An Archaeological Survey for the
San Dieguito River Park Pamo Trail Project,
San Diego County, California

Prepared for:
San Dieguito River Park JPA
18372 Sycamore Creek Rd.
Escondido, CA 92025
City Project No. 380490

Prepared by:
Don Laylander
Brad Comeau
Dr. Mark Becker

2034 Corte Del Nogal
Carlsbad, California 92011
August 2009 (Revised July 2014)
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USGS 7.5-minute Ramona and Mesa Grande topographic quadrangles

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The San Dieguito River Park Authority proposes to develop 2.7 mi. of trail and two staging areas in Pamo Valley, near Ramona, San Diego County, California. The facilities will be part of the San Dieguito River Park Coast to Crest Trail, a public multi-use regional trail.

A records search at the South Coastal Information Center (SCIC) of the California Historical Resources Information System (CHRIS), housed at San Diego State University, identified 63 previously recorded prehistoric and historic archaeological sites and isolates lying within a 1-mi. radius around the Pamo Trail alignment. Ten of the previously recorded sites (SDI-7926, SDI-7933, SDI-8269, SDI-8271, SDI-8277, SDI-9789, SDI-9790, SDI-9801, and SDI-9814) and four isolates (P-37-015443, P-37-015445, P-37-015446, and P-37-015447) were relocated within the study area. An archaeological field survey by ASM identified four additional sites (SDI-19464, SDI-19466, SDI-19467, and SDI-19468) and three isolates (P-37-030643 and P-37-030644, P-37-030645) within the study area. In total, there are fourteen sites and seven isolates within the study area. All but two sites are avoidable for this project, SDI-7933 and -8279.

ASM recommends that:

- every effort be made to avoid impacts to the identified archaeological sites, such as a capping program for SDI-7933 and -8279;
- if avoidance of a site does not appear to be feasible, a testing program be implemented to determine whether the site is eligible for the California Register of Historical Resources (CRHR), with the potential need for additional mitigation measures to be required if the site is determined eligible;
- ground-disturbing activities within a 50 ft. buffer (per standard archaeological practices) to recorded site boundaries be monitored by a qualified archaeologist and Native American monitor due to the reasonable possibility that additional cultural remains may be present but were not detected, given the very limited ground visibility at the time of the survey; and
- if the project alignment is modified to impact areas outside of those covered by the present study, additional archaeological inventory work be undertaken to address those areas.
1. INTRODUCTION

This study was conducted to assess the presence or absence of prehistoric and historic sites potentially eligible for the CRHR, under the California Environmental Quality Act (CEQA). The San Dieguito River Park Authority proposes to develop 2.7 mi. of trail and two staging areas in Pamo Valley, near Ramona, San Diego County, California (Figures 1-3). The facilities will be part of the San Dieguito River Park Coast to Crest Trail, a public multi-use regional trail. The study (survey) area typically consists of a 150-200 meter corridor surrounding the proposed trail alignment to provide flexibility for planning purposes.

Figure 1. Project vicinity map.
1. Introduction

Figure 2. Project location map.
1. Introduction

Figure 3a. Project map – northern portion.

CONFIDENTIAL MAP REMOVED
Figure 3b. Project map – southern portion. Note that for SDI-9790, the trail is outside of the site boundary.
1. Introduction

STUDY PERSONNEL

The following individuals were instrumental in conducting the investigations and producing this report:

John R. Cook, ASM Principal (B.A., Anthropology and Philosophy, San Diego State University), served as project manager.

Dr. Mark S. Becker, ASM Director (Ph.D., Anthropology, University of Colorado, Boulder) served

Don Laylander, ASM Senior Archaeologist (M.A., Anthropology, San Diego State University), served as principal investigator and report author.

Brad E. Comeau, ASM Associate Archaeologist (B.A., Anthropology, University of Massachusetts, Amherst), served as field director.

Whitney Reed, ASM Assistant Archaeologist (B.A., Anthropology, San Diego State University) participated as field crew member.

Clint Linton and Phil Pena participated as Native American monitors.

Zee Malas was the graphic illustrator, and Marcia Sandusky was the desktop publisher.
2. Setting

This chapter places the project area within its regional context. Some of the characteristics of the region’s modern settings are indicated. The culture history of the region is reviewed, including the prehistoric archaeological sequence, conditions present immediately prior to European contact as they have been reconstructed through ethnographic evidence, and the period that followed the advent of written records. The development of investigations into regional prehistoric archaeology is also discussed briefly.

NATURAL SETTING

The project area is located in the foothills province of San Diego County, in Pamo Valley, just north of Santa Maria Valley and the community of Ramona, within the borders of Cleveland National Forest. Elevations in the project area range from 275 to 300 m above sea level, while the mountains bordering Pamo Valley rise to about 1,200 m to the east and 600 m to the west.

