

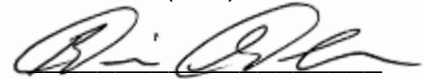
**CULTURAL RESOURCES SURVEY REPORT FOR THE
LANWEST SOLAR FARM PROJECT AREA, BOULEVARD,
SAN DIEGO COUNTY, CALIFORNIA
(Log No. 3992-11-017)**

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Report Date:

December 2013

Report Title:

Cultural Resources Survey Report for the LanWest Solar Farm Project Area,
Boulevard, San Diego County, California

Type of Study:

Cultural Resources Identification Survey

New Sites:

CA-SDI-20461
CA-SDI-20462

Updated Sites:

CA-SDI-16824H
CA-SDI-18921H

USGS Quad:

Live Oak Springs 7.5' T17S/R7E/Section 21 and 28

Acreage:

35 Acres

Permit Numbers:

Log No. 3992-11-017

Key Words:

Boulevard, Kumeyaay, Intensive Survey, Prehistoric, Ceramics, Lithics, Bedrock Milling, Late Period, Historic Ranching, Old Highway 80, U.S. Highway 80, Positive Findings, CA-SDI-20461, CA-SDI-20462, CA-SDI-16824H, CA-SDI-18921H

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LIST OF ACRONYMS

APE	Area of Potential Effect
APN	Assessor's Parcel Number
BP	(Years) Before Present
CEQA	California Environmental Quality Act
CPV	Concentrating Photovoltaic
CRHR	California Register of Historical Resources
DPLU	Department of Planning and Land Use
DPR	Department of Parks and Recreation
DPW	Director of Public Works
EIR	Environmental Impact Report
GPS	Global Positioning System
kV	Kilovolt
MUP	Major Use Permit
MW	Mega Watt
NAHC	Native American Heritage Commission
PRC	Public Resources Code
RPO	Resource Protection Ordinance
SCIC	South Coastal Information Center
SDG&E	San Diego Gas & Electric
USGS	United States Geological Survey

EXECUTIVE SUMMARY

The following reports the results of intensive cultural resources survey and archival research for the 35-acre LanWest Solar Farm Project Area. The project is located within Boulevard, an unincorporated community in eastern San Diego County, California, as depicted on the Live Oak Springs 7.5' United States Geological Survey (USGS) quadrangle.

An intensive pedestrian reconnaissance survey of the project area was completed on October 22, 2011. The entire project area was surveyed using a maximum transect width of 15 meters. Visibility was fair to excellent with the majority of the surface exposed through previous ranching activities. Newly discovered and revisited sites were formally recorded on November 17 and 18 and December 4, 2011.

The survey was preceded by a cultural resources records search conducted by the staff of the South Coastal Information Center (SCIC) at the San Diego State University. The SCIC determined that 54 previous cultural resource studies had taken place within a one-mile radius of the project area. These studies identified 19 previously identified archaeological sites and 20 other cultural resources within the one-mile radius of the LanWest project area. Research also determined that two previous cultural resource sites had been recorded and three studies had taken place within the project area.

Surveys completed at the LanWest Solar Farm site resulted in the identification of two previously recorded historic archaeological sites, two previously unidentified historic archaeological sites, and no isolated artifacts. Adjustments and detailed recordings were made on all previously recorded sites. These sites were recorded on Department of Parks and Recreation (DPR) 523 forms. Initial (surface) data indicate the two previously recorded sites and one of the newly recorded sites are eligible for listing on the California Register of Historical Resources (CRHR).

The evaluation for the LanWest Solar Farm is at a programmatic level. Avoidance of impacts is presumed but will be evaluated on the final design. If avoidance of impacts is not feasible, formal evaluation of each resource to determine their historical significance under CEQA and the RPO, eligibility for listing in the CRHR and local register is required. Following evaluation, mitigation must be proposed to reduce potential impacts to a level below significant. Additionally, under County Guidelines, all resources are considered "important" and impacts to the importance of a resource can be mitigated through evaluation, collection of data and materials, curation of those data and materials, and monitoring during earth moving. However, the infeasibility of avoidance must first be demonstrated.

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1.0 INTRODUCTION

1.1 Project Description

The proposed project is a 5.04 Mega Watt (MW) Concentrating Photovoltaic (CPV) Solar Farm located on approximately 35 acres in Boulevard, California. The proposed project site is located at the southwest intersection of McCain Valley Road and Old Highway 80. The project has been secured through an option-to-purchase agreement that includes parcels with Assessor's Parcel Numbers (APNs) 612-030-1800 and 612-091-1300. The project site consists of relatively flat to gently sloping land that is currently zoned agricultural and used for grazing.

The project area is located directly adjacent to the unincorporated community of Boulevard area in eastern San Diego County, California as depicted on the Live Oak Springs 7.5' United States Geological Survey (USGS) quadrangle (Figures 1 and 2). The LanWest Solar Farm Project Area is located within Township 17 South, Range 7 East, Sections 21 and 28, San Bernardino Base Meridian, in a small ancillary valley northwest of the larger Campo Valley surrounded by granitic hills and mountains including the Tecate Divide to the west, the Inkopah Mountains to the north, the Jacumba Mountains to the northwest and various named peaks throughout the region in all directions.

The proposed LanWest solar farm is anticipated to provide up to 6.5 MW of AC generating capacity and would consist of 264 trackers utilizing dual-axis CPV trackers. In addition to the trackers and inverter transformer units, power generated at the LanWest site would be delivered to SDG&E's Rebuilt Boulevard Substation by means of a dedicated 12.5 kV distribution line. The Rebuilt Boulevard Substation is located approximately 1,000 feet from the southwest corner of the site, across Old Highway 80. Frontage improvements are not required and access would be provided by an onsite private improved driveway located off Old highway 80 Rd. The private driveway would be improved to a commercial driveway standard.

1.2 Existing Conditions

1.2.1 Environmental Setting

Natural

The project area and the surrounding area is a minor valley directly south of the greater McCain Valley, a part of the Peninsular Range physiographic province (Moratto 1984:18-19). The project area is surrounded by mountainous terrain of Cretaceous Period granitics approximately 2.75 mi (4.4 km) east of the Tecate Divide (Sharp

1976:16-19). The most prominent of the nearby peaks is Mount Tule in the Inkopah Range located approximately 3.25 mi (5.25 km) northwest of the project area. Outcrops of tool-quality quartz are located within the region.

Tule Lake, a man-made lake, is the largest local body of water, located approximately 1.2 mi (1.9 km) northwest of the project area. The lake is fed primarily by McCain Valley. The LanWest Solar Farm Project Area and the surrounding area are drained by Walker Canyon, located to the east. Water within the project area is supplied by wells and earthen reservoirs, while the down slope area to the east of the project area is spring-fed. A large amount of bedrock outcrops within the project area and adjacent to these drainages present ideal surfaces for prehistoric milling.

Ornduff (1974:55) classifies the project area as a part of the Upper Sonoran Zone that includes a lower foothill belt and a chaparral belt. The project area falls within the chaparral belt of the Upper Sonoran Zone. The chaparral belt of the zone is “characterized by extensive brush lands. Most of the species represent extreme arid-land types and possess various markedly xerophytic structures ...” (Ornduff 1974:57).

The (hard) chaparral plant community is represented in the hills and mountains surrounding the project area. Species represented include: chamise (*Adenostoma fasciculatum*), manzanita (*Arctostaphylos* spp.), California lilac (*Ceanothus* spp.), scrub oak (*Quercus dumosa*), laurel sumac (*Rhus laurina*), ribbonwood (*Adenostoma sparsifolium*) and yucca (*Yucca whipplei*). The project area itself is currently dominated by chaparral in the rocky areas and introduced grasses with remnant coast live oak (*Quercus agrifolia*). Given these remnant oaks and the valley terrain, this portion of the project area would be classified as valley/foothill woodland.

Cultural

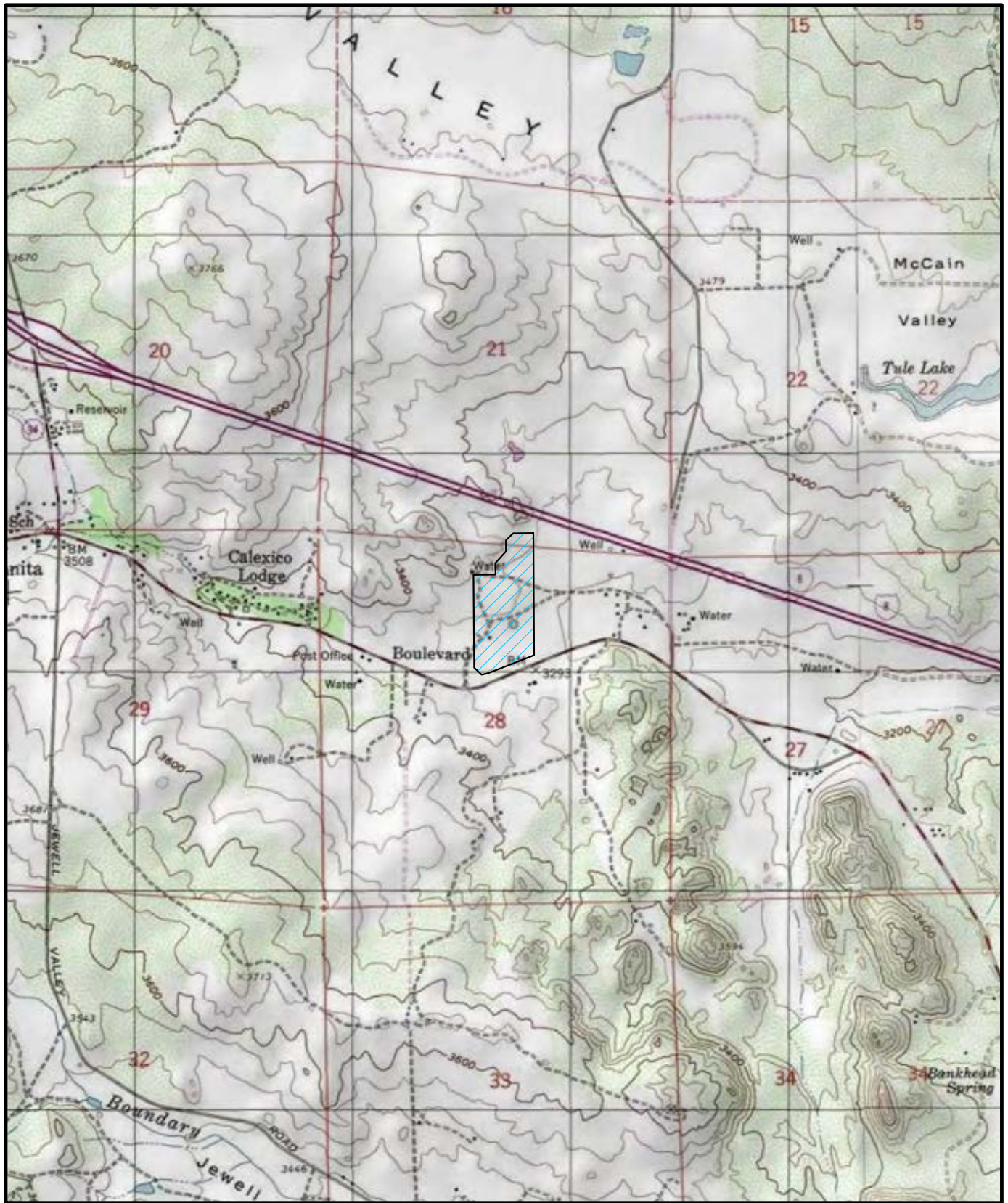
Prehistoric

The following culture history outlines and briefly describes the known prehistoric cultural traditions of San Diego County with special emphasis on the project area. A primary goal of a culture history is to provide a diachronic and developmental approach to past lifeways, settlement patterns, and cultural processes. Analysis of archaeological data gathered from early in the twentieth century to present has identified three distinct temporal periods within San Diego County based on artifact assemblages and ethnohistoric data: San Dieguito, La Jolla, and Late Prehistoric (Yuman/Diegueño/Kumeyaay [Ipai and Tipai]) (Table 1).



Figure 1: LanWest Solar Farm Project Area Location within Southern California

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Legend

 LanWEST Project Boundary

0  1 Kilometers


0  0.25 0.5 0.75 1 Miles



Figure 2, LanWest Solar Farm Project Area as depicted on the Live Oak Springs and Jacumba USGS 7.5' quadrangles.

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San Dieguito (ca. pre-9,000 - 8,000 BP)

The earliest documented appearance of the San Dieguito assemblage is dated at circa 9,000 years before present (BP). This date was derived from the Harris Site (CA-SDI-149) located approximately 12.5km (7.75mi) inland along the San Dieguito River (Warren 1966). The artifact assemblage, called the Western Pluvial Lakes tradition, reflects the desert origins of the San Dieguito. Emphasis was placed on heavy scraping and chopping tools and a tradition of well-formed knives and leaf shaped points associated with hunting activities. Populations were, for the most part, highly mobile resulting in numerous, though often sparse, archaeological deposits. The Harris Site complex represents one of the few sites of San Dieguito age containing evidence of repeated occupation. Rogers identified aspects of the San Dieguito cultural tradition within Cottonwood Valley (Site W-205), north of the project area (Rogers et al. 1966).

La Jolla (ca. 8,000 - 1,100 BP)

A major shift in subsistence strategies took place around 8,000 BP. Debate continues as to whether the shift represents a modification of subsistence techniques on the part of the San Dieguito or a population replacement by immigrating peoples. Regardless of the origins of the population, the aboriginal peoples of the La Jolla Period were forced by their changing environment to rely more heavily on coastal and inland resources of plants, animals, shellfish, and fish (Moriarty 1967).

The artifact assemblage of the inland La Jolla, referred to by some as the Pauma complex, includes grinding implements (manos and metates), quarry-based tools of a greater variety than their coastal counterparts, and later in their existence, the inclusion of a limited use of projectiles (spears and/or darts). Archaeological sites of this period reflect a more sedentary lifestyle often resulting in substantial deposits of tools and subsistence remains such as bone and shell. Few sites of this time period have been documented adjacent the project area where abandonment during the period of diminished rainfall is postulated. The La Jolla lifeway persisted until circa 1,100 BP when a combination of population pressures from the east and rising sea level in the west once again forced adjustment to new circumstances.

Table 1. Concordance of Archaeological Units

Years A.D./B.C.	Coastal San Diego County		Interior San Diego County		Syntheses					Years B.P.	
	(Reger 1939, 1945)	(Morisy 1966)	Northern	Southern	(Wallace 1955)	(Meighan 1959)	(Warren 1961)	(Wallace 1973)	(Harris 1973)		
1500	Yuman III Culture	Diegueño II	Luisefo	Diegueño	Horizon IV Late Prehistoric		Yuman	Shoshonean		Late Period	500
1000	Yuman II Culture		San Luis Rey	Cuyamaca Complex						Prehistoric Phase	1000
500	Yuman I Culture		Shoshonean Intrusion		Horizon III Intermediate						1500
0		Diegueño I	Transition or Hiatus?							Transition/Intermediate	2000
500						Archaic Stage			Period III: Diversified Subsistence		2500
1000	La Jolla II Culture										3000
1500		La Jolla III									3500
2000										La Jolla/Pauma Complex	4000
2500		La Jolla II									4500
3000			Millingstone Substratum (La Jolla/Pauma Complex)		Horizon II Millingstone						5000
3500	La Jolla I Culture									Early Period	5500
4000		La Jolla I									6000
4500									Period II: Food Collecting		6500
5000											7000
5500											7500
6000	San Dieguito Culture	La Jolla/San Dieguito Transition	San Dieguito		Horizon I Early Man	Early Lithic Stage	San Dieguito				8000
6500									Period I: San Dieguito		8500

Late Prehistoric Period - Yuman (ca. 1,100 BP to Contact)

The Yuman occupation of the San Diego region is, given the large number of sites and the abundance of ethnohistoric data, the best documented time period of the San Diego region (Figure 3). As with the San Dieguito/La Jolla transition, population dynamics involved in the La Jolla/Yuman transition are poorly understood.

Cultural traits associated with the Yuman population of the Gila/Colorado River drainage are documented before 2,000 BP. However, the influence of Yuman-speakers is apparent by circa 1,300 BP through the introduction of pottery, small projectile points associated with the bow and arrow, the importation of desert obsidian (volcanic glass), and the modification of burial practices from inhumation (burial) to cremation. The Yuman occupants of the area practiced exploitation of a variety of seasonally available plant and animal resources throughout the region. This resulted in the seasonal reoccupation of many "village sites" as well as many temporary, resource specific camps throughout the region.

Ethnographic

A general context for previous research has been presented above with early complexes distributed over wide expanses of southern California. Later complexes are better understood within a context leading to historic peoples utilizing the region at the time of Spanish contact.

The project area is documented ethnographically to be within the Tipai branch of the Kumeyaay or Diegueño. Research into the eastern territory of the Kumeyaay has been, and continues to be, limited in comparison to the high-mountain and coastal provinces. Ethnographic and archaeological data are used to infer stronger affiliation with their desert neighbors to the east than those of the western coast.

Historic Era

The major historic periods for southern California are defined by key events documented by participants, witnesses, historians, and cartographers:

Spanish Period (1769–1822)

Mexican Period (1822–1848)

American Period (1848–Present)

The historic era encompasses the period of occupation by European descendants. This period marked a time of disease, exploitation, and deculturation of the native peoples beginning circa 1769 with the founding of the Mission San Diego de Alcalá. The occupation and control by the Spanish was passed on to Mexico after the latter gained its independence in 1822. The Mexican period, in turn, gave way to control by the United States subsequent to the Mexican-American War and the treaty of Guadalupe Hidalgo in 1848.

Spanish Period

The **Spanish Period** represents exploration, establishment of the San Diego Presidio, the Missions San Diego de Alcalá, and San Luis Rey de Francia. The mission life brought with it the introduction of agriculture (corn, wheat, olive, and others), as well as herds of grazing cattle and horses. The Spanish period witnessed the introduction of adobe architecture to the area and the establishment of the Pueblo de San Diego on a hill above the location now known as Old Town San Diego. Despite the transition to the later Mexican period, the structure of the Spanish Period was retained for a time and the missions continued to operate as they had in the past.

Mexican Period

Mexico's independence from Spain in 1822 ushered in the **Mexican Period** in *Alta California*. Mexico secularized the missions and continued the Spanish practice of granting large tracts of ranch lands to prominent soldiers, civil servants, and other settlers. Little visible evidence of the transition of power from Spain to Mexico was immediately evident in the frontiers of Alta California. Laws and practices of the earlier government remained in place until shortly before the 1834 secularization of the missions a decade after Mexican rule began.

