



**Cultural Resources Survey Report  
for the Live Oak Springs  
Water System Project  
San Diego County, California**

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**NATIONAL ARCHAEOLOGICAL DATA BASE INFORMATION**

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## Acronyms and Abbreviations

County	County of San Diego
DPW	Department of Public Works
USGS	U.S. Geological Survey
proposed project	Live Oak Springs Water System Project
RECON	RECON Environmental, Inc.
SCIC	South Coast Information Center
CEQA	California Environmental Quality Act
GPS	Global Positioning System
RPO	Resource Protection Ordinance

## Management Summary

This report details the methods and results of the cultural resource survey for the Live Oak Springs Water System Project (proposed project). The County of San Diego (County) Department of Public Works proposes to make improvements including a formalized driveway, storage tanks, pipelines, a well, and pump building. The proposed project is located on the east side of Old Highway 80 between Interstate 8 to the north and Highway 94 to the south in the unincorporated community of Live Oak Springs.

One prehistoric site (9009.10-NDY-01) and one prehistoric isolated artifact (9009.10-ISO-01) are within the survey area; Old Highway 80 (P-37-024023) is adjacent to the project area; and one prehistoric site (CA-SDI-85) was mapped within the project area but not located during the survey. P-37-024023 has previously been determined significant for the National Register of Historic Places and California Register of Historical Resources. 9009.10-NDY-01 has not been tested for significance under County and California Environmental Quality Act guidelines and is, therefore, considered a significant historical resource under County guidelines.

The proposed project will impact a small portion of P-37-024023 and may potentially impact undiscovered significant archaeological subsurface deposits. The impacts to P-37-024023 are not significant and no mitigation is required. The impacts to undiscovered subsurface deposits can be mitigated to a level below significant through a construction monitoring program. The program would require both archaeological and Native American monitors to be present during ground disturbing activities. Should potentially significant cultural resources or human remains be found, the appropriate protocols shall be followed.

# 1.0 Introduction

## 1.1 Project Description

The County of San Diego (County) Department of Public Works (DPW) is proposing to make improvements to Live Oak Springs Water System located in the unincorporated community of Live Oak Springs in eastern San Diego County (Figure 1). The Live Oak Springs Water System Project (proposed project) is located on the east side of Old Highway 80 between Interstate 8 to the north and Highway 94 to the south. The project site is within Township 17 South, Range 6 East, and in the southwest quarter of section 14 of the U.S. Geological Survey (USGS) 7.5-minute topographic map series, Live Oak Springs quadrangle (Figure 2). The Campo Indian Reservation is north and west of the proposed project area.

The proposed project includes improvements to the Live Oak Springs Water System (Figure 3). Potential future work includes the following:

- Formalization of the driveway at the end of the dirt road off Old Highway 80
- Installation of two 100,000 gallon storage tanks
- Installation of 4-inch PVC pipeline from the sodium hypochlorite feed skid to the tanks
- Installation of 6-inch PVC pipeline from the tanks to the pump building
- Installation of standby diesel engine generator
- Installation of pump building
- Installation of proposed well
- Installation of outdoor sodium hypochlorite feed skid with canopy
- Installation of 6-inch PVC distribution pipelines to the east

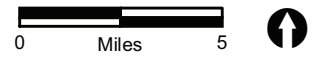
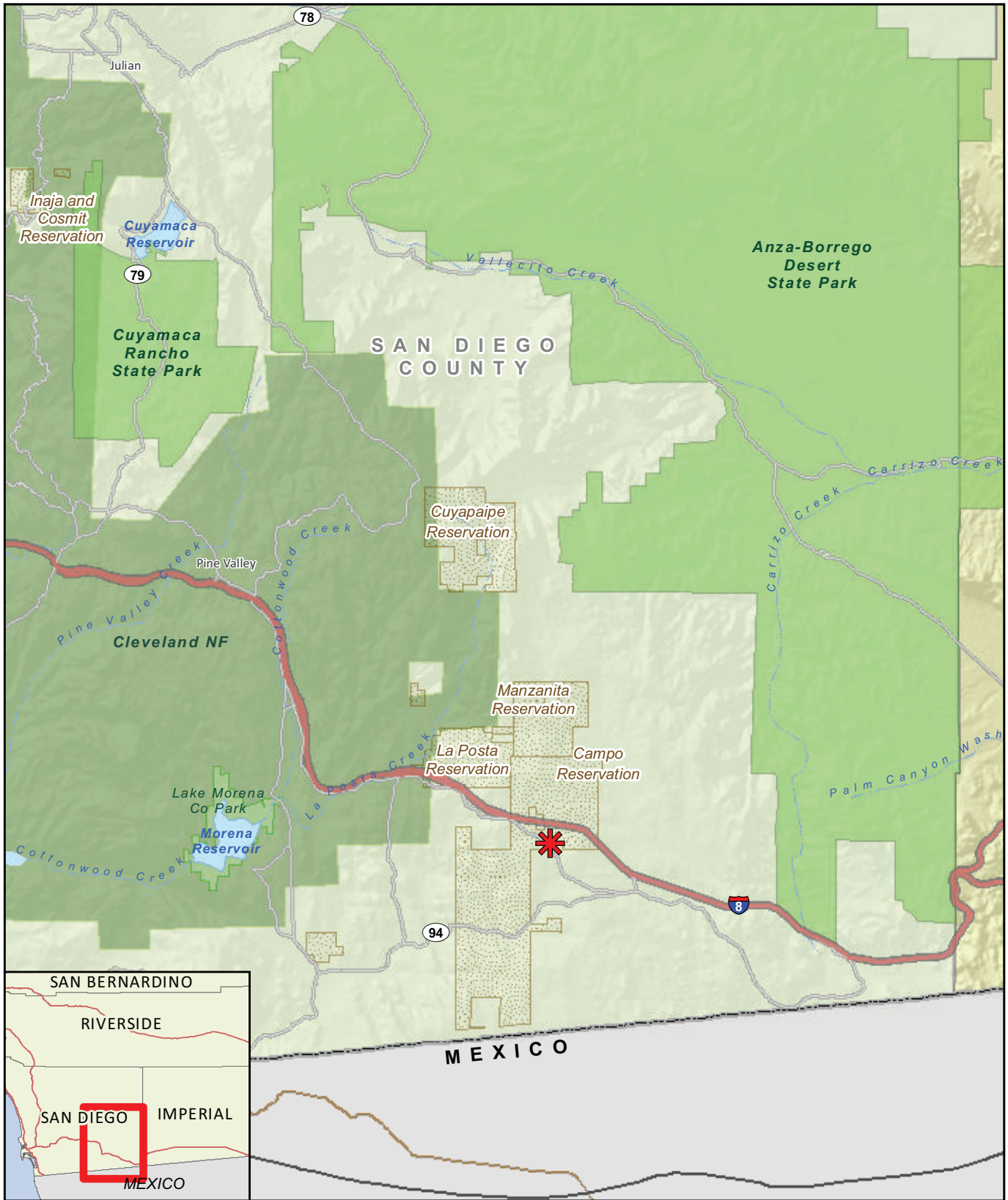
The survey area is approximately 5.7 acres (Figure 4).


