

Phase I Cultural Resources Assessment

West Alton Parcel Development Plan

Prepared for | County of Orange – CEO Real Estate/Land
Development
333 West Santa Ana Boulevard, 3rd Floor
Santa Ana, California 92701

West Alton Parcel Development Plan
USGS El Toro, CA 7.5-Minute Quadrangles; Sections 3
and 10 of Township 6 South; Range 8 West (S.B.B.M)

Prepared by | David M. Smith
Mark A. Roeder
Patrick O. Maxon, M.A., RPA
BonTerra Psomas
3 Hutton Centre Drive, Suite 200
Santa Ana, California 92707
T: 714.751.7373 F: 714.545.8883
www.Psomas.com

November 2015 (Revised November 3, 2016)



TABLE OF CONTENTS

<u>Section</u>	<u>Page</u>
National Archaeological Database (NADB) Information Sheet	S-1
Management Summary.....	S-2
1.0 Undertaking Information/Introduction.....	1
1.1 Contracting Data.....	1
1.2 Undertaking	1
1.3 Area of Potential Effects	1
1.4 Project Personnel	1
2.0 Regulatory Setting.....	2
2.1 California Register of Historical Resources	2
2.2 Human Remains	3
3.0 Cultural Background.....	4
3.1 Prehistoric Background.....	4
3.2 Ethnographic Background	5
3.2.1 <i>Gabrielino/Tongva</i>	5
4.0 Marine Corps Air Station El Toro History.....	7
5.0 Methods	7
5.1 Cultural Resources Records Search	7
5.2 Paleontological Resources Records Search	8
5.3 Native American Sacred Lands File Review.....	8
5.4 Cultural Resources Survey.....	8
5.5 Paleontological Resources Survey.....	8
6.0 Results	9
6.1 Cultural Resources Records Search	9
6.2 Paleontological Resources Records Search	12
6.3 Native American Sacred Lands File Review.....	13
6.4 Cultural Resources Survey.....	13
6.5 Paleontological Resources Survey.....	14
7.0 Management Considerations	15
7.1 County of Orange Standard Conditions.....	15
8.0 Certification	17
9.0 References.....	18

TABLES

<u>Table</u>	<u>Page</u>
1 Cultural Resources Studies Completed Within One-half Mile of the Project Site.....	9
2 Cultural Resources Sites Within One-half Mile of the Project Site	11

EXHIBITS

<u>Exhibit</u>	<u>Follows Page</u>
1 Project Site	1
2 Geologic Map	12

ATTACHMENTS

Attachment

- A Cultural Resources Records Search (SCCIC)
- B Paleontological Resources Records Search (NHMLAC)
- C Native American Heritage Commission (NAHC) Correspondence
- D Personnel Qualifications

Phase I Cultural Resources Assessment

West Alton Parcel Development Plan

by
David M. Smith
Mark A. Roeder
Patrick O. Maxon, M.A., RPA

June 2015 (Revised November 3, 2016)

Submitted by:

BonTerra Psomas
David M. Smith
Mark A. Roeder
Patrick O. Maxon, M.A., RPA
3 Hutton Centre Drive, Suite 200
Santa Ana, California 92707
T: 714.751.7373 F: 714.545.8883

Submitted to:

County of Orange – CEO Real Estate/Land Development
333 W. Santa Ana Boulevard, 3rd Floor
Santa Ana, California 92701

USGS El Toro, CA 7.5 Minute Quadrangles; Sections 3 and 10 of Township 6 South; Range 8 West (*S.B.B.M*)

BonTerra Psomas

Project Number: 3LOW000100

Key Words: Marine Corps Air Station (MCAS) El Toro; West Alton Parcel; USGS El Toro, CA 7.5 Minute Quadrangle; Irvine Ranch, Irvine Boulevard, Alton Parkway

MANAGEMENT SUMMARY

PURPOSE AND SCOPE

BonTerra Psomas undertook this project to provide a Phase I Cultural Resources Inventory for the West Alton Project site (Project site).

DATES OF INVESTIGATION

A cultural resources records search was conducted for the project by David M. Smith at the South Central Coastal Information Center (SCCIC) at California State University, Fullerton on February 25, 2015. The records search was updated on November 3, 2016(Attachment A). A paleontological resources records search and literature review was conducted at the Natural History Museum of Los Angeles County (LACNHM) on March 26, 2015 (Attachment B). Native American consultation was initiated on March 16, 2015, with a letter to the Native American Heritage Commission (NAHC). The NAHC responded on April 22, 2015, and provided a list of Native American groups and individuals who may have knowledge regarding Native American cultural resources not formally listed on any database. Letters were sent to Native American tribes and individuals on April 23, 2015 (Attachment C). This technical report was completed in May 2015.

FINDINGS

The literature review conducted on February 25, 2015, identified 21 cultural resources studies undertaken within ½ mile of the project site. Six of these studies included at least a portion of the Project site; two included the entire parcel (Table 1). None of these studies resulted in the identification of any cultural resources on the subject property. The updated records search found and additional five studies, none of which resulted in any new sites. The initial records search documented 11 resources, none of which are located on the property. The updated records search did not find any additional sites. An archaeological survey of the property was conducted by Mr. David M. Smith, BonTerra Psomas Senior Archaeologist, on February 27, 2015. No cultural resources were observed during the survey.

On May 5, 2015, a paleontological resources survey was conducted by Mr. Mark A. Roeder, BonTerra Psomas Senior Paleontologists. No paleontological resources were observed during the survey.

FINDINGS OF EFFECT

An intensive pedestrian survey of the undeveloped northwestern portion of the property did not result in the discovery of any previously unrecorded historic or prehistoric resource; therefore, it does not appear the project will have any adverse effects on cultural resources in this parcel. Although the paleontological resources survey reveal no paleontological resources, paleontological resources may be uncovered during ground-disturbing activities associated with construction activities.

MITIGATION

The County of Orange has adopted standard conditions of approval that are evaluated for applicability at the time projects are considered for approval. The following measures pertaining to cultural resources would be applicable to the West Alton Development Plan Project. However, since the Project is not located in unincorporated Orange County, these measures have been identified as mitigation measures. Additionally, it should be noted that the County's standard

condition, A01, which requires preparation of a cultural resources report that includes a literature and records search and field survey of the project site, is satisfied by this report.

MM CULT-1 Archaeological Observation and Salvage. Prior to the issuance of any grading permit in which native soil is disturbed, the County or its designee shall provide written evidence to the Manager of Building & Safety, or designee, that the County or its designee has retained a County-certified archaeologist to observe grading activities and to salvage and catalogue archaeological resources as necessary. The archaeologist shall be present at the pre-grade conference, shall establish procedures for archaeological resource surveillance, and shall establish, in cooperation with the County or its designee, procedures for temporarily halting or redirecting work to permit the sampling, identification, and evaluation of the artifacts as appropriate. If the archaeological resources are found to be significant, the archaeological observer shall determine appropriate actions, in cooperation with the County or its designee, for exploration and/or salvage.

Prior to the release of the grading bond, the County or its designee shall obtain approval of the archaeologist's follow-up report from the Manager of Building & Safety, or designee. The report shall include the period of inspection, an analysis of any artifacts found, and the present repository of the artifacts. The archaeologist shall prepare excavated material to the point of identification. The County or its designee shall offer excavated finds for curatorial purposes to the County of Orange, or its designee, on a first refusal basis. These actions, as well as final mitigation and disposition of the resources, shall be subject to the approval of the Manager of Building & Safety, or designee. The County or its designee shall pay curatorial fees if an applicable fee program has been adopted by the Board of Supervisors and such fee program is in effect at the time of presentation of the materials to the County of Orange or its designee, all in a manner meeting the approval of the Manager of Building & Safety, or designee.

MM CULT-2 Paleontological Observation and Salvage. Prior to the issuance of any grading permit in which native soil is disturbed, the County or its designee shall provide written evidence to the Manager of Building & Safety, or designee, that the County or its designee has retained a County-certified paleontologist to observe grading activities and to salvage and catalogue fossils as necessary. The paleontologist shall be present at the pre-grade conference; shall establish procedures for paleontological resource surveillance; and shall establish, in cooperation with the County or its designee, procedures for temporarily halting or redirecting work to permit sampling, identification, and evaluation of the fossils. If the paleontological resources are found to be significant, the paleontologist shall determine appropriate actions, in cooperation with the County or its designee, to ensure proper exploration and/or salvage.

Prior to the release of the grading bond, the County or its designee shall submit the paleontologist's follow up report for approval by the Manager of Building & Safety, or designee. The report shall include the period of inspection, a catalogue and analysis of the fossils found, and the present repository of the fossils. The County or its designee shall prepare excavated material to the point of identification and shall offer excavated finds for curatorial purposes to the County of Orange, or its designee, on a first refusal basis. These actions, as well as final mitigation and disposition of the resources, shall be subject to approval by Manager of Building & Safety, or designee. The County or its designee shall pay curatorial fees if an applicable fee program has been adopted by the Board of

Supervisors and such fee program is in effect at the time of presentation of the materials to the County of Orange or its designee, all in a manner meeting the approval of the Manager of Building & Safety, or designee.

MM CULT-3 Human Remains. If human remains are encountered during ground-disturbing activities, Section 7050.5 of the *California Health and Safety Code* states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition of the materials pursuant to Section 5097.98 of the *California Public Resources Code*. The provisions of Section 15064.5 of the California Environmental Quality Act Guidelines shall also be followed. The County Coroner must be notified of the find immediately. If the remains are determined to be prehistoric, the Coroner shall notify the Native American Heritage Commission (NAHC). The NAHC will determine and notify a Most Likely Descendent (MLD). With the permission of the landowner or his/her authorized representative, the MLD may inspect the site of the discovery. The descendent must complete the inspection within 24 hours of notification by the NAHC. The MLD may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials. These requirements shall be included as notes on the contractor specification and verified by the Development Services Department, prior to issuance of grading permits.

DISPOSITION OF DATA

This report will be filed with the County of Orange, BonTerra Psomas, and the SCCIC. All field notes and other documentation related to the study are on file at BonTerra Psomas.

1.0 UNDERTAKING INFORMATION/INTRODUCTION

1.1 CONTRACTING DATA

This report presents the results of the Phase I Cultural Resources Inventory for the West Alton Project site and provides mitigation measures to reduce the impact of the Project on cultural resources to a less than significant level.

1.2 UNDERTAKING

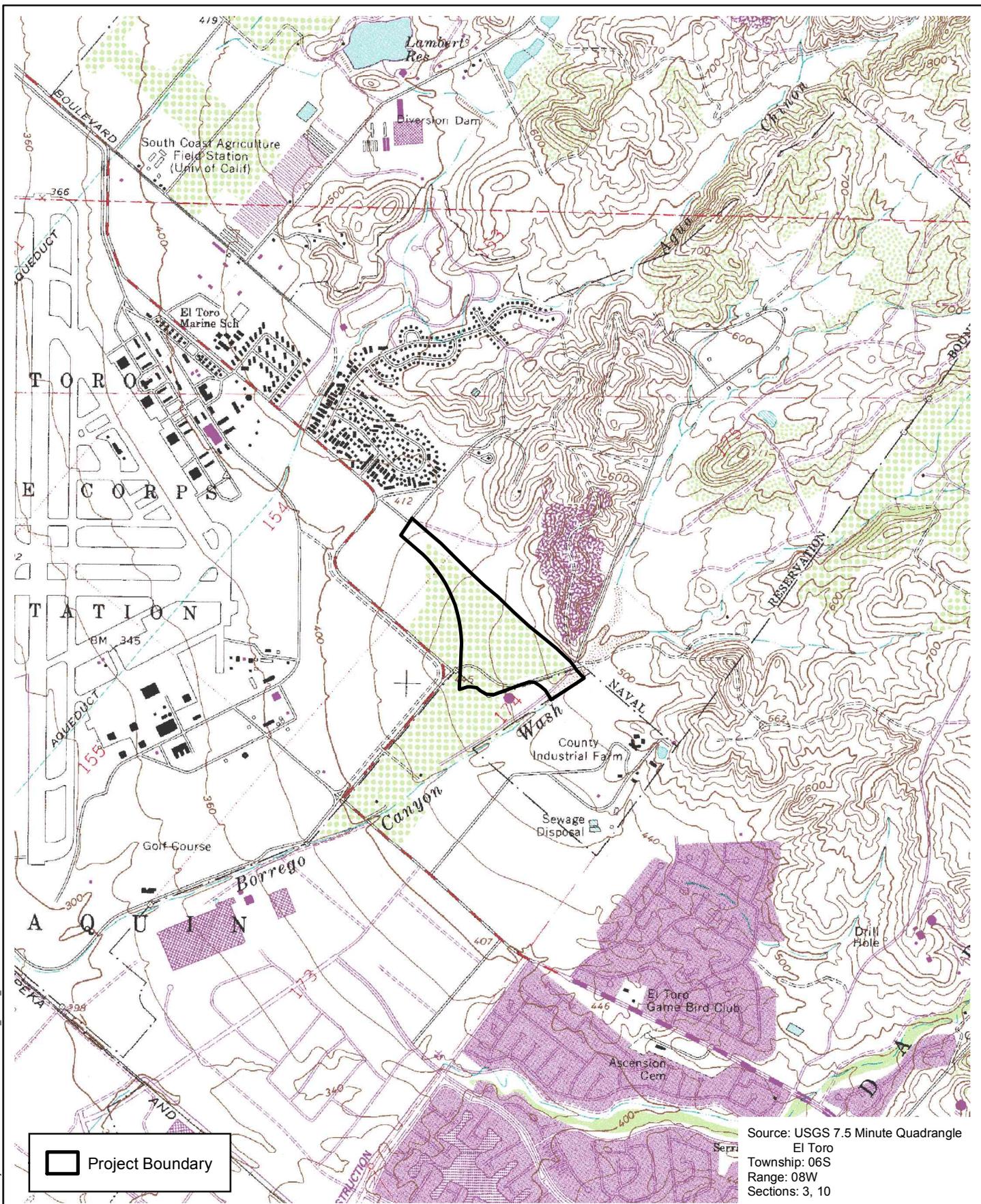
The Project proposes a multi-family development, with an average of 30 units per acre. A total of 970 multi-family units are proposed. North of the wildlife movement corridor, approximately 660 units would be constructed, with the remaining 310 units being located south of the wildlife movement corridor. The units would be up to 5 stories (70 feet maximum height) with both surface and garage parking. The wildlife movement corridor would be protected onsite.

1.3 AREA OF POTENTIAL EFFECTS

Exhibit 1 depicts the Project site on the U.S. Geological Survey's (USGS') El Toro, CA 7.5-minute Quadrangle; Sections 3 and 10; Township 6 South; Range 8 West; San Bernardino Base Meridian.