The secularization freed vast tracts of land for redistribution. Although several grants of land were made prior to 1834, this date marks the era of the rancho. Agriculture was overshadowed by the trade in cattle hides and tallow. It is of the trade in hides along the California coast that William Henry Dana writes in his epoch *Two Years Before the Mast*. The hide trade made the harbor at San Diego, and other coastal stops such as San Juan Capistrano, favorite ports-of-call for the sailing ships of the era. With this trade came a degree of prosperity to the region. The Pueblo de San Diego and the ranchos grew. However, this era was short-lived. The Mexican-American War of 1846-48 was to bring a close to the era of Hispanic rule. The Treaty of Guadalupe-Hidalgo would cede Alta California (along with Arizona, New Mexico, and Texas) to the United States.

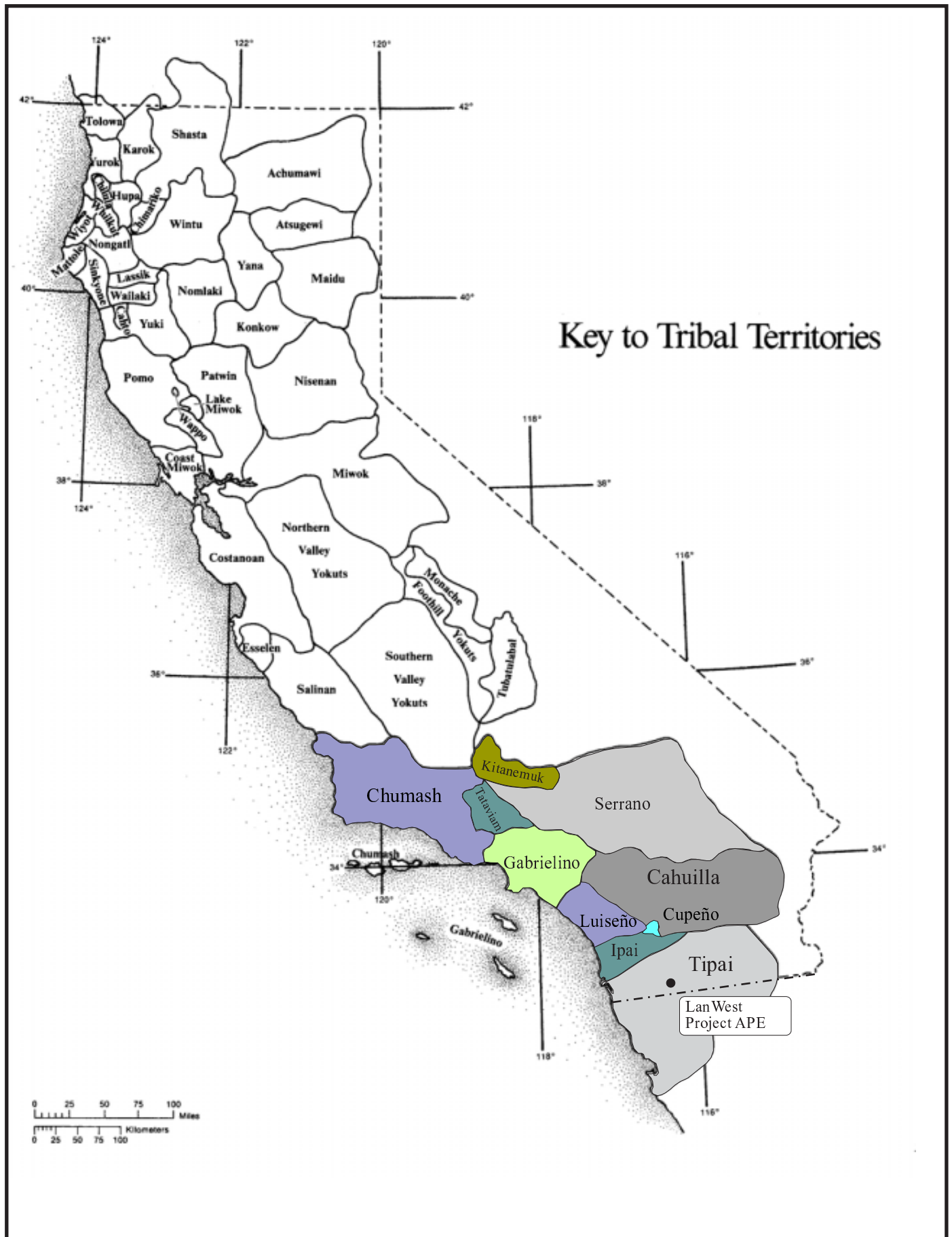


Figure 3. Native American languages of California
(Adapted from Heizer 1978)

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American Period

The **American Period** began with the cession of California by Mexico in 1848. However, prior to this time, Americans were well established; a number of them electing Mexican citizenship and marrying into the local families. The Mexican-American War tested the loyalty of the American emigrants to their adopted country, some of which elected to aid the American forces, while others maintained their allegiance to Mexico and, more relevant, to California.

A Lands Commission was created in responses to the Act of 1851 which provided a means of validating land ownership throughout the state through settlement of land claims. Few Mexican ranchos remained intact because of legal costs and a lack of what Americans considered to be sufficient evidence to provide title claims. Much of the land that once constituted rancho holdings became public land, available for settlement by emigrants to California. Those ranchos that succeeded in laying legal claim remain unsectioned land visible on maps of California.

The influx of people to California and the Lake Elsinore region was the result of various factors, including the discovery of gold in the state; conclusion of the Civil War and subsequent availability of free land through passage of the Homestead Act, and importance of the country as an agricultural area supported by the construction of connecting railways. The growth and decline of towns occurred in response to an increased population and the economic "boom and bust" period of the late 1880s.

As more Americans ventured into southern California and San Diego County at the end of the 19th century, the old Spanish land grants were gradually broken up and the land changed hands many times. Agriculture and ranching were prime activities of the newcomers to the county and, by circa 1900 small towns had been created with all the facilities necessary for future growth—post offices, schools, churches, small commercial establishments and growing residential sections.

This first general store in Boulevard was founded by Don and Vida Ruby between 1910 and 1915 along the old U.S. Army mail and 1850 to 1860 stage route (Figure 4). It operated in that location until 1919 when a new structure was built along the improved road where U.S. Highway 80 was later located. The first store was one of six structures illustrated on a 1915 photograph and the 1941 and 1959 USGS topographic maps (Figures 5, 6 and 7). The old stage route bisected the project area east-west across and down Walker Canyon to the east. A split to the south led to Jacumba along the later route of U.S. Highway 80. The old store and the majority of the structures were located to the south of the old stage road and the Ruby residence to the north in the area designated CA-SDI-16827 (see below). The Ruby's owned the property that included most of the project area.

1.2.2 Records Search Results

Records search data compiled by the South Coastal Information Center (SCIC) at San Diego State University (Appendix A and Confidential Appendix B) indicates 54 previously identified prehistoric or historic era archaeological sites and 19 other cultural resources within the one-mile radius of the LanWest project area (Table 2; Figure 8). Two of these previously identified prehistoric or historic era sites are located within the LanWest project area: CA-SDI-16824H and CA-SDI-18921H. Descriptions of these and newly discovered cultural resources are presented in Section 4.2 of this report.

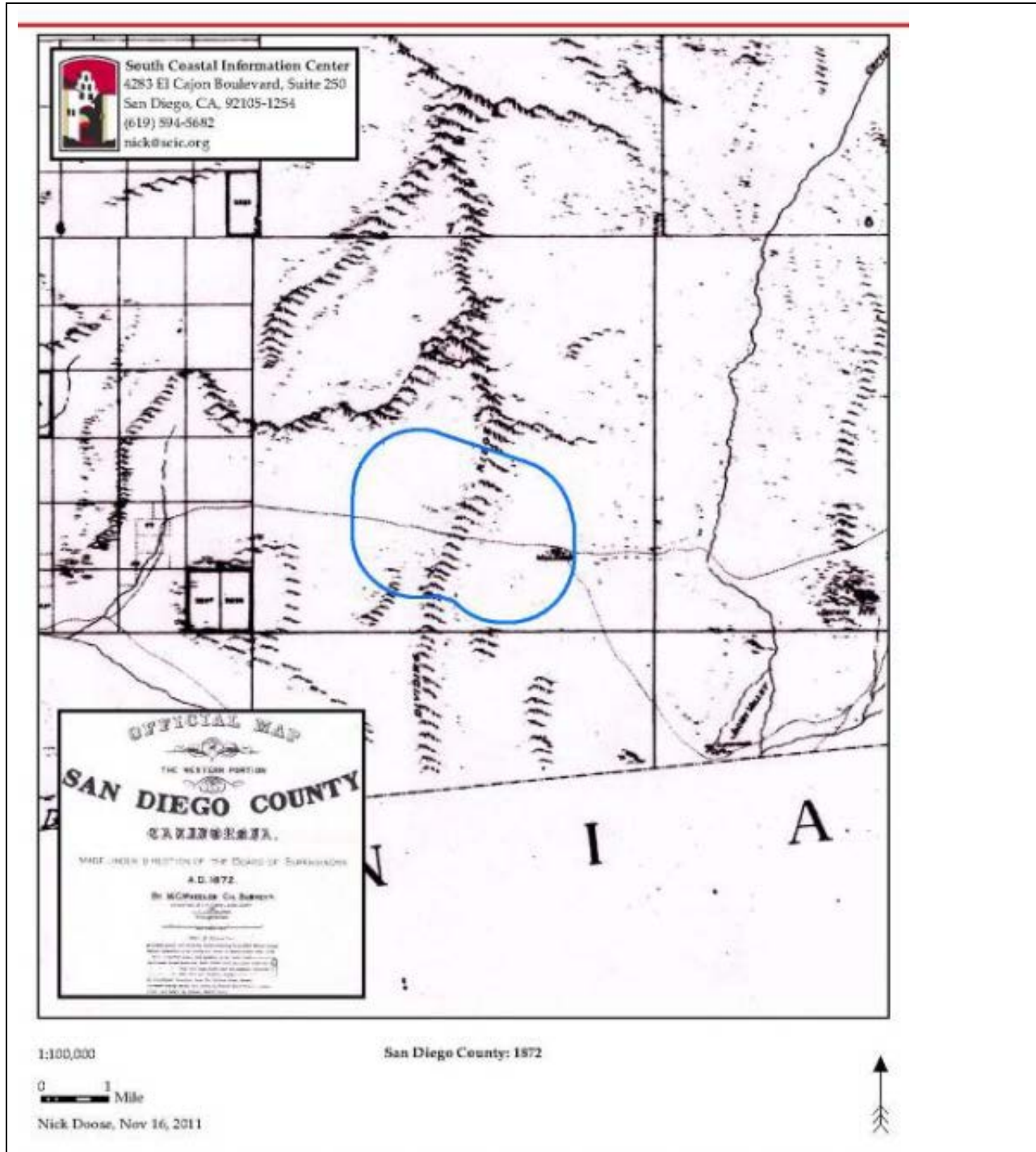
The SCIC identified 54 manuscripts referencing previous investigations within the one-mile search radius of the LanWest project area (Figure 9). Three of the reports address all or a portion of the project area: Chace 79-41, B. Smith 05-582 and EDA 75-01.

The SCIC further reports that review of files at the National Register of Historic Places, the California Register, California State Landmarks California Points of Interest “and other historic property lists” contain no listings for the project area or within the one-mile radius. The exception is Old Highway 80; a National Register listed property located directly south of the project area.

Native American Heritage Commission Consultation

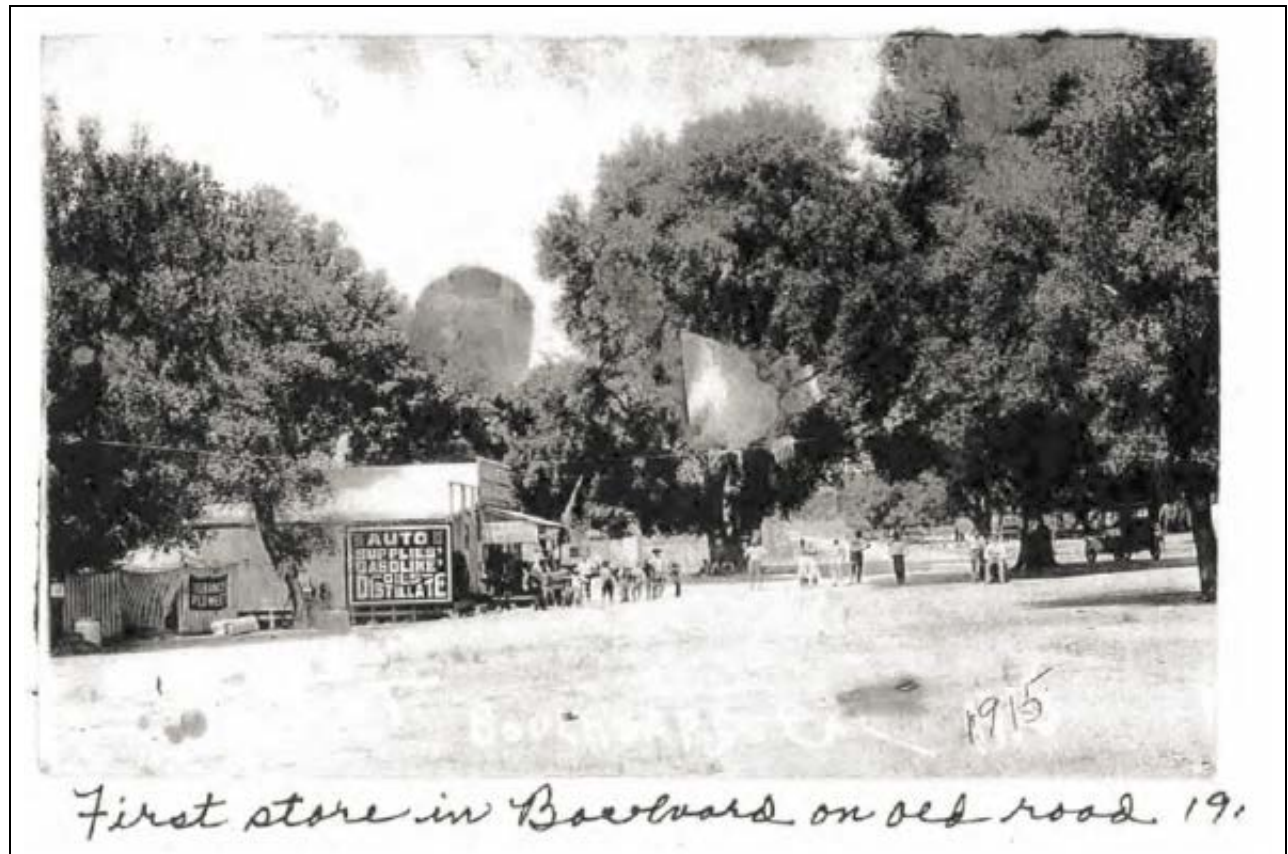
A sacred lands file search was requested from the Native American Heritage Commission (NAHC) on November 7, 2011 and March 5, 2012. In correspondence dated November 18, 2011 and March 5, 2012, the NAHC stated that “Native American cultural resources were not identified in the project area of potential effect (e.g. APE). However, they did state that the area of San Diego County in which the project is located is culturally sensitive. The following Native American groups were contacted on March 5, 2012: Barona, Campo, Ewiiapaayp, Inaja, Jamul, Kwaaymii, La Posta, Manzanita, Mesa Grande, San Pasqual, Sycuan, and Viejas. No responses to the Sacred Lands outreach were submitted.

Figure 4 Wheeler Map of 1872 with SCIC Search Radius



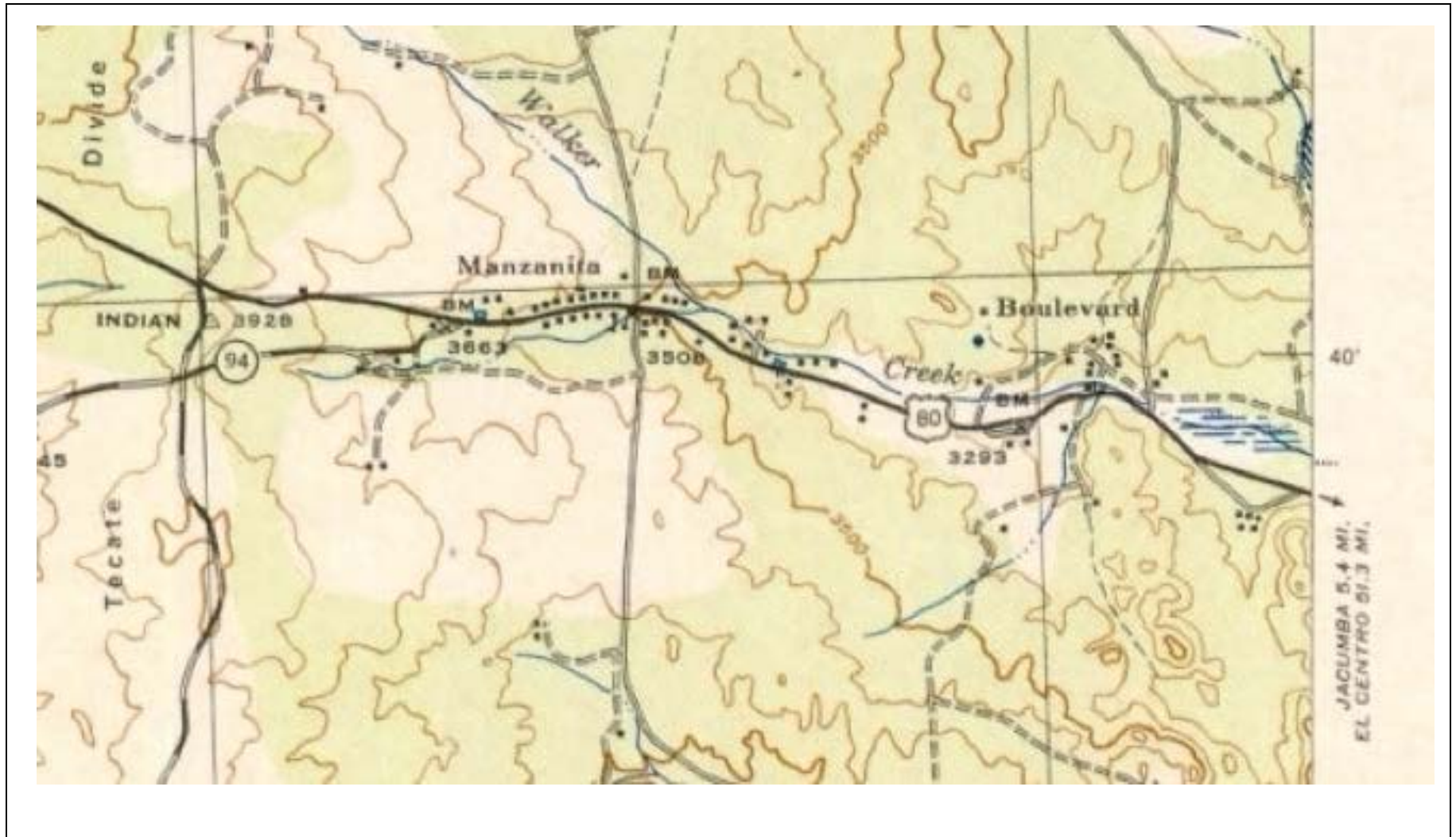
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Figure 5 1915 Photograph of the Ruby General Store, Boulevard, California
(Courtesy of the Mountain Empire Historical Society)



