APPENDIX E

# Archaeological Resources Survey Report for the Shinohara Industrial Project, 517 Shinohara Lane, Chula Vista, San Diego County, California

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# EXECUTIVE SUMMARY

This report provides the results of a Phase I archaeological inventory completed by Red Tail Environmental (Red Tail) for the proposed Shinohara Industrial Project (Project). The Project proposes to construct a single-story 187,748 square-foot industrial building with a 7,468 square-foot leasing office area with a total of 221 parking stalls within an area totaling 9.75 acres in area. The Project area encompasses APN 644-040-010 in the City of Chula Vista, San Diego County, California. The City of Chula Vista (City) is the lead agency. This study was performed in compliance with the California Environmental Quality Act (CEQA) and City's Historic Preservation Program and Historic Preservation Ordinance, Title 21 of the Chula Vista Municipal Code.

This study was conducted to identify all cultural resources and historical resources within the Project area and to determine project-related effects on these resources. The study consisted of a review of relevant site records and reports on file with the South Coastal Information Center (SCIC) of the California Historical Resources Information System (CHRIS) within a 1-mile (mi.) search radius, a pedestrian survey of the Project area by an archaeologist and Native American monitor, and a review of the Sacred Lands File (SLF) held by the Native American Heritage Commission (NAHC). This report includes the results of the study, as well as a brief historic background sketch for the area, and recommendations for future work.

The record search of the SLF held by the NAHC was negative. Information request letters were sent to 16 Native American individuals and organizations. To date one response has been received.

The record search identified a total of 45 cultural resources existing within one mile of the Project area. No resources were identified as existing either wholly or partially within the Project area. The resource closest to the Project area is P-37-008065/CA-SDI-8065, which lies 200 meters south of the Project area. The resource was recorded as a prehistoric site containing a light scatter of green volcanic tools and debitage with occasional fragments of *Chione sp*. and *Argopecten sp*. Lithic tools observed at the time of recordation included one plane scraper, one flake scraper, one dome scraper, one hammerstone, several handstones, and fragments of debitage. Two historic addresses were also identified as existing within one mile of the Project area, and no historic addresses were identified within the Project area.

The Phase I archaeological survey of the proposed Project area resulted in no discoveries of previously unrecorded resources. The Project area appeared to have been recently mowed for vegetation control, with onsite vegetation consisting primarily of annual grasses. Ground visibility was fair, ranging between 40 percent and 75 percent. The Project area appeared to have been graded in 1993, based on aerial imagery. The parcel has a southerly aspect and slopes to the south with a moderate descent in elevation from the Project area's northern boundary. The upper half of the Project area has been graded to form a pad (most likely during 1993) but appears to have lain fallow and undisturbed since the pad formation. The northern portion of the Project area contains an exposed slope that shows intact sediment stratigraphy. Several small scatters of modern-era debris and refuse were present within the Project area. Several dump piles of imported sediment were also observed, although the dumped sediments did appear to represent similar sediments within the intact slopes along the northern boundary. Surface sediments throughout the Project area consisted of light brown and tannish brown silty sands. The northern, southern, and eastern boundaries of the Project area contained concrete-lined V-ditches. An additional concrete-lined V-ditch was present along the north side of the temporary unpaved access road that leads from the southeastern lot entrance to the graded pad in the northern portion of the Project area.

Due to the lack of cultural resources within the Project area and the previous amounts of disturbance from earlier grading activities, the potential of intact subsurface resources within the Project area is low.

Archaeological and Native American monitoring during construction and grading activities is not recommended.

# NATIONAL ARCHAEOLOGICAL DATABASE INFORMATION

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**Submitted to:** City of Chula Vista

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**Report Title:** Archaeological Resources Survey Report for the Shinohara Industrial Project, 517 Shinohara Lane, Chula Vista, San Diego County, California

**Type of Study:** Phase I Archaeological Inventory

**New Sites:** none

**Updated Sites:** none

**USGS Quad:** *Imperial Beach, California* 7.5-minute Topographic Map

**Area:** approximately 9.75 acres

**Keywords:** negative survey, *Imperial Beach, California* 7.5-minute Topographic Map, City of Chula Vista

# 1. INTRODUCTION

## PURPOSE OF STUDY

This report provides the results of a Phase I archaeological inventory completed by Red Tail Environmental (Red Tail) for the proposed Shinohara Industrial Project (Project). The Project area encompasses APN 644-040-010 in the City of Chula Vista, San Diego County, California. The City of Chula Vista (City) is the lead agency. This study was performed in compliance with the California Environmental Quality Act (CEQA) and City's Historic Preservation Program and Historic Preservation Ordinance, Title 21 of the Chula Vista Municipal Code.

## PROJECT LOCATION

The Project site is 9.75 acres at 517 Shinohara Lane, Chula Vista, California and encompasses APN 644-040-010. The Project is bounded by Main Street to the south and developed land to the north, east, and west. Access to the Project area is along Shinohara Lane on the southeast corner of the Project area. The Project is shown on the *Imperial Beach, California* USGS 7.5-minute quadrangle within Township 18 South, Range 1 West, Sections 18 and 19 (Figures 1-3).

## PROJECT DESCRIPTION

The Project proposes to construct one single-story 187,748 square-foot industrial building with a 7,468 square-foot leasing office area with a total of 221 parking stalls. The entire project area consists of 9.75 acres (Figure 3).

## PROJECT PERSONNEL

Red Tail Principal Investigator Shelby Castells, M.A., RPA served as the primary author of this report and managed the study. Red Tail Senior Archaeologist Spencer Bietz conducted the archaeological field survey, contributed to the report and provided cartographic figures. Native American monitoring was provided by Corel Taylor of Red Tail, under the direction of Clint Linton.

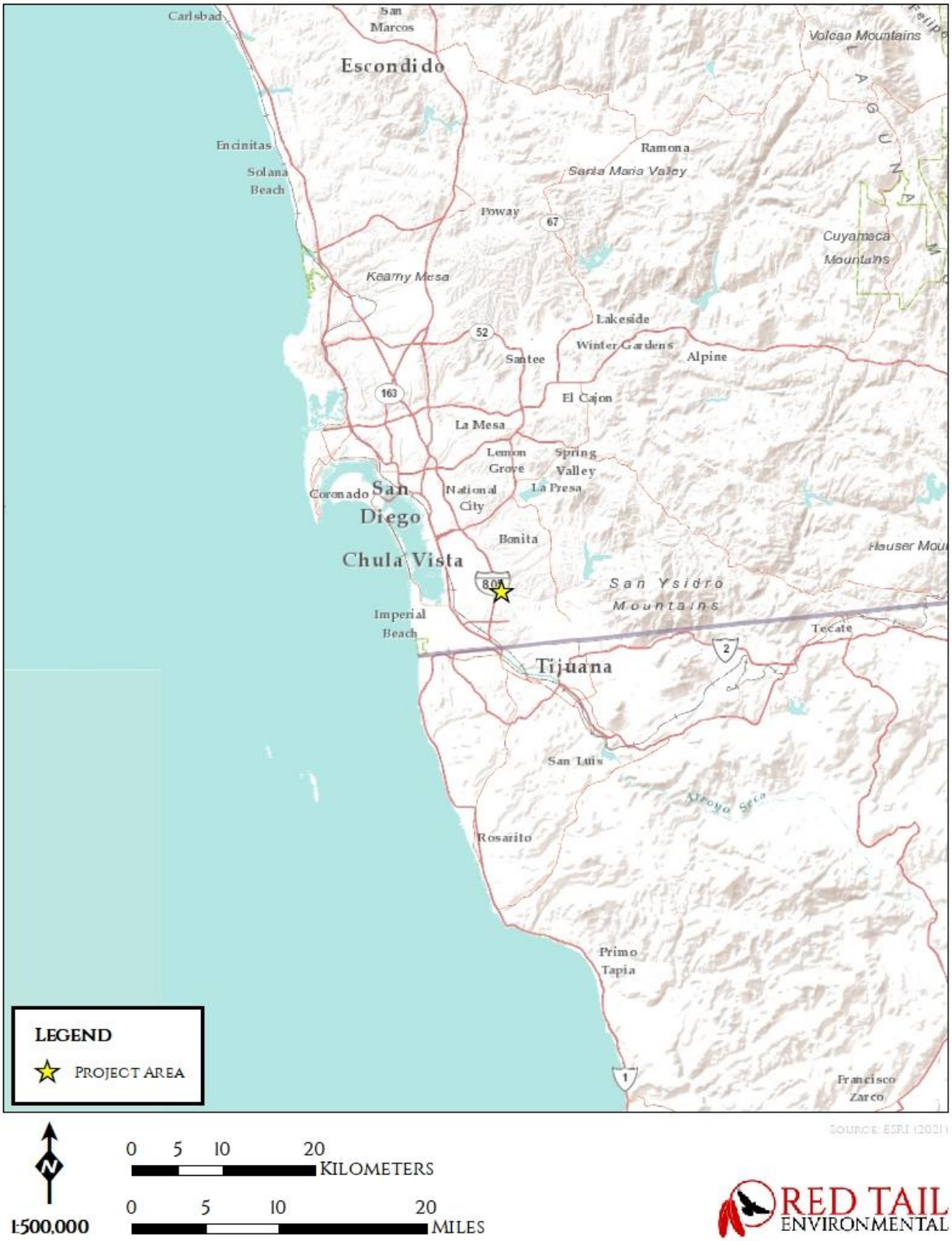



Figure 1. Project Vicinity Map.