1.4 PROJECT PERSONNEL

The cultural resources study was completed by Patrick O. Maxon, M.A., RPA, David M. Smith, and Megan Larum. Mr. Smith also completed the cultural field survey and authored this report (Personnel Qualifications can be found in Attachment D). The format of this report follows *Archaeological Resource Management Reports (ARMR): Recommended Contents and Format* (Office of Historic Preservation 1990). Paleontologist Mark A. Roeder reviewed the paleontological literature review and records searches, completed a field survey, and prepared the technical report.

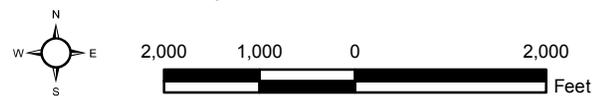


D:\Projects\LowEnt\00011MX\DaCultural\ex_USGS_WesternSite.mxd

Source: USGS 7.5 Minute Quadrangle
 El Toro
 Township: 06S
 Range: 08W
 Sections: 3, 10

Project Site
 West Alton Development Plan

Exhibit 1



2.0 REGULATORY SETTING

This section contains a discussion of the applicable laws, ordinances, regulations, and standards that govern cultural resources and must be adhered to both prior to and during Project implementation. The report is intended to satisfy the requirements of the California Environmental Quality Act (CEQA) regulations (*California Public Resources Code* [PRC] §21083.2) and the State CEQA Guidelines (*California Code of Regulations* [CCR], Title 14, §15064.5).

2.1 CALIFORNIA REGISTER OF HISTORICAL RESOURCES

CEQA requires a lead agency to determine whether a project will have a significant effect on one or more historical resources. According to Section 15064.5(a) of the State CEQA Guidelines, a “historical resource” is defined as a resource listed in or determined to be eligible for listing in the California Register of Historical Resources (CRHR) (PRC §21084.1); a resource included in a local register of historical resources (14 CCR 15064.5[a][2]); or any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant (14 CCR 15064.5[a][3]).

The basic guidelines that were used for the cultural resources study were Section 5024.1 of the PRC; Section 15064.5 of the State CEQA Guidelines (14 CCR); and Sections 21083.2 and 21084.1 of the CEQA Statutes. PRC 5024.1 requires evaluation of historical resources to determine their eligibility for listing on the CRHR. The purpose of the CRHR is to maintain a list of the State’s historical resources and to indicate which properties are to be protected from substantial adverse change. The criteria for listing resources in the CRHR, which were expressly developed to be in accordance with previously established criteria developed for listing in the NRHP (per the criteria listed at 36 CFR 60.4), are stated below.

The quality of significance in American history, architecture, archaeology, engineering and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling and association and that:

- (1) Are associated with events that have made a significant contribution to the broad patterns of local or regional history or the cultural heritage of California or the United States; or
- (2) Are associated with the lives of persons important to local, California, or national history; or
- (3) Embody the distinctive characteristics of a type, period, region, or method of construction, or that represent the work of a master, or that possess high artistic values; or
- (4) Has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California or the nation.

In addition, according to Section 15064.5(a)(3)(A–D) of the State CEQA Guidelines (14 CCR), a resource is considered historically significant if it meets the criteria for listing in the NRHP (per the criteria listed at 36 CFR 60.4). Impacts that affect those characteristics of the resource that qualify it for the NRHP or that would adversely alter the significance of a resource listed in or eligible for listing in the CRHR are considered to have a significant effect on the environment. Impacts to cultural resources from a project are thus considered significant if the project (1) physically destroys or damages all or part of a resource; (2) changes the character of the use of the resource or physical feature within the setting of the resource that contributes to its significance; or

(3) introduces visual, atmospheric, or audible elements that diminish the integrity of significant features of the resource.

The purpose of a cultural resources investigation is to evaluate whether any cultural resources remain exposed on the surface of the project site or can reasonably be expected to exist in the subsurface. If resources are discovered, management recommendations would be required for evaluation of the resources for NRHP or CRHR eligibility.

2.2 HUMAN REMAINS

Section 7050.5 of the *California Health and Safety Code* provides for the disposition of accidentally discovered human remains. Section 7050.5 states that, if human remains are found, no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains shall occur until the County Coroner has determined the appropriate treatment and disposition of the human remains.

Section 5097.98 of the PRC states that, if remains are determined by the Coroner to be of Native American origin, the Coroner must notify the NAHC within 24 hours which, in turn, must identify the person or persons it believes to be the most likely descended from the deceased Native American. The descendants shall complete their inspection within 48 hours of being granted access to the site. The designated Native American representative would then determine, in consultation with the property owner, the disposition of the human remains.

3.0 **CULTURAL BACKGROUND**

3.1 **PREHISTORIC BACKGROUND**

Several chronologies are generally used to describe the sequence of the later prehistoric periods of Southern California. William Wallace (1955) developed the first comprehensive California chronologies and defines four periods for the southern coastal region.

Wallace's synthesis is largely "descriptive and classificatory, emphasizing the content of archaeological cultures and the relationships among them" (Moratto 1984:159). Wallace relies upon the concept of "cultural horizons", which are generally defined by the temporal and spatial distribution of a set of normative cultural traits, such as the distribution of a group of commonly associated artifact types. As a result, his model does not allow for much cultural variation in the same time period, nor does it provide precise chronological dates for each temporal division. Nonetheless, although now more than 50 years old, the general schema of the Wallace chronology has provided a general framework for Southern California prehistory that remains valid today.

Horizon I: Early Man or Paleo-Indian Period (11,000 BCE² to 7,500 BCE). While Wallace (1955) initially termed this period the Early Man Horizon (I), this early stage of human occupation is commonly referred to as the Paleo-Indian Period today (Chartkoff and Chartkoff 1984:24). The precise start of this period is still a topic of considerable debate. At inland archaeological sites, the surviving material culture of this period is primarily lithic, consisting of large, extremely well made stone projectile points and tools such as scrapers and choppers. Encampments were probably temporary, located near major kills or important resource areas.

Horizon II: Milling Stone Assemblages (7,500 BCE to 1,000 BCE). Encompassing a broad expanse of time, the Milling Stone Period was named for the abundant millingstone tools associated with sites of this period. These tools, the mano and metate, were used to process small, hard seeds from plants associated with shrub-scrub vegetation communities. An annual round of seasonal migrations was likely practiced, with movements coinciding with ripening vegetal resources and the periods of maximal availability of various animal resources. Along the coast, shell midden sites are common site types. Some formal burials, occasionally with associated grave goods, are also evident. This period of time is roughly equivalent to Warren's (1968) Encinitas Tradition. Warren (1968) suggests that, as millingstones are common and projectile points are comparatively rare during this period of time, hunting was less important than the gathering of vegetal resources.

More recent studies (Koerper 1981; Koerper and Drover 1983) suggest that a diversity of subsistence activities, including hunting of various game animals, were practiced during this period. At present, little is known about cultural change during this time period in Southern California. While this lack of noticeable change gives the appearance of cultural stasis, almost certainly, many regional and temporal cultural shifts did occur. Future research that is focused on temporal change during the Milling Stone Period would greatly benefit the current understanding of Southern California prehistory.

Horizon III: Intermediate Cultures (1,000 BCE to 750 CE³). The Intermediate Period is identified by a mixed strategy of plant exploitation, terrestrial hunting, and maritime subsistence strategies. Chipped stone tools, such as projectile points, generally decrease in size, but increase in number.

² BCE is defined as "Before Common Era" and generally refers to that time period commonly referred to as "Before Christ" (B.C.).

³ CE is defined as "Common Era" and generally refers to that time period commonly referred to as "annō Domini" (A.D.).

Abundant bone and shell remains have been recovered from sites dating to these time periods. In coastal areas, the introduction of the circular shell fishhook and the growing abundance of fish remains in sites over the course of the period suggest a substantial increase in fishing activity during the Intermediate Horizon. It is also during this time period that mortar and pestle use intensified dramatically. The mano and metate continued to be in use on a reduced scale, but the greatly intensified use of the mortar and pestle signaled a shift away from a subsistence strategy based on seed resources to that of the acorn. It is probably during this time period that the acorn became the food staple of the majority of the indigenous tribes in Southern California. This subsistence strategy continued until European contact. Material culture became more diverse and elaborate and included steatite containers, perforated stones, bone tools, ornamental items, and asphalt adhesive.

Horizon IV: Late Prehistoric Cultures (750 CE to 1769 CE). During the Late Prehistoric Period, exploitation of many food resources, particularly marine resources among coastal groups, continued to intensify. The material culture in the Late Prehistoric Horizon increased in complexity in terms of the abundance and diversity of artifacts being produced. The recovery and identification of a number of small projectile points during this period likely suggests a greater utilization of the bow and arrow, which was likely introduced near the end of the Intermediate Period. Shell beads, ornaments, and other elements of material culture continue to be ornate, varied, and widely distributed; the latter evidence suggests elaborate trade networks. Warren's (1968) scheme divides the late prehistoric period into several regional traditions. Western Riverside County, Orange County, and the Los Angeles Basin area are considered part of the "Shoshonean" tradition, which may be related to a possible incursion of Takic speakers into these areas during this period. The Late Prehistoric Period includes the first few centuries of early European contact (1542–1769 CE); it is also known as the Protohistoric Period as there was a low level of interaction between native Californians and Europeans prior to Portolá's overland expedition in 1769.

In the few centuries prior to European contact, the archaeological record reveals substantial increases in the indigenous population (Wallace 1955:223). Some village sites may have contained as many as 1,500 individuals. Apparently, many of these village sites were occupied throughout the year rather than seasonally. This shift in settlement strategy was likely influenced by improved food procurement and storage technology, which enabled population growth and may have helped stimulate changes in sociopolitical organization.

Evidence is growing that prehistoric cultural change has been much more variable through time and across culture areas than previously thought. Cultural traits such as maritime economies, seafaring, complex trade networks, and year-round occupation of villages appear to have developed much earlier than previously thought. Culture change during the Late Prehistoric Period, in particular, may have been driven more by environmental and resource pressures than optimal adaptation to the environment (Byrd and Raab 2007).

3.2 ETHNOGRAPHIC BACKGROUND

3.2.1 Gabrielino/Tongva

At the time of European contact, this part of Orange County was the home of the Gabrielino, or Tongva. The Gabrielino and their descendants are those people who became associated with Mission San Gabriel Arcángel, which was established in south-central Los Angeles County on September 8, 1771, in what has ever since been called the San Gabriel Valley. Today, these people are sometimes referred to as the *Tongva*, although the term apparently originally (i.e., before the arrival of Euro-Americans) referred to the inhabitants of the San Gabriel Valley only. In either case, the inhabitants of Santa Catalina Island and San Clemente Island are often included as being parts of this tribe, as are the Fernandeano, who inhabited most of the San Fernando

Valley. Note that Chester King distinguishes between the *Eastern Gabrielino*, who lived south of the San Gabriel Mountains, mainly in the San Gabriel Valley, and the *Western Gabrielino*, who lived along the western coast of Los Angeles County, from Malibu to Palos Verdes, and included the people living in the San Fernando Valley (King 2003:14).

The ancestral Gabrielino arrived in the Los Angeles Basin probably before 500 BCE as part of the so-called Shoshonean (Takic speaking) Wedge from the Great Basin region and gradually displaced the indigenous peoples, probably Hokan speakers. Large, permanent villages were established in the fertile lowlands along rivers and streams and in sheltered areas along the coast. Eventually, Gabrielino territory encompassed the watersheds of the Los Angeles, San Gabriel, Rio Hondo, and Santa Ana Rivers, which includes the greater Los Angeles Basin, to perhaps as far south as Aliso Creek, as well as portions of the San Fernando, San Gabriel, and San Bernardino Valleys. Gabrielino territory also included the islands of San Clemente, San Nicholas, and Santa Catalina (McCawley 1996: 23–24; Bean and Smith 1978:538–540). Recent studies suggest the population may have numbered as many as 10,000 individuals at their peak in the Precontact Period.

The subsistence economy of the Gabrielino was one of hunting and gathering. The surrounding environment was rich and varied, and the natives were able to exploit mountains, foothills, valleys, deserts, and coasts. As was the case for most native Californians, acorns were the staple food (by the Intermediate Horizon), supplemented by the roots, leaves, seeds, and fruit of a wide variety of flora (i.e., cactus, yucca, sage, and agave). Fresh and saltwater fish, shellfish, birds, insects, and large and small mammals were exploited.

A wide variety of tools and implements were employed by the Gabrielino to gather, collect, and process food resources. The most important hunting tool was the bow and arrow. Traps, nets, blinds, throwing sticks, and slings were also employed. Fish were an important resource and nets, traps, spears, harpoons, hooks, and poisons were utilized to catch them. Ocean-going plank canoes and tule balsa canoes were used for fishing and for travel by those groups residing near the Pacific Ocean.

The processing of food resources was accomplished in a variety of ways: nuts were cracked with hammer stone and anvil; acorns were ground with mortar and pestle; and seeds and berries were ground with mano and metate. Yucca, an important resource in many areas, was eaten by the natives and exploited for its fibers.

Strainers, leaching baskets and bowls, knives, bone saws, and wooden drying racks were also employed. Food was consumed from a variety of vessels. Catalina Island steatite was used to make ollas and cooking vessels.

Gabrielino houses were circular domed structures of willow poles thatched with tule. They were actually quite large and could, in some cases, hold 50 individuals. Other structures served as sweatshops, menstrual huts, and ceremonial enclosures (Bean and Smith 1978).

Kroeber (1925:621) considered the Gabrielino:

. . . to have been the most advanced group south of Tehachapi, except perhaps the Chumash. They certainly were the wealthiest and most thoughtful of all the Shoshoneans of the State, and dominated these civilizationally wherever contacts occurred.

4.0 MARINE CORPS AIR STATION EL TORO HISTORY

The Project area is within the northern boundary of the Marine Corps Air Station (MCAS) El Toro. Although the MCAS El Toro vicinity had been used for agriculture or ranching throughout much of the 19th and early 20th centuries, all known historic period cultural resources on the site are related to military use of the facility. Construction of the MCAS El Toro began in August 1942, after condemnation of 2,323 acres of the Irvine Ranch. Runways were completed by December of that year, and squadron hangars, barracks, and bachelor officer's quarters soon thereafter. After World War II, the facility was retained as a fully operational Marine Corps Air Station, and many of the buildings were rehabilitated or transformed to permanent or semi-permanent status. The most extensive construction at the facility took place in 1954, with the arrival of the 3rd Marine Air Wing, the mainstay of activities at the facility. Hundreds of new families arrived, and much of the construction during 1954 was for housing. During the Vietnam conflict, the hangar facilities were modernized, and major new barrack construction was initiated to handle increasing numbers of personnel. Activity again increased during the 1980s, and recently MCAS El Toro was used as a staging area for Marines en route to regional conflicts worldwide. MCAS El Toro was still quite active and continued to develop until 1993, when it was included in the base closure recommendations (MCAS El Toro 2002).