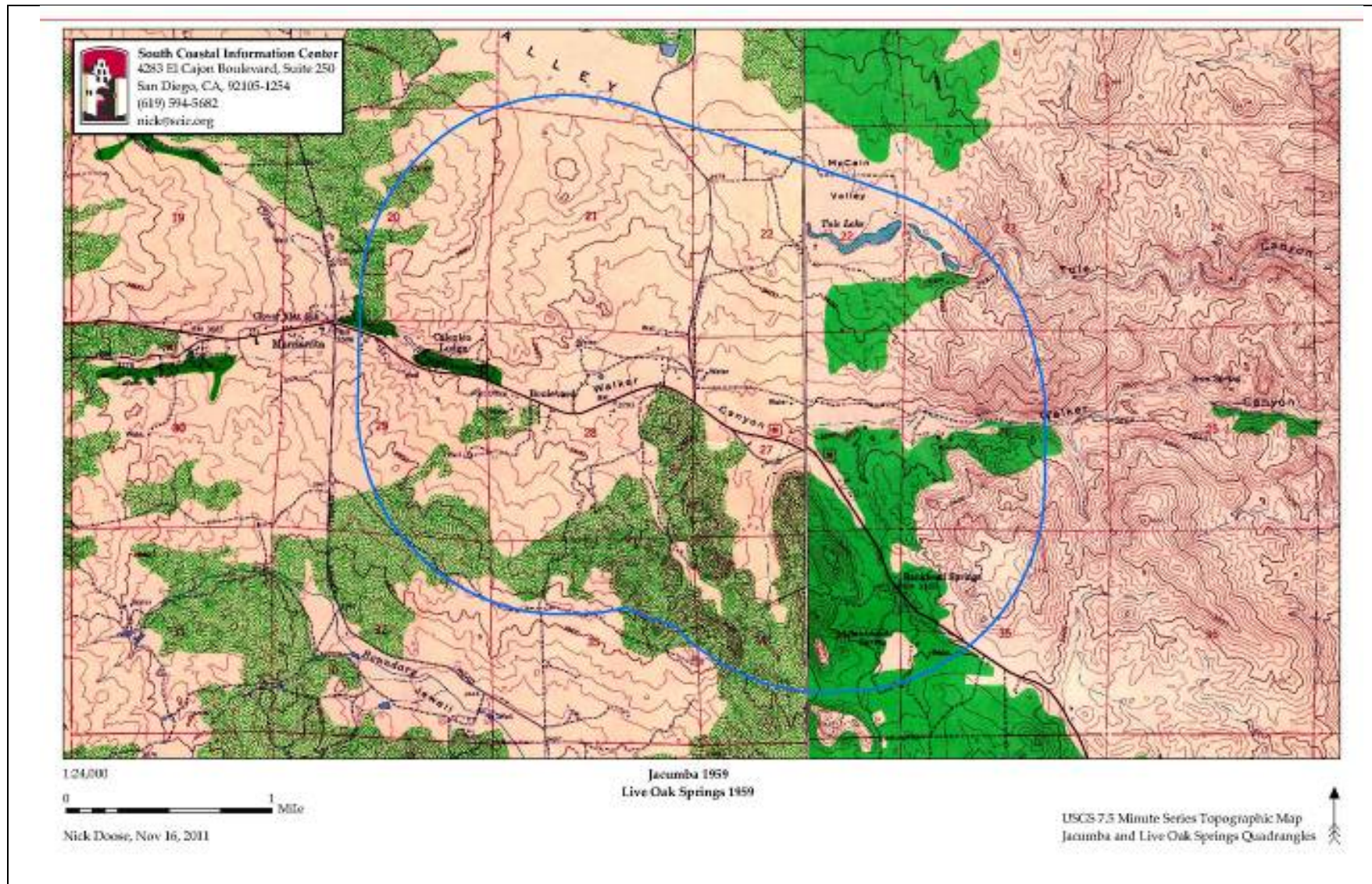
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Figure 6 A Portion of the 1941 USGS Map



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Figure 7 A Portion of the 1959 USGS Map



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Table 2. Cultural Sites Located within One Mile of LanWest Project Area

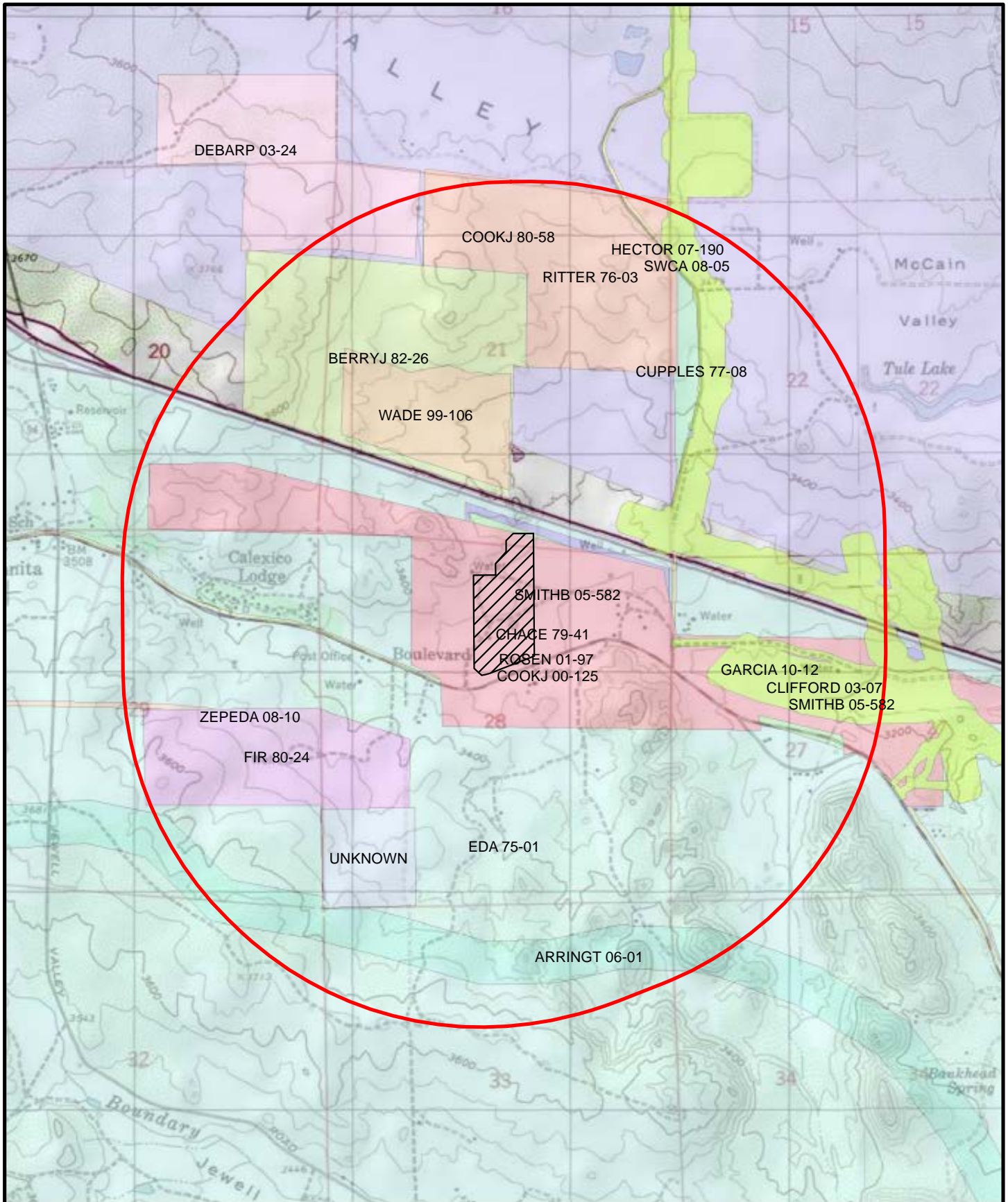
P-Number	Trinomial	Era	Site Type	Area (sq. meters)	Report Reference
P-37-00087	CA-SDI-87	Prehistoric	AP10: Other (Pottery & Seed Cache)	3316	Pignoli et al. 2005 ; Treganza 1947
P-37-005162	CA-SDI-51.62	Prehistoric	AP14: Rock Shelter / Cave	2798	Hale et al. 2010
P-37-005171	CA-SDI-51.71	Prehistoric	AP14: Rock Shelter / Cave	24831	Hale et al. 2010
P-37-005417	CA-SDI-5417	Prehistoric	AP02: Lithic Scatter	110	Hector et al. 2006
P-37-005418	CA-SDI-5418	Prehistoric	AP03: Ceramic Scatter	1693	Hector et al. 2006
P-37-005933	CA-SDI-5933	Prehistoric	AP02: Lithic Scatter; AP04: BRM / Bedrock Milling	90464	Chace 1979; Clifford & Smith 2003; Garcia-Herbst et al. 2009
P-37-006893	CA-SDI-6893 / CA-SDI-16823	Both	AP15: Habitation Debris; AH04: Privy pits / trash scatters / dumps	27509	Chace 1979; Clifford & Smith 2003; Garcia-Herbst et al. 2009
P-37-006894	CA-SDI-6894	Prehistoric	AP15: Habitation Debris	5552	Chace 1979
P-37-006895	CA-SDI-6895	Prehistoric	AP15: Habitation Debris	17165	Chace 1979; Bowden-Renna 2010
P-37-006896	CA-SDI-6896	Prehistoric	AP02: Lithic Scatter; AP03: Ceramic Scatter	1388	Chace 1979
P-37-006897	CA-SDI-6897	Prehistoric	AP02: Lithic Scatter; AP03: Ceramic Scatter	1888	Chace 1979; Hale et al. 2010
P-37-006898	CA-SDI-6898	Both	AP02: Lithic Scatter; AP07: Architectural Features; AH16: Other	1696	Chace 1979
P-37-006899	CA-SDI-6899	Prehistoric	AP04: BRM / Bedrock Milling	1804	Chace 1979; Clifford & Smith 2003
P-37-006900	CA-SDI-6900	Both	AP04: BRM / Bedrock Milling; AH04: Privy pits / trash scatters / dumps AP02: Lithic Scatter; AP03: Ceramic Scatter; AP04: BRM / Bedrock Milling	1804	Chace 1979; Clifford & Smith 2003; Hale et al. 2010
P-37-006901	CA-SDI-6901	Prehistoric	AP02: Lithic Scatter; AP04: BRM / Bedrock Milling; AH04: Privy pits / trash scatters / dumps	6604	Chace 1979; Clifford & Smith 2003
P-37-006902	CA-SDI-6902	Both	AP02: Lithic Scatter	2092	Chace 1979; Clifford & Smith 2003; Garcia-Herbst et al. 2009
P-37-008217	CA-SDI-8217	Prehistoric	AP02: Lithic Scatter	4231	Flower et al. 1980
P-37-008218	CA-SDI-8218	Prehistoric	AP15: Habitation Debris	4797	Flower et al. 1980
P-37-017239	CA-SDI-15188	Historic	HP21: Dam	1280	Berryman & Huett 1982
P-37-017240	CA-SDI-15189	Prehistoric	AP15: Habitation Debris	15660	Berryman & Huett 1982
P-37-017241	CA-SDI-15190	Prehistoric	AP15: Habitation Debris	8639	Berryman & Huett 1982
P-37-024670	CA-SDI-16367	Prehistoric	AP02: Lithic Scatter; AP03: Ceramic Scatter	990	deBarros 2002
P-37-024694	CA-SDI-16374	Historic	AH04: Privy pits / trash scatters / dumps	2934	deBarros 2002
P-37-025307	CA-SDI-16785	Historic	AH04: Privy pits / trash scatters / dumps	1132	Clifford & Smith 2003; Garcia-Herbst et al. 2009
P-37-025308	CA-SDI-16786	Historic	AH04: Privy pits / trash scatters / dumps AH02: Foundations/structure pads; AH04: Privy pits / trash scatters / dumps; AH5: Wells/cisterns	3812	Clifford & Smith 2003; Hale et al. 2010
P-37-025361	CA-SDI-16824	Historic	AH04: Privy pits / trash scatters / dumps	7468	Clifford & Smith 2003; Hale et al. 2010
P-37-025362	CA-SDI-16825	Historic	AH04: Privy pits / trash scatters / dumps	14198	Clifford & Smith 2003
P-37-025363	CA-SDI-16826	Historic	AH04: Privy pits / trash scatters / dumps AH02: Foundations/structure pads; AH04: Privy pits / trash scatters / dumps	1888	Clifford & Smith 2003
P-37-025364	CA-SDI-16827	Historic	AH04: Privy pits / trash scatters / dumps; HP33: Farm / ranch	7690	Clifford & Smith 2003; Hale et al. 2010
P-37-027110	CA-SDI-17731	Historic	AH04: Privy pits / trash scatters / dumps; HP33: Farm / ranch	2190	Pignoli & Kwiatkowski 2005
P-37-027111	CA-SDI-17732	Historic	AH04: Privy pits / trash scatters / dumps	1897	Pignoli & Kwiatkowski 2005
P-37-027112	CA-SDI-17733	Both	AH04: Privy pits / trash scatters / dumps; AP02: Lithic Scatter	6418	Pignoli & Kwiatkowski 2005
P-37-027346	CA-SDI-17869	Prehistoric	AP06: Pictographs	78	Anonymous
P-37-029586	CA-SDI-18921	Historic	AH04: Privy pits / trash scatters / dumps	4504	Collett 2008
P-37-030281	CA-SDI-19277	Historic	AH04: Privy pits / trash scatters / dumps	1842	Noeh & Gallegos 2008; Garcia-Herbst et al. 2009
P-37-030282	CA-SDI-19278	Prehistoric	AP02: Lithic Scatter	929	Noeh & Gallegos 2008
P-37-031286	CA-SDI-19855	Historic	AH11: Walls / fences	122	Garcia-Herbst et al. 2009
P-37-031287	CA-SDI-19856	Prehistoric	AP02: Lithic Scatter	154	Garcia-Herbst et al. 2009
P-37-031338	CA-SDI-19901	Historic	AH04: Privy pits / trash scatters / dumps	310	Garcia-Herbst et al. 2009
P-37-031339	CA-SDI-19902	Both	AH04: Privy pits / trash scatters / dumps; AP02: Lithic Scatter	27	Garcia-Herbst et al. 2009
P-37-031340	CA-SDI-19903	Both	AH04: Privy pits / trash scatters / dumps; AP02: Lithic Scatter	122	Garcia-Herbst et al. 2009
P-37-031578	CA-SDI-20030	Both	AH04: Privy pits / trash scatters / dumps; AP02: Lithic Scatter	78	Bowden-Renna 2010

Table 2. Cultural Sites Located within One Mile of LanWest Project Area

P-Number	Trinomial	Era	Site Type	Area (sq. meters)	Report Reference
P-37-031593	CA-SDI-20041	Prehistoric	AP02: Lithic Scatter; AP03: Ceramic Scatter; AP04: BRM / Bedrock Milling	3684	Hale et al. 2010
P-37-031595	CA-SDI-20042	Both	AI02: Foundations/structure pads; AI04: Privy pits / trash scatters / dumps; AI5: Wells / cisterns; AP15: Habitation Debris	50092	Hale et al. 2010
P-37-031603	CA-SDI-20049	Prehistoric	AP02: Lithic Scatter; AP03: Ceramic Scatter	413	Hale et al. 2010
P-37-031604	CA-SDI-20050	Prehistoric	AP02: Lithic Scatter; AP03: Ceramic Scatter	150	Hale et al. 2010
P-37-032037	CA-SDI-20295	Historic	AI04: Privy pits / trash scatters / dumps	103	Caniels 2011
P-37-032168	CA-SDI-20370	Prehistoric	AP02: Lithic Scatter; AP03: Ceramic Scatter; AP04: BRM / Bedrock Milling	1871	Hale et al. 2010
P-37-032189	CA-SDI-20391	Historic	AI04: Privy pits / trash scatters / dumps	523	Hale et al. 2010
P-37-032190	CA-SDI-20392	Historic	AH04: Privy pits / trash scatters / dumps	256	Hale et al. 2010
P-37-024023		Historic	HP37: Highway / trail	950951	Lorrie 2000; Hale et al. 2010
P-37-024675		Prehistoric	AP16: Other (Isolated Flake)	314	deBarros 2002
P-37-024676		Prehistoric	AP16: Other (Isolated Projectile Point)	314	deBarros 2002
P-37-027113		Prehistoric	AP16: Other (Isolated Flake)	78	Pignolo & Kwiatkowski 2005
P-37-027114		Prehistoric	AP16: Other (Isolated Flake)	78	Pignolo & Kwiatkowski 2005
P-37-030227		Prehistoric	AP16: Other (Isolated Flake)	294	Noah & Gallegos 2008
P-37-031579		Historic	AH04: Privy pits / trash scatters / dumps; AH16: Other (Telephone Pole)	78	Bowden-Renne 2010
P-37-031594		Historic	AH04: Privy pits / trash scatters / dumps	512	Hale et al. 2010
P-37-031685		Historic	AH04: Privy pits / trash scatters / dumps; AH5: Wells / cisterns	1555	Hale et al. 2010
P-37-031686		Historic	AH04: Privy pits / trash scatters / dumps	3823	Hale et al. 2010
P-37-031932		Historic	HP02: Single family property	78	Ghabhlain et al. 2010
P-37-032131		Historic	HP04: Ancillary building	78	Hale et al. 2010
P-37-032132		Historic	HP02: Single family property	78	Hale et al. 2010
P-37-032133		Historic	HP02: Single family property	78	Hale et al. 2010
P-37-032134		Historic	HP02: Single family property	78	Hale et al. 2010
P-37-032135		Historic	HP02: Single family property	78	Hale et al. 2010
P-37-032156		Historic	HP02: Single family property	84246	Hale et al. 2010
P-37-032157		Historic	HP02: Single family property	3899	Hale et al. 2010
P-37-032158		Historic	HP6: 1-3 story commercial building	3887	Hale et al. 2010

Figure 8 Cultural Resources Sites Located within One Mile of the LanWest Project Area (Live Oak Springs and Jacumba Quadrangles) (See Confidential Appendix B)

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Legend

- LanWEST Mile Radius
- LanWEST Proj. Bdy

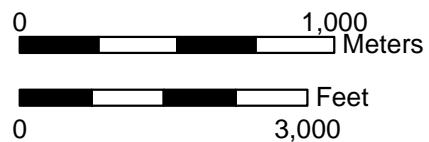


Figure 9. Cultural resources reports located within one mile of the LanWest project area

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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 the California Environmental Quality Act (CEQA), Resource Protection Ordinance (RPO), and San Diego County Local Register 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.