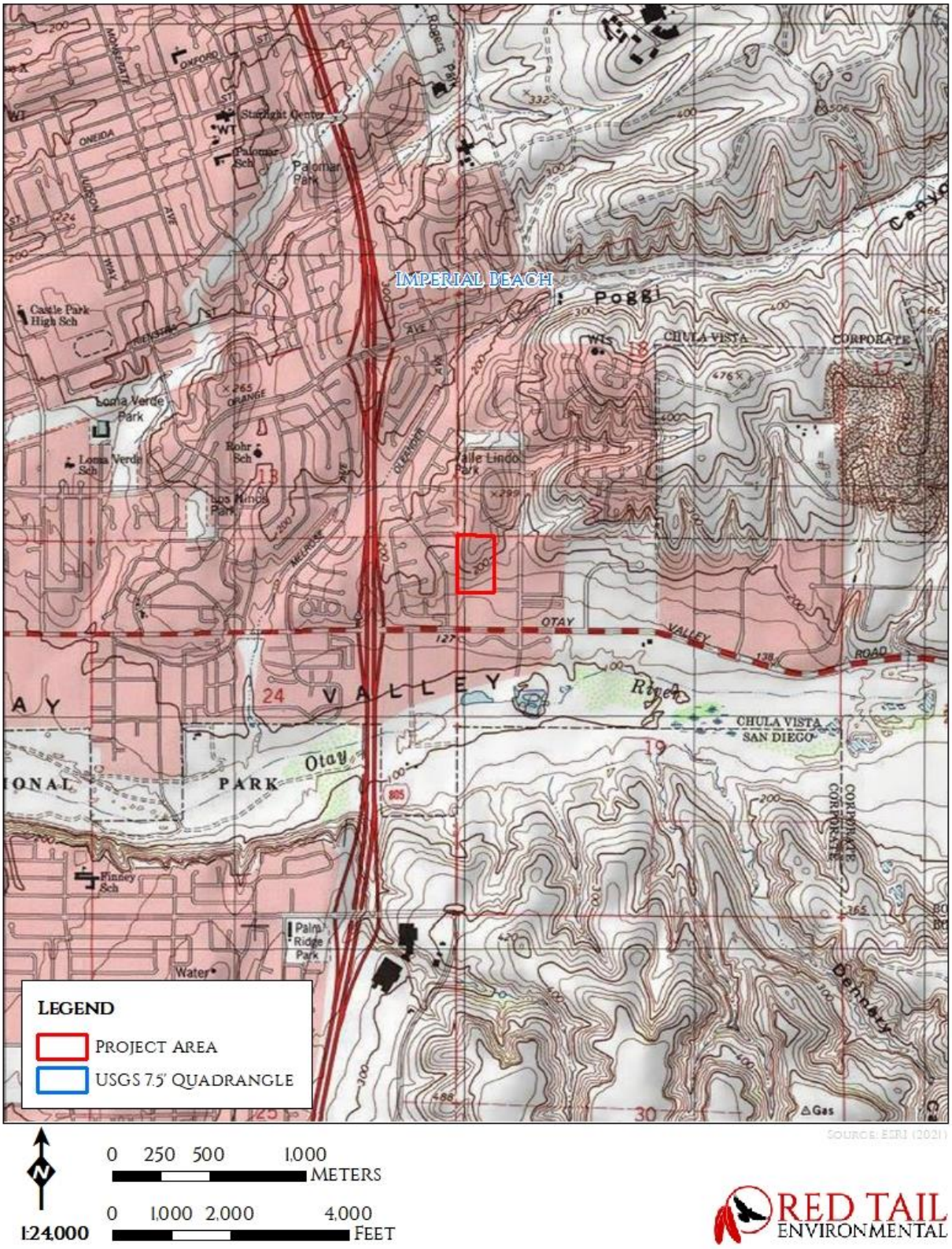



Figure 2. Project Area, shown on the USGS 7.5' *Imperial Beach, California* Quad Map.




Figure 3. Project Area.

# 2. SETTING

## NATURAL SETTING

The Project area is located within San Diego County within the Peninsular Ranges Geomorphic Province. The Peninsular Ranges make up the majority of San Diego County and contains a series of mountain ranges separated by northwest trending valleys (California Department of Conservation, California Geological Survey, 2002). The Project area is located within the Otay River Valley along the north bank of the Otay River. Elevation within the Project area is approximately 200 feet above mean sea level (amsl).

Modern climate conditions within the Project area consist of a Mediterranean climate, with average rainfall of nine to ten inches per year, generally from January through March. The Project area is currently undeveloped. Vegetation within the Project area consists primarily of non-native grasses with several non-native eucalyptus trees present along the southern perimeter.

## CULTURAL SETTING

The cultural setting of the Project area can be divided into the prehistoric, ethnohistoric, and historic periods, as discussed below.

### Prehistoric Archaeology

Generally, archaeologists believe that human occupation within San Diego County began sometime after 20,000 years Before Present (B.P.), and likely prior to 11,200 B.C. (Fagan 2003, Gallegos 2017). Archaeologists have developed numerous chronologies and nomenclature for the archaeological record many of which conflict with each other. Most archaeologists divide the human occupation of San Diego County during the prehistoric period into three main occupation eras: the Terminal Pleistocene / Early Holocene Period; the Middle Holocene Period; and the Late Holocene Period. While archaeological studies have taken place in San Diego County for over 100 years, portions of San Diego County have few well dated deposits as a result of development and the destruction of sites prior to the implementation of environmental laws and systematic archaeological studies (Hale 2009).

No definitive evidence of human occupation of San Diego County is available prior to approximately 12,000 B.C. However, a possible early archaeological site was identified in San Diego County, containing *in situ* hammerstones, a stone anvil, and fragmentary remains of spiral fractured fossilized mastodon bone and molar fragments, showing evidence of percussion, known as the Cerutti Mastodon site (Holen et al. 2017). The site was dated to 130.7 ± 9.4 thousand years ago, and if believed to be an archaeological site is the oldest archaeological site in North America. However, it is highly disputed if the site was formed by the genus *Homo* or is naturally occurring (Holen et al. 2017).

The earliest known archaeological sites near San Diego County with reliable dates are from the Channel Islands. The Arlington Springs site on Santa Rosa Island dates to 13,300 years ago, and the Daisy Cave site on San Miguel Island dates to 12,300-11,120 years ago (Lightfoot and Parrish 2009). Over 25 shell midden sites that date to between 12,000 and 8,000 years ago have been recorded on the Channel Islands. On the mainland a site near San Luis Obispo dates to 10,300-9,650 years ago and several sites on Cedros Island in Baja California date to 12,000 years ago (Lightfoot and Parrish 2009).

Previously, archaeologists believed that people came to North and South American through the Bering Land Bridge, however recent studies have identified that this ice-free corridor was blocked from 21,000 to possibly as late as 11,000 B.C. (Erlandson et al. 2007). Meanwhile, the coastal areas of the Pacific

Northwest were deglaciated by approximately 14,000 B.C. Travel along the Pacific Coast in boats would have been possible during this period, and widespread kelp forest could have created a "kelp highway" with sufficient resources to sustain people entering North America during this time period (Erlandson et al. 2007, Gallegos 2017, Masters and Aiello 2007). Erlandson et al. (2007) argue that "it seems most likely that the peopling of the Americas included both coastal and interior migrations of peoples from northeastern Asia and Beringia, with an earlier migration possibly following the northern Pacific coast" (56). However, Erlandson et al. also argues that no archaeological sites have been unequivocally dated to over 15,000 years ago in California or North American.

### Terminal Pleistocene / Early Holocene Period (ca. 12,000-6,000 B.C.), Paleo-Indian, San Dieguito

Paleo-Indian sites have been identified across most of North America, often referred to as the Clovis Complex. The Clovis Complex is defined by the use of large fluted projectile points and other large bifacial stone tools. Three isolated fluted points have been reported in San Diego County (Davis and Shutler 1969, Kline and Kline 2007, Rondeau et al. 2007). However, no fluted points have been found in San Diego County that are associated with radiocarbon dates or in association with Pleistocene fauna (Rondeau et al. 2007). Fluted points have been dated outside of California to 13,500 years before the present.

In San Diego County the Paleo-Indian period is generally termed San Dieguito. San Dieguito was defined by Warren (1968) at the C.W. Harris Site (SDI-149) and was characterized by leaf shaped and large stemmed projectile points, scrapers and other stone tools that were technologically similar to the Western Stemmed Point Tradition (WSPT), also called the Western Pluvial Lakes Tradition (WPLT). Archaeological evidence of the WSPT has been found across the western interior of North America with small regional variations (Gallegos 2017, Sutton 2016, Warren 1968). Radio carbon dates from the C.W. Harris Site (SDI-149) ranged from ca. 8,000 to 6,500 cal B.C. (Byrd and Raab 2007, Gallegos 2017). Outside of the isolated Clovis points found in San Diego County, this is one of the earliest evidences of human occupation in the County. While the earliest radiocarbon dates in San Diego County are ca. 10,000 to 11,000 years ago, Gallegos (2017) stresses that all San Diego County sites have problematic stratigraphy because of bioturbation or disturbances from modern uses. Ground stone use was infrequent in San Dieguito archaeological remains, leading to the belief that the San Dieguito were highly mobile groups and their subsistence practices focused on the hunting of large game.

It is unknown if the first people arrived in San Diego County via the sea or from the pluvial lakes within the Great Basin to the east. Gallegos reports that there are two locations that may be the earliest San Dieguito habitation areas if they arrived in San Diego by sea: the La Jolla Archaeological area, extending from La Jolla Bay to the University of California, San Diego Chancellor's house, or at the Remmington Hills Site (SDI-11079) near the coast of Otay Mesa, east of the Tijuana Lagoon (Gallegos 2017). Masters and Aiello argue that from approximately 10,800 to 9,400 B.C. the extensive kelp beds of the coast of southern California flourished and would have provided a resource rich environment that would have made the coastal area a more attractive living location than the interior (2007). The estuaries off the coast of San Diego were productive with resources such as fish nurseries, shellfish, shorebird and marine mammals (Masters and Aiello 2007).

In addition, the Windsong Shores Site, SDI-10965/W-131, is representative of the San Dieguito Period, with artifacts similar to the WSPT, and was occupied ca. 9930 to 9580 years ago. However, these San Dieguito archaeological sites, in addition to artifacts similar to the WSPT, also contain artifacts which show a diet of shellfish, fish, birds, small to large mammals, and plant foods. Traditionally, archaeological research on Paleo-Indians has focused on the subsistence strategy of large game hunting of Pleistocene megafauna, which was then hunted to extinction. Subsequently Paleo-Indian peoples then focused on different subsistence strategies (Erlandson et al. 2007). More recent studies along the Southern California

coast have focused on the diversity of subsistence strategies during this period, acknowledging the use of smaller animals and plant foods as staples, with limited evidence for big game hunting (Byrd and Raab 2007, Erlandson et al. 2007). There is little specific information from San Diego County archaeological sites for subsistence practices from this time period, besides the sites listed above. However, in the Daisy Cave archaeological site, only 200 miles to the north, one of the largest early Holocene archaeological deposits that has been excavated identified over 18 types of fish, multiple shellfish, marine mammals, and birds remains, showing that people relied on a wide assortment of marine resources as early as 8000 B.C., rather than subsisting on large mammal hunting (Erlandson et al. 2007). In addition, archaeological research across Southern California has shown the use of shellfish, marine mammals, and fish declined proportionately with distance from the coast. Less is known about plant use in interior sites from 8000 to 6500 B.C., besides the fact that an increase of milling tools is present suggesting that plant resources were heavily relied upon during this early period (Erlandson et al. 2007). Several sites in southwestern California from which spire removed *Olivella* beads have been recovered and dated to 9000 to 7000 B.C., which potentially indicates a trade network between the coast and the interior people or the movement of people between the two very different environments (Erlandson et al. 2007). Byrd and Raab argue that an environmental change from 10,000 to 8,000 cal. B.C. caused warming and drying conditions which shrunk the interior lakes and streams in Southern California's deserts and spurred the change from a reliance on large game hunting to a focus on a variety of subsistence strategies (2007).

There is a large debate between the relationship of the San Dieguito and the La Jolla Complex peoples in San Diego County, and whether they represent either distinct cultural changes or represent tool kits specific to the environment. The La Jolla Complex has been defined as the archaeological remains of the people inhabiting San Diego County during the Middle Holocene, discussed below. It has a focus on milling stone technology, rough percussion-flaked stone tools and a reliance on a variety of marine, plant, and small terrestrial resources (Hale 2009, Wallace 1955, Warren 1968). Sites which date to the Early Holocene in San Diego County do contain some milling tools, but at lower levels than the La Jolla period sites (Gallegos, 2017). The lowest levels of the C.W. Harris Site (SDI-149), however, have been identified as a Paleo-Indian Period occupation with a coastal adaptation. The artifacts are primarily bifaces and scrapers without the ground stone artifacts associated with milling identified in other early sites (Gallegos 2017:21). The Remmington Hills site has four of the earliest radiocarbon dates in San Diego County, but contains cobble tools as well as milling tools, suggesting a dependence on coastal and lagoon resources rather than big game hunting (Gallegos 2017). Gallegos also stresses that in choice locations in San Diego County, such as Tijuana Lagoon surrounding Otay Mesa and around La Jolla Bay, the archaeological record shows a continuous habitation through the Holocene with little evidence for cultural change until the Late Prehistoric Period (Gallegos 2017). Gallegos reiterates that development and bioturbation have resulted in a lack of stratigraphy in these areas, which may have obscured the presence of a traditional Paleo-Indian occupation, if one had been present.