## 1.2 Existing Conditions

### 1.2.1 Environmental Setting

#### Natural Setting

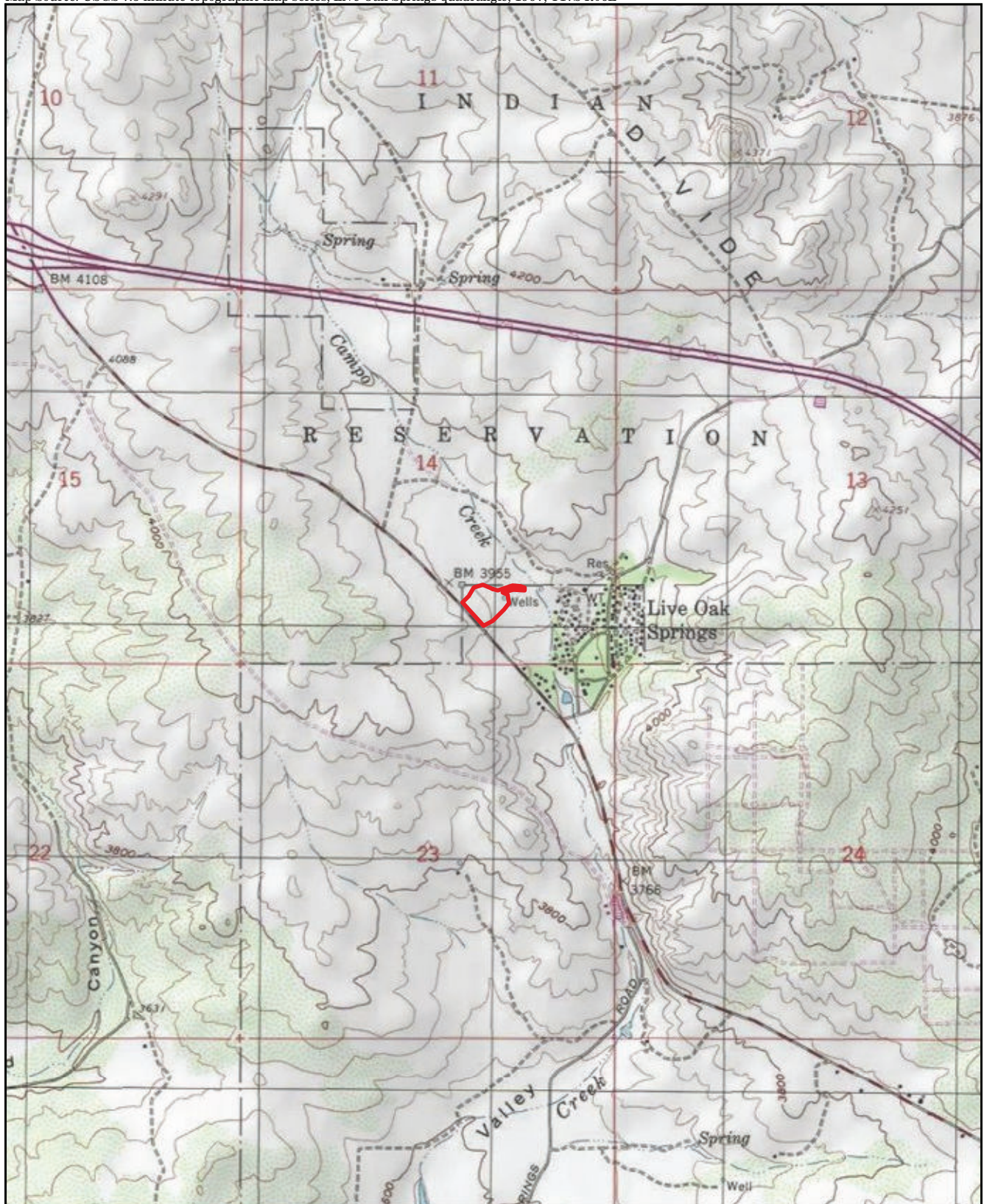
The proposed project is located in the unincorporated community of Live Oak Springs, off of Old Highway 80 between Interstate 8 and Highway 94. The center of Live Oak Springs is approximately 0.3 mile east and the Campo Indian Reservation is north and west of the project area. Surrounding the proposed project area is Old Highway 80, agricultural lands, and Campo Creek. Several dirt roads run through the proposed project area. Currently, the proposed project area exhibits a well house which houses one well and pump, an ancillary structure which houses a booster pump, and several PVC pipelines running upslope to two horizontally placed water storage tanks; all of which are associated with the Live Oak Springs Water System. Campo Creek runs in a northwest/southeast direction and is approximately 125 meters east. The proposed project area elevation averages 3,920 feet above mean sea level.