California Environmental Quality Act (CEQA)

According to CEQA (§15064.5a), the term “historical resource” includes the following:

- (1) A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources (CRHR) (Pub. Res. Code SS5024.1, Title 14 CCR. Section 4850 et seq.).
- (2) A resource included in a local register of historical resources, as defined in section 5020.1(k) of the Public Resources Code (PRC) or identified as significant in an historical resource survey meeting the requirements of section 5024.1(g) of the PRC, shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.
- (3) Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be an historical resource, provided the lead agency’s determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be “historically significant” if the resource meets the criteria for listing on the CRHR (Pub. Res. Code SS5024.1, Title 14, Section 4852) including the following:
 - (A) Is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage;
 - (B) Is associated with the lives of persons important in our past;
 - (C) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or

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

- (4) The fact that a resource is not listed in, or determined eligible for listing in the CRHR, not included in a local register of historical resources (pursuant to section 5020.1(k) of the PRC), or identified in an historical resources survey (meeting the criteria in section 5024.1(g) of the PRC) does not preclude a lead agency from determining that the resource may be an historical resource as defined in PRC section 5020.1(j) or 5024.1.

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

- (1) Substantial adverse change in the significance of an historical resource means physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired.
- (2) The significance of an historical resource is materially impaired when a project:
- (A) Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register of Historical Resources; or
 - (B) Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to section 5020.1(k) of the Public Resources Code or its identification in an historical resources survey meeting the requirements of section 5024.1(g) of the Public Resources Code, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or
 - (C) Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its eligibility for inclusion in the California Register of Historical Resources as determined by a lead agency for purposes of CEQA.

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

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

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

- 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 SS5097.98. The applicant may develop an agreement for treating or disposing of, with appropriate dignity, the human remains and any items associated with Native American burials with the appropriate Native Americans as identified by the Native American heritage Commission. Action implementing such an agreement is exempt from:
 - (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.

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.

San Diego County Resource Protection Ordinance (RPO)

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

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

- (1) Any prehistoric or historic district, site, interrelated collection of features or artifacts, building, structure, or object either:
 - (aa) Formally determined eligible or listed in the National Register of Historic Places by the keeper of the National Register; or
 - (bb) 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:

(aa) Protected under Public Law 95-341, the American Indian Religious Freedom Act or Public Resources Code Section 5097.9, such as burial(s), pictographs, petroglyphs, solstice observatory sites, sacred shrines, religious ground figures or

(bb) 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. 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.

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2.0 GUIDELINES FOR DETERMINING SIGNIFICANCE

Prehistoric Archaeological Resources

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

- (1) The project, as designed, causes a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5 of the State CEQA Guidelines.
- (2) The project proposes activities or uses damaging to, and fails to preserve, significant cultural resources as defined by the RPO.

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

Guideline 1 is derived directly from CEQA. Sections 21083.2 of CEQA and 15064.5 of the State CEQA Guidelines recommend evaluating archaeological resources to determine whether or not a proposed action would have a significant effect on unique archaeological sites.

Guideline 2 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, cumulative) on significant cultural resources as defined by these guidelines would be considered a significant impact.

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

Historic Resources

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

- (1) The project, as designed, causes a substantial adverse change in the significance of a historical resource as defined in §15064.5 of the State CEQA Guidelines.
- (2) The project proposes activities or uses damaging to, and fails to preserve, significant cultural resources as defined by the RPO.

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

Guideline 1 is derived directly from CEQA. Sections 21083.2 of CEQA and 15064.5 of the State CEQA Guidelines recommend evaluating historical resources to determine whether or not a proposed action would have a significant effect on unique historical sites.

Guideline 2 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, cumulative) on significant cultural resources as defined by the County's Significance Guidelines would be considered a significant impact.

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

Human Remains

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

- (1) The project, as designed, disturbs any human remains, including those interred outside of formal cemeteries.
- (2) The project proposes activities or uses damaging to, and fails to preserve, significant cultural resources as defined by the RPO.

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

Guideline 1 is included because human remains must be treated with dignity and respect and CEQA requires consultation with the "Most Likely Descendant" as identified by the NAHC for any project in which human remains have been identified.

Guideline 2 was selected because the RPO requires that cultural resources including human remains be considered when assessing environmental impacts. The RPO requires the preservation of identified human remains. In addition, County regulations provide protection for previously undocumented human remains that may be discovered during earth disturbing activities. See Section 1.3 for a discussion of the specific regulations. Any project that would have an adverse impact (direct, indirect, cumulative)

on significant cultural resources as defined by the County's Significance Guidelines would be considered a significant impact.

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

2.1 Theoretical Orientation

2.1.1 Prehistoric Sites

2.1.2 The Cultural Ecology Paradigm

It is generally accepted that Julian Steward formalized cultural ecology models in his ethnographic and archaeological analyses of Great Basin groups (Steward 1937, 1938; Steward and Setzler 1938). That this connection was evident to earlier researchers is implicit in both their research orientation and interpretations (e.g. Uhle 1907). The utility of cultural ecological approaches is maximized in their application to economic and technological aspects of culture (Lee and Devore 1968). This is not to say that economy and technology are any less important in understanding social aspects of culture, only that this understanding, within the context of hunter-gatherer societies, is best explained through ecological relationship(s) within the techno-economic aspects of culture. Theories based on the cultural ecology paradigm have more applicability in the area of middle-range theory with subsequent articulation to general theory through more general models such as neo-Darwinian evolutionary and human ecology theory (Bettinger 1991).

Cultural ecologists do not argue that cultures are defined by environment, but that environment merely constrains the choices available to the culture. These constraints are assumed to require adaptive responses, though this is not necessarily the case. In addition, adaptive responses cannot be assumed to be optimal. Tradition, technological level, and interaction spheres may apply additional stimuli and limits beyond those resulting from environmental constraints, thus an historical perspective is necessary when evaluating adaptive responses within the framework of environmental limits. This necessity for historical perspective severely limits the ability of cultural ecology to act as a viable general theory. This is not to say that the cultural ecology paradigm is not valuable, but simply acknowledges its limitations.

The role of cultural ecology, in all its different aspects, is viewed as a critical factor in historical reconstruction. Only with a complete understanding of the environmental limitations, and the "optimal responses" to those limitations on a given culture, can we begin to perceive the "extrasomatic" aspects of human behavior. As an example, the reduction in resource availability, through environmental or cultural change, can be viewed as a catalyst to the development of aggressive tendencies and formalization of leadership roles. Likewise, emigration from a specific local and expansion of subsistence breadth are viewed as adaptive strategies, especially when the alternatives are limited (Glassow 1978). Models of homeostasis and cultural evolution are, necessarily and rightly, viable only when complete, or nearly complete, environmental data are available.

Cultural ecological models are additionally valuable in their ability to be tested through empirical observations made through environmental reconstruction, as well as artifact and ecofact analysis. A large number of methods are available for Paleo-climactic reconstructions, such as, pollen cores from both terrestrial and marine environs, dendrochronological and rainfall data from preserved wood, and ocean temperature reconstructions through radiocarbon dating and stable isotope ratio analysis of marine shell. Artifact and ecofact analyses are similarly applicable to correlation with environmental data by way of microwear analyses, phytolith and pollen analyses of tools, and faunal analyses focused on the identification and exploitation of specific environments with special attention given the availability of those environs as delimited by climactic reconstructions (Erlandson 1994).

It is through the use of these data that the environmental limitations and optimal utilization can be compared and contrasted with archaeological data. The residual of such comparisons should represent, in large part, those aspects of culture that are not a direct result of environmental limitation. Thus, this perspective can be applied to an adaptation of the systems theory approach, whereby optimal foraging models are applied to environmental reconstructions in an effort to develop positive and negative feedback loops. What should arise would be apparent inconsistencies between the optimal model and the apparent findings within the archaeological data. These inconsistencies would reflect the influence of cultural aspects of behavior, which in turn could be used to develop testable hypotheses for which the influences of environment have been accounted.

2.1.3 Research Questions

The formulation of research questions pertaining to survey-level investigations are typically based on information specific to the project area under investigation and reflective of previously gathered data. Within the prehistoric research realm, typical

regimes within a cultural ecology model would focus on probability models positing a relationship between functional site types and resource location. These correlations would, naturally, be highly dependent on the time periods represented. Thus, the identification of complexes relating to specific time periods and the establishment of prehistoric context would be paramount.

- (1) Can the archaeological data supplement the prehistoric record to place the site in a local chronology?
- (2) Does the artifact assemblage reflect participation by the occupants in local and regional commodities exchange?
- (3) Can the site contribute to an understanding of the regional land use?
- (4) Can the sites provide insight into the types of sites anticipated within the region?
- (5) How do the artifacts contribute to ethnic, economic or other behavioral identities?

2.2 Historic Sites

2.2.1 The Globalization Paradigm

Historic Period research focuses on defining how the occupants of the region utilized this seemingly local environ. Identified Historic Period resources shall be traced through documentation to an individual or group if possible. A survey-level recording of site constituents would be correlated with socio-economic, ethnic and religious identities of the registered occupants to formulate further research questions applicable to evaluation studies.

Evaluation of historic period assemblages requires a higher level of documentation than that associated with prehistoric assemblages. Analysis of historic artifacts and assemblages must, therefore, be within the context of an accurately documented group responsible for the deposit(s). The combination of artifact analysis and historic documentation should, therefore, attempt to address questions regarding the period(s) represented, ethnicity, gender and age of the group represented, functional behavioral activities of the group, relative economic status, and consumer choice within the context of the perceived economic status.

Archival materials available cover the entire historical period. The period of greatest interest is the American period, specifically circa 1880 to 1945. American era documents include various maps, chain of title back to the U.S. Patent for the land, U.S. Census, Great Register of Voters, County Lease Books etc.

Materials analyzed shall be compared with archival data regarding the persons most likely responsible for the deposit. Preliminary examination of archival records indicates few structures within the project area between 1880 and 1945.

Historic period artifacts shall be classified into both technological and functional groups. Technological classifications shall comprise grouping such as ceramics, glass, metal cans, etc. Functional classes shall reflect an analysis scheme developed by Sprague (1983) and expanded upon by Glenn and May (May 1996, 2001a, 2001b; Glenn and May 1999; May and Glenn 2003a, 2003b).

Roderick Sprague's Functional Classification Method (Sprague 1983:251-261) is widely used in the Great Basin and Northwest (Polk 1996), and has been applied to historic collections in southern California (May 2001a, 2001b; May and Glenn 2003). Within southern California, the method has been applied to study developing agricultural homesteads in the Lusardi community along the San Dieguito River and near the historic town of Linda Vista, both in San Diego County (May 2001a, 2001b). Excavations of circa 1880 to 1920 privy deposits within downtown San Bernardino permitted application of the method to a urban landscape (May and Glenn 2003). It is anticipated that data analysis of artifacts from the project area shall be sufficient in quantity, variety and integrity to be added to the growing database used in regional functional analyses. Uniformity in classification methodology is essential to generate readily comparable data useful to all archaeologists.

Analysis of the artifacts shall focus on testing for evidence of behavior activity groups that would shed light early-20th century rural life. Assigned clusters are anticipated to fall within "hyperspace communities" that reflect the variation in income and social status among those responsible for the deposit, as well as the identifying changing use and status patterns resulting from increased access to goods from San Diego that resulted from improved transportation system that took place between the World Wars. The selection of household goods, commodities, quality of selections, and personal items of consumption and recreation should be reflected in the trash deposits. Behavioral inferences include ethnic diversity, gender and economic status of the households represented. Behavioral groupings represented include Personal, Domestic, Architecture, Administrative, Domestic, Garden/Agricultural, Maritime, Personal, Transportation, Utility conveyance, Warehouse and Workshop. These data shall be compared and contrasted with expectations developed from archival research.

2.2.2 Research Questions

In developing a research design, connectivity between the recovered artifacts and the research context must be established. This is done by developing specific questions that could be answered by the data. Inability to address the questions would mean the

site lacks sufficient data to meet the criterion of significance related to data potential. If there is sufficient data to address those questions in the research context, then the site would meet the criterion of significance. Site integrity is also to be considered.

Several generalized questions will be posed that can assist in determining research value under the criterion of significance related to data potential. These are as follows:

- (1) Can the archaeological data supplement the historical record to place the site in a local chronology?
- (2) Does the artifact assemblage reflect participation by the occupants in local, regional, and international commodities exchange?
- (3) Can the site contribute to an understanding of the regional land use or the local participants?
- (4) Can the collection provide insight into the kind of structures built at the site?
- (5) How do the artifacts contribute to ethnic, economic or other behavioral identities?

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3.0 ANALYSIS OF PROJECT EFFECTS

3.1 Methods

3.1.1 Survey Methods

The historic properties intensive survey was conducted, recorded and reported under the supervision of Mr. Brian K. Glenn of Pacific West Archaeology, Inc. Field personnel consisted of Mr. Kurt McLean, Mr. Charles Bouscaren, Ms. Hillary Warren, Ms. Stephanie Hernandez and Mr. Kyle Griffith. All personnel participated in the initial identification of artifacts and features. Mr. McLean and Mr. Bouscaren shared duties as Field Director. Ms. Warren focused on photography, Ms. Hernandez on field recording and Mr. Griffith on operating the Trimble Series 6000 XH sub-meter Global Positioning System (GPS).

Ms. Whitefeather Roque participated as Native American observer on the project. Ms. Roque inspected each site where prehistoric artifacts and features were identified and provided input directly to the Principal Investigator. Ms. Roque is a member of the Campo Band of Mission Indians and familiar with the project area. Her observations were forwarded to the tribal council.

The entire 35-acre project was surveyed by a team of qualified archaeologists using standard pedestrian parallel transects spaced no greater than 15 meters (50 feet) apart (see Figures 1 and 2). All field and research activities were conducted under the supervision of the Principal Investigator who meets Department of Interior standards and is listed on the County of San Diego approved consultants list (see Appendix C for resume of the Principal Investigator). The exception to the parallel transect method was areas of rugged terrain where staff deviated from parallel transects. Deviations occurred exclusively in areas of rock outcrops located in the northwestern extreme of the project area. Outcrops were intensively inspected for evidence of bedrock milling, rock shelters and other use.

Pedestrian reconnaissance surveys of the entire LanWest Solar Farm Project Area were completed on October 22, 2011. Three additional days, November 17, 18, and December 4, 2011, were spent recording archaeological sites discovered during survey. GPS location data was recorded at each feature and visible diagnostic artifact within the sites. In addition, site boundaries were established using a GPS to create polygons representing the visible extent of artifact and feature distribution.

Visibility was excellent throughout most of the upslope portions of the project area. Visibility in the grassland portion of the project area was fair to good. However, visibility never fell to a level of unacceptable. Disturbance in the central and southern portions of

the project appears is substantial due to foundations, roads and various support structures and features.

The archaeologist focused on the identification and recording of historic and prehistoric period artifacts, features and sites. The GPS receiver was uploaded with data that included: project area boundaries, previously identified cultural resources, background aerial photographs and a data dictionary designed to note attributes necessary for completion of State of California Department of Parks and Recreation (DPR) Forms 523A through L (DPR 523), as appropriate.

Information gathered during site recording included the types and estimated amounts of artifacts, their distribution, an estimation of age, perceived integrity and boundaries of each property sufficient to permit completion and/or updating of appropriate DPR 523 forms. Photographs were taken for each site area (overviews), artifact concentration, and feature. Diagnostic artifacts and boundary information were plotted using a GPS receiver, photographed and described with emphasis on chronologically sensitive attributes. Artifact collecting was not a part of the investigation. All notes, photographs and GPS data are curated at Pacific West Archaeology and will be submitted to the South Coastal Information Center for archiving.

3.1.2 Testing Methods

The LanWest Solar Facility currently does not have a proposed project design. As such, no evaluations were completed for the cultural resources identified in this report. The evaluation of resources will be conducted when a final design is identified and a Major Use Permit is submitted to the County.

Native American Participation/Consultation

The NAHC was contacted for a search of their Sacred Lands Files (see Confidential Appendix B). The response from the NAHC identified that “Native American cultural resources were not identified in the project area of potential effect (e.g. APE)”. Individuals and groups identified by the NAHC have been contacted. No responses to the Sacred Lands outreach were submitted.

Ms. Whitefeather Roque participated as Native American observer on the project. She inspected each site where prehistoric artifacts and features were identified and provided input directly to the Principal Investigator. Ms. Roque is a member of the Campo Band of Mission Indians and familiar with the project area. Her observations were forwarded to the tribal council.

3.2 Results

The survey resulted in the recording of two previously unrecorded archaeological sites (CA-SDI-20461 and CA-SDI-20462) and updating boundaries and observations at the two previously recorded sites, CA-SDI-16824H, and CA-SDI-19821 (Figure 10). Presented below are descriptions of these finds along with detailed maps of sites.

Isolated Finds

No isolated finds were discovered or recorded during the course of the survey.

Previously and Newly Recorded Archaeological Sites

The two previously recorded sites and two newly identified sites were recorded as a result of the survey; all consist exclusively of historic materials and features (Figure 10). The historic elements are, in large part, associated with structural remains located in the southwest of the project area, previously recorded as CA-SDI-16824H. Other sites within the Area of Potential Effect (APE) are a refuse deposit, a refuse scatter and a historic road. New and revised site records are presented on DPR-523 forms within Confidential Appendix B. Additional maps and illustrations are provided where appropriate.

CA-SDI-16824/H

CA-SDI-16824H was first recorded as MVR-4 by Brian F. Smith and Associates in 2003 as consisting of “three historic foundations, a single well, and a sparse scattering of historic trash including pieces of purple glass”. Recording was limited to a primary form and topographic map (DPR-523a and j, respectively [see Appendix B]).

The current survey provides greater detail and precision in identifying both the architectural constituents and associated artifacts. Seven features were identified including Feature 1, referred to locally as the Old Fuquay house (Chace 1979 [site record for CA-SDI-6899]). Various debris piles and scatters connect the features. The 1928 aerial, as well as the 1941 and 1959 USGS quadrangles, show the house and ancillary structures intact (Figure 11; also see Figures 6 and 7). Seven features were identified as a result of survey (Figure 12). Integrity of the various features is high, with little evidence of disturbance subsequent to the removal of the Fuquay house and an ancillary building evident in aerial photographs.