### Middle/Late Holocene Period (ca. 6000 B.C.-A.D. 500 - 800), Archaic Period, La Jolla Complex, Millingstone Horizon

The Millingstone Horizon, also known as the La Jolla Complex or the Archaic Period in San Diego County, is defined through the presence of specialized tools that focused on collection and processing of small plant seeds and the hunting of a variety of medium and small game animals. These specialized tools also promoted a reliance on marine resources along the coast (Byrd and Raab 2007, Hale 2009, Rogers 1945, Warren 1968). While early milling stone assemblages show that by 9,000 years ago milling tools were in use and that seeds and nuts must have been a dominant food source (Lightfoot and Parrish 2009), the Millingstone Horizon is generally attributed to the Middle to Late Holocene Period and has been identified across much of central and southern California by ca. 6000 to 5000 cal B.C. The La Jolla Complex has been

identified as remaining relatively stable for thousands of years within San Diego County with very little technological changes identified within the archaeological record (Byrd and Raab 2007, Hale 2009).

The archaeological record from this period are often found near the coastal lagoons, however inland sites are also identified during the lengthy Middle Holocene Period. Coastal La Jolla Complex sites contain a large number of shellfish remains. Stone tools associated with this period are often described as "crude" or "expedient" and contain choppers, scrappers, handstone, milling slabs, basin metates, discoidals, and Pinto and Elko projectile points. Flexed burials are also associated with the La Jolla Complex (Moriarty 1966, Gallegos 2017, Hale 2009). A large number of small sandstone mortars or bowls have been recovered from archaeological sites in the La Jolla area, dated to the La Jolla Complex, as well as manos, metates, pestles, net weights, scrapers and projectile points (Gallegos 2017).

Interior sites from this period contain similar archaeological collections but with a focus on milling tools, lithic choppers, and scrapers. Conversely, these sites focus less upon the use of shellfish and other marine resources. Unfortunately, there is little archaeological evidence that defines group size and habitation structure functionality within interior San Diego County sites during the middle Holocene.

During this lengthy period little technological changes are identified within the archaeological record until approximately 5,000 years ago when there was an increase in sedimentation along the coast. The increased sedimentation transformed the estuaries into shallow wetlands, closed several of the lagoons, transformed the coastal areas into sand and mudflats, and limited the kelp forests, causing the coastal region to have a lower level of subsistence resources than in the past (Byrd and Raab 2007, Gallegos 2007, Masters and Aiello 2007). Pismo Clams are used to identify the development of sand beaches as they require wide fine-grained sand beaches that are not lost in winter storms (Masters and Aiello 2007). While the sedimentation of the coastal lagoons and estuaries was a lengthy process, the Pismo Clam data suggests the San Diego County coast was the latest area within Southern California to show lagoon closure and the creation of sand beaches, taking place approximately 5,000 years ago, around 3,000 B.C., (Masters and Aiello 2007). Gallegos theorizes that local populations adapted to the changing environmental conditions during this time by altering their settlement patterns to increase their use of plant and terrestrial animal use, which is identified in the archaeological record through an increase in habitation areas near oak and grassland resources and away from the coastal zone (Gallegos 2017). Gallegos shows that this is supported in the archaeological record by a near absence of human occupation at archaeological sites at Agua Hedionda, Batiquitos, San Elijo and San Dieguito lagoons ca. 3500-1580 B.P., with evidence that these lagoons opened again between 1580 and 1000 BP. However, Peñasquitos Lagoon, Tijuana Lagoon, San Diego Bay, and La Jolla Bay did not close and show continuous prehistoric occupation. Gallegos also argues that several of the coastal sites in the La Jolla area, which were located on the mesa tops, appear to have been abandoned ca. 5,000 to 3,000 years ago as the rocky shore shellfish population diminished (2017).

Past archaeological studies have argued that as the coastal estuaries became less productive for shellfish and other food sources, there was a depopulation along the coastal zone and settlements shifted to inland river valleys with an intensification of terrestrial game and plant resources (Byrd and Raab 2007). However, more recent archaeological work has identified Middle Holocene period sites remaining along the coastline along San Diego Bay, Mission Bay, Peñasquitos Lagoon, San Elijo Lagoon, Santa Margarita River drainage, Las Flores Creek, and San Mateo Creek, each displaying a continuous occupation from the Middle Holocene into the Late Holocene (Byrd and Raab 2007). Byrd and Raab argue that the larger drainage systems, such as San Elijo Lagoon, Las Flores Creek, and the Santa Margarita River Valley, likely maintained more productive estuaries that provided resources for a continuous occupation through the Middle to Late Holocene (Byrd and Raab 2007).

During the La Jolla Period there is less evidence for trade networks or migrations of people than in the Late Holocene. Shell bead types found in Southern California have been identified in the western and northern

Great Basin from the Middle Holocene period. However, the extent and variety of these trade networks are unknown. There is an argument that during the Middle Holocene a migration of speakers of Uto-Aztecan languages migrated from the Great Basin into portions of Southern California, based on both archaeological and linguistic data, known as the Shoshonean Wedge, however additional research is needed (Byrd and Raab 2007). Overall, it is unknown if the people which created the La Jollan Complex archaeological sites are the same which created the San Dieguito. The archaeological records display differing subsistence strategies based on location and availability of resources, but additional information is needed to determine if they represent different cultural traditions due to population migration or from other external factors.

Besides the lessening of marine resources nearly 5,000 years ago, archaeologists have not come to a consensus on identifying different phases within the La Jolla Complex from either environmental or cultural changes. Overall, the archaeological record during this lengthy time period remains very similar (Hale 2009, Laylander 2018). Little is known about the transition from the La Jolla Complex to the Late Prehistoric Period. Laylander reports that there is a relative scarcity of dates within archaeological sites from 1300 B.C. to A.D. 200, but it is unknown if this represents a decline in population during the end of the Archaic Period or a bias in research data (Laylander 2014a).

## Late Holocene Period (A.D. ca. 500 – 800 to 1769), Late Prehistoric Period

The Late Prehistoric Period is defined by the introduction of the bow and arrow after approximately A.D. 500 and the use of ceramics after approximately A.D. 1000. Also, during this time, mortuary practices changed from inhumations to cremations (Byrd and Raab 2007). It is unknown if the transition to the Late Prehistoric was caused by the adoption of new technologies by local San Diego populations during the La Jolla Complex or was representative of an influx of migrating populations into San Diego County (Laylander 2014a). Gallegos suggests that there may have been a long period of transition between what archaeologists identify as the La Jolla Period and the Late Prehistoric Period. He theorizes that the transition possibly occurred over a thousand years and that this transition is marked by an increase in the diversification of pressure flaked artifacts (Gallegos 2017:33).

The Late Holocene Period is identified as a continuation of the cultural practices that were present during the initial Euro-American exploration of San Diego County and that were recorded during the Ethno-Historic Period (Byrd and Raab 2007). During the Late Holocene Period, subsistence strategies focused on smaller and more plentiful resources such as the collection of small species of shellfish and seed plants and the hunting of smaller terrestrial animals and marine fish. Within the archaeological record there is an increase in the use of Donax shellfish, milling of plant seeds and nuts in inland locations, and the presence of numerous hearth features along the coast in Torrey Pines habitat which were likely used to processes pint nuts. Desert zones also show an increase in the number of agave roasting pits during this time (Gallegos 2017).

Late Period Sites are plentiful across San Diego County and Gallegos argues that it is unknown if the Late Period sites in San Diego County are found frequently due to an increase in population during this period, especially in the inland areas, or due to the result of more recent sites not being buried by silt and sediment like Early and Middle Holocene sites, and thereby hidden from the archaeological record (Gallegos 2017). Many Late Prehistoric Period archaeological sites are located inland and contain bedrock milling features, thought to relate to acorn or other seed processing. People lived in larger coastal and lower valley villages that were located near permanent water sources. These villages acted as ceremonial and political centers and may have been occupied, at least partially, year-round. Smaller villages and residential areas were inhabited seasonally and were located near subsistence resources or were used for specialized activities, especially in inland areas (Byrd and Raab 2007, Lightfoot and Parrish 2009). This may have led to an increase in community size, longer stays at the major residences, and different societal organization. It is

unknown if these changes in settlement patterns were caused by environmental factors, resource usage, population growth, or other reasons. It is possible that some of these changes were responses to the Medieval Climatic Anomaly between A.D. 1100 and 1300, which caused a temperature increase and drought across the area (Gallegos 2017). Evidence of formal or permanent residential or communal structures has not been identified in the archaeological record. However, early archaeological studies in San Diego County by Rogers reported archaeological evidence of brush house structures, stone enclosures, sweathouses, hearths, roasting pits, granary bases, bedrock milling features, pictographs, and petroglyphs (Gallegos 2017). Most of the rock art in San Diego County has been attributed to the Late Prehistoric Period (Gallegos 2017).

Archaeological remains have identified over four dozen plant types that were used in San Diego County during this period (Byrd and Raab 2007). Grass seeds had the highest frequencies of use, and there was less evidence for acorn exploitation. Hale (2009) reports that an intensive use of acorns in San Diego County did not take place until A.D. 1700 in conjunction with a greater use of ceramics at that time as well. The lower level of acorn usage in San Diego, visible in macro-botanical studies, is in contrast to a reliance on acorns as a major subsistence resource in other parts of Southern California (Byrd and Raab 2007, Hale 2009). Little is known about plant cultivation during the Late Holocene. There is evidence that a high number of plants that follow fires were used, but no major research projects have focused on proto-agriculture in San Diego County. Early Spanish accounts identify that the Native Americans were practicing cultivation of certain plants through burning and water diversion (Gallegos 2017).

Agriculture was in use along the Colorado River, east of San Diego County as early as A.D. 700 (Schaefer and Laylander 2007). However, little evidence of agricultural practices have been identified prehistorically in San Diego County. Within the Jacumba Valley region ethno-historic evidence recorded Kumeyaay constructing small dams and ditches diverting water to terraces for agriculture. However, Gifford reported this in 1930 as taking place in the first half of the nineteenth century, and it is unknown if it was practiced prior to the ethnohistoric period (Schaefer and Laylander 2007). Generally, while there is archaeological evidence for use of fire and the manipulation of grasses producing seeds, the level of agricultural practices predating the mission period in San Diego County is unknown (Schaefer and Laylander 2007).