The project area is adjacent to Santa Ysabel and Temescal creeks. Temescal Creek arises about 11 km north of the project area and flows south through upper Pamo Valley to its merger with Santa Ysabel Creek in the middle of the valley. Santa Ysabel Creek arises in Santa Ysabel Valley, about 15 km east of Pamo Valley, passes through Sutherland Lake to join Temescal Creek, and continues south and then west to San Pasqual Valley, where it is renamed the San Dieguito River. The river reaches the Pacific Ocean at San Elijo Lagoon, about 45 km southwest of the project area.

Geologically, Pamo Valley lies within Mesozoic granitic rocks of the Southern California Batholith, which also includes basic intrusive rocks to the east. The valley itself is underlain by Quaternary alluvium (Rogers 1965). Granitic outcrops and cobbles provided grinding surfaces and tools to the region’s prehistoric occupants, while localized veins of quartz provided flakeable material for projectile points and other edge tools.

The project area has a Mediterranean Hot Summer (Köppen Csa) climate. The average July maximum daily temperature is about 33° C, while the average January minimum is about 2° C. Annual precipitation is about 43 cm, falling primarily between January and March (Pryde 2004).

A chaparral vegetation zone encompasses the project area. Plants characteristic of the zone include chamise (Adenostoma fasciculatum), California lilac (Ceanothus spp.), manzanita (Arctostaphylos spp.), redshank (Adenostoma sparsifolium), and oak (Quercus spp.) (Pryde 2004). Along watercourses, additional riparian plants are found.

CULTURE HISTORY

Archaeological investigations have documented human occupations in San Diego County that spanned at least the last 10,000 years (Byrd and Raab 2007; Warren et al. 2008). A variety of
different chronological divisions and sets of terms have been used to sort the evidence into temporal and, to a lesser extent, geographical units. Some confusion has resulted from the mixture of units that are defined on the basis of chronology with units defined by cultural content or by inferred ethnicity. The present discussion is framed in terms of five main divisions: an early period bridging the latest Pleistocene to early Holocene, prior to about 6000 B.C.; a middle Holocene period, stretching between about 6000 and 2000 B.C.; a late Holocene period, between about 2000 B.C. and A.D. 1769; a synchronic “ethnographic present,” representing conditions just prior to European contact, as they have been inferred from subsequent ethnographic studies; and the historic period since A.D. 1769.

**Late Pleistocene/Early Holocene**

The antiquity of human occupation in the New World has been the subject of considerable debate over the last few decades. The most widely accepted model at present is that humans first entered the western hemisphere between 13,000 and 10,000 B.C. Much earlier dates have also been proposed (Bada et al. 1974; Carter 1957, 1980). However, the amino acid racemization technique that was used to date some of the early sites has been discredited by more recent AMS radiocarbon dating of early human remains along the California coast (Taylor et al. 1985). Despite intense interest and a long history of research, no widely accepted evidence of very early human occupation in the San Diego region has emerged.

The generally accepted archaeological record begins with the Clovis pattern, a widespread phenomenon in North America. Noted for its distinctive tool kit characterized by fluted projectile points, Clovis occupation dates to the end of the Pleistocene, around 11,500 B.C. (Meltzer 1993). Although no substantial Clovis sites have been documented in the region, occasional isolated fluted points have been recovered (e.g., Kline and Kline 2007; Rondeau et al. 2007).

The Early Holocene period in San Diego County extends from approximately 10,000 to 6000 B.C. (Byrd and Raab 2007; Moratto 1984; Warren et al. 2008). A variety of terms have been proposed for Early Holocene assemblages in the southern California region. Malcolm J. Rogers, the first to temporally order the archaeological assemblages of the region, introduced but later discarded the terms Scraper-Makers, Malpais, and Playa to label early lithic industries of the region (Warren 1967). Rogers (1939, 1945, 1966) subsequently coined the term San Dieguito to refer to the earliest artifact assemblages in San Diego County. San Dieguito assemblages are composed almost entirely of flaked stone tools, including scrapers, choppers, and large projectile points (Warren 1987; Warren et al. 2008). The absence or near-absence of milling tools in San Dieguito assemblages has often been viewed as a major difference between the Early Holocene economy and the lifeways that characterized the subsequent Middle Holocene period.

The San Dieguito adaptation occurred during a period of somewhat cooler and moister climate than exists at present. The range of economic adaptations attributed to San Dieguito and the interpretation of the San Dieguito complex as a big game hunting tradition were based primarily on materials from the C. W. Harris site (Ezell 1983, 1987; Warren 1966, 1967; Warren and True 1961). Some coastal assemblages now appear to have been contemporaneous or nearly contemporaneous with San Dieguito assemblages but closely resemble typical Middle Holocene assemblages. Some critics have hypothesized that the differences between San Dieguito and other Early Holocene assemblages may reflect functional differences between particular sites.
rather than either changes through time or contrasts between contemporaneous cultures (Bull 1987; Gallegos 1987; Warren et al. 2008).