Feature 1 is the ruins of a residential structure with an extant stone fireplace and chimney (Figure 13). The foundation footprint is dominated by the main room. It measures 30 by 16 feet and is constructed on historic highway “C” markers laid end to end (Figure 14). The chimney is approximately 18 feet tall and constructed of angular quartz rocks (Figure 15). The peak of the roof gable is visible on the north edge

approximately 15 feet above the ground. The mantel is made from home-made tiles with the two central tiles stamped with a capital "R" on each. Two attached rooms were identified to the north and northeast of the main room. The north room measures approximately 10 by 24 feet. The northeast room measures approximately 14 by 24 feet. Rubble lined walkways border the foundation on the south and west.

C-markers were constructed of concrete and used as surveyor's markers along California highways during the 1920s and 30s. They are believed to coincide with the edge of the highway right-of-way. These markers measure approximately 3 feet in length and 6 inches wide. They were buried with approximately 1 foot to 18 inches remaining above ground. Several of the markers were noted along the north side of Old Highway 80. These markers may have been scavenged, but it may be that the house served as a workers camp during highway construction. A similar but less formal camp was identified along Highway 60 in Riverside County (Glenn 2003). Additional finding in support of this postulate is the large amount of concrete debris, the presence of an explosives storage shed and the size and amount of food and commodity storage cans previously recorded at CA-SDI-16825, directly north of the project area.

Additional elements of Feature 1 include a steel mesh reinforced slab, burned wood fragments and the remains of animal pen fencing associated with Features 2 and 3, below. Household debris includes burned tableware, bottle fragments and a spoon littering the interior of the structure as well adjacent to it. The location of the privy was not discerned.

Feature 2 is a poured-in-place concrete water trough flush with the ground (Figure 16). The trough is rectangular shaped measuring 5 feet east-west by 4 feet north-south. The trough is filled with sediment, thus depth could not be readily determined. It is located approximately 45 feet northeast of the northeast corner of Feature 1.

Feature 3 is a wood pile, possibly representing a fallen animal pen (Figure 17). Materials include 2 by 4 inch framing material, 1 by 10 inch boards and remnants of hog wire. Feature 3 is located 55 feet east of Feature 1.

Feature 4 is the remnants of a hand-crafted wood-framed free-standing animal watering trough lined with galvanized sheet metal (Figure 18). Three concrete rubble piles are located in proximity to the trough. A solder-dot condensed milk can was also noted nearby. Feature 4 is located 115 feet east-northeast of Feature 1.

Feature 5 consists of the remains of a water tank (Figure 19). Elements include a 10 foot diameter slab poured atop a rock and mortar foundation, at least nine ½ inch-diameter bar-stock tank retainers with turn-buckle fasteners found adjacent to the foundation. It is located on the western edge of Feature 6 (see below) and approximately 375 feet east-northeast of Feature 1.

Figure 10 New and Updated Cultural Resources Located within the LanWest Project Area (See Confidential Appendix B)

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Figure 11 1928 Aerial Photograph of the LanWest Project Area



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Figure 12 Detail Map of Features Identified with Site CA-SDI-16824H (See Appendix B)

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Figure 13 Overview of Site CA-SDI-16824H Feature 1



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Figure 14 Close-Up of Department of Highway "C" Markers within Site CA-SDI-16824H Feature 1



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Figure 15 Close-Up of Chimney and Hearth within Site CA-SDI-16824H Feature 1



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Figure 16 Overview of Site CA-SDI-16824H Feature 2



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Figure 17 Overview of Site CA-SDI-16824H Feature 3



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Figure 18 Overview of Site CA-SDI-16824H Feature 4



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Figure 19 Overview of Site CA-SDI-16824H Feature 5



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Feature 6 is a cut/excavated/filled earthen reservoir with an inside diameter measuring approximately 100 feet and 15 feet deep at its maximum (Figure 20). It is located on a gentle south aspect slope, south of the prominent east-west dirt road and north of the drainage ditch (Feature 7). Feature 5 is located on the western rim of the reservoir.

Feature 7 is an earthen ditch feature running approximately 1400 feet east-west between the central dirt road on the north (see CA-SDI-20462) and the meadow to the south (Figure 21). Concrete rubble reinforces the southern edges in its western portion. The ditch is regularly shallow U-shaped across most of its length, measuring approximately 10 feet across and 2 to 3 feet deep.

The feature is bounded on the east by Fuquay Grove (outside the project area) and on the west by CA-SDI-16824H, the Fuquay house. Features 5 and 6 are located upslope to the north of the ditch. The ditch appears designed to intercept surface flow from natural drainages to the north. The ditch is intentionally dammed at several locations along its length, perhaps to allow the water to spill into the meadow.

CA-SDI-18921H

Site CA-SDI-18921H was first recorded with the temporary site number SRPL-SoRt-ROC-2-28-02-2 in February 2008 by Arcadis as part of the Sunrise Powerlink project. It was recorded as a “residential refuse dump circa 1950 [consisting of] mostly food cans, furniture springs, nail keg hoops, ceramic dishes, glass containers and drink ware.”

The current survey verifies the location and constituents, but differs in the temporal assignment of the majority of the deposit. The site is a moderate to high density historical refuse deposit located on a gentle slope on the south side of a dirt road (Figure 22). The irregularly shaped deposit measures approximately 210 feet northwest to southeast and 115 feet northeast to southwest (Figure 23). Several discrete and overlapping dumping episodes are clearly visible, though most appear to be from a relatively narrow time period, circa 1925 to 1935; minor later contamination was noted (Figure 24). The deposit may be associated with site CA-SDI-16824H, with one or both of the two general stores or the old Ruby residence located to the east. The three latter structures or their remains are located outside the project area.

Site constituents include a variety of cans (1000+), ceramic and glass fragments. Dishware includes white glaze earthenware rimmed with two fine green lines. A variety of dishware types in this pattern are present including cups, saucers, bowls, dishes and at least one platter. A maker’s mark “Buffalo China 1925” provides a temporal marker. Other ceramics include both improved and non-improved white glaze earthenware and crockery.

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Figure 20 Overview of Site CA-SDI-16824H Feature 6



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Figure 21 Overview of Site CA-SDI-16824H Feature 7



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Figure 22 Detail Map of Site CA-SDI-18921H (See Confidential Appendix B)

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Figure 23 Overview of Site CA-SDI-18921H



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Figure 24 Overview of a Concentration Area within Site CA-SDI-18921H



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Cans include Calumet baking powder, knife and rotary opened single- and multi-serve food cans, solder drop sealed condensed milk, rectangular hole-in-top meat cans, lard buckets, 5-gallon rectangular cans and key wind open sardine cans. Other metal objects include pie tins, bailing wire, barrel hoops, personal- and laundry-sized wash basins and corrugated metal.

Glass objects include pint and quart clear condiment containers, as well as hundreds of bottle fragments of clear, brown, amber, green, aqua, cobalt blue and sun tinted amethyst. Site integrity is good, though the lack of intact bottles indicates collecting has likely taken place.

CA-SDI-20461

The site consists of an irregularly shaped, low-density (~20 objects) historical refuse scatter measuring approximately 245 feet northwest to southeast by 120 feet northeast to southwest (Figure 25). The site is located almost entirely within APN 612-030-18, bordered on the south by an east-west fence line and on the north by a prominent drainage.

The site contains a variety of single and multi-serve cans opened with knife, p-38 and rotary methods, 2 ½ gallon rectangular cans with screw-top lids and soldered band handles, an oil can and a coil spring remnant of a car seat. Small amounts of glass (clear, amber, brown, aqua and sun-altered amethyst colors) and improved white glazed earthenware were observed. Embossed bottle bases include a Heinz catsup bottle and a possible condiment jar.

The site appears to date from between 1922 and 1943 based on two Heinz condiment bottles with base numbers: H. J. Heinz 1 213 H over A (Hazel Atlas) Pat ^D. Fragments of amethyst glass and improved white glaze earthenware were also noted.

CA-SDI-20462

Temporary site number CA-SDI-20462 is assigned to the old U.S. Army mail route and 1850 to 1860 stage route. The old road bisects the property near its center from east to west as illustrated on a portion of the 1872 Wheeler map of San Diego County and the County Assessor's 1955 "Old Roads" map provided by the SCIC (see Figure 4). The majority of the road is extant and visible on the 1941, 1959 and 1979 USGS topographic maps (see Figures 6, 7 and 8).

The road enters the project area from Fuquay Grove on the east and follows the well-established dirt road through the middle of the project area (Figure 26). The road forks with a segment turning south towards the Fuquay house site (CA-SDI-16824H, Feature

1). The north fork represents the old road and continues west. The remnants of the western 860 feet of the historic road can be seen in aerial photographs continuing to the west. Several close parallel paths are visible, but which is the historic road it is unclear. The old road leaves the project area on the western edge and continues outside the project area to the southwest where it intersects what is currently Old Highway 80. The road within the project area measures approximately 1,250 feet and varies in width between 8 and 10 feet.

Table 3 provides a summary of archaeological resources in the project area.

Table 3. Summary of Archaeological Resources in Project Area

CA-SDI-#	Description	Contents	Size
CA-SDI-16824H	circa 1930 ranch complex	house remains and ranch features	10,595 sq m
CA-SDI-18921H	circa 1930 refuse deposit	cans, ceramic and glass fragments	655 sq m
CA-SDI-20461	circa 1930 refuse scatter	cans, ceramic, glass	1769 sq m
CA-SDI-20462	circa 1850-1920 historic road	graded road	~1800 m

Figure 25 Detail Map of Site CA-SDI-20461 (See Confidential Appendix B)

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Figure 26 Detail Map of Site CA-SDI-20462 (See Confidential Appendix B)

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4.0 INTERPRETATION OF RESOURCE IMPORTANCE AND IMPACT IDENTIFICATION

4.1 Resource Importance

Research questions posed prior to undertaking field investigations focused on the identification of historic and prehistoric period sites, an estimation of their age and their context within the landscape. Given the absence of prehistoric era sites within the project area, discussion focuses on historic era research.

Historic period research similarly focuses on defining how the occupants of the region utilized this environ. Identified Historic Period resources are, where possible, traced through documentation to an individual or group. A survey-level recording of site constituents is correlated with socio-economic, ethnic and religious identities of the registered occupants to formulate further research questions applicable to evaluation studies.

Where feasible based on surface data, sites are considered for data potential from which importance recommendations will be made. Whether a resource is considered significant or not, recommendations for formal evaluation are provided. Additionally, all resources are considered important under County guidelines and examples of mitigation are provided.

Prehistoric Period Resources

No prehistoric period sites were identified within the project APE.

Historic Period Resources

The LanWest project area is dominated by historic era cultural resources. Preliminary research indicates the majority of the project area (APN 612-091-13) was owned and operated by Don and Vida Ruby between circa 1910 and 1931. Further research may extend the dates as it is known that the Rubys operated the general stores both along the old stage route and what would become U.S. Highway 80. The Ruby house was located north of the early general store and stage route to the east of the LanWest project area and west of McCain Valley Road. The parcel was transferred to the Fuquay family by 1969 and possibly earlier. Previous research conducted by Paul Chace and Associates in 1979 refers to the historic era structural remains (CA-SDI-16824H) as the Fuquay house. Additional research that includes a chain of title will clarify dates of ownership.

The research design and questions focus on defining behaviors through the analysis of artifacts and features. Presented below is a discussion of each of the identified historic era sites within the context of a behavioral analysis and each site's potential for addressing research questions. The ability (or potential) to answer research questions

through data analysis is the basis for determining site significance and eligibility for state and local historical resources registers.

For ease of reference, research questions are repeated below:

- (1) Can the archaeological data supplement the historical record to place the site in a local chronology?
- (2) Does the artifact assemblage reflect participation by the occupants in local, regional, and international commodities exchange?
- (3) Can the site contribute to an understanding of the regional land use or the local participants?
- (4) Can the collection provide insight into the kind of structures built at the site?
- (5) How do the artifacts contribute to ethnic, economic or other behavioral identities?

CA-SDI-16824H

Site CA-SDI-16824H consists of the remains of a circa 1935 house and associated ranch features (Figure 11). The house is associated with the Ruby and Fuquay families as property owners, but the name of the residents has not been established. The initials “RR” are embossed in the chimney tiles and may refer to one or more of the Ruby family members. Occupation of the structure by the Fuquay family is anecdotal at this time. Further research into the property history is required to verify this statement.

Current (survey) data have not yielded the location of the house privy or privies. While a septic tank and leach field may have been present during the later stages of occupation, it is likely that one or more privies were present on site in the early years. Additional research and exploration would be necessary to ascertain the location(s). Privies often contain data sets indicative of household consumption patterns.

It is likely that one or more of the refuse deposits located to the north of the complex is directly associated with the occupation of the residence. A water tank and cistern (LW-01) is located to the north of the structure and at the south end of a major refuse deposit (CA-SDI-16825). The cistern is etched with the same “RR” initials along with a date of April 16 1934. The cistern and the refuse deposit are likely associated and contemporary with the structure.

Based on research to date, it is likely that the CA-SDI-16824H site complex contains additional data potential. Integrity of the historic structure has obviously been

compromised by the demolition of the house and ancillary structures. However, the integrity of the archaeological remains has not been ascertained.

Specific to the research questions:

- (1) There is a high potential that archaeological data will supplement the historical record. Few, if any, investigations into Boulevard residences and residents have been documented.
- (2) Surface artifacts and features indicate participation in the local and regional economies.
- (3) Analysis of the house and ranch complex has the potential to contribute to a greater understanding of regional land use and quite possible the individual involved.
- (4) Sufficient archival and archaeological evidence remains to reconstruct to a large extent the kinds of structures present at the site.
- (5) There is an excellent potential for on-site and adjacent refuse deposits to be associated with individuals and families occupying the site during Boulevard's formative years.

Based on the above discussion, CA-SDI-16824H is considered potentially significant under CEQA and may be eligible for listing in the CRHR. The period of significance is circa 1930 to 1960.

It is unlikely that the site will meet the criteria for RPO significance. Formal evaluation is necessary to determine whether the site is a "One-of-a-kind, locally unique, or regionally unique cultural resource which contain a significant volume and range of data and materials" (County of San Diego 2007:4). All sites are considered "important" under County guidelines; potential impacts to site importance can be mitigated through formal significance evaluation, collection and curation of site materials, documentation, and grading monitoring.

CA-SDI-18921H

Site CA-SDI-18921H represents a historic residential household or possibly a commercial café deposit dating from between 1925 and 1935. The deposit retains its integrity; however, the absence of intact bottle specimens suggests that the site has been subject to illicit artifact collection. Multiple instances of diagnostic materials were identified among the glass, ceramic and metal assemblages.

Based on research to date, it is likely that site CA-SDI-18921H contains additional data potential and is therefore recommended as potentially significant. The period of significance (based on surface observations) is circa 1925 to 1935. It is unlikely that the site will meet the criteria for RPO significance. Formal evaluation is necessary to determine whether the site is a “One-of-a-kind, locally unique, or regionally unique cultural resource which contain a significant volume and range of data and materials” (County of San Diego 2007:4). All sites are considered “important” under County guidelines; potential impacts to site importance can be mitigated through formal significance evaluation, documentation, collection and curation of site materials and documentation, and construction monitoring.

Specific to the research questions:

- (1) There is a high potential that archaeological data will supplement the historical record. Few, if any, investigations into Boulevard residences, residents and their refuse have been documented. The deposit likely represents in some form the lifeways of the Ruby family and/or travelers along the old stage road or the pre-County and U.S. Highway 80 road.
- (2) Surface artifacts indicate participation in the local and regional economies. Further research may indicate broader (national and international) patterns of consumption.
- (3) Analysis of the refuse deposit has the potential to contribute to a greater understanding of regional land use and quite possibly the individual involved.
- (4) Little information potential to address structural remains is indicated. The site is dominated by materials indicative of household consumption.
- (5) There is an excellent potential for refuse deposits to be associated with individuals and families occupying the site during Boulevard’s formative years.

CA-SDI-20461

Site CA-SDI-20461 consists of a low density (0.01 artifacts per square meter) surface scatter of historic household and workshop refuse dating between 1922 and 1943 based on limited diagnostic materials. The site has a low potential to yield data such as temporally and functionally diagnostic materials in addition to that collected during survey and site recording.

Specific to the research questions:

- (1) There is a low potential that archaeological data will supplement the historical record. The deposit appears to be sparse and lacking temporally diagnostic materials.

- (2) Surface artifacts indicate participation in the local and regional economies. Given the lack of temporally diagnostic materials, further research is unlikely to yield indications of broader (national and international) patterns of consumption that can be associated with a specific time period.
- (3) Analysis of the refuse deposit has a low potential to contribute to a greater understanding of regional land use or the individuals involved.
- (4) The deposit has little information potential to address structural remains. The site is dominated by materials indicative of household and workshop consumption.
- (5) There is a low potential for the refuse scatter to be associated with individuals and families occupying the site during Boulevard's formative years.

Based on the above discussion, Site CA-SDI-20461 is not likely to be recommended eligible for either CRHR or local register listing of historical resources. It is unlikely to meet the criteria for RPO significance. All sites are considered "important" under County guidelines; potential impacts to site importance can be mitigated through formal significance evaluation, documentation, collection and curation of site materials and documentation, and construction monitoring.

CA-SDI-20462

The temporary site designation CA-SDI-20462 is assigned to the early historic mail and stage coach route through Boulevard (see Figure 4). The road led to San Diego in the west, while the junction to the east provided routes to either Jacumba or down Walker Canyon to habitations in the Colorado Desert and eastward to Yuma. Analysis of a series of historic and contemporary aerial images indicates the path of the road remains, for the most part, intact. The track of the historic road is well-established in the eastern portion of the project area. The western portion is less defined and may be one of several extant and abandoned road sections. It is likely further research will better define the route.

Approximately 1.7 miles of the old stage road remains intact to various degrees. The road is truncated on the east where it is overlain by Interstate 8 and to the west where it is overlain by Old Highway 80 and its predecessor. No further evidence of the old stage road is visible in the vicinity. The portion within the project area represents approximately 1/8th of the remaining road (0.22 miles; 1,250 feet). Of that portion, only the eastern 400 feet within the project area is clearly defined.

The old stage road provided a critical link between San Diego, inland San Diego County and locations to the east. It was used by the U.S. Army to deliver mail, by the Butterfield

and other stage operators, as well as early migrants and travelers to the region. That it appears to be a major portion of the extant remaining section increases its importance to the community and the region.