Ceramic use entered the San Diego region during the Late Prehistoric Period, with a wide variety of Late Prehistoric dates for the introduction of ceramics in various parts of the County (Gallegos 2017, Hale 2009, Schaefer and Laylander 2007). Shackley reported that ceramics were not identified west of the mountains within San Diego County prior to A.D. 1300 (2004), but were present in the Lake Cahuilla region as early as A.D. 700 and that there were at least five ceramic types present in the desert by A.D. 1000 (2004). Meanwhile, Schaefer and Laylander theorized that ceramics were in use by A. D. 800 (2007) and Gallegos described a range of ceramic use in County (2017). There is a consensus that ceramic use spread from the eastern deserts to the center of San Diego County, into Kumeyaay territory, and then spread to northern San Diego County, into the Luiseño territory, after it was in use in the Kumeyaay territory. Ceramic use within the region, especially in the area inhabited by the Tipai, was very diverse and included large food and water storage ollas, parching trays, paint pots, ceramic anvils, canteens, scoops, ceramic dance rattles, and effigy vessels (Shackley 2004). Residual clays from sources west of the Peninsular Ranges produced a ceramic style described as Tizon Brownware, which is identifiable by the brown color and high inclusions of mica and angular granite. Clay sources east of the Peninsular ranges resulted in a lighter buff colored ceramics, with less inclusions, known as Buff Ware. While more common in the respective territories in which they were made, both types are found across the region with a much larger variety of ceramic types found within the Colorado Desert area in eastern San Diego County (Schaefer and Laylander 2007, Shackley 2004)

Archaeological evidence shows that during the Late Prehistoric Period there was a decline in usage of large mammals and a focus on smaller terrestrial mammals, especially rabbits (Christenson 1990). This

subsistence practice is linked to the use of bow and arrows. The earliest arrow points, small projectile points, have been dated in San Diego County is between A.D. 490 to 650 and A.D. 690 (Hale 2009). By A.D. 1000 small projectile points have been identified across San Diego County in large numbers (Hale 2009). Two main projectile point types are found within the Late Prehistoric Period, the Cottonwood Triangular and the Desert Side-Notch, although some typologies have added a third category, Dos Cabezas Serrated (Laylander 2014b). Projectile points and lithic raw materials in general are consistent between the coastal and eastern areas of the County during the Late Prehistoric period, further implying that the western and eastern site of the territory were occupied by the same peoples seasonally.

Common lithic materials for formed tools, primarily projectile points include chert, jasper, agate, fossilized wood, rhyolite, wonderstone, quartz, obsidian, and Santiago Peak metavolcanics (Shackley 2004, Lightfoot and Parrish 2009). The wonderstone found in San Diego County derives from the Rainbow Rock source in the Colorado Desert (Schaefer and Laylander 2007). Dietler reports that for all lithic use during the Late Prehistoric Period, there was a preference for obsidian followed by cryptocrystalline silicates and then volcanic material. However, it was more advantageous to use material that was readily available rather than moving large amounts of preferred material far distances (Dietler 2000). In addition, Obsidian Butte obsidian is found across the County and the archaeological record suggests that access to the imported resource does not appear to have been controlled by one group (Dietler 2000).

Besides the creation of the small projectile points, which are ubiquitous in Late Prehistoric sites and were often carefully made, Schaefer and Laylander characterize lithic technology from this period as "expedient" (2007:252). In general, Schaefer and Laylander theorized that tools were created as need from available materials and discarded after use. Gallegos (2017) also supports that lithic technologies were similar through time, with a focus on a direct response to the tools needed and the quality of local lithic material. The small projectile points in abundance during the Late Prehistoric Period could utilize poorer quality material than the large projectile points within the Early and Middle Holocene, as shown with the use of poor-quality Obsidian Butte obsidian and Piedra de Lumbre (PDL) chert. Generally, local volcanic material was used to make scraper tools, and local granitic and sandstone was used for groundstone tools (Gallegos 2017). Overall lithic technology, besides projectile points, tends to be stable over time across San Diego County, with the only clear chronologically identifiable lithic technology as the change in projectile point type. Groundstone tools show a greater effort of manufacture especially sandstone metates and other volcanic pestles and metates than flaked lithic tools (Gallegos 2017).

The Late Prehistoric Period additionally saw an increase in archaeological sites within portions of the Colorado Desert in eastern San Diego County. The Colorado Desert archaeological sites from this period have a range of radiocarbon dates from ca. A.D. 135 to 645 (Schaefer and Laylander 2007). Although located within Imperial County, Obsidian Butte was a major resource of lithic material in San Diego County during the Late Prehistoric Period. Obsidian Butte obsidian was available during periods of low water within Lake Cahuilla, and is found across Late Prehistoric archaeological sites within San Diego County during the last 1000 years, making up as much as 10 percent of some debitage assemblages in coastal and interior San Diego sites (Schaefer and Laylander 2007). The Colorado Desert was a major source of additional lithic material types found in San Diego County archaeological sites, including chert, chalcedony, basalt, rhylotie, quartz, and others.

After 1300 B.P. cremation was common practice across San Diego County and was practiced during the Ethno-Historic Period by both the Kumeyaay and the Luiseño (Gallegos 2017). It is thought that this practice came from the north or east, and it is unknown if the transition from inhumations to cremations was adopted for religious or population reasons, or to control the spread of disease (Gallegos 2017).

## Ethnohistoric Period

The project area lies within an area that was traditionally inhabited by the Kumeyaay, also known as Ipai, Tipai, or Diegueño (named for Mission San Diego de Alcalá). According to documentation in the ethnographic record, the Kumeyaay territory ranged from between Agua Hedionda Lagoon and Batiquitos Lagoon in the northwest, east through present day Escondido to the southern end of the Salton Sea, and then southeast through the Sonoran Desert into Mexico, with the southwestern boundary near Todos Santos Bay in Baja California, Mexico, south of Ensenada (Luomala 1978). Four to six dialects were present within the Kumeyaay territory, and northernmost groups referred to themselves as Ipai, while those in the southern portions of the Kumeyaay territory refer to themselves as the Kamiai, Kamiyahi, or Tipai (Kroeber 1976). Ipai and Tipai were thought to be two distinct dialects of Kumeyaay, which was part of the Yuman Family of the Hokan Stock (Lightfoot 2005). The Tipai were present south of the San Diego River Valley into Mexico (Gallegos 2017).

The Kumeyaay are a group of exogamous, patrilineal territorial bands who lived in semi-sedentary, politically autonomous villages or rancherias. Most rancherias were the seat of a clan, although it is thought that, aboriginally, some clans had more than one rancheria and some rancherias contained more than one clan (Bean and Shipek 1978; Luomala 1978). Each group or clan was associated with a restricted locality, probably their summer home, called cimul or gentes (Luomala 1978, Spier 1923, Shackley 2004). Often several lineages lived together in a residential base. The number of residents, both full time or seasonally, is unknown. A hereditary male chief was present in each clan (Luomala 1978). Members of each clan had communal rights to the land and resources within their boundaries. The woman in the marriage was generally from another settlement, and if both agreed the couple would move to the man's father's house or would build a house nearby. While generally marriage was patrilocal, it was not uncommon for a couple to live with the woman's family. Both the husband or wife could leave the marriage if they wished.

Houses were made of Tule or California bulrush (Waterman 1910). In the center of villages was a circular dance ground, made of hard packed soils, where dances took place. Songs and dances were often accompanied by a turtle or tortoise shell rattle, wooden flute or whistle, or a bull-roarer, which was swung around the head to make a loud roaring sound. Tobacco was smoked from a stone pipe and was used primarily in ceremonies. Tobacco smoking is also referenced in Kumeyaay mythology (Waterman 1910). Several sources indicate that large Kumeyaay villages or rancherias were located in river valleys and along the shoreline of coastal estuaries (Bean and Shipek 1978; Kroeber 1976). They subsisted on a hunting and foraging economy, exploiting San Diego's diverse ecology throughout the year; coastal bands exploited marine resources while inland bands might move from the desert, ripe with agave and small game, to the acorn and pine nut rich mountains in the fall (Cline 1984; Kroeber 1976; Luomala 1978). Subsistence cycles of the Kumeyaay were seasonal and generally focused on an east-west or coast-to-desert route based around the availability of vegetal foods, while hunting added a secondary food source to gathering practices (Luomala 1978, Shackley 2004). The Kumeyaay lived in the foothills on the edge of the Colorado Desert in the winter, in the mountains in the spring, and in the inland valleys in the summer, although all settlements of a clan would be occupied throughout the year (Spier 1923). A clan's seasonal movement would be based on several major stable plants and a small number of people would arrive at a campsite to begin gathering in the vicinity of the staple crop, soon to be followed by a larger number. Staples included acorns, mesquite, cactus fruits, seeds, and piñon nuts (Luomala 1978). Spier (1923) goes into detail regarding the use of acorns, which are collected in the fall, and then stored to dry until the following February when they are processed by cracking them open, crushing them using a mortar and pestle, and leaching them. Cacti and succulents were used in greater quantity in the eastern side of the Kumeyaay territory, including agaves, Barrel Cactus, chollas, prickly pears, and yuccas (Luomala 1978).

Ethnographic and archaeological sources show the Kumeyaay using the following plant sources: California Buckwheat, Blue Dicks, Canary grasses, Chia, Native Barley, Pitseed Goosefoot, Tarweeds, wild

cucumber, Blue Elderberry, California juniper berries, jojoba, Holly-leafed Cherry, Lemonadeberry, Manzanitas, Oaks, Pinyon, Yucca, Prickly-pears, and others (Lightfoot and Parrish 2009). Meat sources included rodents, lizards, some snakes, insects, larvae, deer, and birds. Most hunting was performed by men, either alone or in informal parties (Luomala 1978). Rabbit was the most abundant source of meat, and was often caught in communal drives using nets, fences, or fires along with rabbit sticks or bows and arrows (Lightfoot and Parrish 2009). Other food sources within coastal environments include abalones, clams, mussels, marine snails, caterpillars, nearshore fishes, and marine birds (Lightfoot and Parrish 2009, Luomala 1978). Some limited agriculture was present in the east, consisting of the planting of maize, beans, and melons. The flood plain agriculture practiced in the eastern river valleys, was used by the same groups that practiced hunting and gathering in other areas of the Kumeyaay territory (Lightfoot and Parrish 2009).

Kumeyaay religion was a mixture of the newer Chungichnish religion and older religious practices and shared many similarities with the Luiseño (Kroeber 1976, Waterman 1910). It is believed that the Chungichnish religion formed in the north and spread south to the islands of Santa Catalina and San Clemente, then to the San Juan Capistrano region and finally into San Diego County through the Luiseño (DuBois 1908). The Chungichnish religion did not reach the southern boundary of the Kumeyaay territory until very late in time, possibly as late as the American period, and was practiced less in the southern Kumeyaay territory (Kroeber 1976). Kroeber reports that these religious practices were not called Chungichnish by the Kumeyaay, rather they were called awik meaning "western". The cult centered around the boys' imitation ceremony in which tolache, Datura meteloides, was drunk. Shamans were present and were the principal performers in Chungichnish ceremonies (Spier 1923). All who took part of the toloache initiation ceremony received a shaman's powers, to a varying degree (DuBois 1908). Practicing the ceremonies of the cult protected the people from evils such as snake bites, and other misfortunes.

Waterman (1910) reported that the Kumeyaay believed that the souls of people have a continued existence after death and that the spirts of the dead go to the east, and the spirits of those that died are still associated with their places and objects. After death, the mourning ritual, Keruk, was performed in which the deceased were cremated, and the ashes were gathered and placed into a jar of pottery and either buried or placed between rocks. The body was burned so that the spirit would not return. The deceased's property was collected to use in the Mourning ceremony, which took place on the year anniversary of the death. During the ceremony the deceased's clothing and any other property was burned during a large gathering.

Other ceremonies and dances included the Feather Ceremony, the Whirling Dance (Tapakwrip), Image Burning Ceremony, the Eagle Ceremony which was a ceremony held on the anniversary of the death of the leader of the dances, the War Dance (Horloi), and the Fire Ceremony. East was the primary ceremonial direction, and ceremonial enclosures open to the east. East was also associated with the color white, south with green-blue, west with black, and north with red.

The Shaman was called the Kwasiyai, and was born a shaman. Waterman (1910) reported that disease was caused by deleterious substances in the body, which must be sucked out. The Shaman cured individuals by sucking blood or the diseased object through the mouth or through a pipe, kneading and pressing and blowing tobacco smoke on the diseased person.