**Middle Holocene Period**

The Middle Holocene period spanned the period between about 6000 and 2000 B.C. (Gallegos 1992; Moratto 1984; Rogers 1966; Warren et al. 2008). A distinction is often made between coastal shell midden sites (La Jolla complex) and inland non-shell midden sites (Pauma complex), particularly in northern San Diego County. The shell middens are generally characterized by flaked cobbled tools, basin metates, manos, occasional discoidals, and flexed burials. Several temporal phases have sometimes been distinguished within the Middle Holocene period (Warren et al. 2008).

Initial exploitation of the San Diego area littoral zone is generally considered to have entailed sizable semisedentary populations focused around resource-rich bays and estuaries (Crabtree et al. 1963; Gallegos 1992; Shumway et al. 1961; Warren 1964, 1968; Warren and Pavesic 1963; Warren et al. 1961). Shellfish were apparently a dietary staple. Plant resources (including nuts and grasses) were an important dietary component, while hunting and fishing were less important. This adaptive strategy remained largely unchanged for several thousand years. According to Warren and his associates (1961:25), “the La Jolla Complex reached its population and cultural climax between 7000 and 4000 years ago when there was a plentiful supply of shellfish in the lagoons along the coast.” Major changes in human adaptations occurred after 2000 B.C. when estuary silting is thought to have become so extensive as to cause a decline in associated shellfish populations. A major depopulation of the coastal zone has been postulated, with settlements shifting inland to river valleys, intensifying the exploitation of terrestrial small game and plant resources, including a strong focus on acorns (Christenson 1992; Crabtree et al. 1963; Gallegos 1985, 1987, 1992; Masters and Gallegos 1997; Rogers 1929:467; Warren 1964, 1968; Warren and Pavesic 1963; Warren et al. 1961). The coast was abandoned or only seasonally occupied, but with a possible revival in coastal occupation after A.D. 400-800.

An exception to this scenario was the San Diego Bay and Mission Bay area (e.g., Warren 1964, 1968), more recently extended to include the Peñasquitos Lagoon/Sorrento Valley area (Gallegos 1992). Although refinements have been made on the basis of new excavations (Gallegos 1987, 1992; Gallegos and Kyle 1998; Warren 1968; Warren et al. 2008), the broad perception of the region’s coastal adaptations has remained largely unchanged (see the discussion in Byrd 1998). Most interpretations of the timing of estuary silting, decreased productivity at specific localities, and related effects on human settlement were based on inferences derived from excavated shell midden sites (Masters and Gallegos 1997; Miller 1966; Warren et al. 1961) and not from independent paleoenvironmental data (see the critiques in Bull 1981; Bull and Norwood 1977; Carrico 1976). Alternative interpretations regarding the nature of coastal Middle Holocene adaptations have been presented, generally suggesting that particular estuaries were open for considerable periods of time after 2000 B.C., that some coastal populations migrated southward rather than eastward as coastal lagoons silted in, and that human populations continued to flourish along the northern San Diego County coast during the Late Holocene (Bull 1981; Byrd 1998; Hubbs et al. 1962; Shumway et al. 1961:116-117, 124; Smith and Moriarty 1985).
Inland Middle Holocene sites have been less extensively studied, although D. L. True and his associates established an important foundation for such studies (True 1958, 1980; True and Beemer 1982; True and Pankey 1985; Warren et al. 1961). The Pauma complex had its geographical focus on the upper San Luis Rey River, with extensions to the Valley Center area, middle San Luis Rey River, upper Santa Margarita River, and Escondido-San Marcos area. Pauma complex characteristics suggested by True included (1) a high frequency of shaped manos, (2) the presence of finely worked small domed scrapers, (3) the presence of knives and points, (4) the presence of discoidals and cobbled stones, (5) a predominance of grinding tools over flaked tools, (6) a predominance of deep basin metates over slab metates, (7) a predominance of cobbled hammers over core hammers, (8) a low frequency of cobbled tools, (9) a scarcity of cobbled choppers and cobbled scrapers, (10) a predominance of volcanic rock over quartzite as a source material for flaked lithics, and (11) an extreme scarcity of obsidian. The coastal La Jolla and inland Pauma complexes have been variously interpreted as separate, contemporaneous sociocultural units and as seasonal/functional manifestations of a single society and culture.

Late Holocene Period

The Late Holocene period is considered to have begun sometime around 2000 B.C., but many of its most distinctive traits only arose after about A.D. 500 (Moratto 1984; Rogers 1945; Warren et al. 2008). Local regional cultural complexes have been distinguished between the northern (San Luis Rey) and southern (Yuman or Cuyamaca) complexes. This period was characterized by the appearance of small, pressure-flaked arrow points (Cottonwood triangular, Desert side-notched, and Dos Cabezas serrated forms) indicative of a bow-and-arrow technology, the appearance of ceramics, the replacement of flexed inhumations with cremations, extensive use of the mortar and pestle, and an emphasis on collecting and processing inland plant foods, especially acorns (Christenson 1989; McDonald and Eighmey 2008; Meighan 1954; Rogers 1945; True 1966; Warren 1964, 1968). The precise timing of the introduction of the various new technologies and cultural practices is still uncertain (Griset 1996; McDonald and Eighmey 2008).