Integrity of the resource is difficult to ascertain. The road was and remains unimproved dirt. The degree of modification through periodic maintenance and subsequent use is unclear. Further analysis of maps and aerial imagery may provide additional data regarding integrity.

Specific to the research questions:

- (1) It is more the knowledge of the location of the road, than the actual feature that adds to the historical record. No associated artifacts, features or sites were identified within the project area.
- (2) The old stage road was integral to the growth of Boulevard. The first general store was located near the junction of the Jacumba and desert roads to San Diego. The road undoubtedly provided a route for goods to Boulevard and further east.
- (3) Knowing the route of the stage road contributes data necessary to build context for early Boulevard.
- (4) The road provides logistical insight into the location of structures on and adjacent to the project area.
- (5) The road contributes little or nothing to understanding ethnic, economic or other behavioral identities.

Based on the above discussion, the old stage road may fulfill CRHR Criterion A, and be recommended as historically significant:

- (A) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.

The period of significance is from circa 1850 (and possibly earlier) to 1920, when the road (in the Boulevard area) was replaced by what would eventually be designated U.S. Highway 80. Formal evaluation is necessary to confirm the statements above. Additionally, all sites are considered "important" under County guidelines; potential impacts to site importance can be mitigated through formal significance evaluation, documentation, collection and curation of site materials and documentation, and construction monitoring.

4.2 Impact Identification

Four archaeological sites have been identified within the project area. Two of these sites (CA-SDI-16824H and CA-SDI-18921H) were previously recorded. Two new sites were identified during the intensive field survey (CA-SDI-20461 and CA-SDI-20462). The County's Guidelines for Determining Significance indicate that any site that yields information or has the potential to yield information is considered a significant site.

All four sites (CA-SDI-16824H, CA-SDI-18921H, CA-SDI-20461 and CA-SDI-20462) must be formally evaluated to determine their historical significance pursuant to CEQA. A testing plan must be submitted to and approved by the County of San Diego prior to completing evaluations. In the event that evaluation indicates that any of the sites are significant, mitigation of potentially significant impacts must be proposed and implemented, including mitigation of impacts to the importance of all four sites under County guidelines.

Project-Specific Impacts

The design of the LanWest Solar Facility is not defined at present, and as such, no project specific impacts can be assessed. The project is evaluated at a programmatic level. Impacts will be analyzed based on a project design once determined, and mitigation will be incorporated should impacts be identified.

Cumulative Impacts

As with project-specific impacts, a cumulative impact analysis must wait until a formal project design for this parcel has been submitted.

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5.0 MANAGEMENT CONSIDERATIONS

Four historic era cultural resources, some with archaeological components, were recorded within the LanWest project area. None of these resources has been formally evaluated to determine their historical significance pursuant to CEQA or RPO. All are considered important resources under County guidelines. Other than avoidance of all impacts, no mitigation can be proposed without first formally evaluating all cultural resources within the LanWest project area to determine their historical significance and potential for RPO designation, as well as potential impacts. Prior to implementation of significance evaluations, an evaluation plan must be submitted to and approved by the County. Evaluation methods shall include historical archival research (i.e., chain of title searches, map and literature review, etc.) as well as archaeological test excavation, as appropriate and mitigation (data recovery, preservation, curation, temporary fencing, etc.), if required.

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 1996 Test Excavations at the Haidee Mine Complex and Site SL-562, Lemhi County, Idaho. Ogden, Utah: U.S. Forest Service
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 1966 *Ancient Hunters of the Far West* (Richard F. Pourade, editor). Union-Tribune Publishing Company/Copley Press, San Diego.
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 2005 An Archaeological Survey and Testing Program for the Grizzle Project. Submitted to John Grizzle Farming. Report on file at the South Coastal Information Center, San Diego State University.
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 1983 A Functional Classification for Artifacts From 19th and 20th Century Historical Sites. *North American Archaeology*. 2(3):251-261.

State of California (SHPO)

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Steward, Julian H.

- 1937 Ecological Aspects of Southwestern Society. *Anthropos* 32:85-104.
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Steward, Julian H. and F. M. Setzler

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Uhle, Max

- 1907 The Emeryville Shellmound. *University of California Publications in American Archaeology and Ethnology* 7:1-107.

Warren, C. N.

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Appendix A-1

**South Coastal Information Center Archaeological Records Search
(Confidential)**

Appendix B-1
Archaeological Site Maps
(Confidential)

Appendix B-2

**Department of Parks and Recreation (DPR) Form 523:
New and Updated Forms (Confidential)**

Appendix C-1

Resume of the Principal Investigators



BRIAN K. GLENN, M.A., RPA
PRESIDENT / PRINCIPAL INVESTIGATOR

SUMMARY OF QUALIFICATIONS

Mr. Glenn has over 25 years of experience in archaeology. His responsibilities have included: project management and coordination of schedules, managing and leading archaeological projects, analysis of flaked stone and groundstone assemblages, marine fauna (fish and shellfish), and the preparation of technical reports (assessment, evaluation and mitigation), cultural resource management plans and EIR/EIS sections.

Mr. Glenn has worked on numerous projects throughout southern California from San Luis Obispo to San Diego County in compliance with the California Environmental Quality Act (CEQA) and Section 106 of the National Historic Preservation Act (NHPA). His professional foci concern southern California's San Dieguito and Campbell Traditions (circa 10,000 to 5000 BCE), biface typology, the analysis of fish and shellfish remains, and the graphic display of data with emphases in exploratory data analyses, geographical information systems (GIS) and computer aided drafting (CAD).

Mr. Glenn received B.A. degrees in Anthropology and Geography from the University of California, Santa Barbara in 1986 and his M.A. in Archaeology from the University of California, Los Angeles in 1991. He has been certified on the Register of Professional Archaeologists (RPA) since 1992 and awarded a certificate in Geographic Information Systems from San Diego Mesa College in 2010.

PROFESSIONAL REGISTRATIONS/AFFILIATIONS/CLEARANCE

Register of Professional Archaeologists (RPA)
Geographic Information Systems Specialist
Geodatabase Development Certificate of Performance
Society for American Archaeology
Society for California Archaeology
San Diego County Archaeological Society (President 1999)
Bureau of Land Management
Various County and City Consultant Lists

TECHNICAL TRAINING

Geographic Information Systems Certificate with emphasis on ArcGIS Geodatabase Development.
San Diego Mesa College 2010.

Working with CEQA: Practical Advice for Compliance with the California Environmental Quality Act.
Presented by Dana McGowan and Brian Ramos, SCA Annual Meeting, 2006

Introduction to Federal Projects and Historic Preservation Law
U.S. General Services Administration Interagency Training Center, April 1994.

OSHA Hazardous Waste Operations and Emergency Response Training Program, 1995

TECHNICAL TRAINING cont.

Advanced Training in Remote Sensing and Photographic Interpretation.
Department of Geography, University of California, Los Angeles, 1990.

Low Altitude Large Scale Aerial Reconnaissance for Cultural Resource Managers
National Park Service, San Juan College, Farmington, New Mexico, 1996.

Crabtree Flintknapping Field School
Dr. Jeffrey Flenniken, Director, Stanley, Idaho 1988.

PAPERS & PUBLICATIONS

Glenn, Brian K. 2010 A San Diego Museum of Man Geodatabase. Paper presented at the San Diego Museum of Man, June.

Glenn, Brian K. 2009 Spatial Analysis of a San Dieguito Site, CA-SDI-14592, Carlsbad, California. Paper presented at the Mesa College GIS Symposium, December.

Glenn, Brian K. 2001 Recent Excavations at CA-SBA-42, Santa Barbara County, California. Paper presented at the San Diego County Archaeological Society, May.

Glenn, Brian K. 1998 *A Possible Location for the Californios' Campsite following the Battle of San Pasqual*. Paper presented at the 32nd annual meeting of the Society for California Archaeology, San Diego, California, April.

Glenn, Brian K. 1996 Fish Exploitation at Several Sites near Gaviota, Santa Barbara County, California: An Alternative Analytical Method. *Proceedings of the Society for California Archaeology*, 9(255-272) Eureka, California 1995.

Ross, Lester & Brian K. Glenn. 1991. *Using AutoCAD: Mapping Archaeological and Historical Cultural Resources Information at the UCLA and San Bernardino County Archaeological Information Centers*. Paper presented at the 25th annual meeting of the Society for California Archaeology, Sacramento, California, March.

Glenn, Brian K. 1991 *Typological Analysis of Projectile Points Recovered from Excavations on Vandenberg Air Force Base, Santa Barbara County, California*. Unpublished Master's paper on file with the Archaeology Program, University of California, Los Angeles.

Glenn, Brian K. 1990 *A Study in the Suitability of Aerial Photography in the Identification and Analysis of Prehistoric Hunter-Gatherer Sites: A Test Case within the Area of the Goleta Slough, Santa Barbara County, California*. Manuscript on file with the author.

Glenn, Brian, Natalie Anikouchine, and Philip Walker. 1988. *Exploitation of Faunal Resources at SBA-46 (Helo)*. Paper presented at the 53rd annual meeting of the Society for American Archaeology, Phoenix, Arizona, April.

PROFESSIONAL EXPERIENCE

2010-2011 **LA Plaza de Cultura y Artes.** Mr. Glenn directed excavations of a portion of the 1822-1844 La Placita Cemetery subject to impacts from the project. Excavations were conducted with the oversight and assistance of Cal State Los Angeles osteologists and the LA County Coroner's Office.

2010-2011 **Balboa Park Energy Efficiency Grant Management.** Mr. Glenn coauthored and managed \$2 million in approved American Recovery and Reinvestment Act Energy Efficiency Conservation Block Grants for 15 Balboa Park Institutions and the City San Diego.

2010 **Solar Alternative Site Study.** Mr. Glenn conducted a records search with the South Coastal Information Center for 3 alternative solar energy locations on BLM land in western Imperial County to assess the presence of previously identified cultural resources and concomitant development constraints.

2010 **Tonner Canyon Fuel Reduction Assessment: Pioneer Canyon Survey.** Mr. Glenn conducted a reconnaissance survey of Pioneer Canyon. Historic era ranch facilities were identified, recorded, mapped and reported to the Los Angeles County Fire Department so that impacts could be avoided.

2009-2010 **San Luis Rey River Trail.** Mr. Glenn managed monitoring of a 1-mile section of the San Luis Rey River Trail Extension project for the City of Oceanside. The project included daily monitoring of earth disturbing activities and formal recordation of elements of a prehistoric milling site, CA-SDI-1266.

2009 **First Solar Energy Blythe #1.** Mr. Glenn supervised construction monitoring of the 200-acre solar project in Blythe, CA and prepared the Phase IV report for the County of Riverside. A single historic era dump site was located, recorded and reported.

2008-2009 **Sterling Energy Solar 2 Project, Imperial County, CA.** Cultural Resources Group Leader for the archaeological recording phase of a 1,750-acre BLM parcel omitted from the proposed project area due to site density and preservation requirements near Plaster City, CA in support of the preparation of an Application for Certification.

2009 **Summit Drive Cultural Resources Assessment.** Mr. Glenn supervised cultural resources assessment of and reporting on a 5-acre parcel in and around a proposed road improvement project adjacent to the City of Escondido for the County of San Diego.

2009 **Viejas Bridge Replacement Project.** Mr. Glenn supervised construction monitoring of earth disturbing activities associated with the replacement of the historic bridge on Viejas Blvd., Descanso area, San Diego County for the County of San Diego and Caltrans.

2009 **Tonner Canyon Fuel Reduction Assessment.** Mr. Glenn summarized records search data obtained from the South Central Coastal Information Center for the proposed Los Angeles County Fire Department fuel reduction program.

2008 **Calnev Expansion Project, San Bernardino County, CA.** Mr. Glenn managed the 186-mile California segment of the BLM Class I records search, Class III cultural resources inventory and paleontological survey for the proposed Colton, CA to Las Vegas, NV petroleum pipeline project

including archaeology, architectural history and paleontology. BLM was Lead Agency on the project that included BLM, DOD, San Bernardino National Forest and County of San Bernardino lands.

2008 **Carson Cogeneration Plant Expansion, CEC, CEC, Los Angeles CA.** Served as archaeology lead for cultural resources assessment for a cogeneration plant expansion: performed fieldwork and co-authored Cultural Resources AFC section and technical reports.

2008 **Starwood Power Project Siting Study, Fresno County, CA.** Cultural Resources Group Leader for the fatal flaw analysis for a proposed project area.

2008 **Starwood-Midway Power Project, Fresno County, CA.** Cultural Resources Group Leader during archaeological and paleontological construction monitoring including preparation of a Cultural Resources Mitigation & Monitoring Plan (CRMMP) and a Worker Environmental Awareness Program (WEAP).

2008 **San Joaquin Solar 1 & 2 AFC, Fresno County, CA.** Cultural Resources Group Leader for a multidisciplinary analysis of a 640 acre solar hybrid power station project located near Coalinga, CA in support of the preparation of an Application for Certification.

2008 **Sterling Energy Solar 1 Project, San Bernardino County, CA.** Cultural Resources Group Leader for a multidisciplinary analysis of an 8,500 acre solar power station project located near Barstow, CA in support of the preparation of an Application for Certification.

2008 **BP Co-generator Project, Carson, Los Angeles County, CA.** Cultural Resources Group Leader for a multidisciplinary cultural resources analysis of a power station located in Carson, CA in support of the preparation of an Application for Certification

2008 **Ausra CESF, San Luis Obispo County, CA.** Archaeological project support during AFC data request submissions, public hearings and alternative analysis.

2007 **Hayes Avenue Well Project, City of Murrieta, CA.** Conducted a Phase I cultural resources assessment of a 1-acre project area and 3,000-foot pipeline corridor in the City of Murrieta that included historic archives review, pedestrian survey and paleontological literature review for RBF Consulting.

2007 **MWD of Southern California Potholing Project, Riverside County, CA.** Conducted a pedestrian survey of six proposed potholing locations directly adjacent to the Colorado River Aqueduct for the Metropolitan Water District of Southern California.

2007 **Creekside Due Diligence Project, City of Perris, CA.** Conducted a historic archives review and paleontological literature review, and Native American Heritage Commission consultation for Laing-Sequoia, LLC.

2007 **Arbor Ridge, City of Beaumont, CA.** Conducted a Phase I cultural resources assessment of a 1,200-acre project area in Beaumont, Riverside County that included historic archives review, pedestrian survey and paleontological literature review for SunCal Development/City of Beaumont.

2007 **Unique Home Center, City of San Jacinto, CA.** Conducted a Phase I cultural resources assessment of a 20,000-square foot project area in San Jacinto, Riverside County that included historic archives review, pedestrian survey and paleontological literature review for Unique Home Center.

2007 **The Lakes Specific Plan Area, San Bernardino County, CA.** Conducted a Phase I cultural resources assessment of a 360-acre project area in the City of Ontario, San Bernardino County that included historic archives review, pedestrian survey and paleontological literature review for RBF Consulting.

2007 **Corydon St. Blending Project., City of Lake Elsinore.** Conducted a Phase I cultural resources assessment of a 1,800 foot water replacement line corridor in the City of Lake Elsinore which included historic archives review, pedestrian survey and paleontological literature review for Carollo Engineers.

2007 **Wyndham Hotel SB 18 Consultation, City of Costa Mesa, CA.** Prepared and distributed consultation request letters to Native American groups on behalf of the City of Costa Mesa in compliance with SB 18 requirements for government-to-government consultation.

2007 **Bonita Canyon Trail Project, City of Irvine, CA.** Prepared a cultural resources assessment report for the 4,600-foot project corridor for RBF Consulting.

2007 **Oso Creek Barrier Project, City of Santa Margarita, CA.** Prepared a existing conditions report based on archival research with the archaeological and paleontological clearing houses for Santa Margarita Water District.

2007 **Jefferson Commons, Fullerton, CA.** Conducted a cultural resources assessment and SB 18 consultation of a proposed residential expansion project for the University of California, Fullerton for the City of Fullerton.

2007 **Talbert Lake Restoration Project, Huntington Beach, CA.** Conducted a cultural resources assessment of the proposed restoration project area of potential effects in compliance with Section 106 and CEQA for submission to the U.S. Army Corps of Engineers for PACE.

2007 **Summit Crest, Lake Forest, CA.** Conducted an archaeological and paleontological cultural resources assessment and construction monitoring of the project area for Atherton-Newport Real Estate Investments.

2007 **Hoag Hospital SB 18 Consultation, City of Newport Beach, CA.** Prepared and distributed consultation request letters to Native American groups on behalf of the City of Newport Beach in compliance with SB 18 requirements for government-to-government consultation for City of Newport Beach.

2007 **O'Neill Regional Park Cultural Resources Monitoring, County of Orange, CA.** Conducted cultural resources construction monitoring as part of a sewer conversion project for County of Orange.

2007 **Los Alamitos Retarding Station, Cities of Seal Beach and Long Beach, CA.** Prepared a cultural resources management plan for the installation of a replacement pump assembly adjacent to the San Gabriel River in the Cities of Seal Beach and Long Beach for the County of Orange.

2007 **Jamboree Avenue Pedestrian Crossing, City of Irvine, CA.** Prepared a cultural resources assessment report for the proposed pedestrian over-crossing for submission to Caltrans for RBF Consulting.

2007 **Orange Avenue PEAR, City of Orange, CA.** BonTerra Consulting prepared a cultural resources assessment report in support of the Caltrans Preliminary Environmental Assessment Report for WGZE.

2007 **Piccadilly Place Sound Wall, City of Fullerton, CA.** BonTerra Consulting prepared the cultural resources element of the Preliminary Environmental Assessment Report prior to sound wall installation at the Interstate 5/State Route 91 interchange, for submission to Caltrans for Washington Infrastructure.

2007 **Cordoba Village Development, Gorman, CA.** Supervised a Phase I cultural resources assessment of a 1,000-acre project area in Gorman, Los Angeles County that included historic archives review, pedestrian survey and paleontological literature review for Seminet Automation.

2007 **The Sherwin, Town of Mammoth Lakes, CA.** Conducted a review of a Phase I cultural resources assessment report on behalf of the Town of Mammoth Lakes, Mono County for the proposed 5.3-acre development project for RBF Consulting.

2007 **Park-Nevada Project, Redlands, CA.** Conducted a Phase I cultural resources assessment of a 5-acre project area in Redlands, San Bernardino County that included historic archives review, pedestrian survey and paleontological literature review for VenturePoint, Inc.

2006 **Walker Canyon, County of Riverside, CA.** Conducted a due diligence constraints analysis of existing conditions for the proposed development project within the County of Riverside, north of Lake Elsinore. The study included archival research and a preliminary site inspection for SunCal Development.