5.0 METHODS

5.1 CULTURAL RESOURCES RECORDS SEARCH

A cultural resources records search was conducted for the Project by David M. Smith at the South Central Coastal Information Center (SCCIC) at California State University, Fullerton on February 25, 2015 (Attachment A). The SCCIC is the designated branch of the California Historical Resources Information System (CHRIS) for the Project area and houses records concerning archaeological and historic resources in Los Angeles, Ventura, and Orange Counties. The review consisted of an examination of the USGS El Toro and Tustin, California 7.5-minute quadrangles to determine if any cultural resources studies had been conducted on or within a ½-mile radius of the parcel. The records search provided data on recorded archaeological and built environment resources as well on or within ½ mile of the Project site. Sources consulted at the SCCIC included archaeological records, Archaeological Determinations of Eligibility, historic maps, and the Historic Property Data File (HPDF) maintained by the California Office of Historic Preservation. The HPDF contains listings for the CRHR and/or NRHP, California Historical Landmarks, and California Points of Historical Interest.

An updated records search was completed on November 3, 2016 (Attachment A).

5.1 PALEONTOLOGICAL LITERATURE REVIEW

The literature review for this study included an examination of the geologic maps for the Project area. The literature review encompasses the entire project footprint and included a one-mile buffer around the Project footprint (Study Area). Review included previous geologic mapping of the area. In addition to the reviewed published geologic maps, technical reports provided the basis from which the regional and project-specific geology was derived for this project.

Pertinent published literature and unpublished manuscripts with regards to the geology and paleontology of central Orange County and were also reviewed for this project. In the process of conducting the background literature review, existing paleontological resource data (including such published resources as books, journals, and geologic maps, as well as information available via the internet on government websites) were consulted. Furthermore, an online database search

was conducted to identify previous paleontological resource assessments conducted within the boundaries of the project site and the surrounding areas.

Jefferson (2008) catalogue of Quaternary vertebrates of California was consulted.

5.2 PALEONTOLOGICAL RESOURCES RECORDS SEARCH

A paleontological resources records search and literature review was conducted by Dr. Samuel A. McLeod at the Los Angeles County Natural History Museum (LACNHM) on March 26, 2015 (Attachment B).

5.3 NATIVE AMERICAN SACRED LANDS FILE REVIEW

An inquiry was made on March 16, 2015, of the Native American Heritage Commission (NAHC) to request a review of the Sacred Lands File database regarding the possibility of Native American cultural resources and/or sacred places in the Project vicinity that are not documented on other databases. The NAHC responded on April 22, 2015, and provided a list of Native American groups and individuals who may have knowledge regarding Native American cultural resources not formally listed on any database. Tribes and individuals were mailed an informational letter on April 23, 2015, which describes the Project and requests any information regarding resources that may exist on or near the Project site (Attachment C).

5.4 CULTURAL RESOURCES SURVEY

An archaeological survey of the property was conducted by Mr. David M. Smith, BonTerra Psomas Senior Archaeologist, on February 27, 2015. The survey was accomplished using 15 meter (50-foot) transects where practical.

5.5 PALEONTOLOGICAL RESOURCES SURVEY

A paleontological resources survey of the property was conducted by Mark A. Roeder, BonTerra Psomas Senior Paleontologist, on May 5, 2015. The parcel was accessed via Irvine Boulevard.

6.0 **RESULTS**

6.1 **CULTURAL RESOURCES RECORDS SEARCH**

Archaeological Inventory

Studies

The literature review conducted on February 25, 2015 identified 21 cultural resources studies undertaken within ½-mile of the Project site. Six of these studies included at least a portion of the proposed Project site; two included the entire parcel (Table 1). None of these studies resulted in the identification of any cultural resources on the subject property.

The records search was updated on November 3, 2016. As a result, 5 additional studies were documented within a ½ mile radius of the subject property. One of these included a small portion of the property. None of the studies resulted in the recordation of any new sites on or within ½ mile of the property.

**TABLE 1
CULTURAL RESOURCES STUDIES COMPLETED WITHIN
ONE-HALF MILE OF THE PROJECT SITE**

Report Number	Recorder/Year	Type of Study	Located on the Project Site
OR-00275	Mabry 1978	Agua Chinon Flood Control Improvement Project	No
OR-00305	Schroth 1979	The History of Archaeological Research on Irvine Ranch Property: The Evolution of the Company History	No
OR-00520	Mabry 1979	Archaeological Records Search and Reconnaissance Survey Irvine Industrial Complex-east Phase 2 and 3 Areas Irvine, CA.	No
OR-00661*	Bissell 1988	Cultural Resources Reconnaissance of the Baker Ranch Property, El Toro, Orange County	No
OR-00748	Bissell 1984	Cultural Resources Assessment Los Alisos Research and Development Park El Toro. Orange County, California	No
OR-00753	Padon 1984	Archaeological Resource Assessment Irvine Industrial Complex East Phase IV, City of Irvine	No
OR-00813	Cottrell et al. 1985	Archaeological, Historical, and Paleontological Assessment of the Musick Facility, Orange County, California	No
OR-00847	Padon 1985	Archaeological Resource Inventory City of Irvine and its Sphere of Influence.	Yes
OR-01022	Del Chario et al. 1989	Cultural Resource Assessment for the Allen-McColluch Pipeline (amp) Flow Augmentation Project Reaches S4b/s5	No
OR-1082*	Jertberg 1990	Archaeological Monitoring Report for Rheon USA Project. Parcel Map No. 84.629. Lot 6, Irvine, California	No
OR-01084	Brown 1990	Cultural Resources Reconnaissance of a Portion of the Joplin Boys Ranch Orange County, California	No
OR-01099	Cooley 1979	Archaeological Resources Assessment Conducted for Proposed Irvine Ranch Water District Pipeline Right of Ways.	No

**TABLE 1
CULTURAL RESOURCES STUDIES COMPLETED WITHIN
ONE-HALF MILE OF THE PROJECT SITE**

Report Number	Recorder/Year	Type of Study	Located on the Project Site
OR-01583	Nicoll 1974	Archaeology and Paleontology Report for Rancho De Los Alisos Area, Orange County, California	Yes
OR-01841	Cottrell and Murray 1987	Archaeological Resources Assessment Completed for the Marine Corps Air Station, El Toro, California	Yes
OR-2225	Strozier 1978	The Irvine Company Planning Process and California Archaeology – A Review and Critique	No
OR-02534	Unknown 1976	Annual Report to The Irvine Company from Archaeological Research, Inc.	No
OR-2610*	York 1998	Testing Plan Archaeological Site Evaluation and National Register Eligibility Evaluation at Site CA-Ora-1462, MCAS El Toro, Orange County, California	No
OR-2611*	Underwood et al. 1999	Testing Plan Archaeological Site Evaluation and National Register Eligibility Evaluation at Site CA-Ora-1462, MCAS El Toro, Orange County, California	No
OR-02649	Allen 1997	Archaeological Survey Report Marine Corps Air Station, El Toro	Yes
OR-02928	Demcak 1994	Final Report of Salvage Level Investigations at ORA-758, Alton Parkway Extension Project. County of Orange, California.	No
OR-02938	Drover et al. 2001	A Cultural Resources Inventory for Planning Area 6, Irvine, California. With Appendices.	No
OR-03056	Willey 2003	MCAS El Toro Monitoring Wells Survey	No
OR-03840*	Marken 2009	Phase I Archaeological Assessment for the IRWD Baker Regional Water Treatment Plant Project, Orange County, CA	No
OR--04333	O'Neil 2012	Archaeological Resources Excavation Results Report Alton Parkway Extension Project Orange County, California.	Yes
OR-04334	O'Neil 2012	Cultural and Paleontological Monitoring Report for the Alton Parkway Extension Project (County Job No. ETD2002), City of Irvine, Orange County, California; Project 5780	Yes
OR-04347	Bissell 1986	Cultural Resources Reconnaissance of the Pacific Business Park (Diocese Property) in El Toro, Orange County, California	No
MCAS: Marine Corps Air Station			
*Updated records search			

Previously Recorded Sites

The SCCIC literature review undertaken on February 25, 2015, showed that 11 cultural resources sites have been recorded within 1/2 mile of the Project site (Table 2).

**TABLE 2
CULTURAL RESOURCES SITES WITHIN ONE-HALF MILE
OF THE PROJECT SITE**

Site Number	Recorder/Year	Description	Within Project Area
CA-ORA-617	Cottrell 1977	Lithic scatter, rock shelter	No
CA-ORA-647	Brown 1994	Lithic scatter	No
CA-ORA-648	Brown 1996	Lithic scatter	No
CA-ORA-755	York 1996	Lithic scatter	No
CA-ORA-756	Beck and Allen 1996	Lithic scatter	No
CA-ORA-758	Beck and Allen 1996	Lithic scatter	No
CA-ORA-759	Beck and Allen 1996	Lithic scatter	No
CA-ORA-760	York and Mullen 1978	Lithic scatter	No
CA-ORA-1356	Beck, Mullen, and York 1996	Lithic scatter	No
CA-ORA-1741	Bissell 1986	Lithic scatter	No
30-176799	Mikesell 1997	MCAS Building	No
See OR-04334	O'Neal 2012	7 hearth features	Yes

MCAS: Marine Corps Air Station

None of the recorded resources are located closer than 1/4 mile from the Project site. However, during mass grading for the wildlife corridor on the parcel in 2010 and 2011, cultural resource monitors from Ultrasystems, Inc. discovered seven stone cooking features at average depths of 12 feet (O'Neil 2012). Each feature was excavated by hand, diagrammed, and sampled as warranted. O'Neil concluded that the features were remnants of prehistoric yucca roasting pits (O'Neil 2012). The features have not been formally recorded on DPR 523 forms; therefore, they are not plotted on the site maps at the SCCIC, but may be found in the report (O'Neil 2012).

The records search was updated on November 3, 2016. No additional sites have been recorded within 1/2 mile of or on the property since the initial records search in February of 2015.

6.2 PALEONTOLOGICAL LITERATURE SEARCH

Regional Geology

The Project area is part of the Peninsular Ranges geomorphic province. The province is a series of mountain ranges separated by northwest trending valleys, subparallel to faults branching from the San Andreas Fault. The trend of the topography is similar to the Coast Ranges, but instead of being composed of sedimentary rocks, the Peninsular Ranges are more like the Sierra Nevada with granitic rocks intruding older metamorphic rocks. The Los Angeles Basin which includes the Project area is in this province.

Project Geology

The geology of the Project area can be seen in Exhibit 2. The area is underlain by two surficial sedimentary rock units: Quaternary very old alluvial fan deposits (Qvof) and Quaternary young alluvial fan deposits (Qyf) (Morton and Miller 2006; Bedrossian and Roffers 2012).

Quaternary Young Alluvial Fan Deposits (Qyf)

Approximately eighty percent of the Project is underlain by Quaternary young alluvial fan deposits (Qyf) (Miller and Morton 2006; Bedrossian and Roffers 2012; Exhibit 2), which consists of sand, silt, clay, and gravel deposited in this area from the erosion of the nearby foothills. Although very young in surface and at shallow depth, these sediments increase in age at deeper levels. Elsewhere, these sediments range in age from late Pleistocene to Holocene (Bedrossian and Roffers 2012). Excavations in similar Late Pleistocene aged sediments yielded remains of large extinct mammals such as Columbian mammoth, mastodon, ground sloth, tapir, horse, camel, dire wolf, saber-tooth cat, and American lion, (Jefferson 2008; Miller 1971) as well as remains of extant smaller fish, amphibians, reptiles, birds, and mammals.

Quaternary Very Old Alluvial Fan Deposits (Qvof)

Approximately twenty percent of the Project is underlain by Quaternary young alluvial fan deposits (Qvof) (Miller and Morton 2006; Bedrossian and Roffers 2012; Exhibit 2), which consists of sand, silt, clay, and gravel deposited in this area from the erosion of the nearby foothills. Elsewhere, these sediments range in age from early to middle Pleistocene (Bedrossian and Roffers 2012). Excavations in similar aged-Pleistocene aged sediments yielded remains of large extinct mammals such as Columbian mammoth, mastodon, ground sloth, tapir, horse, camel, dire wolf, saber-tooth cat, and American lion, (Jefferson 2008; Miller 1971) as well as remains of extant smaller fish, amphibians, reptiles, birds, and mammals.

6.2 PALEONTOLOGICAL RESOURCES RECORDS SEARCH

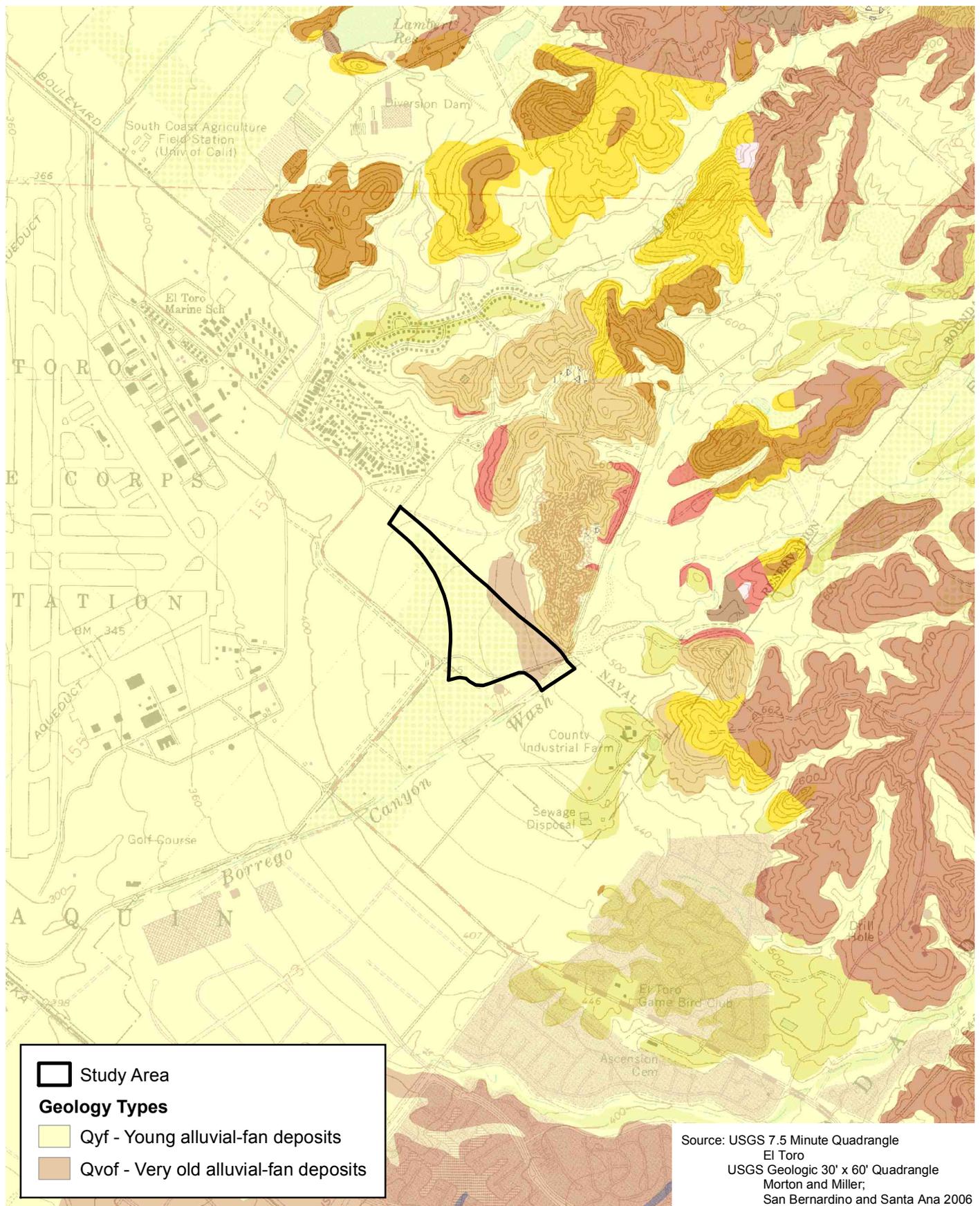
Dr. Sam McLeod of the NHMLAC responded to BonTerra Psomas' inquiry by letter on March 26, 2015. The letter states that, although there are no recorded fossil localities within the Project site, the NHMLAC has identified fossil localities farther afield from sedimentary deposits similar to those that occur subsurface in the Project area.