 Project Location

**FIGURE 1**  
Regional Location

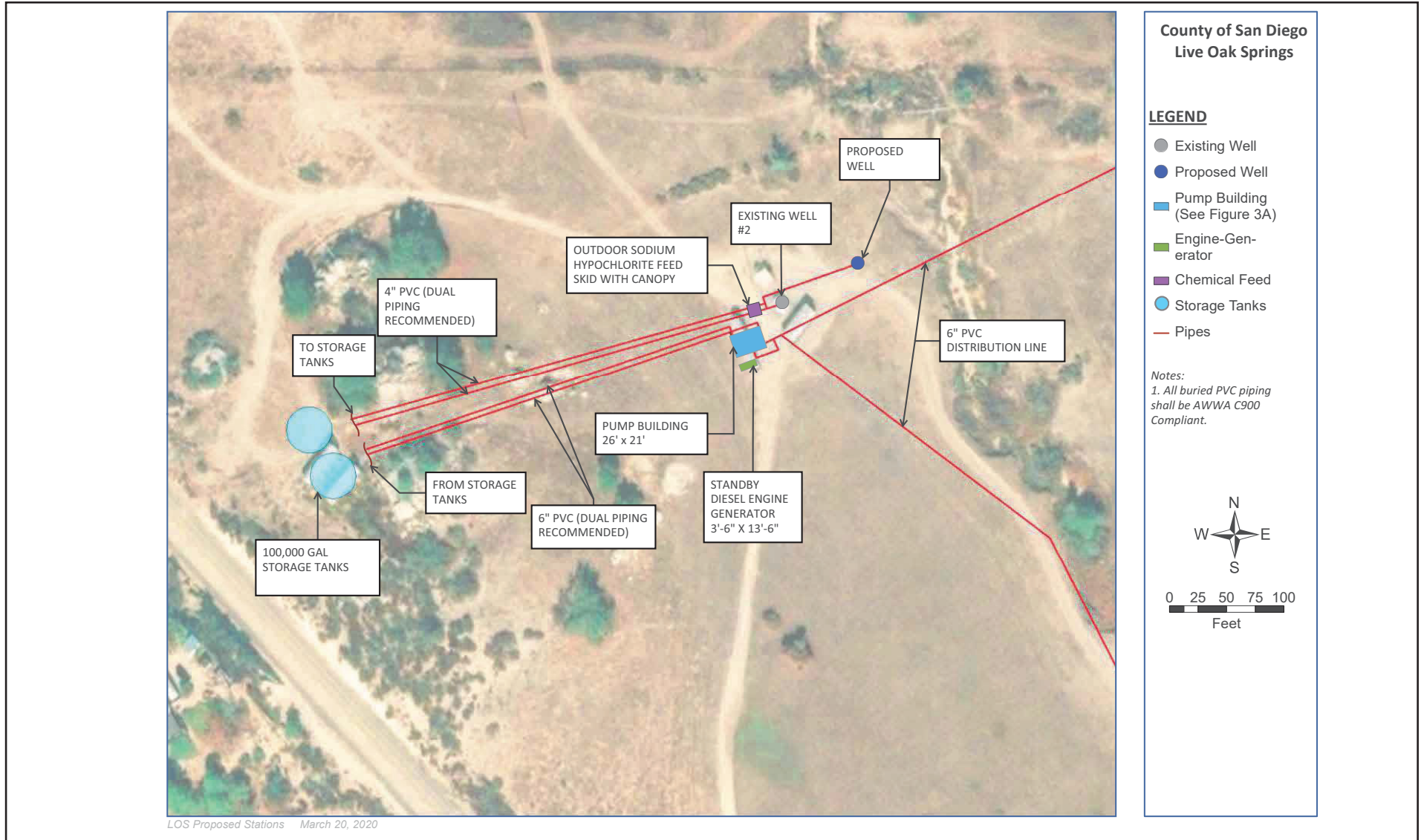




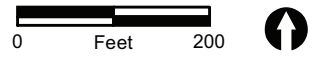
 Survey Area

**FIGURE 2**  
Project Location on USGS Map










 Survey Area

FIGURE 4

Project Location on Aerial Photograph

Several soil types occur along the proposed project. Loamy alluvial land (Lu) is on the east half of the project. Loamy alluvial land occurs in mountainous areas and has slopes of 0 to 5 percent. Soils are somewhat poorly drained, very deep, very dark brown silt loams to sandy loams. La Posta loamy coarse sand with 5 to 30 percent slope (LaE2) occurs on the west half of the project. La Posta loamy coarse sand is found on dissected plateaus and terraces. These soils formed in material weathered from granodiorite. Mottsville loamy coarse sand with 2 to 9 percent (Mvc) is found in the south and north parts of the proposed project area. The sand occurs on alluvial fans and alluvial plains. This soil series is excessively drained sand that formed in sandy sediments transported from granitic rock or material weathered in place from granitic rock (U.S. Department of Agriculture [USDA] 1973).