2006 **Capistrano Bluffs Sewer Line Project, City of Dana Point, CA.** Prepared a cultural resources assessment of a 675-foot section of proposed sewer replacement for RBF Consulting.

2006 **Parc Anaheim Specific Plan, City of Anaheim, CA.** BonTerra Consulting prepared a cultural resources assessment report in support of an environmental impact report for a proposed multi-purpose residential/commercial project for the City of Anaheim.

2006 **World Citrus Parking Structure.** Managed preparation of the Section 106 and CEQA compliance reports for submission to Caltrans for the City of Fullerton.

2006 **I-105 Dewatering Project, City of Carson, CA.** Prepared an archaeological survey report and historic properties survey report in compliance with Section 106 of the National Historic Preservation Act for Carollo Engineering.

2006 **Scully Adobe, County of Orange, CA.** Managed National Register evaluation excavations of a middle- to late-19th Century adobe within the State Route 90 right-of-way for Caltrans.

2006 **Cabot-Camino Capistrano Overpass Project, Mission Viejo, CA.** Prepared an Archaeological Survey Report and Historic Properties Survey Report for submission to Caltrans for RBF Consulting.

2006 **Aliso Creek Restoration Project, City of Lake Forest, CA.** Conducted a cultural resources assessment of the project area in compliance with Section 106 for submission to the U.S. Army Corps of Engineers for RBF Consulting.

2006 **Clearwater Specific Plan, Town of Mammoth Lakes, CA.** Conducted a historic archives review and SB 18 consultation on behalf of the Town of Mammoth Lakes, Mono County for the proposed 5.7-acre development project for RBF Consulting.

2006 **Pacific Electric Inland Empire Bike Trail.** Compiled previously gathered archival and survey data, and conducted additional research and survey for the preparation of a Caltrans Archaeological Survey Report (ASR) for Parsons and the City of Fontana.

2006 **Studebaker Road Caltrans Preliminary Environmental Study (PES).** Compiled background environmental documentation with regard a street rehabilitation and storm drain installation over a one-mile segment of Studebaker Road in the City of Norwalk for KFM Engineering and City of Norwalk.

2006 **Class III: UNAVCO Seismic Sensor Project Cultural Resource Assessment.** Class III cultural resource assessment of four 1-acre sensor locations for the UNAVCO Project, Imperial County, California conducted for the Bureau of Land Management, El Centro District.

2006 **Canyon County Project Cultural Resource Assessment.** Class III cultural resource assessment of the Edd's Mini-Storage Intrusion Project, County of Los Angeles, California conducted for the Bureau of Land Management.

2006 **Sun City Medical Center.** BonTerra Consulting conducted a Phase I cultural resources assessment of an 8.25-acre project area in Sun City that included historic archives review, pedestrian survey and paleontological literature review for RBF Consulting.

2006 **Central & Dexter.** Conducted a Phase I cultural resources assessment of a 4.27-acre project area in the City of Lake Elsinore that included historic archives review, pedestrian survey and paleontological literature review for Southland Development.

2006 **Jacaranda Park, Sun City, CA.** Conducted a Phase I cultural resources assessment of a 12.54-acre project area in Sun City that included historic archives review, pedestrian survey and paleontological literature review for Signature Capital.

2006 **Lake Nuevo Village.** Represented the client in consultation with the Native American community and the County of Riverside with regard to cultural resources within the project area for Laing-Sequoia, LLC.

2006 **Murrieta 320.** Conducted a Phase I cultural resources assessment of a 320-acre project area in the City of Murrieta that included historic archives review, pedestrian survey and paleontological literature review for RBF Consulting.

2006 **Canyon Hills Estates.** Conducted a Phase I cultural resources assessment of a 245-acre project area in the City of Lake Elsinore that included historic archives review, pedestrian survey and paleontological literature review for Trumark Companies.

2006 **Quail Valley Project Cultural Resource Assessment.** Class III cultural resource assessment of the Long Quail Valley Water Supply Tie-Line Replacement Improvement Project, County of Riverside, California conducted for Fiesta Development and the Bureau of Land Management.

2006 **Banning 223 Project.** Mr. Glenn conducted a Phase I cultural resources assessment of a 223-acre project area in the City of Banning which included historic archives review, pedestrian survey and paleontological literature review for Laing-Sequoia, LLC.

2006 **Los Alamitos Pump Station Project.** Mr. Glenn conducted a Phase I cultural resources assessment of a 0.6-acre expansion of the project area in the City of Long Beach which included historic archives review, pedestrian survey and paleontological literature review for RBF Consulting.

2006 **Amerige Court Project.** Mr. Glenn conducted a Phase I cultural resources assessment of a 4-acre project area in the City of Fullerton which included historic archives review, pedestrian survey and paleontological literature review for Pelican, LLC.

2006 **Casa la Quinta Project.** Mr. Glenn managed archaeological and paleontological monitoring during initial grading of the 2-acre property. Paleontological monitoring was conducted through Paleo Environmental for Borrego Resorts, LLC.

2006 **SR-74 / Interstate 215 Interchange Project.** Mr. Glenn conducted a Phase I cultural resources assessment of a 115-acre interchange project area in the City of Perris which included historic archives review, pedestrian survey and paleontological literature review for David Evans Associates.

2006 **Highland Reservoir Project.** Mr. Glenn conducted a Phase I cultural resources assessment of an 8.76-acre reservoir property in the City of Yorba Linda which included historic archives review and architectural evaluation, pedestrian survey and paleontological literature review for Carollo Engineers.

2006 **Joy Ave Blending Project.** Mr. Glenn conducted a Phase I cultural resources assessment of a 1.2-mile water replacement line corridor in the City of Lake Elsinore which included historic archives review, pedestrian survey and paleontological literature review for Carollo Engineers.

2005 **McCanna Hills Outfall Project, City of Perris, Riverside County.** Mr. Glenn conducted a Phase I cultural resources assessment of the property which included historic archives review, pedestrian survey, paleontological literature review, and Native American consultation for Laing-Sequoia, LLC.

2005 **Cordero Development Project.** Mr. Glenn conducted a Phase I cultural resources assessment of the property which included historic archives review, pedestrian survey, and paleontological literature review for RBF Consulting.

2005 – 2006 **State Route 111 Widening Project, La Quinta.** Mr. Glenn supervised preparation of Caltrans-approved cultural resources documents which included a Historical Resource Compliance Report and an Archaeological Survey Report which included historic archives review, pedestrian survey, and Native American consultation for RBF Consulting.

2005 **Monitoring of the Canyon Park, Canyon Drive, Costa Mesa.** Mr. Glenn managed archaeological and paleontological monitoring during initial grading of the 2.3-acre property. Paleontological finds were identified and reported through Paleo Solutions for United Pacific Development.

2005 **Santiago Creek Bike Trail, City of Orange.** Mr. Glenn prepared Caltrans cultural resources documents which included a Historic Properties Survey Report, bridge study, and an Archaeological Survey Report which included historic archives review, pedestrian survey, Native American consultation, and paleontological literature review for KFM Engineering.

2005 – 2006 **Cultural Resource Assessment of Four Parcels in the Community of Pala, San Diego County.** Mr. Glenn conducted a Phase I cultural resources assessment of the four parcels, totaling approximately 400 acres, which included historic archives review, pedestrian survey, site recording, and Native American consultation for Stetson Engineering.

2005 – 2006 **Cultural Resource Assessment of a Proposed Fire Station Location in the Community of Pala, San Diego County.** Mr. Glenn conducted a Phase I cultural resources assessment of the one parcel, totaling approximately ten acres, which included historic archives review, pedestrian survey, and Native American consultation for Stetson Engineering.

2005 – 2006 **Hansen Dam Recreation Area Universally Accessible Playground, City of Los Angeles.** Mr. Glenn provided cultural resources monitoring during earth disturbance as required of the City of Los Angeles by the U.S. Army Corps of Engineers (USACE). Construction activities monitored included grading, trenching, and excavation. A letter report summarized the City's compliance with USACE requirements for City of Los Angeles, Department of Public Works.

2005 **Cultural Resource Assessment of TR 31596, a 14.8-acre Parcel in the Community of Pedley, Riverside County.** Mr. Glenn conducted a Phase I cultural resources assessment of the property which included historic archives review, pedestrian survey, site recording, and paleontological literature review for Bluefield Development.

2005 – 2006 **Interstate 15/215 Improvements Project, Cities of Temecula and Murrieta.** Mr. Glenn managed all aspects of the Caltrans cultural resources inventory and reporting process in the French Valley area of Riverside County for Moffat Nichols.

2005 **Aliso Canyon Sewer Line Project, Granada Hills, City of Los Angeles.** Mr. Glenn managed archaeological and paleontological monitoring of excavation and boring within sensitive resource areas in compliance with City of Los Angeles mandates for Khov Development.

2005 – 2006 **Black Bench Specific Plan, City of Banning, Riverside County.** Mr. Glenn conducted a Phase I cultural resources assessment of the property which included historic archives review, pedestrian survey, Native American consultation, and paleontological literature review for SunCal Companies.

2005 **South Pointe West Specific Plan, City of Diamond Bar, Los Angeles County.** Mr. Glenn managed paleontological review of City-mandated monitoring requirements subsequent to landslide and landslide mitigation for JCC Homes.

2005 – 2006 **McCanna Hills, Village 5 Specific Plan, City of Perris, Riverside County.** Mr. Glenn compiled an existing conditions report for cultural resources within the project area, managed site evaluation, and provided Native American consultation & coordination for Laing-Sequoia, LLC.

2005 **Interstate 10/Monterey Avenue Interchange Improvement Project, Thousand Palms, Riverside County.** Mr. Glenn prepared Caltrans cultural resources documents which included a Historic Properties Survey Report, bridge study, and an Archaeological Survey Report which included historic archives review, pedestrian survey, Native American consultation, and paleontological literature review for RBF Consulting.

2005 **Las Posas Transmission Main Project, Ventura County.** Mr. Glenn supervised a Phase I cultural resources assessment of the 3-mile pipeline alignment which included historic archives review, pedestrian survey, and paleontological literature review for RBF Consulting.

2005 **State Route 73/Jamboree Avenue Bridge Improvement Project.** Mr. Glenn prepared Caltrans-approved cultural resources documents which included a Historical Resource Compliance Report, bridge study, and an Archaeological Survey Report which included historic archives review, pedestrian survey, Native American consultation, and paleontological literature review for RBF Consulting.

2005 **54th Street and Arlington Sewer Replacement Project, City of Los Angeles.** Mr. Glenn provided cultural resources monitoring during earth disturbance in association with sewer line replacement in south Los Angeles. Monitoring resulted in the discovery and documentation of a portion of the Los Angeles Redline tracks. A letter report summarized compliance with the City's requirements for Vasilj Construction.

2005 **Interstate 215/State Route 74 Interchange Improvement Project, City of Perris, Riverside County.** Mr. Glenn prepared Caltrans cultural resources documents which included a Historic Properties Survey Report, bridge study, and an Archaeological Survey Report which included historic archives review, pedestrian survey, Native American consultation, and paleontological literature review for DEA Engineering.

2005 **State Route 57 Widening Project, northern Orange County.** Mr. Glenn prepared Caltrans cultural resources documents which included a Historic Properties Survey Report, bridge study, and an Archaeological Survey Report which included historic archives review, pedestrian survey, Native American consultation, and paleontological literature review for RBF Consulting.

2005 **Canyon Park Development Project, City of Costa Mesa, Orange County.** Mr. Glenn managed archaeological and paleontological monitoring of grading and excavation within sensitive resource areas in compliance with City of Costa Mesa mandates for Pacific Rim Builders.

2005 **Lewis Retail Project Cultural Resource Assessment.** Phase I cultural resource assessment of an 9 acres, Lewis Retail project, French Valley area, County of Riverside, California for Rincon Consultants

2005 **Estrella Subdivision Cultural Resource Assessment.** Phase I cultural resource assessment of an ~150 acres, Estrella Subdivision (Parcel 6), Calexico, Imperial County, California for HDR.

2005 **Esmeralda Estates Cultural Resource Assessment.** Phase I cultural resource assessment of an ~90 acres, Esmeralda Estates (Parcel 3), Calexico, Imperial County, California for HDR.

2005 **Ashley Menifee North Cultural Resource Assessment.** Phase I cultural resource assessment of a 19 acre parcel, Community of Menifee, Riverside County, CA for Rincon Consultants.

2005 **Mesa Linda Street and Sunset Road Cultural Resource Assessment.** Phase I cultural resource assessment of 11.8 acres, Mesa Linda Street and Sunset Road, Victorville, County of San Bernardino, California for Rincon Consultants.

2005 **Berger Existing Conditions Report.** Conducted a cultural resources existing conditions review and report for ~300 acres within the Berger Project Area near Mecca, County of Riverside, California for Rincon Consultants.

2005 **Ashley Place Cultural Resource Assessment.** Phase I cultural resource assessment of an 18.4 acre parcel, Community of Menifee, Riverside County, CA for Rincon Consultants.

2005 **SoCal Gas Line 225 Overburden Removal and Pipeline Assessment.** Conducted USFS Angeles Forest mandated monitoring of the Southern California Gas Company Line 225 Overburden Removal Project, Los Angeles County, CA for Sempra Energy, H.E.A.R.T. and Rincon Consultants.

2005 **Cultural Resource Monitoring for a Portion of the Old Ridge Route.** Conducted USFS Angeles Forest mandated monitoring of the Southern California Gas Company Line 85 Temporary Relocation Project, Los Angeles County, CA for Sempra Energy, H.E.A.R.T. and Rincon Consultants.

2005 **Site Recording of a Segment of the *Zanja Madre*.** Exposure and recording of a portion of the original City of Los Angeles water supply pipeline *Zanja Madre*, adjacent to the Cornfield State Park, City of Los Angeles, CA for Cogstone Resource Management and Los Angeles Metropolitan Transit Authority.

2005 **Central Park Redevelopment Project.** Project Manager for archaeological and paleontological monitoring of the Central Park Redevelopment Project, City of Irvine, Orange County, CA for Cogstone Resource Management and Lennar Communities.

2005 **Vila Borba Site Relocation and Evaluation.** Archaeological survey, relocation and evaluation of previously identified sites within the proposed Vila Borba Development Project, City of Chino Hills, Orange County, CA for Cogstone Resource Management and The Planning Center.

2005 **Holland Road Assessment Project.** Cultural resource assessment and due diligence report of ~15 acres adjacent to Interstate 215, Menifee, Riverside County, CA for Rincon Consultants.

2005 **Tustin Villas Cultural Resources Monitoring Report.** Archaeological and paleontological monitoring report for the redevelopment of a portion of USMC Tustin Air Station, Tustin, Orange County, CA for Cogstone Resource Management and Lennar Communities.

2005 **Moffett Meadows Cultural Resources Monitoring Report.** Archaeological and paleontological monitoring report for the redevelopment of a portion of USMC Tustin Air Station, Tustin, Orange County, CA for Cogstone Resource Management and Lennar Communities.

2005 **Live Oaks and Mountain Shadows Assessment Project.** Archaeological and paleontological resource assessment of access roads and soils boring locations within two proposed development project areas, Orange County, CA for Cogstone Resource Management and PCR Environmental.

2005 **Murietta 20 Assessment Project.** Archaeological and paleontological resource assessment of a 20-acre parcel near Murrieta, Riverside County, CA for Cogstone Resource Management.

2005 **Quail Valley Archaeological and Paleontological Assessment and Mitigation Plan.** Assessment report and mitigation plan for a proposed 440 housing development project directly west of Palmdale, Los Angeles County, CA for Cogstone Resource Management and Palmdale 1000 Associates.

2005 **Additional Mitigation Guidelines for CA-RIV-6904.** County of Riverside, Department of Transportation mandated additional data recovery trenching program at CA-RIV-6904 in cooperation with the Pechanga Band of Luiseño Mission Indians.

2005 **San Lawrence Terrace Cultural Resource Assessment.** Archaeological and paleontological assessment of the 55-acre residential subdivision project in San Miguel, San Luis Obispo County, CA for Cogstone Resource Management and Kirk Consulting.

2005 **Santa Ysabel Ranch, Construction Phase 2, Cultural Resource Monitoring Report.** Archaeological and paleontological monitoring report for the 200-acre construction phase 2 of the Santa Ysabel Ranch development project, Paso Robles, San Luis Obispo County, CA for Cogstone Resource Management and Weyrich Development.

2005 **Santa Ysabel Ranch, The Lake Construction Phase, Cultural Resource Monitoring Report.** Archaeological and paleontological monitoring report for the 10-acre "The Lake" construction phase of the Santa Ysabel Ranch development project, Paso Robles, San Luis Obispo County, CA for Cogstone Resource Management and Weyrich Development.

2005 **Data Recovery Research Design for CA-SLO-2077, The Hot Springs Site.** Editing and expansion of a previously developed data recovery research design for the Hot Springs Site (CA-SLO-2077) within the Santa Ysabel Ranch project area, Paso Robles, San Luis Obispo County, CA for Cogstone Resource Management and Weyrich Development.

2005 **Fox Studios Cultural Resource Mitigation Management Plan.** Preparation of a cultural resource management plan for archaeological and paleontological monitoring as required by the City of Los Angeles for Cogstone Resources Management and Fox Studios.

2004 **Soledad Canyon Road Archaeological Reconnaissance Report.** Cultural resource survey and assessment for proposed Caltrans road maintenance and upgrade within the USFS Angeles National Forest, Los Angeles County, CA for Cogstone Resource Management and URS Corporation.

2004 **Shin-yo Lin Cultural Resource Monitoring Report.** Archaeological and paleontological monitoring report for the redevelopment of the Shin-yo Lin Temple Complex, City of Chino Hills, Orange County, CA. for Cogstone Resource Management.

2004 **Aliso Canyon Bridge Replacement Archaeological Reconnaissance Report.** Archaeological assessment of the emergency bridge replacement project, Acton area, Los Angeles County, CA for Cogstone Resource Management, Los Angeles County Department of Public Works and USFS Angeles National Forest.

2004 **Los Angeles Metropolitan Transit Authority Cultural Resource Mitigation and Monitoring Plan, MTA Goldline Project.** Preparation of a cultural resource management plan for archaeological and paleontological monitoring for the East Los Angeles Goldline Light-rail Project as required by the Los Angeles MTA and Federal Transportation Authority for Cogstone Resources Management and Ultrasystems.

2004 **MTA Cultural Resources Sensitivity Training.** Preparation and presentation of Power Point-based cultural resources sensitivity training sessions to MTA and Contractor Project and Field Managers for the Los Angeles Metropolitan Transit Authority for Cogstone Resources Management and Ultrasystems.

2003-2004 **Archaeological Monitoring, Marine Corps Base, Camp Pendleton.** Conducting EA-required archaeological monitoring of earthmoving operations associated with construction of an Iron/Manganese Water Treatment Facility on U. S. Marine Corps Base, Camp Pendleton, San Diego Co., CA for RQ Construction.