The entire Project area has surficial deposits composed of younger Quaternary alluvium, primarily derived as alluvial fan deposits from the hills to the east. These deposits typically do not contain significant vertebrate fossils, at least in the uppermost layers, but they may be underlain by older Quaternary deposits.

The closest fossil vertebrate locality from similar older Quaternary deposits is LACM 7867 (immediately northwest of the Project area near the intersection of C Street and 5th Street), which produced fossil specimens of pocket gopher, *Thomomys*, at a depth of 25 feet below the surface (bgs). The next closest vertebrate fossil from these deposits is LACM 7713, southwest of the Project area on the western side of the Laguna Freeway (State Route [SR] 133) at the southern end of the interchange with the San Diego Freeway (Interstate [I] 405), which produced a fossil specimen of ground sloth, *Mylodontidae*, from unstated but shallow depth.

Grading or shallow excavations in the uppermost few feet of the younger Quaternary alluvial sediments in the Project area are unlikely to encounter significant fossil vertebrate remains. Deeper excavations in the Project area, however, may well encounter significant remains of vertebrate fossils in older Quaternary sediments. Any substantial excavations below the uppermost layers, therefore, should be monitored closely to quickly and professionally recover

D:\Projects\LoweEnt\0001\MXDs\Geology\WestAlton\ex3_GeologicMap.mxd



Source: USGS 7.5 Minute Quadrangle
 El Toro
 USGS Geologic 30' x 60' Quadrangle
 Morton and Miller;
 San Bernardino and Santa Ana 2006

Geologic Map

West Alton Development Plan

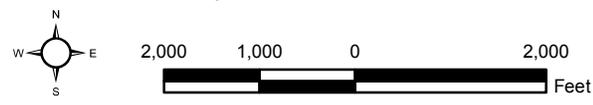


Exhibit 2



any fossil remains while not impeding development. Sediment samples should also be collected and processed to determine the small fossil potential in the Project area. Any fossils collected should be placed in an accredited scientific institution for the benefit of current and future generations.

6.3 NATIVE AMERICAN SACRED LANDS FILE REVIEW

The NAHC Search of the Sacred Lands File on March 23, 2015, failed to identify the presence of Native American cultural resources on the Project site. In addition, the NAHC provided a list of Native American groups and individuals that may have knowledge of the religious and/or cultural significance of resources that may be in and/or near the Project site. The NAHC listed the following groups and individuals:

- Teresa Romero, Chairwoman, Juaneño Band of Mission Indians Acjachemen Nation
- Chairperson, Juaneño Band of Mission Indians Acjachemen
- Rebecca Robles, United Coalition to Protect Panhe (UCPP)
- Anita Espinoza, Juaneño Band of Mission Indians
- Adolph 'Bud' Sepulveda, Vice Chairperson, Juaneño Band of Mission Indians
- Sonia Johnston, Tribal Chairperson, Juaneño Band of Mission Indians
- Joyce Perry, Representing Tribal Chairperson, Juaneño Band of Mission Indians Acjachemen Nation

All individuals were mailed an informational letter on April 23, 2015, that describes the Project and requests any information regarding resources that may exist on or near the Project site.

All correspondence related to the Native American consultation for the Project is provided in Attachment C.

6.4 CULTURAL RESOURCES SURVEY

On February 27, 2015, David M. Smith, a BonTerra Psomas Senior Archaeologist, undertook a pedestrian survey of the property. Mr. Smith accessed the subject property via Irvine Boulevard.

The easternmost parcel, immediately east of the wildlife corridor, was visually inspected and determined to consist entirely of fill materials that had been graded smooth. No survey was conducted in that parcel. Immediately to the north and west of the wildlife corridor, is a mulch plant, covered mostly with large piles of mulched wood, trailers, vehicles, and assorted other equipment related to the business. Access to the western portion of the West Alton property was via the main gate to the mulch plant.

The approximate western half of the West Alton parcel was clear of vegetation, piles, and equipment and could be surveyed completely. The survey began in the far western end of the property just past a retention basin. The survey was conducted in north-south transects spaced at 15-meter (50-foot) intervals. The survey progressed eastward from there until the western edge of the mulch plant was reached.

Although the ground visibility was excellent, no artifacts, either historic or prehistoric, were observed.

6.5 PALEONTOLOGICAL RESOURCES SURVEY

On May 5, 2015, Mark A. Roeder, a BonTerra Psomas Senior Paleontologist, undertook a combination of windshield and pedestrian survey of the property. Mr. Roeder accessed the subject property via Irvine Boulevard. Most of the subject property was heavily vegetated and there were no areas to inspect the underlying geology. No paleontological resources were observed.

7.0 **MANAGEMENT CONSIDERATIONS**

7.1 **COUNTY OF ORANGE STANDARD CONDITIONS**

A01 Archaeological Survey. Prior to the issuance of the first grading permit, the applicant shall obtain approval from the Manager, Permit Services of a report on a literature and records search and field survey of the project site. The applicant shall retain a County-certified archaeologist to complete the literature and records search for recorded sites and previous surveys. The archaeologist shall conduct a field survey unless the entire proposed project site has been documented as previously surveyed. If determined necessary by the archaeologist, the archaeologist shall prepare a report on a subsurface test level investigation of archaeological resources collection as appropriate. The applicant shall implement the mitigation measures recommended in this report in a manner meeting the approval of the Manager, Permit Services.

A02 Archaeological Observation and Salvage. Prior to the issuance of the first grading permit, the applicant shall provide written evidence to the Manager, Permit Services, that applicant has retained a County-certified archaeologist, to observe grading activities and salvage and catalogue archaeological resources as necessary. The archaeologist shall be present at the pre-grade conference, shall establish procedures for archaeological resource surveillance, and shall establish, in cooperation with the applicant, procedures for temporarily halting or redirecting work to permit the sampling, identification, and evaluation of the artifacts as appropriate. If the archaeological resources are found to be significant, the archaeological observer shall determine appropriate actions, in cooperation with the project applicant, for exploration and/or salvage.

Prior to the release of the grading bond the applicant shall obtain approval of the archaeologist's follow-up report from the Manager, Permit Services. The report shall include the period of inspection, an analysis of any artifacts found and the present repository of the artifacts. The archaeologist shall prepare excavated material to the point of identification. Applicant shall offer excavated finds for curatorial purposes to the County of Orange, or its designee, on a first refusal basis. These actions, as well as final mitigation and disposition of the resources, shall be subject to the approval of the Manager, Permit Services. Applicant shall pay curatorial fees if an applicable fee program has been adopted by the Board of Supervisors, and such fee program is in effect at the time of presentation of the materials to the County of Orange or its designee, all in a manner meeting the approval of the Manager, Permit Services.

A03 Paleontological Survey. Prior to the issuance of the first grading permit, the applicant shall obtain approval from the Manager, Permit Services of a report on a literature and records search and field survey of the project site. The applicant shall retain a County-certified paleontologist to complete the literature and records search for recorded sites and previous surveys. The paleontologist shall conduct a field survey unless the entire proposed project site has been documented as previously surveyed. If determined necessary by the paleontologist, the paleontologist shall prepare a report of the pre-grade paleontological salvage operation. The applicant shall implement the mitigation measures in the report in a manner meeting the approval of the Manager, Permit Services.

The report shall include methodology, an analysis of artifacts found, a catalogue of artifacts, and their present repository. The County-certified paleontologist shall prepare excavated materials to the point of identification. Applicant shall offer excavated finds for curatorial purposes to the County of Orange, or its designee, on a first refusal basis. Applicant shall pay curatorial fees if an applicable fee program has been adopted by the Board of Supervisors, and such fee program is in effect at the time of presentation of the materials to the County of Orange or its designee, all in a manner meeting the approval of the Manager, Permit Services.

A04

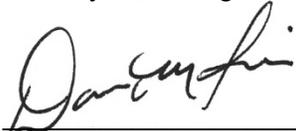
Paleontological Observation and Salvage. Prior to the issuance of the first grading permit, the project applicant shall provide written evidence to the Manager, Permit Services, that applicant has retained a County certified paleontologist to observe grading activities and salvage and catalogue fossils as necessary. The paleontologist shall be present at the pre-grade conference, shall establish procedures for paleontological resource surveillance, and shall establish, in cooperation with the applicant, procedures for temporarily halting or redirecting work to permit sampling, identification, and evaluation of the fossils. If the paleontological resources are found to be significant, the paleontologist shall determine appropriate actions, in cooperation with the applicant, to ensure proper exploration and/or salvage.

Prior to the release of the grading bond the applicant shall submit the paleontologist's follow up report for approval by the Manager, Permit Services. The report shall include the period of inspection, a catalogue and analysis of the fossils found, and the present repository of the fossils. Applicant shall prepare excavated material to the point of identification, and offer excavated finds for curatorial purposes to the County of Orange, or its designee, on a first refusal basis. These actions, as well as final mitigation and disposition of the resources, shall be subject to approval by Manager, Permit Services. Applicant shall pay curatorial fees if an applicable fee program has been adopted by the Board of Supervisors, and such fee program is in effect at the time of presentation of the materials to the County of Orange or its designee, all in a manner meeting the approval of the Manager, Permit Services.

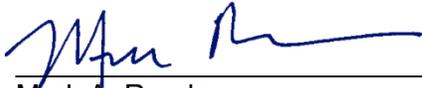
8.0 CERTIFICATION

I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this cultural resources report, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.

DATE: November 30, 2015
(Revised November 3, 2016)

SIGNED: 

David M. Smith
Senior Archaeologist

SIGNED: 

Mark A. Roeder
Senior Paleontologist

SIGNED: 

Patrick O. Maxon, M.A., RPA
Director, Cultural Resources

9.0 REFERENCES

- Bean, Lowell John and Charles R. Smith
 1978 Gabrielino. In *Handbook of North American Indians*, Vol. 8, California (pp. 538–549). Robert F. Heizer, Editor. Smithsonian Institution. Washington, D.C.
- Bedrossian, T.L., and P.D. Roffers
 2012 Geologic Compilation of Quaternary surficial deposits in southern California. Digital preparation by S. McCrea and J. Carlotta. California Geological Survey
- Byrd, B. and M. Raab
 2007 Prehistory if the Southern Bight: Models for a New Millennium. In *California Prehistory: Colonization, Culture, and Complexity* (pp. 215–227). Terry Jones and Kathryn Klar, Editors. Altamira Press, a Division of Rowman & Littlefield Publishers, Inc.
- Chartkoff, J.L. and K.K. Chartkoff
 1984 *The Archaeology of California*. Stanford University Press, Stanford, California.
- Jefferson, G.T.
 2008 Catalogue of Late Quaternary Vertebrates from California. Unpublished manuscript on file at the Stout Research Center, Anza-Borrego Desert State Park
- King, Chester
 2003 Japchibit Ethnohistory. Prepared for the United States Department of Agriculture Southern California province Angeles National Forest, Arcadia, California. Prepared by Topanga Anthropological Consultants, Topanga, California.
- Koerper, H. C.
 1981 Prehistoric Subsistence and Settlement in the Newport Bay Area and Environs, Orange County, California (Ph.D. dissertation). University of California, Riverside.
- Koerper, H. C. and C. Drover
 1983 Chronology Building for Coastal Orange County, The Case from CA-ORA-119-A. *Pacific Coast Archaeological Society Quarterly* 19(2):1–34.
- Kroeber, Alfred
 1925 Handbook of the Indians of California. *Bureau of American Ethnology Bulletin* 78. Washington, D.C.
- MCAS El Toro
 2002 MCAS El Toro Disposal and Reuse Final EIS. Paul, Hastings, Janofsky, and Walker L.L.P. Los Angeles, California
- McCawley, W.
 1996 *The First Angelenos: The Gabrielino Indians of Los Angeles*. Malki Museum Press/Ballena Press Cooperative Publication, Banning and Novato, California.
- McLeod, S.
 2015 *Paleontological Resources for the proposed West Alton Parcel Development Plan, in the City of Irvine, Orange County, project area.*

Miller, W.E.

- 1971 Pleistocene vertebrates of the Los Angeles Basin and vicinity (exclusive of Rancho La Brea). *Bulletin of the Los Angeles County Museum of Natural History, Science* 10:1–124.

Moratto, M. J.

- 1984 *California Archaeology*. Academic Press, San Diego, California.

Morton, D. J. and F.K. Miller

- 2006 Geologic Map of the San Bernardino and Santa Ana 30' X 60' quadrangles, California. Digital Preparation by P.M. Cossette and K. R. Bovard. U. S. Geological Survey

Office of Historic Preservation

- 1990 *Archaeological Resource Management Reports (ARMR): Recommended Contents and Format*. Department of Parks and Recreation, Office of Historic Preservation, Sacramento, California.

O'Neil, Stephen, Megan Black and William Sawyer

- 2012 Archaeological Resources Excavation Results Report. Alton Parkway Extension Project, Orange County, California. Manuscript #4334 on file at the South Central Coastal Information Center, California State University, Fullerton.