Kroeber (1925) reports that the Kumeyaay origin story is similar to that of other Yuman speaking people in Southern California. In the origin story, mankind and all things in the world are born from mother earth, with either the sky or night as the father, and that the divinity Wiyot is regarded as the first born and not the creator. However, Waterman (2010) reports that there are two separate mythologies regarding creation and the role of the divinity Wiyot. DuBois (1906) recorded that the Kumeyaay came from Wik-a-mee or Wikami, which was a mountain in the Colorado River region, that all the Indians came from that place and only had one language. Shackley (2004) recorded that Tom Lucas, an ethnographic source from Laguna Mountain, told a similar story that they came from "Spirit Mountain". Additionally, the spirits of all the

dead people return to the mountain to dance (Spier 1923). Shackley states that the Kumeyaay origin story parallels the archaeological evidence in that sometime after A.D. 1000, a large number of Kumeyaay ancestors moved into the present territory and that, archaeologically, the relationship between the Kumeyaay ancestors and the populations living at the coast is not entirely known. Tom Lucas reported that the Kwaaymii, the people living in the Laguna Mountains, were created by the Great Spirit, Amaayahaa, who put life into their bodies made of dirt, in their current location, and his people did not migrate from a different area (Cline 1984).

Waterman also reported that there was a wonderful being called Chaup, and that several myths center on Chaup. Chaup named many of the plants and animals and marked them, and he also first brought storms and disease into the world. Chaup's physical manifestation is a ball of lightning or a shooting star (DuBois 1904; Miskwish 2016).

The Kumeyaay calendar was divided into six divisions, with 13 lunar months and four seasons. The calendar was used to know when to harvest plants and administer medicines. The Kumeyaay tracked the equinoxes and solstices, and both solar and lunar eclipses. The winter solstice was the most important date on the calendar, with the fall equinox being the start of the year as it also marked the acorn harvest (Miskwish 2016). Constellations were reflected in pictographs, petroglyphs, and cupules. Constellations played an important part of the puberty ceremonies, other constellations represent creation stories, and other stories, such as death relate to the solstice and equinox. Observatories could be rock cairns, rock alignments, or even a singly placed rock (Miskwish 2016).

Waterman (1910) also recorded that the Kumeyaay played several gambling games, some of which may have been introduced historically. One such game, peon, was still played during Waterman's research and is thought to be an ancient practice. Peon was mentioned in the Chaup myth and is played ceremonially. Peon is played on two sides of four players each and involves guessing and reading the other player's expressions.

### Village Sites Along Otay River

Two ethnohistoric village sites have been recorded within the Otay River Valley, *La Punta* and *Otai* (Gallegos *et al.* 1998). *La Punta* has been identified on early maps as being located along the mouth of the Otay River Valley at San Diego Bay and hearth features have been identified 1.2 m below the ground surface in alluvial deposits. *Otai* (also recorded as *Ueai*) has been recorded near the confluence of O'Neal Canyon and Otay River Valley, approximately 4 miles to the east of the Project area. The village site was along the main access trail from the Otay River Valley to the Mission San Diego do Alcala. It is believed that much of the remains of the village was destroyed in the 1916 flood (Schoenherr 2017). Additional habitation sites have been recorded along the Otay River Valley. Habitation areas have been defined within the Otay Mesa as sites with diverse surface artifact counts of over 200 artifacts per 10x10m collection grids (Gallegos *et al.* 1998)

## History

San Diego history can be divided into three periods: the Spanish, Mexican and American periods.

### Spanish Period (1769-1822)

European exploration of the San Diego area was initiated with the maritime expeditions of Juan Rodriguez Cabrillo in 1542 and Sebastián Vizcaíno in 1602. Continuous European settlement begin in 1769 when expeditions under the leadership of Gaspar de Portolá and Junípero Serra reached the region from Baja California and passed northward along the coastal plain to seek Monterey, and the presidio and the Misión San Diego de Alcalá were founded. Additional missions were founded in the region at San Juan Capistrano in 1776 and San Luis Rey de Francia in 1798. During this period the original El Camino Real ran from

Mission San Diego de Alcalá through to Mission San Luis Rey de Francia (Cavalier 2008). Native Americans within the vicinity of the Project area were removed from their lands and forced into servitude at Mission San Diego de Alcalá. The vicinity of the Project area may have been used for grazing cattle by the Spanish during this period, but the Project area remained undeveloped. Directly north of the Project area was Rancho del Rey, which was in use since 1795 as a grazing area for the Presidio.

### Mexican Period (1822-1846)

In 1821 Mexico achieved its independence from Spain and by 1833 the missions were secularized. During this period the Pueblo of San Diego was founded, although the population grew slowly (Schoenherr 2017). Native Americans released from the Mission San Diego de Alcalá returned to their native villages, moved east to areas lying beyond Mexican control, or sought work on ranchos or in the towns across the region. Numerous large land grants were issued to private owners during this period.

The Project area is near the southern boundary of the Rancho de la Nación and the western boundary of Rancho Otay. Rancho de la Nación was formerly referred to as Rancho del Rey, and was granted to John Forster in 1845 and consisted of over 26,000 acres. Rancho Otay, consisting of over 6,000 acres, was granted in 1829 to Doña Magdalena Estudillo, although the lands may have been regranted in 1846 by Governor Pío Pico (Schoenherr 2017). Little development within the vicinity of the Project area took place during this period. Ranchos, houses, corrals and other facilities for cattle ranching were constructed, while most land remained unchanged and used for grazing of cattle.

### American Period (1846-Present)

The American Period began at the end of the Mexican American War, between 1846-1848, with the Treaty of Guadalupe Hidalgo. After the Mexican-American war the population of the region began to grow, as the Ranchos changed hands and eventually were sold. Immigrants from the eastern U.S. gradually moved into the area and supplanted old Californio customs. Due to a lack of reliable water, agriculture within the area was limited to grain and ranching of cattle. The growth of the population within San Diego County was punctuated with historical events such as the discovery of gold in the Julian area, the extension of the railroad to San Diego, and the establishment of military facilities.

During San Diego's population boom in the mid-1880s speculators formed land companies and subdivided town sites throughout the county (Pourade 1964:167-191). This boom brought homesteaders to the Chula Vista area. Rancho Otay changed hands several times and was eventually sold to the San Diego Land and Town Company in the 1880s (Schoenherr 2017). Rancho de la Nación also changed hand several times and eventually much of the rancho became National City (Schoenherr 2004).

The City of Chula Vista was incorporated in 1911 but most of the area remained rural for several decades. Lemon groves became the primary agricultural good in the region. Chula Vista was typical of the small agricultural communities that grew up in the hinterland of San Diego, characterized generally by widely dispersed settlements that were united by a common school district, post office, church, and general store (Van Wormer 1986a, 1986b, 1987). By 1919 the San Diego and Arizona Eastern Railway was completed, causing a population growth in the area (Schoenherr 2004). With the construction of dams and other water facilities agricultural production grew but Chula Vista remained a small agricultural community until World War II. World War II brought aeronautical companies and military housing to the area and by 1955 the population of Chula Vista had expanded to 31,330 people. Over the next several decades Chula Vista continued to grow adding residential development, transportation routes and additional irrigation and water infrastructure (Schoenherr 2004).

# 3. RESEARCH DESIGN

The Phase I archaeological survey was a systematic, intensive, non-sampling, non-collecting survey. The primary objectives with respect to prehistoric and historic archaeological resources are straightforward: to identify and document all of the resources that are detectable through surface observations. For the research design, the field requirements are (1) that survey coverage include all portions of the study area that can safely be covered and that offer some realistic prospects for containing identifiable resources (excluding, for instance, areas with very steep slopes, flooded areas, areas with no ground surface visibility, or areas where modern construction has destroyed or buried the natural ground surface), and (2) that the spatial extent and general character of any identified resources be documented according to the prevailing professional standards.

# 4. METHODS

Methods used to assess the presence or absence of cultural resources within the Project area included a search of existing records, archival research, and an intensive pedestrian field survey.

## ARCHIVAL RESEARCH

The records search was conducted at the SCIC on June 28, 2021 (Appendix A). The search included the Project area and a radius of 1-mile around it. It included a review of all records for historic and prehistoric archaeological sites, historic addresses, as well as a review of all known cultural resource reports within a 1-mile radius of the Project area. A record search of the Sacred Lands File held by the NAHC was requested on June 28, 2021 (Appendix B). Historic aerial photographs and maps, provided by historicaerials.com and USGS Historical Topographic Map Explorer, of the Project area were examined.

## FIELD SURVEY

The field survey was conducted on July 8, 2021. Field methods consisted of a pedestrian survey of the Project area by the archaeologist and Native American monitor in transects spaced at 10-m intervals. The Project area was photographed, and all visible soils were examined for cultural resources. If the alignment was under pavement, adjacent areas with ground surface visibility were surveyed. Upon discovery of an artifact or feature, the crew halted while the person who made the discovery scouted the area to determine whether the item was isolated, associated with only a few other items, or part of a larger site deposit. Any isolates and sites were recorded during the transects. Archaeological isolates were distinguished from sites on the basis that isolates consist of three or fewer artifacts within a 50-m radius. All site and isolate locations were recorded in Universal Transverse Mercator (UTM) coordinates using handheld GPS units with sub-meter accuracy. Sites were plotted on proposed Project maps using NAD 83 UTM feet coordinates. Site information was recorded on State of California Department of Parks and Recreation (DPR) 523 series forms. While the process of site documentation varied slightly depending on what kinds of artifacts and features were identified, at all sites the spatial boundaries were delineated, site maps were drawn, artifacts were plotted, artifact inventories were completed, and material types were noted. All notes and photographs from the study are curated at Red Tail's office.

# 5. RESULTS

## ARCHIVAL RESEARCH RESULTS

### SCIC Record Search Results

The SCIC record search results indicate that seventy-one (71) studies have previously been completed within the 1-mi. record search radius (Table 1). Two of the previously conducted studies intersect the Project area.