Explanations for the origin of innovations associated with the Late Holocene period have varied. A. L. Kroeber (1925:578) speculated that Shoshonean (i.e., Takic) speakers migrated from the deserts to the southern coast of California at least 1,000-1,500 years ago (but on varied interpretations of the region’s linguistic prehistory, see Golla 2007; Laylander 2007). Some archaeologists have embraced this hypothesis and correlated it with the origins of the Late Holocene archaeological complexes (Meighan 1954; Warren 1968). Rogers (1929) initially discussed the Luiseño and Kumeyaay under the rubric of the Mission Indians, and distinguished them from earlier shell-midden and scraper-maker cultures. He later argued for continuity in occupation from the Archaic to the Late Prehistoric period in the Kumeyaay area (Rogers 1945). He proposed that the Kumeyaay had appeared as the result of earlier migration of Yumans from the coast to the Colorado River (perhaps as the result of an influx of Takic speakers into northern San Diego County), adaptation to their new riverine setting and adoption of traits from adjacent populations in the Southwest, and subsequent movement back to the coast during the Late Prehistoric period. Subsequently, scholars have proposed several cultural processes to explain Late Holocene cultural developments, including an occupational hiatus (Wallace 1955), cultural continuity with the addition of new traits (True 1966, 1970; Warren 1964, 1968), and population replacement (Bull 1987).
The San Luis Rey complex was defined by Clement W. Meighan, refined by True, and generally applied to the northwestern portion of San Diego County (Meighan 1954; True 1966; True and Waugh 1982, 1983; True et al. 1974, 1991). Meighan (1954:Table 2) suggested that the San Luis Rey I phase began around A.D. 1400 and included small triangular arrow points, manos, portable metates, mortars, pestles, *Olivella* shell beads, and stone pendants. The San Luis Rey II phase differed primarily in the addition of ceramics and pictographs around A.D. 1750. True (1993:17) further hypothesized that the lower portions of the San Luis Rey drainage had sedentary villages making limited use of marine resources. The Late Holocene period has been linked with the subsequent ethnohistoric record, and direct historical analogies are based on the assumption of considerable stability in adaptations and territorial extent as documented by early non-native observers.

**Historic Period – Ethnographic Record**

The San Diego region became increasingly multiethnic in its cultural traditions after the arrival of permanent Spanish settlement in A.D. 1769. Within this mix, Native Americans continued to play an important role. Written records from the historic period also shed considerable indirect light on prehistoric lifeways in the region. Relevant documents from the Spanish and Mexican periods are very limited (Fages 1937; Geiger and Meighan 1976; Laylander 2000). The ethnographic record became much richer in the early decades of the twentieth century, with the rise of academic anthropology (Drucker 1937, 1941; Gifford 1918, 1931; Hicks 1963; Hohenthal 2001; Kroeber 1925; Laylander 2004; Luomala 1978; Spier 1923; Waterman 1910).

The Ramona area was associated with the Ipai during the early historic period. The Ipai spoke a language (or possibly a dialect) belonging to the Diegueño group (also sometimes termed Kumeyaay), together with closely related Kumeyaay and Tipai languages to the south, within the larger Yuman linguistic family. According to the debatable technique of glottochronology, the separation of the Diegueño languages from their closest relative, Cocopa in the Colorado River delta, may date back about 1,000-1,200 years, and the separation from other Yuman groups represented in western Arizona and northern Baja California may have occurred around 1,500-2,000 years ago (Laylander 1985).

Aboriginal Ipai subsistence was largely or entirely based on harvesting natural plants and animals, rather than on growing agricultural crops. Acorns were a staple for the western groups, as were agave and mesquite for eastern groups. Numerous other plants were valued for the dietary contributions from their seeds, fruit, roots, stalks, or greens, and a still larger number of species had known medicinal uses. Game animals included deer first and foremost, but mountain sheep and pronghorn antelope were also present, as well as bears, mountain lions, bobcats, coyotes, and other medium-sized mammals. Small mammals were probably as important in aboriginal diets as larger animals, with jackrabbits and cottontails being preeminent, but woodrats and other rodents were commonly exploited. Various birds, reptiles, and amphibians were caught and eaten. Food taboos were few in number and inconsistent, to judge from the surviving ethnographic record. The only precontact domesticated animal was the dog. It is not clear whether marine fish and shellfish were a mainstay for some coastal groups or merely provided supplemental or emergency food sources for groups that were oriented primarily toward terrestrial resources. Interregional exchange systems are known to have linked the coast with areas to the east in particular, but exchange may have been more concerned with facilitating social and ceremonial matters than with meeting material needs.
The Ipai had developed a varied material culture that functioned well but was not highly elaborated, by worldwide standards. An array of tools were made from stone, wood, bone, and shell, and these served to procure and process the region’s resources. Needs for shelter and clothing were minimal, but considerable attention was devoted to personal decoration in ornaments, painting, and tattooing. The local pottery was well made, although infrequently decorated. Basketry was a craft that was particularly refined.