Tadlock

- 1976 Archaeological Site Record. 30-000517

Wallace, W.

- 1955 A Suggested Chronology for Southern California Coastal Archaeology. *Southwestern Journal of Anthropology* 11: 214–230.

Warren, C. N.

- 1968 Cultural Traditions and Ecological Adaptation on the Southern California Coast. In Archaic Prehistory in the Western United States. *Eastern New Mexico Contributions in Anthropology* 1(3): 1–14.

ATTACHMENT A
SCCIC RECORDS SEARCH

Report List

Alton

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
OR-00275		1978	Mabry, Theo N.	Agua Chinon Flood Control Improvement Project	Archaeological Planning Collaborative	30-000647, 30-000755, 30-000756, 30-000757, 30-000758, 30-000759, 30-000760
OR-00305		1979	Schroth, Adella	The History of Archaeological Research on Irvine Ranch Property: the Evolution of a Company Tradition	Archaeological Resource Management Corp.	30-000002, 30-000044, 30-000047, 30-000048, 30-000051, 30-000053, 30-000059, 30-000060, 30-000061, 30-000062, 30-000063, 30-000064, 30-000065, 30-000066, 30-000067, 30-000068, 30-000069, 30-000070, 30-000071, 30-000072, 30-000073, 30-000077, 30-000091, 30-000099, 30-000100, 30-000104, 30-000106, 30-000107, 30-000109, 30-000111
OR-00520		1979	Mabry, Theo N.	Archaeological Records Search and Reconnaissance Survey Irvine Industrial Complex-east Pahse 2 and 3 Areas Irvine, Ca	Archaeological Planning Collaborative	
OR-00748		1984	Bissell, Ronald M.	Cultural Resources Assessment Los Alisos Research and Development Park El Toro, Orange County, California	RMW Paleo Associates, Inc.	30-000570, 30-000647, 30-000648, 30-001062, 30-001063, 30-001064, 30-001065, 30-001066
OR-00753		1984	Padon, Beth	Archaeological Resource Assessment Irvine Industrial Complex East Phase Iv, City of Irvine.	Larry Seeman Associates, Inc.	
OR-00813	Paleo -	1985	Cottrell, Marie, Del Chario, Kathleen, Vada Drummy-Chapel, and John D. Cooper	Arcaeological, Historical, and Paleontological Assessment of the Musick Facility, Orange County, California	Archaeological Resource Management Corp.	
OR-00847		1985	Padon, Beth	Archaeological Resource Inventory City of Irvine and its Sphere of Influence	LSA Associates, Inc.	30-000161, 30-000349, 30-000361, 30-000383, 30-000478, 30-000494, 30-000495, 30-000496, 30-000499, 30-000545, 30-000601, 30-000734, 30-000735, 30-000767, 30-000803, 30-000804, 30-000805, 30-000806, 30-000807, 30-000808
OR-01022		1989	Del Chario, Kathleen C., V. Drummy-Chapel, and C. R. Demcak	Cultural Resource Assessment for the Allen-mccolloch Pipeline (amp) Flow Augmentation Project Reaches S4b/s5	ARM	30-000244, 30-000643, 30-000647, 30-000651
OR-01084		1990	Brown, Joan C.	Cultural Resources Reconnaissance of a Portion of the Joplin Boys Ranch Orange County, California	RMW Paleo Associates, Inc.	30-001253

Report List

Alton

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
OR-01099		1979	Cooley, Theodore G.	Archaeological Resources Assessment Conducted for Proposed Irvine Ranch Water District Pipeline Right of Ways	Archaeological Resource Management Corp.	30-000344, 30-000349, 30-000382, 30-000383, 30-000556, 30-000647, 30-000806, 30-000807, 30-000808, 30-000809, 30-000810, 30-000811
OR-01583	Paleo -	1974	Nicoll, Gerald A.	Archaeology and Paleontology Report for Rancho De Los Alisos Area, Orange County, California	G.A. Nicoll and Associates	
OR-01841		1987	Cottrell, Marie G. and Murray, John	Archaeological Resources Assessment Completed for the Marine Corps Air Station, El Toro, California	Mobile District	30-000755, 30-000756, 30-000757, 30-000758, 30-000759, 30-000760, 30-000961, 30-001070, 30-001356
OR-02225	Other - Irvine Ranch	1978	Strozier, Hardy	The Irvine Company Planning Process and California Archaeology- A Review and Critique	The Irvine Company	
OR-02534		1976		Annual Report to The Irvine Company from Archaeological Research, Inc.	ARI	30-000051, 30-000064, 30-000099, 30-000100, 30-000106, 30-000119, 30-000130, 30-000184, 30-000196, 30-000197, 30-000484, 30-000518, 30-000575
OR-02649		1997	Allen, Rebecca	Archeological Survey Report Marine Corps Air Station, El Toro	KEA Environmental, Inc	30-000755, 30-000756, 30-000757, 30-000758, 30-000759, 30-000760, 30-000961, 30-001356, 30-001462
OR-02928		1994	Demcak, Carol R.	Final Report of Salvage Level Investigations at ORA-758, Alton Parkway Extension Project, County of Orange, California	Archaeological Resource Management Corp.	30-000758
OR-02938		2001	Drover, Christopher E., Koerper, Henry C., and Lambert, Craig	A Cultural Resources Inventory for Planning Area 6, Irvine, California With Appendices	The Keith Companies Archaeological Division	30-000244, 30-000545, 30-000649, 30-000650, 30-000651, 30-000652, 30-000761, 30-000762, 30-001070, 30-001297, 30-001311, 30-001480, 30-001588, 30-001589, 30-001590, 30-001591, 30-001592, 30-001593, 30-001594, 30-001595, 30-001596
OR-03056		2003	Wiley, Lorraine M.	Mcas El Toro Monitoring Wells Survey	EDAW	
OR-04333		2012	O'Neil, Stephen	Archaeological Resources Excavation Results Report Alton Parkway Extension Project Orange County, California	UltraSystems Environmental	30-000755, 30-000756, 30-000758
OR-04334	Paleo -	2012	O'Neil, Stephen	Cultural and Paleontological Monitoring Report for the Alton Parkway Extension Project (County Job No ETD2002), City of Irvine, Orange County, California; Project 5780	UltraSystems Environmental	30-000755, 30-000756

Report List

Alton

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
OR-04347		1986	Bissell, Ronald M.	Cultural Resources Reconnaissance of the Pacific Business Park (Diocese Property) in El Toro, Orange County, California	RMW Paleo Associates	30-000039, 30-000647, 30-000773, 30-001063, 30-001741

Report List

West Alton Update

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
OR-00275		1978	Mabry, Theo N.	Agua Chinon Flood Control Improvement Project	Archaeological Planning Collaborative	30-000647, 30-000755, 30-000756, 30-000757, 30-000758, 30-000759, 30-000760
OR-00305		1979	Schroth, Adella	The History of Archaeological Research on Irvine Ranch Property: the Evolution of a Company Tradition	Archaeological Resource Management Corp.	30-000002, 30-000044, 30-000047, 30-000048, 30-000051, 30-000053, 30-000059, 30-000060, 30-000061, 30-000062, 30-000063, 30-000064, 30-000065, 30-000066, 30-000067, 30-000068, 30-000069, 30-000070, 30-000071, 30-000072, 30-000073, 30-000077, 30-000091, 30-000099, 30-000100, 30-000104, 30-000106, 30-000107, 30-000109, 30-000111
OR-00520		1979	Mabry, Theo N.	Archaeological Records Search and Reconnaissance Survey Irvine Industrial Complex-east Pahse 2 and 3 Areas Irvine, Ca	Archaeological Planning Collaborative	
OR-00611		1988	Bissell, Ronald M.	Cultural Resources Reconnaissance of the Baker Ranch Property, El Toro Orange County,	RMW Paleo Associates, Inc.	30-000040, 30-000758, 30-001004, 30-001145, 30-001150
OR-00748		1984	Bissell, Ronald M.	Cultural Resources Assessment Los Alisos Research and Development Park El Toro, Orange County, California	RMW Paleo Associates, Inc.	30-000570, 30-000647, 30-000648, 30-001062, 30-001063, 30-001064, 30-001065, 30-001066
OR-00753		1984	Padon, Beth	Archaeological Resource Assessment Irvine Industrial Complex East Phase Iv, City of Irvine.	Larry Seeman Associates, Inc.	
OR-00813	Paleo -	1985	Cottrell, Marie, Del Chario, Kathleen, Vada Drummy-Chapel, and John D. Cooper	Arcaeological, Historical, and Paleontological Assessment of the Musick Facility, Orange County, California	Archaeological Resource Management Corp.	
OR-00847		1985	Padon, Beth	Archaeological Resource Inventory City of Irvine and its Sphere of Influence	LSA Associates, Inc.	30-000161, 30-000349, 30-000361, 30-000383, 30-000478, 30-000494, 30-000495, 30-000496, 30-000499, 30-000545, 30-000601, 30-000734, 30-000735, 30-000767, 30-000803, 30-000804, 30-000805, 30-000806, 30-000807, 30-000808
OR-01022		1989	Del Chario, Kathleen C., V. Drummy-Chapel, and C. R. Demcak	Cultural Resource Assessment for the Allen-mccolloch Pipeline (amp) Flow Augmentation Project Reaches S4b/s5	ARM	30-000244, 30-000643, 30-000647, 30-000651

Report List

West Alton Update

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
OR-01082		1990	Jertberg, Patricia R.	Archaeological Monitoring Report for Rheon Usa Project: Parcel Map No. 84-629, Lot 6 Irvine, California	LSA Associates, Inc.	30-001274
OR-01084		1990	Brown, Joan C.	Cultural Resources Reconnaissance of a Portion of the Joplin Boys Ranch Orange County, California	RMW Paleo Associates, Inc.	30-001253
OR-01099		1979	Cooley, Theodore G.	Archaeological Resources Assessment Conducted for Proposed Irvine Ranch Water District Pipeline Right of Ways	Archaeological Resource Management Corp.	30-000344, 30-000349, 30-000382, 30-000383, 30-000556, 30-000647, 30-000806, 30-000807, 30-000808, 30-000809, 30-000810, 30-000811
OR-01583	Paleo -	1974	Nicoll, Gerald A.	Archaeology and Paleontology Report for Rancho De Los Alisos Area, Orange County, California	G.A. Nicoll and Associates	
OR-01841		1987	Cottrell, Marie G. and Murray, John	Archaeological Resources Assessment Completed for the Marine Corps Air Station, El Toro, California	Mobile District	30-000755, 30-000756, 30-000757, 30-000758, 30-000759, 30-000760, 30-000961, 30-001070, 30-001356
OR-02225	Other - Irvine Ranch	1978	Strozier, Hardy	The Irvine Company Planning Process and California Archaeology- A Review and Critique	The Irvine Company	
OR-02534		1976		Annual Report to The Irvine Company from Archaeological Research, Inc.	ARI	30-000051, 30-000064, 30-000099, 30-000100, 30-000106, 30-000119, 30-000130, 30-000184, 30-000196, 30-000197, 30-000484, 30-000518, 30-000575
OR-02610		1998	York, Andrew L.	Testing Plan Archaeological Site Evaluation and National Register Eligibility Evaluation at Site CA-ORA-1462 Mcas El Toro, Orange County, California	KEA Environmental, Inc.	30-001462
OR-02611		1999	Underwood, Jackson and York, Andrew	Archaeological Testing and Evaluation at Site CA-ORA-1462 Mcas, El Toro, Orange County, California	KEA Environmental, Inc.	30-001462
OR-02649		1997	Allen, Rebecca	Archeological Survey Report Marine Corps Air Station, El Toro	KEA Environmental, Inc	30-000755, 30-000756, 30-000757, 30-000758, 30-000759, 30-000760, 30-000961, 30-001356, 30-001462
OR-02928		1994	Demcak, Carol R.	Final Report of Salvage Level Investigations at ORA-758, Alton Parkway Extension Project, County of Orange, California	Archaeological Resource Management Corp.	30-000758

Report List

West Alton Update

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
OR-02938		2001	Drover, Christopher E., Koerper, Henry C., and Lambert, Craig	A Cultural Resources Inventory for Planning Area 6, Irvine, California With Appendices	The Keith Companies Archaeological Division	30-000244, 30-000545, 30-000649, 30-000650, 30-000651, 30-000652, 30-000761, 30-000762, 30-001070, 30-001297, 30-001311, 30-001480, 30-001588, 30-001589, 30-001590, 30-001591, 30-001592, 30-001593, 30-001594, 30-001595, 30-001596
OR-03056		2003	Willey, Lorraine M.	Mcas El Toro Monitoring Wells Survey	EDAW	
OR-03840		2009	Marken, Mitch	Phase I Archaeological Assessment for the IRWD Baker Regional Water Treatment Plant Project, Orange County, CA	ESA	30-000039, 30-000647, 30-000648, 30-000773, 30-001060
OR-04333		2012	O'Neil, Stephen	Archaeological Resources Excavation Results Report Alton Parkway Extension Project Orange County, California	UltraSystems Environmental	30-000755, 30-000756, 30-000758
OR-04334	Paleo -	2012	O'Neil, Stephen	Cultural and Paleontological Monitoring Report for the Alton Parkway Extension Project (County Job No ETD2002), City of Irvine, Orange County, California; Project 5780	UltraSystems Environmental	30-000755, 30-000756
OR-04347		1986	Bissell, Ronald M.	Cultural Resources Reconnaissance of the Pacific Business Park (Diocese Property) in El Toro, Orange County, California	RMW Paleo Associates	30-000039, 30-000647, 30-000773, 30-001063, 30-001741