## **Cultural Setting**

The prehistoric cultural sequence in San Diego County is generally conceived as comprising three basic periods: the Paleoindian, dated between about 11,500 and 8,500 years ago and manifested by the artifacts of the San Dieguito Complex; the Archaic, lasting from about 8,500 to 1,500 years ago and manifested by the cobble and core technology of the La Jolla Complex; and the Late Prehistoric, lasting from about 1,500 years ago to historic contact (i.e., A.D. 500 to 1769) and represented by the Cuyamaca Complex. This latest complex is marked by the appearance of ceramics, small arrow points, and cremation burial practices.

### Paleoindian Period

The Paleoindian Period in San Diego County is most closely associated with the San Dieguito Complex, as identified by Rogers (1938, 1939, 1945). The San Dieguito assemblage consists of well-made scraper planes, choppers, scraping tools, crescentics, elongated bifacial knives, and leaf-shaped points. The San Dieguito Complex is thought to represent an early emphasis on hunting (Warren et al. 1993:III-33).

### Archaic Period

The Archaic Period in coastal San Diego County is represented by the La Jolla Complex, a local manifestation of the widespread Millingstone Horizon. This period brings an apparent shift toward a collecting economy and an emphasis on seed resources, small game, and shellfish. The inland cultural manifestations of the Archaic Period is called the Pauma Complex. Pauma Complex sites lack the shell that dominates many La Jollan sites. Along with an economic focus on gathering plant resources, the settlement system appears to have been more sedentary. La Jollan and Pauma assemblages are dominated by rough, cobble-based choppers and scrapers, and slab and basin metates. Elko series projectile points appeared late in the period. Large deposits of marine shell at coastal sites argue for the importance of shellfish gathering to the coastal Archaic economy (True 1980).

### Late Prehistoric Period

Near the coast and in the Peninsular Mountains beginning approximately 1,500 years ago, patterns began to emerge which suggest the ethnohistoric Kumeyaay. This period is

characterized by higher population densities and elaborations in social, political, and technological systems. Economic systems diversify and intensify during this period, with the continued elaboration of trade networks, the use of shell-bead currency, and the appearance of more labor-intensive, but effective technological innovations. The late prehistoric archaeology of the San Diego coast and foothills is characterized by the Cuyamaca Complex. It is primarily known from the work of D. L. True (1970) at Cuyamaca Rancho State Park. The Cuyamaca Complex is characterized by the presence of steatite arrowshaft straighteners, steatite pendants, steatite comales (heating stones), Tizon Brownware pottery, ceramic figurines reminiscent of Hohokam styles, ceramic “Yuman bow pipes,” ceramic rattles, miniature pottery various cobble-based tools (e.g., scrapers, choppers, hammerstones), bone awls, manos and metates, mortars and pestles, and Desert Side-Notched (more common) and Cottonwood Series projectile points).

### Ethnohistory

The Kumeyaay (also known as Kamia, Ipai, Tipai, and Diegueño) occupied the southern two-thirds of San Diego County. The Kumeyaay lived in semi-sedentary, politically autonomous villages or rancherías. A settlement system typically consisted of two or more seasonal villages with temporary camps radiating away from these central places (Cline 1984). Their economic system consisted of hunting and gathering, with a focus on small game, acorns, grass seeds, and other plant resources. The most basic social and economic unit was the patrilocal extended family. A wide range of tools was made of locally available and imported materials. A simple shoulder-height bow was used for hunting. Numerous other flaked-stone tools were made, including scrapers, choppers, flake-based cutting tools, and biface knives. Preferred stone types were locally available metavolcanics, cherts, and quartz. Obsidian was imported from the deserts to the north and east. Ground stone objects include mortars and pestles typically made of locally available fine-grained granite. Both portable and bedrock types are known. The Kumeyaay made fine baskets. These employed either coiled or twined construction. The Kumeyaay also made pottery, using the paddle-and-anvil technique. Most were a plain brown utility ware called Tizon Brownware, but some were decorated (May 1978; Spier 1923).

### Historic Period

San Diego was first settled by Spanish colonists in A.D. 1769, when the Mission San Diego de Alcalá and Presidio de San Diego were founded. The Spanish period (1769–1820) economy was based on cattle grazing. Missions were major population centers, and mission cattle roamed freely over open range, tended by Indian vaqueros. European contact substantially and pervasively stressed the social, political, and economic fabric of aboriginal culture (Shipek 1986, 1991). Disease, starvation, and a general institutional collapse caused emigration, birth rate declines, and high adult and infant mortality levels for the aboriginal groups in San Diego County (Shipek 1991).

The citizens of Mexico successfully revolted against the Spanish in 1821. The Mexican government secularized the missions in 1833. The U.S. took over the northern half of Mexico as a result of the Mexican–American War in 1848, and California became a state in



1850. American settlement in southern California was slow during the Gold Rush, when northern California experienced a dramatic population explosion (Rolle 1998). By the late 1800s, the county witnessed the beginning of a recognizable downtown San Diego area and the gradual development of a number of outlying communities, many of which were established around previously defined ranchos and land grants. These communities were composed of an aggregate of people who lived on scattered farmsteads tied together through a common school district, church, post office, and country store (Hector and Van Wormer 1986; Pourade 1963).