The Ipai were subdivided into essentially sovereign local communities or tribelets. Community membership was generally inherited in the male line. However, in practice some degree of intermixing of these patriclans was certainly present during the historic period, particularly among the Ipai, and this may have reflected a considerable degree of flexibility in community membership during prehistoric times as well. Later descriptions of the settlement systems have been inconsistent, and there may have been considerable variability in practice (cf., Laylander 1992, 1997; Owen 1965; Shipek 1982; Spier 1923). In some areas, substantially permanent, year-round villages seem to have existed, with more remote resources beyond the daily foraging range being acquired by special task groups. In other areas, communities appear to have followed an annual circuit among seasonal settlements, or to have oscillated between summer and winter villages, often with the group splitting up into its constituent families during certain seasons. Some differences in settlement strategies may have reflected local differences in resource availability or cyclical effects of variability between times of plenty and times of stress. Rights of ownership over the land and its various resources were vested both in individual families and in the clans or communities as a whole. Leadership within communities had at least a tendency to be hereditary, but it was relatively weak; authority was more ceremonial and advisory than administrative or judicial. Headmen had assistants, and shamans exerted an important influence in community affairs, beyond their role in curing individual illness.

**Historic Period – Nonnative History**

The historic record of the general region began as early as A.D. 1542, with the visit of Juan Rodríguez Cabrillo to San Diego Bay. However, more intensive inland activity by outsiders did not begin until 1769, with the arrival of the Portolá-Serra expeditions in San Diego and their travels north along the coast to Monterey. Mission San Diego de Alcalá and the San Diego Presidio were established, and local populations began to be drawn into the orbit of the Spanish empire.

Lay Hispanic settlement of the region in private land grants began under Spain, but accelerated after Mexico’s independence was established in 1821. Rancho Santa María, immediately to the south of Pamo Valley, was granted to Edward Stokes in 1843.

After annexation by the United States in 1848, southern California experienced cycles of boom and bust during the later nineteenth century. The community of Ramona was established in 1886, taking its name from the title character of Helen Hunt Jackson’s celebrated novel. By 2000, the city’s population had grown to more than 33,000 (Pryde and Stutz 2004). In the 1980s, a proposal was advanced to construct a water storage dam in Pamo Valley. The dam project was set aside in response to public opposition to it on environmental grounds.
3. METHODS

RECORDS SEARCHES AND NATIVE AMERICAN COORDINATION

A records search at SCIC was conducted in April 2009, and an update was requested in July 2014. The records search encompassed a search radius of 1 mi. around the project area. The sources consulted for this search included site maps, site records, maps showing areas addressed by previous cultural resources reports, National Archaeological Database (NADB) citations, maps and database of historic properties (formerly Geofinder), and historic maps.

The Native American Heritage Commission (NAHC) conducted a search of its Sacred Lands File (SLF) on April 24, 2009. The SLF search did not indicate the presence of Native American cultural resources in the immediate project area. Local Native American contacts were identified by the NAHC (Table 1), and contact letters were sent to these individuals on April 27, 2009. Telephone follow-up contacts with the same individuals were made or attempted on May 15, 2009. To date, only a single substantive comment has been received. Carmel Lucas stated that she had no direct concerns, but requested the involvement of Native American monitors in the project.

Table 1. Native American Contacts

<table>
<thead>
<tr>
<th>Individual</th>
<th>Affiliation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Steve Banegas</td>
<td>Kumeyaay Cultural Repatriation Committee</td>
</tr>
<tr>
<td>Bobby L. Barrett</td>
<td>Viejas Band of Mission Indians</td>
</tr>
<tr>
<td>Ron Christman</td>
<td>Kumeyaay Cultural Historic Committee</td>
</tr>
<tr>
<td>Paul Cuero</td>
<td>Kumeyaay Cultural Heritage Preservation</td>
</tr>
<tr>
<td>Johnny Hernandez</td>
<td>Santa Ysabel Band of Diegueno Indians</td>
</tr>
<tr>
<td>Allen E. Lawson</td>
<td>San Pasqual Band of Diegueno Indians</td>
</tr>
<tr>
<td>Clint Linton</td>
<td>--</td>
</tr>
<tr>
<td>Carmen Lucas</td>
<td>Kwaaymii Laguna Band of Mission Indians</td>
</tr>
<tr>
<td>Rebecca Osuna</td>
<td>Inaja Band of Mission Indians</td>
</tr>
<tr>
<td>Edwin Romero</td>
<td>Barona Broup of the Capitan Grande</td>
</tr>
<tr>
<td>Mark Romero</td>
<td>Mesa Grande Band of Mission Indians</td>
</tr>
</tbody>
</table>

ARCHAEOLOGICAL SURVEY

An initial archaeological survey of the project area was conducted on June 24-26, 2009. The survey consisted of systematic transects at 15-m intervals paralleling the proposed trail alignment. Two archaeologists and a Native American monitor participated in the survey. Ground surface visibility was generally poor due to vegetation cover. As cultural resources were identified within the proposed project area, Dr. Mark Becker visited the project area on May 21,
2014 with San Dieguito River Park JPA officials to discuss various site avoidance strategies such as trail realignment and site capping. This was followed by a second archaeological survey on May 30, 2014 which covered additional areas as a result of realigning portions of the trail to avoid cultural resources. This survey also consisted of systematic transects at 15-m intervals paralleling the proposed trail alignment. One archaeologist and a Native American monitor participated in the survey. Ground surface visibility was again generally poor due to vegetation cover.
4. REPORT OF FINDINGS

RECORDS SEARCH

The SCIC records search identified six previous cultural resources reports that addressed portions of the project area or its 1-mi. study buffer (Table 2).