Resource List

West Alton Update Resources

Primary No.	Trinomial	Other IDs	Type	Age	Attribute codes	Recorded by	Reports
P-30-000617	CA-ORA-000617		Site	Prehistoric	AP02 (Lithic scatter); AP14 (Rock shelter/cave); AP15 (Habitation debris)	1977 (Cottrell, M., Archaeological Research, Inc); 1987 (Mason, Roger D., Scientific Resource Surveys)	OR-00869, OR-00954, OR-01995, OR-02022, OR-03571
P-30-000647	CA-ORA-000647	Resource Name - LADC 1	Site	Prehistoric	AP02 (Lithic scatter); AP12 (Quarry)	1977 (SCHUSTER, Archaeological Research, Inc.); 1986 (Ronald M. Bissell, RMW Paleo Associates); 1994 (Brown, Joan C., RMW Paleo Associates)	OR-00253, OR-00275, OR-00457, OR-00748, OR-00940, OR-01022, OR-01099, OR-01372, OR-01995, OR-02219, OR-03747, OR-03840, OR-04347
P-30-000648	CA-ORA-000648	Resource Name - Field #2	Site	Prehistoric	AP02 (Lithic scatter)	1977 (Cottrell, M., Archaeological Research, Inc); 1994 (Brown, Joan, RMW Paleo Associates)	OR-00253, OR-00457, OR-00748, OR-00940, OR-01372, OR-01995, OR-02219, OR-03747, OR-03840
P-30-000755	CA-ORA-000755		Site	Prehistoric	AP02 (Lithic scatter)	1978 (MABRY, Archaeological Planning Collaborative); 1996 (York, A. & J. Mullen, KEA Environmental, Inc.)	OR-00275, OR-01841, OR-01995, OR-02649, OR-03747, OR-04333, OR-04334
P-30-000756	CA-ORA-000756		Site	Prehistoric	AP02 (Lithic scatter)	1978 (Mabry, Archaeological Planning Collaborative); 1996 (Beck, R. & R. Allen, KEA Environmental)	OR-00275, OR-01408, OR-01841, OR-01995, OR-02649, OR-03747, OR-04333, OR-04334
P-30-000758	CA-ORA-000758		Site	Prehistoric	AP02 (Lithic scatter)	1978 (Mabry, Archaeological Planning Collaborative); 1981 (Chario, K.Del, & L. Sullivan, Archaeological Resource Management Corp.); 1996 (Beck; Allen, KEA Environmental, Inc.)	OR-00275, OR-00611, OR-00629, OR-01353, OR-01408, OR-01841, OR-01995, OR-02219, OR-02649, OR-02928, OR-03747, OR-03749, OR-04333

Resource List

West Alton Update Resources

Primary No.	Trinomial	Other IDs	Type	Age	Attribute codes	Recorded by	Reports
P-30-000759	CA-ORA-000759		Site	Prehistoric	AP02 (Lithic scatter)	1978 (MABRY, Archaeological Planning Collaborative); 1996 (Beck & Allen, KEA Environmental)	OR-00275, OR-01841, OR-01995, OR-02649, OR-03747
P-30-000760	CA-ORA-000760		Site	Prehistoric	AP02 (Lithic scatter)	1978 (MABRY, Archaeological Planning Collaborative); 1996 (York, A.; J. Mullen, KEA Environmental)	OR-00275, OR-01841, OR-01995, OR-02649, OR-03747
P-30-001356	CA-ORA-001356	Resource Name - MCAS-2	Site	Prehistoric	AP02 (Lithic scatter)	1988 (COTTRELL, U.S. Army Corps of Engineers); 1996 (Allen; Beck; Mullen; York,, KEA Environmental)	OR-01841, OR-02649, OR-03747, OR-04084
P-30-001741	CA-ORA-001741	Resource Name - LADC II	Site	Prehistoric	AP02 (Lithic scatter)	1986 (Ronald M. Bissell, RMW Paleo Associates)	OR-04347
P-30-176799		Resource Name - Wherry Village, MCAS, El Toro; Other - zip 92709	Building	Historic	HP34 (Military property)	1997 (Steven D. Mikesell, JRP Historical Consulting Services)	LA-07429, OR-03014

ATTACHMENT B

PALEONTOLOGICAL RESOURCES RECORDS SEARCH

Natural History Museum
of Los Angeles County
900 Exposition Boulevard
Los Angeles, CA 90007

tel 213.763.DINO
www.nhm.org



Vertebrate Paleontology Section
Telephone: (213) 763-3325
Fax: (213) 746-7431
e-mail: smcleod@nhm.org

26 March 2015

BonTerra Psomas
3 Hutton Centre Drive, Suite 200
Santa Ana, CA 92707

Attn: David M. Smith, Senior Archaeologist

re: Paleontological Resources for the proposed Western Parcel / North of Alton Parkway Project,
BonTerra Psomas Project # 3LOW000100, in the City of Irvine, Orange County, project
area

Dear David:

I have conducted a thorough search of our Vertebrate Paleontology records for the proposed Western Parcel / North of Alton Parkway Project, BonTerra Psomas Project # 3LOW000100, in the City of Irvine, Orange County, project area as outlined on the portion of the El Toro USGS topographic quadrangle map that you sent to me via e-mail on 11 March 2015. We do not have any vertebrate fossil localities that lie within the project boundaries, but we do have localities nearby from the same sedimentary units that may occur as subsurface deposits in the proposed project area.

The entire proposed project area has surficial deposits composed of younger Quaternary Alluvium, primarily derived as alluvial fan deposits from the hills to the east. These deposits usually do not contain significant vertebrate fossils, at least in the uppermost layers. In the very southeastern portion of the proposed project area there are older Quaternary terrace deposits at the surface, and older Quaternary deposits may underlie the younger Quaternary deposits in the remainder of the proposed project area. Our closest vertebrate fossil locality from these older Quaternary deposits is LACM 7867, just north of west of the proposed project area near the intersection of C Street and 5th Street, that produced fossil specimens of pocket gopher, *Thomomys*, at a depth of 25 feet below the surface. Our next closet vertebrate fossil from these

deposits is LACM 7713, west-southwest of the proposed project area on the western side of the Laguna Freeway (Highway 133) at the southern end of the interchange with the San Diego Freeway (I-405), that produced a fossil specimen of ground sloth, Mylodontidae, from unstated but shallow depth.

Grading or shallow excavations in the uppermost few feet of the younger Quaternary alluvial sediments in the proposed project site area are unlikely to uncover significant fossil vertebrate remains. Deeper excavations in that portion of the proposed project area, as well as any excavations in the older Quaternary terrace deposits in the southeastern portion of the proposed project site area, however, may well encounter significant vertebrate fossils in older Quaternary sediments. Any substantial excavations in the proposed project area, therefore, should be closely monitored to quickly and professionally collect any specimens without impeding development. Sediment samples should also be collected and processed to determine the small fossil potential in the proposed project area. Any fossils recovered during mitigation should be deposited in an accredited and permanent scientific institution for the benefit of current and future generations.

This records search covers only the vertebrate paleontology records of the Natural History Museum of Los Angeles County. It is not intended to be a thorough paleontological survey of the proposed project area covering other institutional records, a literature survey, or any potential on-site survey.

Sincerely,

A handwritten signature in cursive script that reads "Samuel A. McLeod". The signature is written in black ink and is positioned above the typed name.

Samuel A. McLeod, Ph.D.
Vertebrate Paleontology

enclosure: invoice

ATTACHMENT C
NATIVE AMERICAN HERITAGE COMMISSION

TRANSMITTAL

DATE: March 16, 2015

TO: Ms. Katy Sanchez
Associate Government Program
Analyst
Native American Heritage Comm.
1550 Harbor Boulevard, Ste. 100
West Sacramento, CA 95691

FAX NUMBER: (916) 373-3710
TEL NUMBER: (916) 373-5471
PROJECT: 3LOW000100
FROM: Patrick O. Maxon

Fax / Pages E-Mail Fed Ex / Overnight Express Delivery / Courier

REGARDING: Sacred Lands File Search and Contact List Request

Dear Ms. Sanchez:

BonTerra Psomas has been retained to complete a cultural resources study for the proposed **West Alton Development Plan** located in the City of Irvine, Orange County, California. This project requires a General Plan Amendment and is therefore subject to the statutory requirements of Senate Bill 18; however, SB 18 consultation will be conducted by the City of Irvine at a later date.

At your earliest convenience, please conduct a search of the Sacred Lands File and provide a tribal contact list for the proposed project, located within Sections 3 and 10 (Township 6 South; Range 8 West) of the USGS **El Toro, CA** 7.5 Minute Quadrangle. Refer to attached exhibit.

The project proposes a multi-family development, with an average of 30 units per acre. A total of 970 multi-family units are proposed. North of the wildlife movement corridor, approximately 660 units would be constructed, with the remaining 310 units being located south of the wildlife movement corridor. The units would be up to 5 stories (70 feet maximum height) with both surface and garage parking. The wildlife movement corridor would be protected onsite.

Please fax the results to me at (714) 545-8883, or e-mail to Patrick.Maxon@Psomas.com, referencing your letter to the "**West Alton Development Plan**". If you have any questions or require any additional information, please do not hesitate to contact me at (714) 751-7373 or via email.

Sincerely,
BonTerra Psomas



Patrick O. Maxon, M.A., RPA
Director, Cultural Resources

STATE OF CALIFORNIA

Edmund G. Brown, Jr. Governor

NATIVE AMERICAN HERITAGE COMMISSION

1550 Harbor Blvd., ROOM 100
West SACRAMENTO, CA 95691
(916) 373-3710
Fax (916) 373-5471



April 22, 2015

Patrick Maxon
BonTerra Psomas
3 Hutton Centre Drive, Suite 200
Santa Ana, CA 92707-8794

Sent by Fax: (714) 545-8883
Number of Pages: 2

Re: West Alton Development Plan, Orange County.

Dear Mr. Maxon,

A record search of the sacred land file has failed to indicate the presence of Native American cultural resources in the immediate project area. The absence of specific site information in the sacred lands file does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Enclosed is a list of Native Americans individuals/organizations who may have knowledge of cultural resources in the project area. The Commission makes no recommendation or preference of a single individual, or group over another. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated, if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe or group. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from any of these individuals or groups, please notify me. With your assistance we are able to assure that our lists contain current information. If you have any questions or need additional information, please contact me at (916) 373-3712.

Sincerely,

A handwritten signature in cursive script that reads "Katy Sanchez".

Katy Sanchez
Associate Government Program Analyst

**Native American Contact List
Orange County
April 22, 2015**

**Juaneno Band of Mission Indians Acjachemen
Chairperson**
32161 Avenida Los Amigos Juaneno
San Juan Capistrano CA 92675
(949) 293-8522

**Juaneno Band of Mission Indians
Anita Espinoza**
639 Holten Road Juaneno
Talent , Or 97540
neta777@sbcglobal.net

**Juaneno Band of Mission Indians Acjachemen
Teresa Romero, Chairwoman**
31411-A La Matanza Street Juaneno
San Juan Capistrano CA 92675
tromero@juaneno.com
(949) 488-3484
(530) 354-5876 Cell
(949) 488-3294 Fax

**United Coalition to Protect Panhe (UCPP)
Rebecca Robles**
119 Avenida San Fernando Juaneno
San Clemente CA 92672
rebrobles1@gmail.com
(949) 573-3138

**Juaneno Band of Mission Indians
Adolph 'Bud' Sepulveda, Vice Chairperson**
P.O. Box 25828 Juaneno
Santa Ana , CA 92799
bssepul@yahoo.net
(714) 838-3270
(714) 914-1812 Cell

**Juaneno Band of Mission Indians Acjachemen Nation
Joyce Perry, Representing Tribal Chairperson**
4955 Paseo Segovia Juaneno
Irvine , CA 92612
kaamalam@gmail.com
(949) 293-8522

**Juaneno Band of Mission Indians
Sonia Johnston, Tribal Chairperson**
P.O. Box 25628 Juaneno
Santa Ana , CA 92799
sonia.johnston@sbcglobal.net

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of the statutory responsibility as defined in Section 7060.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting locative Americans with regard to cultural resources for the proposed West Alton Development Plan, City of Irvine, Orange County.



April 23, 2015

Chairperson
Juaneño Band of Mission Indians Acjachemen Nation
32161 Avenida Los Amigos
San Juan Capistrano, California 92675-3702

Subject: West Alton Development Plan

Dear Chairperson:

BonTerra Psomas has been retained to complete a cultural resources study for the proposed West Alton Development Plan located in the City of Irvine, Orange County, California. This project requires a General Plan Amendment and is therefore subject to the statutory requirements of Senate Bill 18; however, SB 18 consultation will be conducted by the City of Irvine at a later date.

Under the requirements of Section 106 of the National Historic Preservation Act, this letter is to inform you of the proposed project and the opportunity to consult, and to request any relevant information you may have regarding cultural resources on or near the project site.

Location

The project location is shown on the USGS *El Toro, CA 7.5 Minute Quadrangle* in Sections 3 and 10 (Township 6 South; Range 8 West) (*S.B.B.M.*). Refer to attached exhibit.

Project

The project proposes a multi-family development, with an average of 30 units per acre. A total of 970 multi-family units are proposed. North of the wildlife movement corridor, approximately 660 units would be constructed, with the remaining 310 units being located south of the wildlife movement corridor. The units would be up to 5 stories (70 feet maximum height) with both surface and garage parking. The wildlife movement corridor would be protected onsite.

NAHC Notification

A Sacred Lands File Search conducted by the Native American Heritage Commission (NAHC) failed to indicate the presence of Native American cultural places on the project site. The NAHC also provided BonTerra Psomas with a list of Native American individuals/organizations that may have knowledge of cultural resources in the project area. Your name and contact information was included on the list and serves as the basis for this letter.

Chairperson
April 23, 2015
Page 2

Records Search/Survey

A cultural resources records search was conducted at the South Central Coastal Information (SCCIC) at California State University, Fullerton on February 26, 2015 to evaluate the existing conditions of the project site; however, no recorded prehistoric Native American sites were identified on the project site. Similarly, no resources were noted as a result of the pedestrian survey of the project site, completed on February 27, 2015.

Your participation in this local planning process is important. If you have any additional knowledge of Native American Sacred Lands or other cultural resources on or near the study area, or would like to consult on the project, please contact me at your earliest convenience at (714) 751-7373 or via email at Patrick.Maxon@Psomas.com, with a subject line referencing the "West Alton Development Plan".

Sincerely,
BonTerra Psomas



Patrick O. Maxon, M.A., RPA
Director, Cultural Resources



April 23, 2015

Ms. Anita Espinoza
Juaneño Band of Mission Indians
639 Holten Road
Talent, Oregon 97540

Subject: West Alton Development Plan

Dear Ms. Espinoza:

BonTerra Psomas has been retained to complete a cultural resources study for the proposed West Alton Development Plan located in the City of Irvine, Orange County, California. This project requires a General Plan Amendment and is therefore subject to the statutory requirements of Senate Bill 18; however, SB 18 consultation will be conducted by the City of Irvine at a later date.

Under the requirements of Section 106 of the National Historic Preservation Act, this letter is to inform you of the proposed project and the opportunity to consult, and to request any relevant information you may have regarding cultural resources on or near the project site.

Location

The project location is shown on the USGS *El Toro, CA 7.5 Minute Quadrangle* in Sections 3 and 10 (Township 6 South; Range 8 West) (*S.B.B.M.*). Refer to attached exhibit.

Project

The project proposes a multi-family development, with an average of 30 units per acre. A total of 970 multi-family units are proposed. North of the wildlife movement corridor, approximately 660 units would be constructed, with the remaining 310 units being located south of the wildlife movement corridor. The units would be up to 5 stories (70 feet maximum height) with both surface and garage parking. The wildlife movement corridor would be protected onsite.