From the end of the Civil War, vigorous efforts were made to establish a transcontinental railway with San Diego as its western terminus. However, there was no easy way through the rugged mountains in eastern San Diego County. The first transcontinental railroad was completed through the Lake Tahoe area of northern California 1869. While Los Angeles got a railroad in 1876, it was not until 1885 that the first transcontinental train service arrived in San Diego. It was through San Bernardino and Cajon Pass, and was—in effect—a spur route of the Los Angeles line. Nevertheless, the imminent arrival of the railroad initiated a large real estate boom in San Diego.

The economy of the area continued to be based on ranching and agriculture. After World War II, rural southeast San Diego County became a series of bedroom communities for people who commuted to San Diego to work. Many residents of the area reside on ranchitas where they may have room for a few horses, other livestock, and gardens.

## 1.2.2 Previously Recorded Sites

RECON requested a records search with a one-mile-radius buffer of the proposed project area from the California Historical Resources Information System, South Coastal Information Center (SCIC; Confidential Attachment 1). There have been numerous cultural resource investigations within the one-mile search area. SCIC identified four historic-era resources and four prehistoric resources within the one-mile radius (Table 1). The historic sites include a single-family house, Old Highway 80, a utility line, and a fence line. The prehistoric sites include a possible rock shelter, bedrock milling features, ceramic scatters, and lithic scatters. One prehistoric site (CA-SDI-85) is mapped within the proposed project area and Old Highway 80 (P-37-024023) is immediately adjacent.

Primary #	Trinomial #	Site Type	Age	Date Recorded	Notes
P-37-000085	CA-SDI-000085	Ceramic scatter	Prehistoric	2016 (ASM Affiliates) ; 1940s (Treganza)	
P-37-006906	CA-SDI-006906	Ceramic scatter, lithic scatter, ground stone	Prehistoric	n.d. Eidsness	
P-37-012267	CA-SDI-012267	Single family house	Historic	1991 (Beck and Joyner)	
P-37-024023	n/a	Roadway	Historic	2001 (Caltrans)	Old Hwy 80 National Reg. Dist.

**Table 1**  
**Cultural Resources within One Mile of Survey Area**

Primary #	Trinomial #	Site Type	Age	Date Recorded	Notes
P-37-033170	CA-SDI-020877	Rock shelter, bedrock milling, lithic scatter, ceramic scatter	Prehistoric	2013 (AECOM)	
P-37-036514	n/a	Utility Line	Historic	2014 (ASM); 2018 (HDR)	
P-37-036677	n/a	Barbed wire fenceline	Historic	2016 (ASM Affiliates)	
P-37-036681	CA-SDI-022164	Lithic scatter	Prehistoric	2016 (ASM Affiliates)	

## Previously Recorded Resources within the Area of Potential Effect

### CA-SDI-85

CA-SDI-85/P-37-000085 was recorded by Treganza in the 1940s as a 100x100-foot ceramic scatter with Campo Creek situated east of the site. The resource is mapped as occurring in the area of the wells, 76 meters to the northeast but the recorded location describes the scatter as occurring “in town” with “many houses on the site.” The ceramics were described as “Mountain ware potsherds, Roger’s type, Yuma 2 and 3 site” (Treganza 1940). In 2016, ASM Affiliates revisited the southern part of the recorded boundary and surveyed “a plowed field adjacent to Campo Creek” but did not locate the scatter or the houses. The northwestern portion of the site is mapped within the survey area (Manchan 2016).

### P-37-024023

P-37-024023 is Old Highway 80, a two-lane undivided highway. It is about 33 miles long with the majority of the road surfaced with Portland cement concrete. Only about 23 percent of the highway has been overlaid with asphalt concrete. The highway starts at the Descanso Junction and heads east through Guatay, Pine Valley, Live Oak Springs, Boulevard, Bankhead Springs, and Jacumba; it ends 5.5 miles east of Jacumba. In the 1920s, the route was designated US 80 connecting the Pacific Coast in San Diego with Savannah, Georgia and was one of the earliest east-west transcontinental routes. This resource has been determined eligible for listing on the National Register of Historic Places and the California Register as a historic district under criterion A/1 for its association with San Diego’s efforts to become a terminus for a transcontinental highway and the significance of the highway for the regional economy, and under criterion C/3 for its pre-freeway era highway design standards, the 1920s to 1930s method of construction. Several portions of the highway, specifically those that are used as the main streets in Guatay, Pine Valley, Live Oak Springs, Boulevard, and Jacumba, have been repaved with asphalt concrete and have had their shoulders widened. These portions are non-contributing elements to the historic district.

## Historic Maps and Aerial Photographs Review

Historic USGS topographic maps and aerial photographs were reviewed to determine changes in the survey area over time. Historic aerial photographs only go back to 1994. At that time, one partial dirt road was noted. The remaining dirt roads, as they currently exist, were noted in the 2009 aerial photograph. The 1944 topographic map of Live Oak Springs shows two wells while three wells appear on the 1960 topographic map (Nationwide Environmental Title Research 2020).

### **1.3 Applicable Regulations**

The project is subject to California Environmental Quality Act (CEQA) compliance.

#### **1.3.1 California Environmental Quality Act and County of San Diego Compliance**

The regulatory framework and methods for determining impacts on cultural resources include compliance with the requirements of CEQA as defined in Section 15064.5 of the CEQA Determining the Significance of Impacts to Archaeological and Historical Resources (CEQA Guidelines) and with County Guidelines for Determining Significance of Cultural Resources: Archaeological and Historic Resources (County of San Diego 2007). Both sets of guidelines require the identification of cultural resources that could be affected by the proposed project, the evaluation of the significance of such resources, an assessment of the proposed project impacts on significant resources, and a development of a data recovery program to avoid or address adverse effects to significant resources. Significant resources, also called historical resources, are those cultural resources (whether prehistoric or historic) that have been evaluated and determined to be eligible for listing in the California Register of Historical Resources (CRHR).