Sixty-three previously recorded cultural resources were recorded within the project area or its 1-mi. study buffer (Table 3). All of these resources are prehistoric, with the exception of one rock structure of undetermined age. The resources include 58 sites and five isolates. Prehistoric site types that are represented include habitation sites (villages or temporary camps; \( n = 13 \)), milling stations \( (n = 40) \), milling tools \( (n = 2) \), a rockshelter, and a lithic scatter.

FIELD SURVEY

The field survey confirmed the presence of fourteen previously recorded cultural resources in the study area, within or immediately adjacent to the proposed trail alignment. It also identified four additional prehistoric sites and three prehistoric isolates within the study area for a total of 21 cultural resources.

<table>
<thead>
<tr>
<th>NADB #</th>
<th>SHPO ID</th>
<th>Report</th>
</tr>
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<tr>
<td>1131623</td>
<td>Hector 02-194</td>
<td>Susan M. Hector and Alice Brewster. 2002. San Dieguito River Valley Inventory of Archaeological Resources. ASM Affiliates.</td>
</tr>
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</table>
### Table 3. Previously Recorded Cultural Resources.

<table>
<thead>
<tr>
<th>Designation</th>
<th>Distance from Study Area</th>
<th>Site Type</th>
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<tbody>
<tr>
<td>CA-SDI-7926</td>
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<td>Corum, 1979; Cardenas, 1983</td>
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<td>CA-SDI-7933</td>
<td>within</td>
<td>Prehistoric habitation site</td>
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<td>Hedges, 1980; Cardenas, 1983</td>
</tr>
<tr>
<td>CA-SDI-8261</td>
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<td>Prehistoric habitation site</td>
<td>Hedges, 1980; Cardenas, 1983</td>
</tr>
<tr>
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<td>Hedges, 1980; Cardenas, 1983</td>
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<tr>
<td>CA-SDI-8264</td>
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<td>Prehistoric milling station</td>
<td>Hedges, 1980; Fulmer and Wade, 1983</td>
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<td>Hedges, 1980; Cardenas, 1983</td>
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<td>Hedges, 1980; Cardenas, 1983</td>
</tr>
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<td>Prehistoric milling station</td>
<td>Hedges, 1980; Fulmer and Wade, 1983</td>
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<tr>
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<td>Prehistoric milling station</td>
<td>Hedges, 1980; Fulmer and Wade, 1983</td>
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<td>Hedges, 1980; Cardenas, 1983</td>
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<td>within</td>
<td>Prehistoric milling station</td>
<td>Hedges, 1980; Cardenas, 1983</td>
</tr>
<tr>
<td>CA-SDI-8272</td>
<td>200 m</td>
<td>Prehistoric milling station</td>
<td>Hedges, 1980; Cardenas, 1983</td>
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<tr>
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<td>Prehistoric rockshelter</td>
<td>Hedges, 1980; Fulmer and Wade, 1983</td>
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<td>Prehistoric milling station</td>
<td>Hedges, 1980; Cardenas, 1983</td>
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<td>Hedges, 1980; Cardenas, 1983</td>
</tr>
<tr>
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<td>Hedges, 1980; Cardenas, 1983</td>
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</tr>
<tr>
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<td>Cardenas, 1983</td>
</tr>
<tr>
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<td>Cardenas, 1983</td>
</tr>
<tr>
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<td>Cardenas, 1983</td>
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<td>Cardenas, 1983</td>
</tr>
<tr>
<td>CA-SDI-9793</td>
<td>1,100 m</td>
<td>Prehistoric milling station</td>
<td>Van Wormer, 1983</td>
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<tr>
<td>CA-SDI-9794</td>
<td>400 m</td>
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<tr>
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<td>900 m</td>
<td>Prehistoric milling station</td>
<td>Fulmer and Wade, 1983</td>
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<td>Prehistoric milling station</td>
<td>Fulmer and Wade, 1983</td>
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<td>800 m</td>
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<td>Fulmer and Wade, 1983</td>
</tr>
<tr>
<td>CA-SDI-9801</td>
<td>within</td>
<td>Prehistoric habitation site</td>
<td>Cardenas, 1983</td>
</tr>
</tbody>
</table>
Sites and Isolates Within the Study Area

SDI-7926. This site is a small bedrock milling station. Corum in 1979 and Cardenas in 1983 recorded a single milling feature with two mortars. The milling feature was relocated during the present study, and the mapping of its location was corrected slightly. It is located outside of the proposed trail route, on the opposite side of Pamo Road (Figure 4).