NAHC Notification

A Sacred Lands File Search conducted by the Native American Heritage Commission (NAHC) failed to indicate the presence of Native American cultural places on the project site. The NAHC also provided BonTerra Psomas with a list of Native American individuals/organizations that may have knowledge of cultural resources in the project area. Your name and contact information was included on the list and serves as the basis for this letter.

Ms. Anita Espinoza

April 23, 2015

Page 2

Records Search/Survey

A cultural resources records search was conducted at the South Central Coastal Information (SCCIC) at California State University, Fullerton on February 26, 2015 to evaluate the existing conditions of the project site; however, no recorded prehistoric Native American sites were identified on the project site. Similarly, no resources were noted as a result of the pedestrian survey of the project site, completed on February 27, 2015.

Your participation in this local planning process is important. If you have any additional knowledge of Native American Sacred Lands or other cultural resources on or near the study area, or would like to consult on the project, please contact me at your earliest convenience at (714) 751-7373 or via email at Patrick.Maxon@Psomas.com, with a subject line referencing the "West Alton Development Plan".

Sincerely,

BonTerra Psomas



Patrick O. Maxon, M.A., RPA
Director, Cultural Resources



April 23, 2015

Ms. Sonia Johnston, Tribal Chairperson
Juaneño Band of Mission Indians
P.O. Box 25628
Santa Ana, California 92799

Subject: West Alton Development Plan

Dear Ms. Johnston:

BonTerra Psomas has been retained to complete a cultural resources study for the proposed West Alton Development Plan located in the City of Irvine, Orange County, California. This project requires a General Plan Amendment and is therefore subject to the statutory requirements of Senate Bill 18; however, SB 18 consultation will be conducted by the City of Irvine at a later date.

Under the requirements of Section 106 of the National Historic Preservation Act, this letter is to inform you of the proposed project and the opportunity to consult, and to request any relevant information you may have regarding cultural resources on or near the project site.

Location

The project location is shown on the USGS *El Toro, CA 7.5 Minute Quadrangle* in Sections 3 and 10 (Township 6 South; Range 8 West) (*S.B.B.M.*). Refer to attached exhibit.

Project

The project proposes a multi-family development, with an average of 30 units per acre. A total of 970 multi-family units are proposed. North of the wildlife movement corridor, approximately 660 units would be constructed, with the remaining 310 units being located south of the wildlife movement corridor. The units would be up to 5 stories (70 feet maximum height) with both surface and garage parking. The wildlife movement corridor would be protected onsite.

NAHC Notification

A Sacred Lands File Search conducted by the Native American Heritage Commission (NAHC) failed to indicate the presence of Native American cultural places on the project site. The NAHC also provided BonTerra Psomas with a list of Native American individuals/organizations that may have knowledge of cultural resources in the project area. Your name and contact information was included on the list and serves as the basis for this letter.

Ms. Sonia Johnston

April 23, 2015

Page 2

Records Search/Survey

A cultural resources records search was conducted at the South Central Coastal Information (SCCIC) at California State University, Fullerton on February 26, 2015 to evaluate the existing conditions of the project site; however, no recorded prehistoric Native American sites were identified on the project site. Similarly, no resources were noted as a result of the pedestrian survey of the project site, completed on February 27, 2015.

Your participation in this local planning process is important. If you have any additional knowledge of Native American Sacred Lands or other cultural resources on or near the study area, or would like to consult on the project, please contact me at your earliest convenience at (714) 751-7373 or via email at Patrick.Maxon@Psomas.com, with a subject line referencing the "West Alton Development Plan".

Sincerely,

BonTerra Psomas



Patrick O. Maxon, M.A., RPA
Director, Cultural Resources



April 23, 2015

Ms. Joyce Perry, Representing Tribal Chairperson
Juaneño Band of Mission Indians Acjachemen Nation
4955 Paseo Segovia
Irvine, California 92612

Subject: West Alton Development Plan

Dear Ms. Perry, Representing Tribal Chairperson:

BonTerra Psomas has been retained to complete a cultural resources study for the proposed West Alton Development Plan located in the City of Irvine, Orange County, California. This project requires a General Plan Amendment and is therefore subject to the statutory requirements of Senate Bill 18; however, SB 18 consultation will be conducted by the City of Irvine at a later date.

Under the requirements of Section 106 of the National Historic Preservation Act, this letter is to inform you of the proposed project and the opportunity to consult, and to request any relevant information you may have regarding cultural resources on or near the project site.

Location

The project location is shown on the USGS *El Toro, CA 7.5 Minute Quadrangle* in Sections 3 and 10 (Township 6 South; Range 8 West) (*S.B.B.M.*). Refer to attached exhibit.

Project

The project proposes a multi-family development, with an average of 30 units per acre. A total of 970 multi-family units are proposed. North of the wildlife movement corridor, approximately 660 units would be constructed, with the remaining 310 units being located south of the wildlife movement corridor. The units would be up to 5 stories (70 feet maximum height) with both surface and garage parking. The wildlife movement corridor would be protected onsite.

NAHC Notification

A Sacred Lands File Search conducted by the Native American Heritage Commission (NAHC) failed to indicate the presence of Native American cultural places on the project site. The NAHC also provided BonTerra Psomas with a list of Native American individuals/organizations that may have knowledge of cultural resources in the project area. Your name and contact information was included on the list and serves as the basis for this letter.

Ms. Joyce Perry, Representing Tribal Chairperson

April 23, 2015

Page 2

Records Search/Survey

A cultural resources records search was conducted at the South Central Coastal Information (SCCIC) at California State University, Fullerton on February 26, 2015 to evaluate the existing conditions of the project site; however, no recorded prehistoric Native American sites were identified on the project site. Similarly, no resources were noted as a result of the pedestrian survey of the project site, completed on February 27, 2015.

Your participation in this local planning process is important. If you have any additional knowledge of Native American Sacred Lands or other cultural resources on or near the study area, or would like to consult on the project, please contact me at your earliest convenience at (714) 751-7373 or via email at Patrick.Maxon@Psomas.com, with a subject line referencing the "West Alton Development Plan".

Sincerely,

BonTerra Psomas



Patrick O. Maxon, M.A., RPA
Director, Cultural Resources



April 23, 2015

Ms. Rebecca Robles
United Coalition to Protect Panhe (UCPP)
119 Avenida San Fernando
San Clemente, California 92672

Subject: West Alton Development Plan

Dear Ms. Robles:

BonTerra Psomas has been retained to complete a cultural resources study for the proposed West Alton Development Plan located in the City of Irvine, Orange County, California. This project requires a General Plan Amendment and is therefore subject to the statutory requirements of Senate Bill 18; however, SB 18 consultation will be conducted by the City of Irvine at a later date.

Under the requirements of Section 106 of the National Historic Preservation Act, this letter is to inform you of the proposed project and the opportunity to consult, and to request any relevant information you may have regarding cultural resources on or near the project site.

Location

The project location is shown on the USGS *El Toro, CA 7.5 Minute Quadrangle* in Sections 3 and 10 (Township 6 South; Range 8 West) (*S.B.B.M.*). Refer to attached exhibit.

Project

The project proposes a multi-family development, with an average of 30 units per acre. A total of 970 multi-family units are proposed. North of the wildlife movement corridor, approximately 660 units would be constructed, with the remaining 310 units being located south of the wildlife movement corridor. The units would be up to 5 stories (70 feet maximum height) with both surface and garage parking. The wildlife movement corridor would be protected onsite.

NAHC Notification

A Sacred Lands File Search conducted by the Native American Heritage Commission (NAHC) failed to indicate the presence of Native American cultural places on the project site. The NAHC also provided BonTerra Psomas with a list of Native American individuals/organizations that may have knowledge of cultural resources in the project area. Your name and contact information was included on the list and serves as the basis for this letter.

Ms. Rebecca Robles

April 23, 2015

Page 2

Records Search/Survey

A cultural resources records search was conducted at the South Central Coastal Information (SCCIC) at California State University, Fullerton on February 26, 2015 to evaluate the existing conditions of the project site; however, no recorded prehistoric Native American sites were identified on the project site. Similarly, no resources were noted as a result of the pedestrian survey of the project site, completed on February 27, 2015.

Your participation in this local planning process is important. If you have any additional knowledge of Native American Sacred Lands or other cultural resources on or near the study area, or would like to consult on the project, please contact me at your earliest convenience at (714) 751-7373 or via email at Patrick.Maxon@Psomas.com, with a subject line referencing the "West Alton Development Plan".

Sincerely,

BonTerra Psomas



Patrick O. Maxon, M.A., RPA
Director, Cultural Resources



April 23, 2015

Ms. Teresa Romero, Chairwoman
Juaneño Band of Mission Indians Acjachemen Nation
31411-A La Matanza Street
San Juan Capistrano, California 92675

Subject: West Alton Development Plan

Dear Ms. Romero:

BonTerra Psomas has been retained to complete a cultural resources study for the proposed West Alton Development Plan located in the City of Irvine, Orange County, California. This project requires a General Plan Amendment and is therefore subject to the statutory requirements of Senate Bill 18; however, SB 18 consultation will be conducted by the City of Irvine at a later date.

Under the requirements of Section 106 of the National Historic Preservation Act, this letter is to inform you of the proposed project and the opportunity to consult, and to request any relevant information you may have regarding cultural resources on or near the project site.

Location

The project location is shown on the USGS *El Toro, CA 7.5 Minute Quadrangle* in Sections 3 and 10 (Township 6 South; Range 8 West) (*S.B.B.M.*). Refer to attached exhibit.

Project

The project proposes a multi-family development, with an average of 30 units per acre. A total of 970 multi-family units are proposed. North of the wildlife movement corridor, approximately 660 units would be constructed, with the remaining 310 units being located south of the wildlife movement corridor. The units would be up to 5 stories (70 feet maximum height) with both surface and garage parking. The wildlife movement corridor would be protected onsite.

NAHC Notification

A Sacred Lands File Search conducted by the Native American Heritage Commission (NAHC) failed to indicate the presence of Native American cultural places on the project site. The NAHC also provided BonTerra Psomas with a list of Native American individuals/organizations that may have knowledge of cultural resources in the project area. Your name and contact information was included on the list and serves as the basis for this letter.

Ms. Teresa Romero

April 23, 2015

Page 2

Records Search/Survey

A cultural resources records search was conducted at the South Central Coastal Information (SCCIC) at California State University, Fullerton on February 26, 2015 to evaluate the existing conditions of the project site; however, no recorded prehistoric Native American sites were identified on the project site. Similarly, no resources were noted as a result of the pedestrian survey of the project site, completed on February 27, 2015.

Your participation in this local planning process is important. If you have any additional knowledge of Native American Sacred Lands or other cultural resources on or near the study area, or would like to consult on the project, please contact me at your earliest convenience at (714) 751-7373 or via email at Patrick.Maxon@Psomas.com, with a subject line referencing the "West Alton Development Plan".

Sincerely,

BonTerra Psomas



Patrick O. Maxon, M.A., RPA
Director, Cultural Resources



April 23, 2015

Mr. Bud Sepulveda, Vice Chairperson
Juaneño Band of Mission Indians
P.O. Box 25828
Santa Ana, California 92799

Subject: West Alton Development Plan

Dear Mr. Sepulveda:

BonTerra Psomas has been retained to complete a cultural resources study for the proposed West Alton Development Plan located in the City of Irvine, Orange County, California. This project requires a General Plan Amendment and is therefore subject to the statutory requirements of Senate Bill 18; however, SB 18 consultation will be conducted by the City of Irvine at a later date.

Under the requirements of Section 106 of the National Historic Preservation Act, this letter is to inform you of the proposed project and the opportunity to consult, and to request any relevant information you may have regarding cultural resources on or near the project site.

Location

The project location is shown on the USGS *El Toro, CA 7.5 Minute Quadrangle* in Sections 3 and 10 (Township 6 South; Range 8 West) (*S.B.B.M.*). Refer to attached exhibit.

Project

The project proposes a multi-family development, with an average of 30 units per acre. A total of 970 multi-family units are proposed. North of the wildlife movement corridor, approximately 660 units would be constructed, with the remaining 310 units being located south of the wildlife movement corridor. The units would be up to 5 stories (70 feet maximum height) with both surface and garage parking. The wildlife movement corridor would be protected onsite.

NAHC Notification

A Sacred Lands File Search conducted by the Native American Heritage Commission (NAHC) failed to indicate the presence of Native American cultural places on the project site. The NAHC also provided BonTerra Psomas with a list of Native American individuals/organizations that may have knowledge of cultural resources in the project area. Your name and contact information was included on the list and serves as the basis for this letter.

Mr. Bud Sepulveda

April 23, 2015

Page 2

Records Search/Survey

A cultural resources records search was conducted at the South Central Coastal Information (SCCIC) at California State University, Fullerton on February 26, 2015 to evaluate the existing conditions of the project site; however, no recorded prehistoric Native American sites were identified on the project site. Similarly, no resources were noted as a result of the pedestrian survey of the project site, completed on February 27, 2015.