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

1. A resource listed in, or determined to be eligible for listing on, the CRHR.
2. A resource included in the local register.
3. A resource which an agency determines to be historically significant. Generally a resource shall be considered to be “historically significant,” if the resource meets the criteria for listing on the California Register of Historical Places (Public Resources Code Section 5024.1 Title 14 California Code of Regulations, Section 4852) including the following:
  - A. Is associated with events that have made a significant contribution to the broad patterns of California’s history or 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 maybe likely to yield, information important to prehistory or history.
4. The fact that a resource is not listed in or determined to be eligible for listing in the CRHR or a local register does not preclude a lead agency from determining that the resource may be an historical resource as defined in Public Resources Code Sections 5020.1(j) or 5024.1.

A resource must meet one of the above criteria and must have integrity; that is, it must evoke the resource's period of significance or, in the case of criterion D, it may be disturbed, but it must retain enough intact and undisturbed deposits to make a meaningful data contribution to regional research issues. Most archaeological sites typically qualify for listing under criterion D.

The San Diego County Local Register of Historical Resources includes resources with any of the following criteria:

- 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.

## **2.0 Guidelines for Determining Significance**

Section 4.2 of the County Guidelines for Determining Significance of Cultural Resources: Archaeological and Historic Resources (County of San Diego 2007) indicate that any of the following will be considered a potentially significant environmental impact to cultural resources:

- 1. The project causes a substantial adverse change in the significance of a historical resource as defined in Section 15064.5 of the state CEQA Guidelines. This shall include the destruction, disturbance, or any alteration of characteristics or elements

of a resource that cause it to be significant in a manner not consistent with the Secretary of the Interior Standards.

2. The project causes a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5 of the state CEQA Guidelines. This shall include the destruction or disturbance of an important archaeological site or any portion of an important archaeological site that contains or has the potential to contain information important to history or prehistory.
3. The project disturbs any human remains, including those interred outside of formal cemeteries.
4. The project proposes activity or uses damaging to significant cultural resources as defined by the Resource Protection Ordinance and fails to preserve those resources.

## **3.0 Analysis of Project Effects**

### **3.1 Methods**

#### **3.1.1 Survey Methods**

The primary goals of this survey were to provide a constraints level survey of the project area, to complete conditions assessment of existing cultural resources, and to determine if there are new cultural resources present. RECON archaeologist Nathaniel Yerka accompanied by Jason Pinto from the Jamul Indian Village conducted the on-foot survey of the proposed project area on April 13, 2020, using 15-meter transects. The proposed project area was inspected for evidence of archaeological materials such as debris, flaked and ground stone tools, ceramics, milling features, and human remains. All rock outcrops were checked for bedrock milling.

The locations of observed features and artifacts were recorded using an iPad running ESRI's ArcGIS Collector application paired with a Trimble R1 sub-meter global positioning system (GPS) unit. The survey area was photographed to document environmental setting, identifying surrounding landmarks, and general conditions. Bedrock milling features were measured and photographed. Milling forms were completed for each milling feature found. California Department of Parks and Recreation site forms, update forms, and maps were submitted to the SCIC (Confidential Attachment 2).

#### **3.1.2 Native American Participation**

Native American participation was required per the County's Report Format and Content Requirements (County of San Diego 2007) during the survey. Jason Pinto from the Jamul Indian Village participated as the Native American monitor.

## 3.2 Results

### 3.2.1 Survey

RECON identified one new prehistoric site (9009.10-NDY-01) and a prehistoric isolate (9009.10-ISO-01) (Confidential Attachment 3). 9009.10-ISO-01 consists of two fine-grained porphyritic metavolcanic flakes. The portion of Old Highway 80 adjacent to the proposed project area appeared to be in good condition. CA-SDI-85 was not located within the proposed project area.

The proposed project area was surveyed under cloudy skies and cool temperatures. The southern portion of the survey area presented the highest elevation of the proposed project exhibiting mostly undisturbed and dense chaparral with numerous boulder outcrops (Photograph 1). Rubbish discards associated with Old Highway 80 (e.g., aluminum cans, glass bottles, assorted papers and plastics) were noted dispersed throughout the area, as well as tires, cinder blocks, dimensional lumber, and other discarded building materials. Two water storage tanks associated with the Live Oak Springs Water System were situated on a graded and cleared pad (Photograph 2). 9009.10-ISO-01, a prehistoric isolate recorded on the current survey consisting of two fine-grained porphyritic metavolcanic flakes, is situated approximately 10 meters south of the water storage tanks. Ground visibility in this area was approximately 30 percent.

All bedrock and boulder outcrops were checked for the presence of milling surfaces. 9009.10-NDY-01, a prehistoric bedrock milling feature located along the southeastern survey area boundary and situated between several oak trees, exhibited at least four determinable milling slicks. Three of the four grinding surfaces are highly exfoliated to where obtaining complete dimensions was not possible.

With the exception of several large bedrock and boulder outcrops, the remaining survey area, like the area surrounding the proposed project area, is cleared agricultural land intersected by several dirt roads. The cleared, and therefore, disturbed land presents dense ground cover consisting of non-native grasses that are periodically mowed. These grasses limited ground visibility to less than 5 percent (Photograph 3). The main dirt roads within the survey area are used periodically by County DPW staff for access to and from the Live Oak Springs Water System. These dirt roads presented the best opportunity to observe bare dirt and were checked for the presence of disturbed cultural material.