Table 1. Previously Conducted Studies within 1-Mile of the Project Area

| Report Number | Year | Authors | Report Title | Relation to Project Area |
|---|---|---|---|---|
| SD-00181 | 1977 | BARBOLLA, DIANE E. | PROPOSED BRANDYWINE PIPELINES PROJECT: AN ARCHAEOLOGICAL SURVEY | Outside Project Area |
| SD-00221 | 1976 | CARRICO, RICHARD | ARCHAEOLOGICAL SURVEY OF PALM AVENUE PROPERTY EQD#76-05-19P, SAN DIEGO, CA. | Outside Project Area |
| SD-00585 | 1989 | CHEEVER, DAYLE | CULTURAL RESOURCES SURVEY OF THE H.G. FENTON MATERIALS COMPANY PROPERTY CITY OF CHULA VISTA, CA | Outside Project Area |
| SD-00686 | 1974 | FINK, GARY R. | FURTHER ARCHAEOLOGICAL INVESTIGATIONS OF THE PROPOSED YOUTH DEVELOPMENT CENTER, OTAY, CALIFORNIA | Outside Project Area |
| SD-00687 | 1973 | FINK, GARY R. | PRELIMINARY ARCHAEOLOGICAL SURVEY OF THE PROPOSED YOUTH DEVELOPMENT CENTER, OTAY, CALIFORNIA | Outside Project Area |
| SD-01041 | 1988 | GALLEGOS, DENNIS R. AND DAYLE CHEEVER | CULTURAL RESOURCE INVENTORY FOR HIDDEN TRAILS: OTAY MESA, SAN DIEGO, CALIFORNIA | Outside Project Area |
| SD-01335 | 1986 | PIGNIOLO, ANDREW, DENNIS GALLEGOS, AND RICHARD CARRICO | CULTURAL RESOURCE SURVEY OF THREE ALTERNATE JAIL FACILITIES IN SAN DIEGO COUNTY. | Outside Project Area |
| SD-01384 | 1973 | FINK, GARY R. | ARCHAEOLOGICAL SURVEY OF MAIN STREET, OTAY PROJECT IK2090 | Outside Project Area |
| SD-01412 | 1989 | SMITH, BRIAN F. | THE ARCHAEOLOGICAL SURVEY AT THE CHULA VISTA AUTO CENTRE PROJECT A CULTURAL RESOURCE SURVEY OF 31.667 ACRES | Outside Project Area |
| SD-01413 | 1987 | SMITH, BRIAN F. | THE ARCHAEOLOGICAL INVESTIGATIONS AT THE OTAY RIO BUSINESS PARK PROJECT A CULTURAL RESOURCE SURVEY OF 210 ACRES AND THE EVALUATION OF THE LOCI OF SITE W-3861 | Outside Project Area |
| SD-01460 | 1984 | SCIENTIFIC RESOURCE SURVEYS, INC. | AN ARCHAEOLOGICAL SURVEY OF THE WALKER SCOTT PROPERTIES IN OTAY VALLEY, SAN DIEGO COUNTY, CALIFORNIA | Outside Project Area |
| SD-01784 | 1980 | SCIENTIFIC RESOURCE SURVEYS, INC. | ARCHAEOLOGICAL/PALEONTOLOGICAL SURVEY REPORT ON THE CHULA VISTA-OTAY VALLEY ROAD LIMITED INDUSTRIAL PROJECT LOCATED IN THE CHULA VISTA AREA OF THE COUNTY OF SAN DIEGO | Intersects Project Area |
| SD-02252 | 1991 | ADVANCED SCIENCES,INC | AN ARCHAEOLOGICAL IMPACT EVALUATION FOR THE OTAY RIVER VALLEY RESOURCE ENHANCEMENT PLAN | Outside Project Area |
| SD-02511 | 1993 | HIX, ANN B. | DENNERY RANCH PLANNED RESIDENTAL DEVELOPMENT PERMIT HILLSIDE REVIEW OVERLAY ZONE/RESOURCE PROTECTION PERMIT AND REZONE #88-0785 | Outside Project Area |
| SD-02805 | 1992 | CITY OF SAN DIEGO | DRAFT ENVIRONMENTAL IMPACT REPORT, HIDDEN TRAILS REZONE FROM AGRICULTRURAL TO RESIDENTIAL, SAN DIEGO COUNTY | Outside Project Area |
| SD-02982 | 1995 | CITY OF SAN DIEGO | HIDDEN TRAILS, DRAFT ENVIRONMENTAL IMPACT REPORT | Outside Project Area |
| SD-03077 | 1984 | SMITH, BRIAN AND JAMES MORIARTY | AN ARCHAEOLOGICAL SURVEY OF THE ROBINHOOD BRIDGE PRECISE PLAN AND THE EVALUATION OF SITES SDM-W-3513 AND SDM-W-3514, OTAY MESA, CITY OF SAN DIEGO, CALIFORNIA | Outside Project Area |

| Report Number | Year | Authors | Report Title | Relation to Project Area |
|---|---|---|---|---|
| SD-03266 | 1996 | GROSS, TIMOTHY, RUTH ALTER, AND MARY ROBBINS-WADE | ARCHAEOLOGICAL SURVEY FOR THE JOINT TASK FORCE-SIX BORDER ROAD REPAIR PROJECT, OTAY MOUNTAIN, CALIFORNIA | Outside Project Area |
| SD-03306 | 1988 | CHEEVER, DAYLE AND DENNIS GALLEGOS | CULTRUAL RESOURCE INVENTORY FOR HIDDEN TRAILS; OTAY MESA, SAN DIEGO, CALIFORNIA | Outside Project Area |
| SD-03359 | 1988 | SMITH, BRIAN F. | A REPORT OF THE RESULTS OF AN ARCHAEOLOGICAL SURVEY AND CULTURAL RESOURCE EVALUATION AT THE ROBINHOOD RIDGE PRECISE PLAN, OTAY MESA, CITY OF SAN DIEGO, CALIFORNIA | Outside Project Area |
| SD-03452 | 1998 | CITY OF SAN DIEGO | DRAFT EIR FOR ROBINHOOD RIDGE PROJECT | Outside Project Area |
| SD-03726 | 1996 | KYLE, CAROLYN E. AND DENNIS R. GALLEGOS | ARCHAEOLOGICAL SURVEY REPORT FOR THE OTAY ANNEX LANDFILL PROJECT | Outside Project Area |
| SD-03824 | 2000 | KYLE, CAROLYN | CULTURAL RESOURCE SURVEY FOR THE PROPOSED OLYMPIC PARKWAY PROJECT, CITY OF CHULA VISTA, CALIFORNIA | Outside Project Area |
| SD-03843 | 2000 | CAROLYN KYLE | HISTORIC PROPERTY SURVEY REPORT FOR THE INTERSTATE 805/ORANGE AVENUE INTERCHANGE PROJECT, CITY OF CHULA VISTA, CALIFORNIA | Outside Project Area |
| SD-03950 | 1997 | GALLEGOS, DENNIS AND CAROLYN KYLE | CULTURAL RESOURCES REPORT FOR THE OTAY ANNEX LANDFILL PROJECT | Outside Project Area |
| SD-04411 | 1992 | ASM AFFILIATES, INC. | ARCHAEOLOGICAL TESTING AND SIGNIFICANCE EVALUATION PROGRAM REPORT FOR THE SENNERY RANCH PROPERTY CITY OF SAN DIEGO | Outside Project Area |
| SD-04533 | 1998 | MONSERRATE, LAWRENCE C. AND CITY OF SAN DIEGO | NOTICE OF PREPARATION OF A DRAFT ENVIRONMENTAL IMPACT REPORT HIDDEN TRAILS | Outside Project Area |
| SD-04578 | 1988 | CHEEVER, DAYLE AND DENNIS GALLEGOS | CULTURAL RESOURCE INVENTORY FOR HIDDEN TRAILS; OTAY MESA, SAN DIEGO, CALIFORNIA | Outside Project Area |
| SD-04590 | 1990 | CITY OF SAN DIEGO | APPENDIXES FOR THE ENVIRONMENTAL IMPACT REPORT FOR OTAY VALLEY WATER RECLAIMATION FACILITY FOR THE CLEAN WATER PROGRAM FOR GREATER SAN DIEGO | Outside Project Area |
| SD-04677 | 1988 | SMITH, BRIAN | A REPORT OF THE RESULTS OF AN ARCHAEOLOGICAL SURVEY AND CULTURAL RESOURCE EVALUATION AT THE ROBINHOOD RIDGE PRECISE PLAN | Outside Project Area |
| SD-04798 | 1999 | CITY OF SAN DIEGO | RECIRCULATED ENVIRONMENTAL IMPACT REPORT: HIDDEN TRAILS PRECISE PLAN VESTING TENTATIVE MAPS | Outside Project Area |
| SD-05091 | 1988 | CHEEVER, DAYLE | CULTURAL RESOURCE INVENTORY FOR HIDDEN TRAILS; OTAY MESA, SAN DIEGO, CALIFORNIA | Outside Project Area |
| SD-05092 | 2000 | CITY OF SAN DIEGO | DRAFT EIR FOR HIDDEN TRAILS, OTAY MESA COMMUNITY PLAN | Outside Project Area |
| SD-05227 | 1992 | COOK, JOHN | ARCHAEOLOGICAL TESTING & SIGNIFICANCE EVALUATION PROGRAM REPORT FOR THE DENNERY RANCH PROPERTY CITY OF SAN DIEGO, CA | Outside Project Area |
| SD-05247 | 1998 | CITY OF SAN DIEGO | D.E.I.R. FOR HIDDEN TRAILS COMMUNITY PLAN AMENDMENT | Outside Project Area |
| SD-05361 | 2000 | MONSERRATE, LAWRENCE | DRAFT ENVIRONMENTAL IMPACT REPORT: HIDDEN TRAILS | Outside Project Area |
| SD-05659 | 2000 | KYLE, CAROLYN | HISTORIC PROPERTY SURVEY REPORT FOR THE INTERSTATE 805/ORANGE AVE. INTERCHANGE PROJECT CITY OF CHULA VISTA, CALIFORNIA | Outside Project Area |
| SD-05722 | 1997 | GILMER, JO ANNE | RESULTS OF THE CULTURAL RESOURCE UPDATE SURVEY FOR THE OTAY MESA-GATEWAY PROPERTY | Outside Project Area |
| SD-06147 | 1997 | CITY OF SAN DIEGO | PROPOSED MITIGATED NEGATIVE DECLARATION FOR KAISER SOUTH SAN DIEGO MEDICAL OFFICE FACILITY | Outside Project Area |
| SD-06369 | 1999 | GALLEGOS, DENNIS | HISTORIC PROPERTY SURVEY REPORT FOR THE STATE ROUTE 905 | Outside Project Area |
| SD-06728 | 1999 | CITY OF SAN DIEGO | PUBLIC NOTICE OF PROPOSED ADDENDUM TO AN ENIVRONMENTAL IMPACT REPORT-DENNERY RANCH | Outside Project Area |
| SD-08607 | 1980 | SCIENTIFIC RESOURCE SURVEYS, INC | ARCHAEOLOGICAL/PALEONTOLOGICAL HISTORICAL RECORDS SEARCH AND REPORT ON THE CHULA VISTA-OTAY VALLEY ROAD LIMITED INDUSTRIAL PROJECT LOCATED IN THE CHULA VISTA AREA OF THE COUNTY OF SAN DIEGO | Intersects Project Area |