SDI-7933. This is an extensive village site with numerous bedrock milling features as well as flaked lithics, ground stone artifacts, and ceramics. Six loci have been identified. The site was previously documented by Corum and Fink in 1979, Hedges in 1980, and Cardenas and Van Wormer in 1983. During the present survey, additional milling features were identified, and the mapped locations of various loci were corrected using GPS. Ground surface visibility was poor, so that the observed extent of the loci had to be based primarily on the distribution of bedrock milling features. Although most of the site is located to the west of the proposed trail route, it extends across the proposed route to the east (Figure 5).
Figure 4. SDI-7926 overview, looking west.

Figure 5. SDI-7933, overview of Locus C, looking south.
**SDI-8269.** This site is a bedrock milling station, with a few associated surface artifacts. Hedges in 1980 and Cardenas in 1983 recorded two milling loci, variously reported as containing 2 mortars, 1 to 3 basins, and 12 to 15 slicks. Also noted were a pestle fragment, two mano fragments, and brownware sherds. The milling features were relocated during the present survey. The site is located partially within the western edge of the proposed trail route, near its northern terminus (Figure 6). The site will not be impacted by the proposed trail route.

**SDI-8271.** This site is a bedrock milling station. It was originally recorded in 1980 by Hedges, who noted two mortars, seven basins, and six slicks. Cardenas in 1983 observed two loci with a total of six mortars, five basins, and six slicks. The site was relocated during the present study. It lies on both sides of Pamo Road, outside of but immediately adjacent to the proposed trail route (Figure 7).

**SDI-8277.** This site is also a bedrock milling station. The site was initially recorded in 1980 by Hedges, who noted a single bedrock milling feature with two basins. Cardenas noted three basins and one slick in 1983. During the present survey, a second milling feature with one basin and three slicks was noted. The site is on the west side of Pamo Road (Figure 8). The site will not be impacted by the proposed trail route.

**SDI-8278/8279.** SDI-8278 was initially recorded as a bedrock milling station in 1980 by Hedges, who noted two mortars, one basin, and seven slicks. Subsequent analyses have treated the site as a portion of SDI-8279, which it adjoins. SDI-8279 was recorded as an extensive habitation site, with 25 bedrock mortars, at least 15 basins, and at least 11 slicks, as well as manos, pestles, projectile points, lithic debitage, brownware sherds, bone, and shell. The site was also documented by Hedges in 1980, and then by Cardenas in 1983. Cardenas distinguished four loci within the site. The four loci were relocated in 2009, and their spatial extent was slightly enlarged. One additional milling feature was identified at Cardenas’ Locus A. For the purposes of this project, the site is simply referred to as SDI-8279. The site is located directly within the proposed trail route (Figure 9).

**SDI-9789.** This site is a bedrock milling station. It was originally recorded in 1983 by Cardenas, who observed milling features on three boulders, including two basins and one slick. During the present survey, a metate fragment of highly weathered granitic rock was also found at the site. One of Cardenas’ features was found to have been overturned, evidently by machinery. The site is located outside of the proposed trail route, near its southern terminus (Figure 10).

**SDI-9790.** This site is a bedrock milling station, with a few associated surface artifacts. The site was originally recorded in 1983 by Cardenas, who observed two milling loci with a total of 5 mortars, 13 basins, and 13 slicks, as well as two manos and a metate/mano/hammerstone. During the present survey, a quartz flake was also noted, and the site boundary was enlarged. The site is located within the proposed trail route (Figure 11).
4. Report of Findings

Figure 6. SDI-8269, overview of Locus B, looking north.

Figure 7. SDI-8271 overview, looking north.
Figure 8. SDI-8277 overview looking east.

Figure 9. SDI-8279, overview of Locus A, looking north.
4. Report of Findings

Figure 10. SDI-9789, features 1, 2, and 3, looking northeast.

Figure 11. SDI-9790, overview of Locus a, looking south.
4. Report of Findings

SDI-9801. This site is a bedrock milling station with a few associated surface artifacts. The site was originally recorded in 1983 by Cardenas, who observed two milling features and a scatter of groundstone, flaked lithic debitage, and potsherds. An additional milling feature was recorded during the present survey. The site lies outside of the proposed trail route, at its southern terminus, but southwest of Orosco Truck Trail (Figure 12). The site will not be impacted by the proposed trail route.

SDI-9814. This site is a bedrock milling station. Cardenas in 1986 recorded a single milling feature with three slicks. The milling feature was relocated during the present survey. The site is located outside of the proposed trail route, near its northern terminus (Figure 13).

SDI-19464. This newly documented site is a bedrock milling station. It consists of two bedrock milling features and two portable metate fragments. The site is located outside of but immediately adjacent to the proposed trail route at its southern terminus (Figure 14).