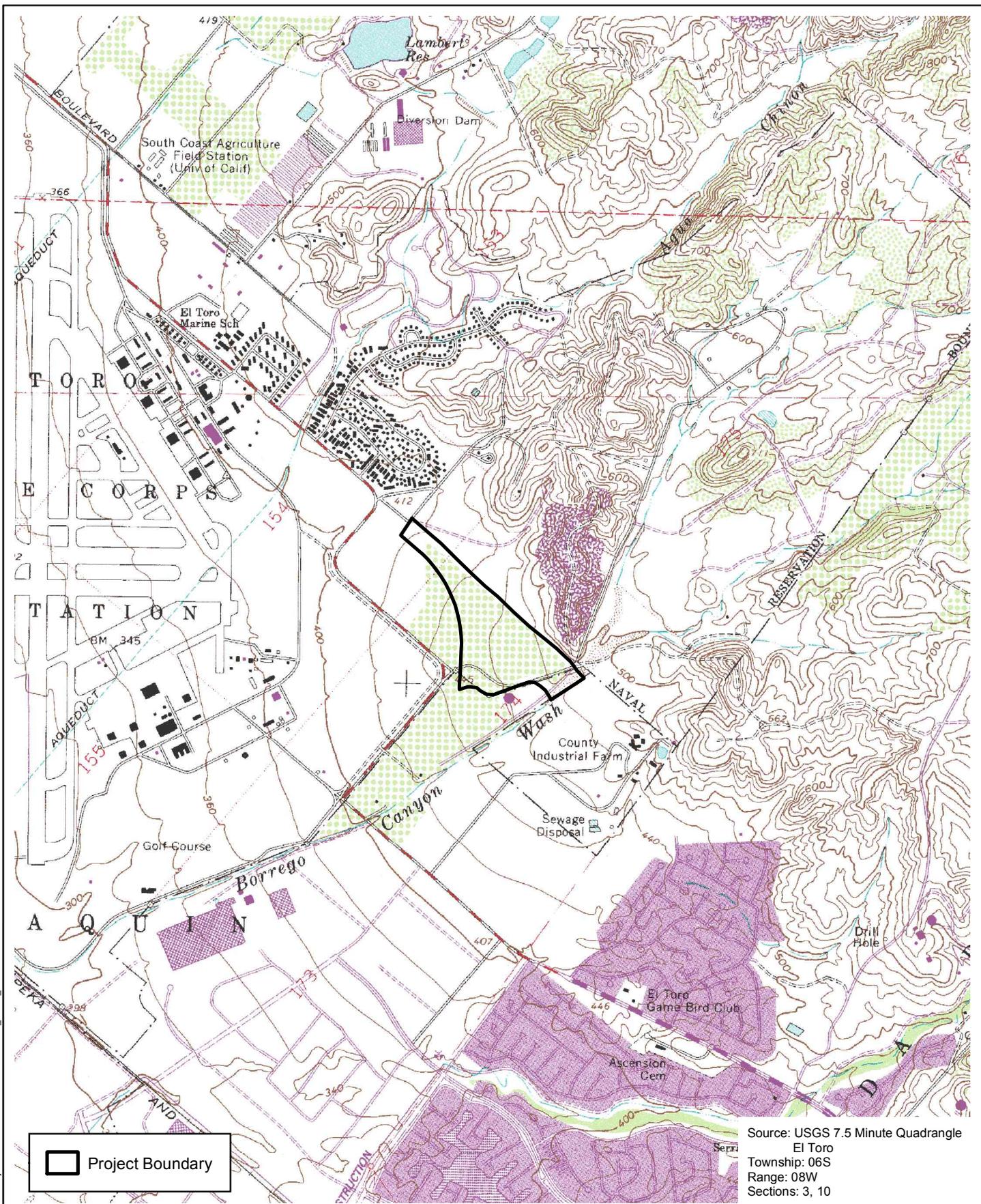
Your participation in this local planning process is important. If you have any additional knowledge of Native American Sacred Lands or other cultural resources on or near the study area, or would like to consult on the project, please contact me at your earliest convenience at (714) 751-7373 or via email at Patrick.Maxon@Psomas.com, with a subject line referencing the "West Alton Development Plan".

Sincerely,

BonTerra Psomas



Patrick O. Maxon, M.A., RPA
Director, Cultural Resources

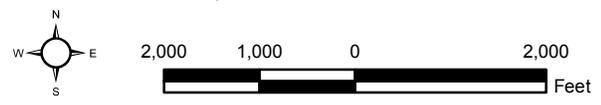


 Project Boundary

Source: USGS 7.5 Minute Quadrangle
 El Toro
 Township: 06S
 Range: 08W
 Sections: 3, 10

Project Site
 West Alton Development Plan

Exhibit 1



D:\Projects\LoweEnt\0001\MXDs\Cultural\ex_USGS_WesternSite.mxd

Subject: FW: West Alton Development Plan Irvine

From: Rececca Robles [<mailto:rebrobles1@gmail.com>]

Sent: Sunday, May 31, 2015 8:29 PM

To: Patrick Maxon

Subject: West Alton Development Plan Irvine

May 30, 2015

Patrick O. Maxon, M.A., RPA

Director, Cultural Resources

Bon Terra Psomas

Subject: West Alton Development Plan, Irvine, CA

Thank you for the opportunity to comment on the above mentioned project. We have no information regarding Native American Sacred lands or cultural resources in the project area, however, there is the potential for buried archaeological resources if ground disturbance is to occur. Therefore, if cultural resources are discovered during construction, we request that we be informed and given an opportunity to comment. We also request that serious consideration be given to preservation measures, such as avoidance and site burial as described in Appendix K of the CEQA Guidelines. This is important because prehistoric sites hold special significance for Native descendants and these religious and cultural values cannot be mitigated through data recovery excavations.

Sincerely,



Rebecca Robles,

United Coalition to Protect Panhe (UCPP)

119 Avenida San Fernando

San Clemente, Ca 92672

ATTACHMENT D
PERSONNEL QUALIFICATIONS

David Smith

Project Manager/Senior Archaeologist

EDUCATION

1991 / Bachelor of Science,
Anthropology / University of
California, Riverside, CA

PROFESSIONAL CERTIFICATIONS

Certified Archaeologist, Orange
County Environmental
Management Agency.

Certified Archaeologist, Riverside
County #218.

Principle Investigator, Southern
California, Bureau of Land
Management

Hazwoper 40 Hour Certification
2014-2015

MEDIC First Aid Basic Plus 2013 -
2015

David Smith has 25 years of experience as a principal investigator, field director, project archaeologist, and project manager. His federal agency experience has included Bureau of Land Management (BLM), Bureau of Reclamation (BOR), National Forest Service (NFS), National Park Service (NPS), and the USACE. He managed properties, pipelines, transmission lines developments, facilities, mines, and parks. He has expertise in NEPA/CEQA compliance through providing surveys, inventories, monitoring, testing and data recovery, and Native American consultations. He is a certified archaeologist for Riverside County and has completed Riverside County cultural sensitivity training. He has conducted archaeological surveys in California, Nevada, and Arizona, encompassing over 40,000 acres of private and public lands. These surveys were conducted for private and public clients. Agencies include the BLM in Arizona, California, and Nevada; the Prescott National Forest, the San Bernardino National Forest, the Cleveland National Forest, the Angeles National Forest, the Inyo National Forest and the Coconino National Forest; the Department of Defense; the Bureau of Reclamation; California State Lands Commission; Arizona State Lands; Arizona State Museum; the United States Army Corps of Engineers; and dozens of municipal, County, and State agencies.

David has extensive experience with agency, client, Native American, and subcontractor coordination; archival research; field reconnaissance; site testing; data recovery excavation; construction monitoring; site recordation; site protection/preservation; mapping; laboratory analysis; and report production. He has the practical experience necessary to staff, train, and manage field crews effectively to produce an accurate, high-quality product for the client.

David's field experience includes all aspects of safety training, education, and implementation to ensure compliance under the most rigid agency regulations.

Representative Project Experience

Baker Ranch Development Project Archaeological and Paleontological Investigations Lake Forest, CA: Senior Archaeologist for this project. Beginning in late 2012, BonTerra Psomas implemented the Mitigation Monitoring and Reporting Program adopted as a part of the EIR for Phase I of the Baker Ranch Development Project, an approximate 386 acre proposed master-planned community that will include 2,379 residential units and 25,000 sf of commercial development along the newly built section of Alton Parkway. The project includes Archaeological, Native American, and Paleontological monitoring programs during grading activities for project construction. Results of the Phase I grading monitoring efforts included the recovery of many significant fossil resources, identified and evaluated by the Sand Diego Museum of Natural History, from the Oso Sand member of the late Miocene to early Pliocene Epoch Capistrano Formation.

Jamboree Improvements at MacArthur, Newport Beach, CA: Staff Archaeologist for this project. Six mitigation measures from the EIR and four Special Conditions from the California Coastal Commission were prepared for this project. David wrote the archaeological report for this project. No resources were encountered.

Ball Road Basin Park Project Environmental Impact Report, City of Anaheim, CA: Senior Archaeologist for this project, which proposes to develop a former 19.5-acre water recharge basin as an active park to serve the residents and workforce of the City. Project elements would include soccer playing fields, a children's play area, improvements to the regional riding and hiking trail, and meeting space. On-site parking and lighting elements are also proposed. The project requires an amendment to the Anaheim General Plan to redesignate the site from Open Space to Parks and a Zoning Reclassification from transition to public recreation. David completed an archaeological assessment for the project.

NorthLake Specific Plan Supplemental Environmental Impact Report, CA: Senior Archaeologist for the preparation of a Supplemental EIR to the NorthLake Specific Plan EIR (certified in 1992) and the One Valley One Vision Program EIR (certified in 2012) for implementation of the previously approved NorthLake Specific Plan project. The project involves development of an approximately 1,330-acre project site in unincorporated northwest Los Angeles County in accordance with the previously approved NorthLake Specific Plan. The project involves the construction and operation of a mix of single-family units, multi-family units, commercial uses, industrial uses, recreational uses and open space, and school and park facilities. David is directing the field survey for cultural resources and the production of the final cultural resources report.

Summerly Development Cultural Resources Monitoring Project, Lake Elsinore, CA: Senior Archaeologist for this project, which included grading for a drainage channel, a large sewer line, and subsequent residential development. At the conclusion of the monitoring program, David prepared a technical report that documented the results of the monitoring and provided management recommendations for any further work.

Matrix Oil Field Redevelopment Project, La Habra Heights, CA: Senior Archaeologist for this project, which included the redevelopment of existing oil wells and the drilling of new oil wells; a Central Processing Facility; a truck loading facility; a small office with a restroom; and ancillary facilities. In addition, an off-site crude oil pipeline and a natural gas pipeline would be installed underground, extending from the Project site to El Cajonita Drive, Las Palmas Drive, West Road, Hacienda Road, Whittier Boulevard, and Beach Boulevard to connect with existing oil and gas pipelines located beneath La Habra Boulevard and beneath the Union Pacific Railroad right-of-way. David completed a records search and field survey of the project site. This included accessing the South Central Coastal Information Center at California State University, Fullerton to determine if known archaeological sites exist on or near the project site, and subsequently conducting a pedestrian survey of the project site to determine if previously unknown resources exist there. David authored the final cultural resources report for the project.

Mark Roeder

Senior Paleontologist/Principal Investigator

EDUCATION

1977 / Bachelor of Arts,
Anthropology / San Diego State
University, CA

PROFESSIONAL REGISTRATION

Registered Paleontologic
Consultant, County of Orange

Mark Roeder has 34 years of experience as a Paleontologist. Mark has extensive experience with CEQA and NEPA compliance and with conducting and managing paleontological resource impact assessments and impact mitigation programs for large construction projects in California. Project experience includes municipal solid waste landfills; aggregate quarries; flood-control facilities; oil refineries; natural gas pipelines; freeways and other roadways; subways; waste water treatment facilities; housing developments; planned communities; office buildings/complexes; shopping centers; hospitals and medical centers; industrial complexes; parking lots/structures; land exchanges; and conditional use permit and specific plan revisions. He has worked for a diverse set of clients including private-industry clients; public utilities; conservancies; and federal, State, County, City, and regional agencies. Mark has conducted paleontological resource assessments—which involve data searches such as literature reviews, archival searches, field surveys, and consultation with other paleontologists—in order to develop baseline inventories to evaluate the scientific importance of resources and potential for disturbance by adverse, project-related impacts; and to formulate mitigation measures to reduce these impacts to less than significant levels. Mark has worked on paleontological resources impact mitigation programs that have required monitoring of earth-moving activities, recovery of fossil remains, field personnel supervision, and progress and final report preparation. His previous project participation has involved extensive coordination and consultation with project proponents, other consulting firms, and permitting agencies; adherence to strict delivery schedules; and completion of tasks within specified budget limits. Mark also has an extensive paleontological research background in the fish faunas of the Cenozoic marine and lacustrine formations of Southern California. His research entailed literature reviews, archival searches, field surveys, and consultation with other paleontologists.

Representative Project Experience

Baker Ranch Development Project Archaeological Investigations, Lake Forest, CA: Paleontological Resources Principal Investigator for Baker Ranch Project. The project includes Archaeological, Native American, and Paleontological monitoring programs to be instituted during grading of the project site. Much of the site is underlain by the late Miocene to early Pliocene Epoch Oso Sand Member of the Capistrano Formation, which is one of the most prolific fossil-bearing units in Orange County. Numerous fossil localities (including various bones associated with whales, a seal, sharks, and fishes, as well as plant remains and invertebrates) have been found and continue to be found by BonTerra Psomas monitors during grading at the site. Mark oversees paleontological investigations on site and in the laboratory and assists as necessary with identifying and evaluating fossils; salvaging larger specimens; and providing oversight and assistance to the field monitors.

Newport Banning Ranch Paleontological Assessment, Newport Beach, CA: Paleontologist for this project. The Newport Banning Ranch project would allow for the development of up to 1,375 residential dwelling units; 75,000 square feet of commercial uses; a 75-room resort inn; and approximately 52 acres of public parks on a 401-acre site. Mark wrote the paleontological assessment in order to determine the project site's potential for the presence of sensitive rock formations and fossil resources. The paleontological significance of the project site was deemed "high. Future paleontological work will include an intensive site survey, sampling of fossil outcrops, preservation of some outcrops (if possible), and monitoring of construction activities.

Sunset Ridge Park Paleontological Assessment, Newport Beach, CA: Paleontologist for this project. Located on the northwestern corner of Superior Avenue and West Coast Highway, the approximate 13.7-acre site, located within the Coastal Zone, will be developed with active and passive recreational uses. Mark wrote the paleontological assessment in order to determine the project site's potential for the presence of sensitive rock formations and fossil resources. The paleontological significance of the project site was deemed "high". In January 2014, Mark supervised paleontological work which included an intensive site survey, sampling of fossil outcrops, preservation of some outcrops (if possible), and monitoring of construction activities for the park. The treatment of the fossils and documentation report are pending.

Eastern Transportation Corridor (State Route 241) Project, Orange County, CA: Senior Paleontologist for this project. He supervised the paleontologist resource monitoring and collection of fossil samples during construction activities. Also, he was involved in the treatment and documentation of the fossils.

Murrieta Creek Bridge Cultural Resources Services, City of Temecula, CA: Paleontologist for this project, which consists of the construction of a new bridge over Murrieta Creek at Overland Drive from its current terminus near Commerce Center Drive. Construction of the bridge will include concrete embankments/abutments; piers and concrete structural approaches; a 140-foot-wide scour protection element consisting of ArmorFlex over geotextile filter fabric; and 1 ton riprap rock to protect the bridge piers and abutments within Murrieta Creek. Mark was the paleontological manager for the project. The Murrieta Creek Bridge study consisted of (1) paleontological records and literature searches; (2) paleontological pedestrian survey of the project site; and (3) paleontological technical report describing the results of the study and recommended mitigation measure for any potential impacts to resources. Mark found that near the western abutment for the proposed bridge in a natural exposure at the base of the bluff just above the current base level for the creek is a two- to three-foot-thick fossil root-cast bearing, brown, silt bed. This horizon may be Late Pleistocene age and is approximately 13 to 15 feet below the grade of the surface roads on either side of the creek. Root casts noted during the survey are considered paleontological resources and indicate there is a potential for significant paleontological resources during earth-moving activities in this area. The potential for destruction of paleontological resources due to depth excavations during construction is high and monitoring was recommended.