| Report Number | Year | Authors | Report Title | Relation to Project Area |
|---|---|---|---|---|
| SD-09596 | 2005 | DOUGLAS, DIANE AND CARREL, MARK | CULTURAL RESOURCES TECHNICAL REPORT FIRE PROTECTION PROJECT CITY OF CHULA VISTA FEMA-1498-DR-CA, HMGP# 1498-118-48 | Outside Project Area |
| SD-09755 | 2005 | HECTOR, SUSAN | CULTURAL RESOURCES EXISTING CONDITIONS ASSESSMENT FOR THE OTAY VALLEY REGIONAL TRAILS PROJECT, INTERSTATE 5 TO INTERSTATE 805 SAN DIEGO, CALIFORNIA | Outside Project Area |
| SD-09765 | 1987 | ROBBINS-WADE, MARY, TIMOTHY GROSS, AND SEAN CARDENAS | CULTURAL RESOURCES INVENTORY AND ASSESSMENT: CALIFORNIA TERRACES | Outside Project Area |
| SD-09920 | 2006 | HECTOR, SUSAN | CULTURAL RESOURCES SURVEY FOR THE OTAY VALLEY REGIONAL PARK TRAILS PROJECT, WEST OF INTERSTATE 5 TO INTERSTATE 805, SAN DIEGO, CALIFORNIA | Outside Project Area |
| SD-10250 | 2006 | BONNER, WAYNE H. AND SARAH A. WILLIAMS | CULTURAL RESOURCE RECORDS SEARCH AND SITE VISIT RESULTS FOR CRICKET TELECOMMUNICATIONS FACILITY CANDIDATE SAN-757 (OTAY WATER DISTRICT 458 1 & 2 RESERVOIR SITE), 651 POINT BARROW ROAD, CHULA VISTA, SAN DIEGO COUNTY, CALIFORNIA | Outside Project Area |
| SD-10448 | 2005 | COOLEY, THEODORE | SITE SIGNIFICANCE EVALUATION OF A PORTION OF PREHISTORIC ARCHAEOLOGICAL SITE CA-SDI-17668 LOCATED ALONG THE PROPOSED OTAY WATER DISTRICT, 30-INCH RECYCLED WATER PIPELINE ROUTE, IN THE OTAY RIVER VALLEY, SAN DIEGO COUNTY, CALIFORNIA | Outside Project Area |
| SD-10821 | 2007 | CASE, ROBERT P. | FINAL CULTURAL RESOURCES MITIGATION MONITORING REPORT FOR THE OTAY WATER DISTRICT 30- INCH RECYCLED WATER PIPELINE SAN DIEGO COUNTY, CALIFORNIA | Outside Project Area |
| SD-12268 | 2009 | ROBBINS-WADE, MARY | ARCHAEOLOGICAL RESOURCES SURVEY, MAIN STREET PROPERTY, CHULA VISTA, SAN DIEGO COUNTY, CALIFORNIA | Outside Project Area |
| SD-13131 | 2010 | SMITH, BRIAN F. | MITIGATION MONITORING OF THE AUTO PARK GRAVITY SEWER PROJECT, CHULA VISTA, CALIFORNIA | Outside Project Area |
| SD-13313 | 2011 | LOFTUS, SHANNON | AT&T SITE SS0004 PALM PROMENADE LTE OPTIMAL 650 1/2 DENNERY ROAD SAN DIEGO, SAN DIEGO COUNTY, CALIFORNIA 92154 | Outside Project Area |
| SD-13504 | 2012 | REED, BRENDAN | SECTION 106 ENERGY UPGRADES, 151 LOTUS DRIVE, CHULA VISTA, CA | Outside Project Area |
| SD-13506 | 2012 | REED, BRENDAN | SECTION 106 ENERGY UPGRADES, 133 LOTUS DRIVE, CHULA VISTA, CA | Outside Project Area |
| SD-14028 | 2012 | CASTELLS, SHELBY GUNDERMAN | CULTURAL RESOURCES STUDY FOR THE GEOTECHNICAL FIELD INVESTIGATION, HERITAGE ROAD BRIDGE REPLACEMENT, CITY OF CHULA VISTA, CALIFORNIA | Outside Project Area |
| SD-14106 | 2012 | DAVIS, SHANNON, SARAH STINGER-BOWSHER, JENNIFER KRINTZ, AND SINEAD NI GHABHLAIN | FINAL HISTORIC RESOURCES SURVEY, CHULA VISTA, CALIFORNIA | Outside Project Area |
| SD-14368 | 2013 | CITY OF SAN DIEGO | DRAFT PROGRAM ENVIRONMENTAL IMPACT REPORT FOR THE OTAY MESA COMMUNITY PLAN UPDATE, CITY OF SAN DIEGO PROJECT NUMBER 30330/304032 | Outside Project Area |
| SD-14714 | 2013 | CITY OF SAN DIEGO | FINAL PROGRAM ENVIRONMENTAL IMPACT REPORT FOR THE OTAY MESA COMMUNITY PLAN UPDATE, CITY OF SAN DIEGO | Outside Project Area |
| SD-15229 | 2013 | KRISTIN TENNESEN | ETS #24738.03, CULTURAL RESOURCES MONITORING FOR THE INTRUSIVE POLE INSPECTIONS, METRO DISTRICT, SUB-AREAS BORD, SNYS, IMPE, OTAY, SBAY, HILT, MONT, SSDE, LINC PROJECT, SAN DIEGO COUNTY, CALIFORNIA (HDR #207357) | Outside Project Area |
| SD-15437 | 2014 | KRISTIN TENNESEN | ETS #8357, ADDENDUM CULTURAL RESOURCES SURVEY REPORT FOR THE TL 649 WOOD-TO-STEEL REPLACEMENT AND RECONDUCTOR PROJECT, SAN DIEGO COUNTY, CALIFORNIA | Outside Project Area |
| SD-15692 | 2015 | KRISTIN TENNESEN | ETS #24945, CULTURAL RESOURCES SURVEY FOR THE OTAY RIVER BASIN ACCESS ROAD REPAIR PROJECT, SAN DIEGO COUNTY, CALIFORNIA | Outside Project Area |
| SD-16138 | 2015 | JULIE ROY | LETTER REPORT: ETS 28615 - CULTURAL RESOURCES MONITORING REPORT FOR 6" ISO JT 60PSI INSTALLATION, CITY OF CHULA VISTA, SAN DIEGO COUNTY, CALIFORNIA - IO 7011101 | Outside Project Area |
| SD-16164 | 2016 | ANDREW PIGNIOLO | CULTURAL RESOURCE SURVEY FOR THE AQUA CLEAN EXPRESS PROJECT CITY OF CHULA VISTA, CALIFORNIA (CUP15-0034) | Outside Project Area |

| Report Number | Year | Authors | Report Title | Relation to Project Area |
|---|---|---|---|---|
| SD-16552 | 2012 | DAVIS, SHANNON | PHASE ONE REPORT, HISTORIC RESOURCES RECONNAISSANCE SURVEY, CHULA VISTA, CALIFORNIA | Outside Project Area |
| SD-17217 | 2016 | CASTELLS, SHELBY GUNDERMAN | ARCHAEOLOGICAL SURVEY REPORT FOR THE HERITAGE ROAD BRIDGE REPLACEMENT PROJECT, CITY OF CHULA VISTA, SAN DIEGO COUNTY, CALIFORNIA | Outside Project Area |
| SD-17344 | 2018 | WILLHITE, BRENTON E. | ARCHAEOLOGICAL MONITORING FOR PYD - POWER YOUR DRIVE BATCH 9 (KAISER), OTAY MESA, SAN DIEGO, SAN DIEGO COUNTY, CALIFORNIA (SDG&E ETS # 37003, PANGIS PROJECT # 1402.13) | Outside Project Area |
| SD-17371 | 2017 | FOGLIA, SHANNON E. AND THEODORE G. COOLEY | LETTER REPORT: ETS 34479 - CULTURAL RESOURCES SURVEY FOR THE OTAY RANCH VILLAGE 3 HERITAGE RD, MAIN STREET CONVERSION, CITY OF CHULA VISTA, SAN DIEGO COUNTY, CALIFORNIA - IO 7074264 | Outside Project Area |
| SD-17614 | 2018 | LEARD, DANIEL | ETS #24945: CULTURAL RESOURCES MONITORING FOR THE OTAY RIVER BASIN ACCESS ROAD REPAIR PROJECT, SAN DIEGO COUNTY, CALIFORNIA | Outside Project Area |
| SD-18343 | 2018 | VOLTA, BENIAMINO | ETS #31119.02, CULTURAL RESOURCES MONITORING FOR THE CMP, TL649, REPLC Z183560, Z169367, SAN DIEGO PROJECT, SAN DIEGO COUNTY, CALIFORNIA | Outside Project Area |
| SD-18344 | 2018 | LEARD, DANIEL | ETS #31119, CULTURAL RESOURCES MONITORING FOR THE CMP, TL649, REPLC Z183560, Z169367, SAN DIEGO PROJECT, SAN DIEGO COUNTY, CALIFORNIA | Outside Project Area |
| SD-18838 | 2021 | JORDAN, AMY | ARCHAEOLOGICAL MONITORING FOR TCM ACCESS ROADS, ANNUAL REPORT 2020, SAN DIEGO COUNTY, CALIFORNIA (ASM #23005.67) | Outside Project Area |

Forty-one (41) cultural resources have been recorded within the 1-mi. record search radius, which includes archaeological sites, historic addresses, and isolates (Table 2). No previously recorded resources are located within the Project Area.

Table 2. Previously Recorded Cultural Resources within 1-Mile of the Project Area

| Primary Number | Trinomial | Period | Contents | Recorder (Date) | Relation to Project Area |
|---|---|---|---|---|---|
| P-37-000761 | CA-SDI-761 | Prehistoric | AP2 Lithic Scatter, AP16 Marine Shell Scatter | N. Blotner (2010)<br>R.H. Crabtree, C. King (1973)<br>R.H. Crabtree, C. King (1961) | Outside Project Area |
| P-37-004639 | CA-SDI-4639 | Prehistoric | AP2 Lithic Scatter | T. Gross (1973) | Outside Project Area |
| P-37-007983 | CA-SDI-7983 | Prehistoric | AP2 Lithic Scatter | B.E. Willhite (2018)<br>N. Blotner (2010)<br>J.R. Cook (1990)<br>M. Robbins-Wade (1987)<br>Robbins-Wade, Joines, Kyle, Seneca (1984)<br>A. Cody (1984)<br>L. McCoy (1979) | Outside Project Area |
| P-37-007985 | CA-SDI-7985 | Prehistoric | AP2 Lithic Scatter | L. McCoy (1979) | Outside Project Area |
| P-37-008065 | CA-SDI-8065 | Prehistoric | AP2 Lithic Scatter, AP16 Marine Shell Scatter | M. Roeder (n.d.) | Outside Project Area |
| P-37-008912 | CA-SDI-8912 | Prehistoric | AP2 Lithic Scatter | K. Tennesen (2015)<br>T.J. Banks (1984)<br>M. Desautels (1980) | Outside Project Area |
| P-37-010055 | CA-SDI-10055 | Prehistoric | AP2 Lithic Scatter | N. Blotner (2010)<br>J.R. Cook (1990)<br>D. Desautels (1984) | Outside Project Area |