SDI-19466. This site consists of a small artifact scatter. It was originally recorded as an isolate in 1993 by Glenn and Pigniolo, who observed three pieces of quartz debitage and two pieces of volcanic debitage. During the present survey, 14 pieces of quartz debitage and one brownware potsherd were observed. The site lies outside of the proposed trail route and will not be impacted by this project (Figure 15).

SDI-19467. This newly documented site is a small scatter of milling artifacts, including six manos and two metates. It is located outside of the proposed trail route (Figure 16).

SDI-19468. This site is a small bedrock milling station, with a single bedrock milling basin on a granitic boulder. Because the ground surface was not visible, the presence or absence of surface artifacts could not be confirmed. The site is located east of the proposed trail route and will not be impacted by this project (Figure 17).

P-37-030643. This isolated granitic pestle is located outside of the proposed trail route.

P-37-030644. This concrete foundation slab is located outside of the proposed trail route.

P-37-030645. This prehistoric isolate consists of a brownware body sherd and is outside of the proposed trail route.
4. Report of Findings

Figure 12. SDI-9801, features 2 and 3, looking southeast.

Figure 13. SDI-9814 overview, looking southwest.
4. Report of Findings

Figure 14. SDI-19464 overview, looking north.

Figure 15. SDI-19466 overview, looking southeast.
4. Report of Findings

Figure 16. SDI-19467 overview, looking southwest.

Figure 17. SDI-19468 overview, looking north.
5. MANAGEMENT CONSIDERATIONS

A records search and field survey have identified fourteen archaeological sites and seven archaeological isolates within the study area. The eligibility of the sites for the CRHR has not been determined. Isolates are normally considered to be categorically ineligible.

The preferred management option is to avoid impacts to cultural resources. Therefore, all possible forms of site avoidance, including redesign, realignment, fencing, and capping, were explored for this project. "Capping" means to cover archaeological sites with a layer of soil before construction to preserve those cultural resources. Capping is considered an acceptable alternative when the following conditions are met (Historical Resources Guidelines 2001:14):

1. The soils to be covered will not suffer serious compaction;
2. The covering materials are not chemically active;
3. The site is one in which the natural processes of deterioration have effectively ceased; and,
4. The site has been recorded and an index of the contents of the site has been made.

If it does not appear feasible or practical to avoid all impacts to a site, an archaeological testing program is likely to be required, in order to evaluate whether or not the site is eligible for the CRHR. If a site is determined to be ineligible, further management consideration would not be mandatory, although impacts should still be minimized to the extent possible. If a site is determined to be CRHR-eligible, and if impacts still cannot be avoided, additional mitigation measures, such as data recovery, are likely to be required.

For this project, it was possible to realign the proposed trail route to avoid all but two cultural resources, SDI-7933 and SDI-8279. Both sites are too large to feasibly reroute the trail for full avoidance (see Figure 3), and site capping is the proposed mitigation measure where the trails must pass through these cultural resources. The trail route would be restricted to use by hikers, bikes, and horses, with no mechanized vehicle use, to comply with Condition 1 and prevent serious compaction. Following the San Dieguito River Park Concept Plan (1994) by JPA, the following capping measures are proposed for this situation (Condition 2):

Filter fabric shall be placed on the portion of the site to be impacted, followed by the placement of two inches of sterile soils, one inch of ½ to ⅜ inch gravel, and a minimum of an additional four inches of sterile soil.

Trails passing through both sites would be on flat, stable surfaces where capping is possible since there is no discernable erosion taking place (Condition 3), and both sites were fully recorded during an archaeological survey in 1983, and last inspected for updates in 2009 (Condition 4).

There is a fairly strong possibility that cultural deposits may extend beyond the site boundaries that were identified during the present survey. This reflects the fact that ground surface visibility was generally only fair to poor at the time of the survey, and the site limits consequently tended to be defined primarily by bedrock milling features that are visible above the vegetation. When
5. Management Considerations

ground-disturbing activity is to occur in proximity to known sites, it is recommended that a qualified archaeological and Native American monitor be present. The monitor would identify cultural materials uncovered by the project activity and should have the authority to suspend work in order to document and evaluate the finds and recommend avoidance measures, if necessary.

Monitoring should be conducted for those segments of trail construction that are within a 50 ft. buffer of any site boundary per standard archaeological practices. This would include the following sites; SDI-7933, -8279, -9790, and -19464.

If project changes involve impacts to areas lying outside the scope of the present survey, additional archaeological survey work is likely to be required in order to inventory and evaluate cultural resources in those areas.
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Moratto, Michael

Owen, Roger C.

Pryde, Philip R.
Pryde, Philip R., and Frederick P. Stutz

Rogers, Malcolm J.

Rogers, Thomas H.

Rondeau, Michael F., Jim Cassidy, and Terry L. Jones

Shipek, Florence Connolly

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Warren, Claude N., Delbert L. True, and Ardith A. Eudey

Waterman, Thomas T.
APPENDIX A

Archaeological Site Records