The survey area to the northeast exhibited the current well house, booster pump house, two tractor-trailers, two conex box containers, as well as numerous smaller items associated with the water system (Photograph 4). The original wells and associated structures have been replaced since their initial installation in 1969 (Stacy Preve, pers. comm. 2020). The only remaining original part is the concrete pad of the well house. The drilling location for the new well is approximately 50 feet east of the current well house. This area is also within the mapped location of CA-SDI-85 which was not located on the current survey. The survey area included a crossing of Campo Creek where an abandoned pipeline, a concrete foundation, and various discarded rubbish items were observed.



**PHOTOGRAPH 1**  
Southern Survey Area with Typical Chaparral,  
Looking North-Northeast



**PHOTOGRAPH 2**  
Current Water Storage Tanks, Looking North





PHOTOGRAPH 3  
Typical Agricultural Land and Dirt Roads, Looking Southeast



PHOTOGRAPH 4  
Main Live Oak Springs Water System Utility Area, Looking South

## **P-37-02423/Old Highway 80**

Old Highway 80 is adjacent to the survey area and appeared to be in good condition. At the location of the future driveway, the highway shoulder has been expanded; however, the original Portland concrete cement segments are present.

## **CA-SDI-85**

CA-SDI-85 was not located as noted above. This site likely has been mismapped. Based on Treganza's description, this ceramic scatter was surrounded by houses and is located west of Campo Creek.

## **9009.10-NDY-01**

9009.10-NDY-01 is a bedrock milling feature exhibiting at least four slicks. Three of the four grinding surfaces are highly exfoliated making obtaining complete dimensions not possible. The granite boulder measures 5.5 by 5 by 0.7 meters high and is situated at the western edge of an outcrop between several oak trees to the north and south. No surface artifacts were noted. The surrounding vegetation consisted of non-native grasslands and chaparral.

# **4.0 Interpretation of Resource Importance and Impact Identification**

## **4.1 Resource Importance**

This section will address 9009.10-NDY-01. The following eight criteria will not be applied to CA-SDI-85 because it was not located during the survey and P-37-024023 because it has been determined significant for the National Register of Historic Places and CRHR.

The criteria used to identify significant archaeological and historic resources are based on the San Diego County Local Register criteria of significance. The local register is similar to the CRHR, but is different in that significance is evaluated at a local level. Sites, buildings, and structures are eligible for the San Diego County Register if they are:

1. Resources associated with events that have made a significant contribution to the broad patterns of California or County history and cultural heritage.
  - 9009.10-NDY-01 does not qualify under this criterion. No information was found to associate the site with a significant event in local or California history.
2. Resources associated with the lives of persons important to our past, including the history of San Diego County or its communities.
  - 9009.10-NDY-01 does not qualify under this criterion. No information was found to associate the site with specific a person or persons important to our past.

3. Resources that embody the distinctive characteristics of a type, period, region (San Diego County), or method of construction, or represents the work of an important creative individual, or possesses high artistic values.
  - 9009.10-NDY-01 does not qualify under this criterion. Archaeological sites are not structures or buildings, so do not exhibit the type of characteristics required for significance under this criterion.
4. Resources that have yielded, or may be likely to yield, information important in prehistory or history.
  - 9009.10-NDY-01 may qualify under this criterion. Without subsurface testing, it is unknown if there is a subsurface deposit which could qualify the site as likely to yield information important to prehistory. Often prehistoric sites can answer research questions regarding chronology, subsistence, and site function/settlement. There are no associated artifacts to identify a period of use. Milling slicks occurred during both the Archaic and Late Prehistoric periods.

The question regarding subsistence may be addressed with the milling slick. Cline (1980) states that flat grinding slabs were used to pulverize clay into a fine powder to be used for making pottery. Past investigations have successfully conducted protein residue extractions from bedrock milling elements to analyze what may have been ground on the surface during prehistoric times. One study in eastern San Diego County extracted residue from 30 milling features including cupules, slicks, basins, and mortars. Positive reactions were obtained from five samples: three cupules, one basin, and one mortar. No positive results were obtained from any of the slicks (Schneider and Bruce 2009). Therefore, because there are four slicks, the potential to get a positive result is considered low and not recommended. This is especially true for the three slicks that have exploited and have minimal ground surface element remaining. Therefore, the site is recommended to have limited significance.

5. Districts are significant resources if they are composed of integral parts of the environment not sufficiently significant by reason of historical association or artistic merit to warrant individual recognition, but collectively compose an entity of exceptional historical or artistic significance, or outstandingly commemorate or illustrate a way of life or culture.
  - 9009.10-NDY-01 does not qualify under this criterion.
6. The County Resource Protection Ordinance (RPO) for significant prehistoric or historic sites is not applicable to this project. The RPO does not apply because the road improvement is a public project. Section 86.605 (2)(c) of the RPO exempts “any essential public facility or project, or recreation facility which includes public use when . . . (2) All possible mitigation measures have been incorporated into the facility or project, and there are no feasible, less environmentally damaging location, alignment, or non-structural alternatives that would meet project objectives” (Title 8, Division 6, Chapter 6 of the County Code of Regulatory Ordinances).

7. A resource shall be considered significant if it contains any human remains interred outside of a formal cemetery.
  - 9009.10-NDY-01 does not qualify under this criterion. No human remains were encountered during the survey and likely would not be present subsurface because human remains are usually associated with large habitation sites, not single bedrock milling features with no surface artifacts.
8. Resources must retain enough of their integrity to be recognizable as historical resources and to convey the reasons for their significance.
  - 9009.10-NDY-01 qualifies under this criterion. The bedrock and surrounding area appear to be in fair condition. The bedrock does not appear to have been moved in the past. There is no evidence grading around the bedrock. Three of the four slicks are exfoliating and may not contain enough of the grinding surface element for a successful protein residue extraction.