2004 **Vaughn Property Subdivision.** Cultural resource assessment reconnaissance survey and report for a proposed 80-acre subdivision, Campo area, San Diego County, CA for County of San Diego, Department of Planning and Land Use.

2004 **Bolsa Chica Wetlands Line 1228 Relocation Project.** Cultural and paleontological resources monitoring of a Sempra Energy pipeline relocation project, Bolsa Chica, Huntington Beach, Orange County, CA for Rincon Consultants and Sempra Energy.

2004 **Harman Property Subdivision.** Cultural resources assessment reconnaissance survey and report for a proposed 198-acre subdivision, Ramona area, San Diego County, CA for Ecological Ventures California and County of San Diego, Department of Planning and Land Use.

2004 **Walker Street Commercial Development Project.** Cultural resources assessment and monitoring of the 5-acre commercial development project, City of La Verne, San Bernardino County, CA for URS Corporation and WF Construction.

2004 **Big Tujunga Dam Pre-disaster Mitigation Cultural Resource Assessment.** Section 106 assessment report for the Big Tujunga Dam retrofit project, Los Angeles County, CA for URS Corporation and the Federal Emergency Management Administration (FEMA).

2004 **Ontario Airport Redevelopment Project.** Survey and site recording for the Ontario Airport redevelopment project, San Bernardino, CA for URS Corporation and the Ontario International Airport.

2004 **Malakoff Diggins State Historic Park Pre-disaster Mitigation Cultural Resource Assessment.** Section 106 cultural resources assessment of a 3.5-mile fuel reduction corridor within the Malakoff Diggins State Historic Park, Nevada County, CA for URS Corporation and the Federal Emergency Management Administration (FEMA).

2004 **Empire Mine Historic State Park Pre-disaster Mitigation MOA.** Preparation of a Advisory Council for Historic Preservation-approved Memorandum of Agreement regarding fuel reduction operations within the Empire Mine Historic State Park, Grass Valley, Nevada County, CA for URS Corporation and the Federal Emergency Management Administration (FEMA).

2004 **Environmental On-Call Service for the City of Los Angeles, Department of Water and Power.** Program manager for two \$1.2 million on-call services agreements for various environmental studies including cultural and biological resources, and noise studies for LADWP.

2003 **Bartlett Subdivision, Lake Morena area, San Diego County, CA.** Survey of a 168-acre parcel in preparation for subdivision, recorded four prehistoric archaeological sites and provided

recommendations for evaluation and/or mitigation and monitoring plan focused on site preservation.
Richell Bartlett

2003 Alicante Project, Bankers Hill, City of San Diego.

Pacific West Archaeology provided monitoring and emergency cultural resources data recovery at the Alicante development project, Bankers Hill neighborhood, City of San Diego, California. Analysis revealed a family-oriented deposit dating from the late 19th and early 20th century.

2003 Class III Survey and Historic Site Recording Adjacent to the Cocopah Nursery Gas Pipeline Project. Recording of an early-20th century highway construction camp, CA-RIV-7337H, in support of the Southern California Gas Company Cocopah Nursery Project near Desert Center, Riverside County. Rolla Queen, BLM Archaeologist.

2003 Archaeological Monitoring of Natural Gas Pipeline Anode Installation. Cultural resources monitoring and report preparation for a pipeline anode near Niland, Imperial County, CA for submission to the Bureau of Land Management for Sempra Energy and Rincon Consultants.

2003 P-071 I/M Plant, Treated Water Transmission Line and Reservoir Cultural Resources Mitigation and Monitoring Plan. Mitigation and monitoring plan for a proposed water treatment plant and associated facilities on Marine Corps Base Camp Pendleton, San Diego County, CA for RQ Construction.

2003 National Register Evaluation of CA-RIV-7019H and CA-RIV-7020H. National Register evaluation of two early to mid-20th historic trash dumps located during archaeological monitoring of the Southern California Gas Company Line 1030 Maintenance Corridor, Desert Center, Riverside County, CA for submission to the Bureau of Land Management and Sempra Energy.

2002 National Register Evaluation at 602-666 W. 6th St., City of San Bernardino. Archaeological monitoring and subsequent testing of late-19th and early-20th century deposits within the proposed HUD senior housing development for TELACU Development and the City of San Bernardino.

2002 Phase III Data Recovery of CA-SDI-14,592. Execution of an Army Corps of Engineers- and City of Carlsbad-approved research design for data recovery of an expansive San Dieguito Period archaeological site.

2002 MCAS Camp Pendleton ICRMP. Production of DoD-mandated 5-year integrated cultural resource management plan for the Marine Corps Air Station, Camp Pendleton to facilitate NHPA and NEPA compliance.

2002 National Register Evaluation of CA-RIV-2195. Surface collection, subsurface testing and reporting on four loci of archaeological site CA-RIV-2195 within the City of La Quinta, Riverside County, CA for submission to the Department of Housing and Urban Development and the City of La Quinta. Southern California Presbyterian Homes.

2002 **Phase I Cultural Resource Survey, Alpine CA.** Pedestrian cultural resource reconnaissance survey and reporting of a 10.25-acre parcel within the Community of Alpine, CA for submission to the County of San Diego, DPLU. Crawford Street Partners.

2002 **Extended Phase I Studies at CA-INY-371, Inyo County, CA.** Surface survey and shovel test pit excavations with the Owens Dry Lake dust control pipeline corridor. The corridor running from the Los Angeles Aqueduct to the Owens Dry Lake project area contained a previously undocumented extension of prehistoric site CA-INY-371. Bishop Office BLM, Barnard Construction, CH2M Hill, Los Angeles DWP.

2002 **Owens Lake Dust Control Project, Inyo County, CA.** Archaeological survey of five areas totalling approximately 1,400 acres within Phase II construction project area. Barnard Construction, CH2M Hill, Los Angeles DWP.

2001-2002 **Owens Lake Dust Control Project, Inyo County, CA.** Archaeological monitoring of Phase II construction operations, site recording and survey. Barnard Construction, CH2M Hill, Los Angeles DWP.

2001 **Santee Town Center Community Park, San Diego County, CA.** Director of archaeological monitoring during initial grading in areas of cultural resource sensitivity, City of Santee, California.

2001 **CA-SBA-42, Santa Barbara County, CA.** Field Director/Co-Principal Investigator during site indexing excavations on a Middle Period and Historic Period archaeological site in Santa Barbara County.

2001 **Marine Corps Air Station Miramar, San Diego County, CA.** Database coordinator and report editor for historic collections analysis conducted during Section 106 National Register eligibility studies of 10 early 1900s homesteads.

2000-2001 **Fort Guijarros Museum Foundation.** Archaeologist of Record and database coordinator for the analysis of historic period materials recovered from excavations of a whaling camp of Ballast Point, San Diego, CA.

2000 **CA-SDI-316 (Historic Component).** Database coordinator for the analysis of 1880s to 1920s Historic Period homestead along the San Dieguito River, San Diego County, CA.

1999-2000 **CA-SDI-148.** Phase II CEQA evaluation of importance of CA-SDI-148 for the Olivenhain Municipal Water District, San Diego County.

1999 **Rancho Cielo, San Diego County, CA.** Project Manager and Principal Investigator for the Phase I reconnaissance survey of two parcels adjacent to the existing Rancho Cielo project area.

1999 **Starwood Development, Crosby Estate, San Diego County, CA.** Project Manager and Principal Investigator for the Section 106 Historic Properties Treatment Plan for National Register eligible and nominated sites including the C. W. Harris Site Archaeological District.

1999 **Starwood Development, Crosby Estate.** Project Manager and Principal Investigator for National Register evaluation studies at three sites: CA-SDI-11,825/H, CA-SDI-12,660, and CA-SDI-12,666.

1998 **Santa Fe Valley Effluent Treatment Plant.** Phase II analysis of CA-SDI-13,014H, an historic ranch site in Santa Fe Valley, San Diego County, California.

1998 **Talega Canyon Fish Bone Analysis.** Taxonomic identification and analysis of fish bone recovered from Phase III mitigation excavations by Brian F. Mooney Associates at CA-ORA-907A, southern Orange County, California.

1998-99 **Starwood Development, Crosby Estate.** Project Manager and Principal Investigator for a Phase II CEQA evaluation of sites CA-SDI-12,686 and CA-SDI-12,688; characterization of site CA-SDI-13,037/H, Locus A; and development of a cultural resources management plan for the C. W. Harris Site Archaeological District.

1998 **CA-SDI-48 Fish Bone Analysis.** Taxonomic identification and analysis of fish bone recovered from Phase III mitigation excavations by Brian F. Mooney Associates at CA-SDI-48 on the Naval Submarine Base, Point Loma.

1997 **Bressi Ranch.** Project Manager and Principal Investigator for a 480-acre survey and Phase II CEQA evaluation of sites CA-SDI-9,846 and CA-SDI-14,592, City of Carlsbad.

1997 **CA-SDI-48 Fish Bone Analysis.** Taxonomic identification and analysis of fish bone recovered from Phase II test excavations by Brian F. Mooney Associates at CA-SDI-48 on the Naval Submarine Base, Point Loma.

1996 **Seal Beach Naval Weapons Center, U.S. Navy Southwest Division.** Fish and shellfish analysis and report section preparation for Phase II site evaluations at ORA-298 and ORA-322.

1996 **Naval Training Center, San Diego, U.S. Navy Southwest Division.** Principal Investigator responsible for a Extended Phase I backhoe trenching program as part of the Base Realignment and Closure program with the goal of reconstructing the predevelopment landscape and evaluating the possibility of buried prehistoric and historic cultural resources according to NEPA requirements.

1996 **San Pasqual Aquatic Treatment Facility Pipeline, City of San Diego.** Field Director for Extended Phase I boundary definition and Phase II importance evaluation of nine cultural resource sites within the San Pasqual Aquatic Treatment Facility pipeline corridor. Responsible for lithic and groundstone analysis, and report preparation.

1995 **Gregory Canyon Landfill, County of San Diego.** Project Archaeologist responsible for field direction of a 600-acre survey and Phase II importance evaluation of a Late Period San Luis Rey occupation site. Project required the preparation of a CEQA cultural resources technical report, an EIR section, and various Caltrans reports.

1995-97 **Shaw Tentative Map Area, County of San Diego.** Principal Investigator responsible for Phase II evaluation of seven cultural resource sites according to CEQA and San Diego County Resource Protection Ordinance criteria. Extended Phase II testing further delineated contributing elements of two important cultural resource sites. Responsibilities included project management, field direction, lithic analysis, and technical report and EIR section preparation.

1995-96 **Bernardo Lakes Tentative Map Area, County of San Diego.** Principal Investigator responsible for directing Phase II importance evaluation of five sites within the Bernardo Lakes Tentative map area. Extended Phase II testing at CA-SDI-10,493/H was undertaken to further delineate areas contributing to the CEQA importance of the site. Responsibilities included project management, field direction, lithic and groundstone analysis, and report preparation.

1995-96 **Balcor Tentative Map Area, County of San Diego.** Directed CEQA importance evaluation and boundary testing at eleven cultural resource sites within the San Dieguito River drainage including the Harris Site, the type site for the San Dieguito complex. Responsibilities included field direction, lithic and groundstone analysis, and report preparation.

1996 **Rancho San Diego Equestrian Center, U.S. Fish and Wildlife Service.** Project Archaeologist with responsibility for survey of 23 acres and Section 106 evaluation of three prehistoric cultural resource sites within the equestrian center facilities proposed by the U.S. Fish and Wildlife Service. In addition, a negative Historic Properties Survey Report was prepared for the portion of the project within Caltrans right-of-way.

1996 **32nd Street Naval Station, U.S. Navy, Southwest Division.** Analysis and Phase II report section preparation of fish remains from CA-SDI-5931 and SDMM-W-194.

1995 **San Elijo Ranch, City of Vista.** Project archaeologist responsible for direction of alternative road alignment survey, spot-check of the San Elijo Project area, and preparation of the EIR cultural resources section.

1995 **Camp Pendleton P-529 Sewage Effluent Compliance, U.S. Navy Southwest Division.** Project archaeologist with responsibility for an archaeological survey of proposed sewage effluent disposal pipeline and treatment facilities within the San Mateo and Las Flores Creek drainages. Directed field work and report preparation according to Section 106 criteria.

1994 **San Pasqual Water Treatment Plant, City of San Diego.** Project archaeologist with responsibility for field direction of test excavations at six prehistoric sites discovered during monitoring operations. Coordinating laboratory procedures, analyses, and report preparation according to Section 106 of NHPA.

1994-96 **Santa Fe Valley Specific Plan, County of San Diego.** Project archaeologist with responsibility as survey director for an archaeological survey of 3,129-acre development parcel in northern San Diego County. Directed field work and report preparation. Coordinated GIS cultural resources database.

1994 **Sycamore Avenue Interchange Project, City of Vista.** Principal Investigator with responsibility for organization and supervision of field studies, preparation of site form and reports according to Caltrans guidelines for the implementation of Section 106 of the National Historic Preservation Act.

1994 **North Mission Valley Interceptor Sewer, City of San Diego.** Assistant project archaeologist in the test excavation of three previously documented prehistoric sites located on the San Diego River within the alternative APE of the North Mission Valley Interceptor Sewer project.

1993-96 **Emergency Water Storage Program, San Diego County Water Authority.** Project archaeologist with responsibility for supervision of field studies and preparation of site records, GIS coordination, and report for alternative reservoir sites including Moosa Canyon, Guejito Ranch, Lake Wohlford, Mount Israel, and San Vincente Lake.

1993 **Highland Park Estates Trunk Sewer Project, City of San Diego.** Project archaeologist with responsibility for organization and supervision of field studies and preparation of site records and report according to City of San Diego and CEQA guidelines

1993 **Alvarado Water Filtration Plant, City of San Diego.** Project archaeologist with responsibility for the survey of proposed pipeline alignments, synthesis of previous data, and EIR breakout and technical report preparation.

1993 **Miramar Water Filtration Plant, City of San Diego.** Project archaeologist with responsibility for the survey of proposed pipeline alignments, synthesis of previous data, and EIR breakout and technical report preparation.

1992 **SA-680/SF-728 Highway Survey, KEA Environmental/Boyle Engineering, County of San Diego.** Project archaeologist with responsibility as field director during archaeological survey of alternative highway corridors within the area of Black Mountain Ranch and Del Dios Highway, northern San Diego County. Duties included the supervision of transect survey personnel, site recordation, and report preparation.

1991-93 **East Mission Gorge Interceptor Pump Station and Force Main Project, City of San Diego.** Assisted in the direction of data recovery excavations at CA-SDI-9,243, a multi-component occupation site along the San Diego River. Responsibilities included direction of field operations, coordinating database compilation and analysis, analysis and reporting of projectile points recovered, and editing report drafts.

1991 **Las Flores Ranch, UCLA Field School.** Field Director for excavations at CA-SBR-1624, a village site located at the headwaters of the Mojave River, San Bernardino County, California. Duties included the instruction of graduate and undergraduate students in field and laboratory techniques.

1990-91 **South Central Coastal Information Center, University of California, Los Angeles.** Acting Coordinator responsible for the overall management of the center including overseeing the preparation and dissemination of record search requests, maintenance of site and report records, assignment of state trinomials, and liaison between the SHPO and lead agencies within Ventura, Los Angeles, and Orange Counties.

1990 **Archaeological Testing at CA-SLO-993 in the City of Paso Robles, San Luis Obispo County, CA.** Field technician responsible for excavation of site evaluation units. For C.A. Singer and Associates.

1990 **Timber Sale Survey, Stanislaus National Forest .** Survey of approximately 400 acres of potential timber harvest land within Calaveras County, California for historic and prehistoric archaeological resources.

1990 **Barrel Springs, UCLA Field School.** Laboratory Director for excavations at CA-LAN-82, a Late Period village located in the Antelope Valley near Palmdale, California. Duties included the instruction of graduate and undergraduate students in field and laboratory techniques.

1988-91 **Space Shuttle and MX Missile Projects, Vandenberg Air Force Base.** Michael Glassow, Director. Typological analysis of projectile points recovered from excavations at sixty-three sites on Vandenberg Air Force Base, Santa Barbara County, California.

1988-90 **Mescalitan Island, CA-SBA-46, Santa Barbara County.** Species identification and analysis of fish remains recovered during Phase III excavations of a Late Period village, Santa Barbara County, California.

1988 **White Property Survey, Santa Barbara County.** Field Director for a Phase I reconnaissance survey of 600 acres located in the Santa Ynez Valley, Santa Barbara County, California.

1988 **CA-SBA-46 (Mescalitan Island), Santa Barbara County.** Lynn Gamble, Director. Preparation of house-floor contour maps using AutoCad.

1987 **Great Plains data maps.** Doug Bamforth, Director. AutoCad maps depicting shifting cultural boundaries within post-contact Great Plains (dissertation materials).

1987-88 **Hammonds Meadow, CA-SBA-1213, Santa Barbara County.** Laboratory Director for Phase II excavations of a Late Period village on the Santa Barbara coast near Montecito, California

1987 **New Frontiers in the Archaeology of the Pacific Coast of Southern Mesoamerica.** Frederick Bove and Lynette Heller, eds. Preparation of maps representing site location and environmental data.

1986 **Wilson Land Exchange, Los Padres National Forest.** Field Director for a Phase I reconnaissance survey of isolated National Forest properties slated for exchange.

1986 **Santa Barbara Island, Channel Islands National Park.** Crew Chief /Field Director during test excavations at various sites throughout the island. Excavations were carried out as part of a comprehensive management plan for the cultural resources of the park.

1986 **CA-SBA-245, Las Cruces, Gaviota State Park, Santa Barbara County.** Photo documentation of Las Cruces adobe and analysis of impacts through historical reconstruction via aerial photographs 1929 to 1979.

1986 **Archeomagnetic Evaluation.** Dan Wolfman, Director. Prepared and processed archaeomagnetic samples from various Mesoamerican sites using the UCSB, Department of Geology cryogenic magnetometer.

1985 **San Miguel Island, California, Channel Islands National Park.** Don Morris, Director. Preparation of AutoCAD basemap depicting site survey information from Greenwood and Rosaire surveys.

1984-86 **Belize River Archaeological Settlement Survey.** Anabel Ford, Director. Preparation of transect maps for two five kilometer and one 10 kilometer survey depicting contour and settlement data using AutoCad.

1983 **Fort Guijarros, Fort Rosecrans Naval Base.** Ron May, Director. Crew Chief /Field Supervisor during research excavations of a late 18th - early 19th century Spanish and Mexican Period harbor defense Ballast Point, San Diego, California for the Fort Guijarros Museum Foundation.