| Primary Number | Trinomial | Period | Contents | Recorder (Date) | Relation to Project Area |
|---|---|---|---|---|---|
| P-37-010056 | CA-SDI-10056 | Prehistoric | AP2 Lithic Scatter | J.R. Cook (1990)<br>T.J. Banks (1984) | Outside Project Area |
| P-37-010058 | CA-SDI-10058 | Prehistoric | AP2 Lithic Scatter | J.R. Cook (1990)<br>Joines, Sinkovec, Robbins-Wade (1984)<br>T.J. Banks (1984) | Outside Project Area |
| P-37-010060 | CA-SDI-10060/H | Multicomponent | AH2 Foundations/ Structure Pads, AH5 Wells/Cisterns, AP2 Lithic Scatter, AP16 Marine Shell Scatter | J.R. Cook (1990)<br>D. Desautels (1984) | Outside Project Area |
| P-37-010204 | CA-SDI-10204 | Prehistoric | AP2 Lithic Scatter | M. Robbins-Wade (1987)<br>Robbins-Wade, Joines, Kyle, Seneca (1984) | Outside Project Area |
| P-37-010471 | CA-SDI-10471 | Prehistoric | AP2 Lithic Scatter | G.R. Fink (1973) | Outside Project Area |
| P-37-010472 | CA-SDI-10472 | Prehistoric | AP2 Lithic Scatter | A. Pigniolo (1986)<br>G.R. Fink (1973) | Outside Project Area |
| P-37-010473 | CA-SDI-10473 | Prehistoric | AP2 Lithic Scatter | G.R. Fink (1974) | Outside Project Area |
| P-37-010489 | CA-SDI-10489 | Prehistoric | AP2 Lithic Scatter | A. Pigniolo (1986) | Outside Project Area |
| P-37-011822 | CA-SDI-11822 | Prehistoric | AP2 Lithic Scatter | J.R. Cook (1990) | Outside Project Area |
| P-37-014739 | - | Prehistoric | AP16 Lithic Isolate | A. Cody (1984) | Outside Project Area |
| P-37-014791 | - | Prehistoric | AP16 Lithic Isolate | Robbins-Wade, Joines, Kyle, Seneca (1984) | Outside Project Area |
| P-37-014793 | - | Prehistoric | AP17 Lithic Isolate | Joines, Sinkovec, Robbins-Wade (1984) | Outside Project Area |
| P-37-014794 | - | Prehistoric | AP16 Lithic Isolate | Joines, Sinkovec, Robbins-Wade (1984) | Outside Project Area |
| P-37-014795 | - | Prehistoric | AP16 Lithic Isolate | Joines, Sinkovec, Robbins-Wade (1984) | Outside Project Area |
| P-37-014796 | - | Prehistoric | AP16 Lithic Isolate | Joines, Sinkovec, Robbins-Wade (1984) | Outside Project Area |
| P-37-014801 | - | Prehistoric | AP16 Lithic Isolate | Joines, Serr, Robbins-Wade (1984) | Outside Project Area |
| P-37-015231 | - | Prehistoric | AP16 Lithic Isolate | M. Forstadt, J. Forstadt (1992) | Outside Project Area |
| P-37-015975 | - | Prehistoric | AP16 Lithic Isolate | C. Kyle, L. Tift (1996) | Outside Project Area |
| P-37-019024 | CA-SDI-13719 | Prehistoric | AP2 Lithic Scatter, AP16 Marine Shell Scatter | K. Rhodes, I. Strudwick (1991) | Outside Project Area |
| P-37-025521 | - | Historic | HP2 Single Family Property | L. Pierson (2004) | Outside Project Area |
| P-37-026987 | CA-SDI-17668 | Prehistoric | AP2 Lithic Scatter, AP16 Marine Shell Scatter | M. Wise, J. Paaterson (2005) | Outside Project Area |
| P-37-030568 | - | Prehistoric | AP16 Lithic Scatter | A. Giletti, J. Meriwether, L. Hoff (2009) | Outside Project Area |
| P-37-031356 | - | Prehistoric | AP16 Lithic Isolate | N. Blotner (2010) | Outside Project Area |
| P-37-031357 | - | Prehistoric | AP16 Lithic Isolate | N. Blotner (2010) | Outside Project Area |
| P-37-031358 | - | Prehistoric | AP16 Lithic Isolate | N. Blotner (2010) | Outside Project Area |
| P-37-031371 | CA-SDI-19919 | Prehistoric | AP2 Lithic Scatter, AP16 Marine Shell Scatter | N. Blotner (2010) | Outside Project Area |

| Primary Number | Trinomial | Period | Contents | Recorder (Date) | Relation to Project Area |
|---|---|---|---|---|---|
| P-37-031372 | CA-SDI-19920 | Prehistoric | AP16 Marine Shell Scatter | N. Blotner (2010) | Outside Project Area |
| P-37-031373 | CA-SDI-19921 | Prehistoric | AP16 Marine Shell Scatter | N. Blotner (2010) | Outside Project Area |
| P-37-035092 | - | Historic | HP13 Community Center/Social Hall | J. Krintz, S. Davis (2012) | Outside Project Area |
| P-37-035093 | - | Historic | HP16 Religious Building | J. Krintz, S. Davis (2012) | Outside Project Area |
| P-37-036628 | CA-SDI-22124 | Prehistoric | AP2 Lithic Scatter | J. Meling, R. Loveless (2017) | Outside Project Area |
| P-37-038705 | - | Historic | HP11 Engineering Structure | M. Ihle (2018) | Outside Project Area |
| P-37-039424 | CA-SDI-23065 | Historic | AH2 Foundations/Structure Pads | M. DeCarlo (2020) | Outside Project Area |
| P-37-039425 | CA-SDI-23066 | Prehistoric | AP2 Lithic Scatter | M. DeCarlo (2020) | Outside Project Area |

The closet resource to the Project area is P-37-008065/CA-SDI-8065, which lies 200 meters south of the Project area. The resource was originally recorded by M. Roeder as a prehistoric site containing a light scatter of green volcanic tools and debitage with occasional fragments of *Chione sp*. and *Argopecten sp*. Lithic tools observed at the time of recordation included one plane scraper, one flake scraper, one dome scraper, one hammerstone, several handstones, and fragments of debitage. The site was situated upon in-use agricultural fields and measured approximately 350 meters east-west by 120 meters north-south. Roeder noted that the site had been severely impacted by the 1916 flood and agricultural activities occurring within the site's vicinity since 1906. The resource has not been updated since original recordation.

The record search also identified two historic addresses located within 1-mile of the Project area (Table 3). No historic addresses were identified within the Project Area.

Table 3. Previously Recorded Historic Addresses within 1-Mile of the Project Area

| Primary Number | Address | Name | Property Type | Recorder Date | Evaluation | Relation to Project Area |
|---|---|---|---|---|---|---|
| P-37-035092 | 115 Spruce Road | Woodlawn Park Library | HP13 Community Center/Social Hall | J. Krintz, S. Davis (2012) | 6Z – Found Ineligible for NR, CR, or Local Designation through Survey Evaluation | Outside Project Area |
| P-37-035093 | 124 Spruce Road | Woodlawn Church | HP16 Religious Building | J. Krintz, S. Davis (2012) | 6Y – Found Ineligible for NR through Section 106 Process, Not Evaluated for CR or Local Listing | Outside Project Area |

## NAHC Record Search Results

The NAHC responded to the record search request of the SLF on July 20, 2021 that the record search of the SLF was negative. The NAHC also provided a list of 16 Native American individuals and organizations which may have additional information on the Project area. All correspondence pertaining to the NAHC, is included in Appendix B.

Red Tail Environmental sent an information request letter to the 16 Native American individuals and organizations on July 20, 2021. On July 20, 2021 Lisa Cumper, Tribal Historic Preservation Officer, The Jamul Indian Village of California, responded to ask if the Project area had been surveyed and if it is within Otay. On July 20, 2021 Shelby Castells responded that an archaeological survey was conducted for this project and that the Project area appeared to have been previously graded, and that the Project area is on the northern side of the Otay River.

As of July 21, 2021, no additional responses have been received.

## Historic Map and Aerial Photograph Research Results

In addition to historical documents reviewed at the SCIC, Red Tail reviewed historic United States Geologic Survey (USGS) topographic maps and aerial photographs. Historical topographic maps were reviewed using USGS Historical Topographic Map Explorer, and aerial imagery was accessed via HistoricalAerials.com, part of NETROnline.com.

The Project area is visible on USGS topographic maps as early as 1904. The 1904, 1908, 1911, 1915, 1920, 1928, 1932, 1941, 1943, 1955, and 1960 topographic maps show no development in the Project area. A road is present to the south of the Project area, presumably the earlier alignment of Main Street. Several structures are depicted south of Main Street, each with individual roads connecting them to Main Street.

The 1962 topographic map shows Main Street in its current alignment and as an improved paved road. No additional developments are shown on the map except for one new structure located east of the Project Area. A 1977 topographic map shows new residential development west of the Project area and several new structures along the north side of Main Street south of the Project. Interstate 805 is also visible.

Topographic maps from 2002, 2012, 2015 and 2018 show the Project area and its immediate vicinity as largely fitting modern alignments. The Project area remains undeveloped, Shinohara Lane is visible, and surrounding road alignments are present in their modern-day alignment.

Aerial photographs are available of the Project area as early as 1953, which shows the current alignment of Main Street, although it is not as wide as the current alignment. The Project area is undeveloped and is surrounded by agricultural fields to the east and south and undeveloped land to the north and west. The Project area is directly bordered by what appears to be an agricultural facility on the south, and aerial imagery from 1964, 1966, 1968, and 1971 show the facility expanding within its parcel. The imagery from these years also shows additional lands to the east and south being used as agricultural fields, new residential development occurring along the Project Area's western border, and the widening of Main Street. The northern border of the Project area remains undeveloped.

Imagery from 1978 and 1980 show no new developments occurring within the surrounding vicinity. Additionally, starting in imagery from 1978, the facility located directly south of the Project area is no longer visible.

Aerial photographs from 1981, 1982, 1983, 1984, 1985, 1986, 1987, 1988, 1989, 1990, and 1991 show new development around the Project area. Three agricultural fields along the south side of Main Street are developed into commercial centers, with an additional three agricultural parcels being graded in anticipation of development. Three commercial structures are constructed within the parcels directly bordering the Project area to the south, and a new industrial center is constructed along the Project's east border. New residential develop also occurs within previously undeveloped lands along the Project's north border. Shinohara Lane is also constructed during this time and is visible as early as 1989.

Aerial imagery from 1993 show new grading activities occurring within the Project area, specifically within the northern half of the Project area, although a definitive pad structure does not appear to be created. A small unpaved access road is also visible that bisects the parcel as it travels southeast to join with the Shinohara Lane cul-de-sac. The remaining aerials from the 1990s, 2000s, and 2010s show no changes in the Project area besides a variation in vegetation levels. No further grading or development occurs within the Project area during this time, and aerial imagery depict the parcel growing fallow. Within the surrounding vicinity, Main Street was widened into its current extent between 1995 and 1996, and the remaining agricultural fields located southeast of the Project area are also developed into commercial structures.

## FIELD SURVEY RESULTS

The survey was conducted by Red Tail Archaeological Field Director Spencer Bietz and Native American representative Corel Taylor, also from Red Tail Environmental, on July 8, 2021. The crew traversed the area using 10-meter-wide survey intervals when vegetation allowed, with the survey transects being aligned in cardinal directions in order to survey the maximum amount of visible area. Special attention was given to visible soils in areas devoid of vegetation or disturbed soils from bioturbation.

The Project area was largely undeveloped and is bordered by residential developments to the north and west, and industrial structures to the east and south. There is a small unpaved access route leading to a large graded pad in the parcel's northern half from the southeastern entrance. The unpaved access route is directly bordered on the north by a modern concrete-lined V-ditch. Additional concrete-lined V-ditches were present along the Project area's eastern, northern, and southern boundaries. The northern half of the Project area contained a large graded pad that is bordered by an exposed south-facing slope to the north. The slope is bisected by the unpaved access road, trending west-east, which later loops back into the graded pad area in the parcel's north-eastern corner. Several small scatters of modern-era refuse and debris were present within the Project area, along with several piles of imported sediment, although the imported sediments did appear to be similar to in-situ sediments present within the exposed portions of the northern slope. Surface sediments throughout the Project area consisted of light brown and tannish brown silty sands. No prehistoric or historic-era resources were observed during the survey effort, and no indications of potentially intact subsurface deposits or features were observed.

# 6. RECOMMENDATIONS AND CONCLUSIONS

Although avoidance is always the best course of action to take to protect cultural resources, it may not be feasible in all project designs. In order to comply with CEQA, project-related effects/impacts must be avoided, reduced, or mitigated to a level that is acceptable under CEQA.

No historic resources are present with the Project area and implementation of the Project will not cause an adverse change to a historical resource. The study was negative for cultural resources. No archaeological resources were identified within the Project area during the survey. Archival research performed at the SCIC indicated that no previously recorded resources were present within the Project area. Research of historic topographic maps and aerial imagery also indicated that the parcel has not been previously developed, however it appears to have been previously graded and highly disturbed. Due to the lack of archaeological resources and indicators of intact subsurface deposits observed during the survey effort, previous grading within the Project area, and the negative Sacred Lands File search no further archaeological work is recommended.

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# APPENDICES

# APPENDIX A: SCIC RECORD SEARCH CONFIRMATION

# APPENDIX B: NAHC CORRESPONDENCE