## 4.2 Impact Identification

Specific guidance was from Section 4.2, County Guidelines for Determining Significance of Cultural Resources: Archaeological and Historic Resources (County of San Diego 2007). Pursuant to the County of San Diego Guidelines for Determining Impact Significance—Cultural Resources (2007), any of the following will be considered a significant impact to cultural resources:

1. The project causes a substantial adverse change in the significance of a historical resource as defined in Section 15064.5 of the State CEQA Guidelines. This shall include the destruction, disturbance, or any alteration of characteristics or elements of a resource that cause it to be significant in a manner not consistent with the Secretary of the Interior Standards.
  - P-37-024023, Old Highway 80, would not be adversely changed by the formalization of the dirt driveway. The impacts will occur within the widened shoulder, an area already disturbed. The limits of work should remain within the asphalt shoulder and not impact the Portland concrete cement segments which are one of the most important historic characteristics that make Old Highway 80 significant.
2. The project causes a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5 of the state CEQA Guidelines. This shall include the destruction or disturbance of an important archaeological site or any portion of an important archaeological site that contains or has the potential to contain information important to history or prehistory.
  - 9009.10-NDY-01 is not within proposed impact area; therefore, the proposed project will not cause a substantial adverse change to this resource.



- CA-SDI-85 is mapped within the proposed impact area; however, it was not located within the survey. Therefore, the proposed project will not cause a substantial adverse change to this resource.
  - Additionally, there is a potential for significant impacts to unknown subsurface archaeological deposits, such as an intact feature or soil stratum, during construction. Project impacts to unknown subsurface deposits would be significant and mitigable to below a level of significance.
3. The project disturbs any human remains, including those interred outside of formal cemeteries.
- 9009.10-NDY-01 was not evaluated and the presence or absence of human remains was not determined. However, the potential for the presence of human remains at milling feature site types is very low.
  - CA-SDI-85 is mapped within the project impact area; however, it was not located within the survey. Therefore, the potential for the presence of human remains in the mapped location of this site is low.
  - P-37-024023 does not meet this criterion. P-37-024023 is a historic highway and would not have burials associated with it.
4. The project proposes activities or uses damaging to significant cultural resources as defined by the RPO and fails to preserve those resources.
- This is not applicable because the proposed water system improvement project is a public project and, therefore, exempt from the RPO, as stated above.

## **5.0 Management Considerations**

### **5.1 Mitigated Impacts**

As noted above, no direct impacts will occur to 9009.10-NDY-01. Direct impacts, however, may occur to unknown significant subsurface archaeological deposits during the construction of the proposed project due to the presence of archaeological resources within the one-mile radius. Mitigation measures are recommended in the next section to avoid inadvertently impacting any undiscovered significant archaeological features.

#### **5.1.1 Mitigation Measures**

The impacts can be mitigated to a level below significant through implementation of a Construction Monitoring Program during construction. Implementation of these measures would mitigate impacts to the unknown deposit.

## Construction Monitoring Program

The Construction Monitoring Program would mitigate potential impacts to undiscovered significant archaeological resources. The Construction Monitoring Program would include the following:

- The Construction Monitoring Program would require both archaeological and Native American monitors to attend a pre-construction meeting and to be present during ground-disturbing activities, such as vegetation clearing, grading or trenching. The frequency of inspections would be determined by the Project Archaeologist in consultation with the Native American monitor and would vary based on the rate of excavation, the materials excavated, and the presence and abundance of artifacts and features.
- If previously unidentified potentially significant cultural resources are discovered, construction activities would be diverted away from the discovery and the resources evaluated for significance. Isolates and non-significant deposits would be minimally documented in the field. Significant archaeological discoveries include intact features, stratified deposits, previously unknown archaeological sites, and human remains. The Principal Investigator would inform the County Archaeologist of the discovery and together determine its significance. To mitigate potential impacts to significant cultural resources, a Data Recovery Program for any newly discovered cultural resource would be prepared by the Principal Investigator, approved by the County Archaeologist, and implemented using professional archaeological methods. Construction activities would be allowed to resume after the completion of the recovery of an adequate sample or the recordation of features.
- All cultural material collected during the Data Recovery and Construction Monitoring Programs would be processed and curated at a San Diego County facility that meets federal standards per 36 Code of Federal Regulations Part 79 unless the tribal monitors request the collection.
- If human remains are discovered, work shall halt in that area and the procedures set forth in the California Public Resources Code (Section 5097.98) and State Health and Safety Code (Section 7050.5) will be followed. The Principal Investigator shall contact the County Coroner.
- After the completion of the monitoring, an appropriate report shall be prepared. If no significant cultural resources are discovered, a brief letter shall be prepared. If significant cultural resources are discovered, a report with the results of the monitoring and data recovery (including the interpretation of the data within the research context) shall be prepared.

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## **7.0 List of Preparers and Persons/Organization Contacted**

### **7.1 Project Participants**

#### **7.1.1 RECON Environmental, Inc.**

Carmen Zepeda-Herman	Principal Investigator and Author
Nathanial Yerka	Field Archaeologist and Co-Author
Frank McDermott	GIS/UAV Coordinator
Jennifer Gutierrez	Production Specialist

#### **7.1.2 Jamul Indian Village**

Jason Pinto	Native American monitor
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## **7.2 Organization Contacted**

South Coastal Information Center, records search

**CONFIDENTIAL ATTACHMENTS**

(Not for Public Review)