Appendix C

Cultural and Paleontological Resources Assessment Report for the Redlands Avenue East Industrial Project

City of Perris, Riverside County, California

Cogstone

August 2021

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PALEONTOLOGY - ARCHAEOLOGY - HISTORY

CULTURAL AND PALEONTOLOGICAL RESOURCES ASSESSMENT REPORT FOR THE REDLANDS AVENUE EAST INDUSTRIAL PROJECT, CITY OF PERRIS, RIVERSIDE COUNTY, CALIFORNIA

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August 2021

Cogstone Project Number: 5054
Type of Study: Cultural and Paleontological Resources Assessment
Cultural Resources: None within the Project Area
Fossil Localities: None within the Project Area
USGS 7.5' Quadrangle: Perris (1979)
Area: 12.59 acres
Key Words: Negative Survey, Cultural and Paleontological Resources Assessment, Cahuilla Territory Serrano Territory, Luiseño Territory, Gabrielino/Tongva Territory, early to middle Pleistocene very old alluvial fan deposits, late Pleistocene to Holocene young alluvial valley deposits

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SUMMARY OF FINDINGS

This study was conducted to determine the potential impacts to cultural and paleontological resources during the Redlands Avenue East Industrial Project (Project), City of Perris, California. The City of Perris (City) will be the lead agency under the California Environmental Quality Act (CEQA). This Project must also comply with City of Perris local requirements.

The Project Area is located on approximately 12.59 acres within Assessor Parcel Numbers (APNs) 300-210-008, 300-210-007, 300-210-006, 300-210-026, 300-210-027, and 300-210-028 located along the east side of Redlands Avenue between Rider Street and Placentia Avenue in the City of Perris, Riverside County, California. Specifically, the Project is located within Township 4 South, Range 3 West, Section 17 on the United States Geological Survey (USGS) 7.5-minute Perris (1:24,000) topographic quadrangle map, San Bernardino Baseline and Meridian.

The Project involves the construction and operation of a 251,472 square foot warehouse building with a 4,000 square foot mezzanine, landscaping, and associated parking. Maximum planned depths for grading and utilities trenching are 10 feet and 15 feet respectively.

PALEONTOLOGICAL RESOURCES

The Project is mapped as early to middle Pleistocene (2.58 million years ago – 129,000 years ago) very old alluvial fan deposits and late Pleistocene to Holocene (less than 11,000 years ago) young alluvial valley deposits.

The results of the record search showed that no fossils have previously been recorded from the proposed Project Area or within a one mile radius. However, abundant late Pleistocene fossils have been found in association with the Diamond Valley Reservoir and San Diego Pipeline 6 / Salt Creek Channel projects in southern Hemet, California, between 10 and 15 miles southeast of the current Project. Thousands of Pleistocene fossils have been recorded near the Project Area, including Pacific mastodon, Columbian mammoth, ground sloths, sabre-toothed cat, dire wolf, short-faced bear, bison, horses, stilt-legged llama, yesterday's camel, flat-headed peccary, diminutive pronghorn, and California turkey.

Based upon the record of fossil localities near the Project Area and the Riverside County General Plan, very old alluvial fan deposits and the young alluvial valley deposits less than four feet below the original ground surface on the Project are assigned a low paleontological sensitivity (PFYC 2) while deeper sediments have a moderate sensitivity (PFYC 3).

At present, based on the anticipation of impacts to the very old alluvial fan deposits and the young alluvial valley deposits within the Project Area, a Paleontological Resources Impact Mitigation Plan should be developed and implemented, which should include development of a paleontology Worker Environmental Awareness Program as well as paleontological monitoring.

In the event of an unanticipated discovery, all work must be suspended within 50 feet of the find until a qualified paleontologist evaluates it.

CULTURAL RESOURCES

Cogstone requested a search of the California Historic Resources Information System (CHRIS) from the Eastern Information Center (EIC) on October 9, 2021, that included the entire proposed Project Area as well as a half-mile radius. The EIC completed the request on January 26, 2021. Results of the record search indicate that 21 previous studies have been completed within half-mile of the proposed Project Area including three that included the Project Area.

The records search also determined no previously recorded resources are located within the Project boundaries. Six cultural resources, all historic built environment resources, are located within one-half mile of the Project Area.

Cogstone archaeologist and cross-trained paleontologist Sandy Duarte surveyed the Project Area on April 1, 2021. The Project Area has been heavily disturbed with clearing, rock base hardscaping as well as concrete driveways at street entrance. The intensive pedestrian survey consisted of two to three meter wide transects. Ground visibility within the Project Area was generally poor (approximately 20 percent) due to vegetation overgrowth. Much of the area was covered in grass, weeds, and modern refuse. Where visible, surficial sediments primarily consisted of yellowish-brown sandy silts. No cultural or paleontological resources were observed.

Based on the results of the pedestrian survey, the cultural records search, and the negative Sacred Lands File (SLF) search from the Native American Heritage Commission (NAHC), the Project Area has low sensitivity for prehistoric cultural resources. Analysis of these data sources and historical United States Department of Agriculture (USDA) aerial photographs indicate that the Project Area also has low sensitivity for buried historical archaeological features such as foundations or trash pits. No further cultural resources work is recommended.

In the event of an unanticipated discovery, all work must be suspended within 50 feet of the find until a qualified archaeologist evaluates it. In the unlikely event that human remains are encountered during project development, all work must cease near the find immediately.

In accordance with California Health and Safety Code Section 7050.5, the County Coroner must be notified if potentially human bone is discovered. The Coroner will then determine within two working days of being notified if the remains are subject to his or her authority. If the Coroner recognizes the remains to be Native American, he or she shall contact the Native American Heritage Commission (NAHC) by phone within 24 hours, in accordance with Public Resources Code Section 5097.98. The NAHC will then designate a Most Likely Descendant (MLD) with respect to the human remains. The MLD then has the opportunity to recommend to the property owner or the person responsible for the excavation work means for treating or disposing, with appropriate dignity, the human remains and associated grave goods. Work may not resume in the vicinity of the find until all requirements of the health and safety code have been met.

INTRODUCTION

PURPOSE OF STUDY

This study was conducted to determine the potential impacts to cultural and paleontological resources during the Redlands Avenue East Industrial Project (Project), City of Perris, California (Figure 1). The City of Perris (City) will be the lead agency under the California Environmental Quality Act (CEQA).

PROJECT LOCATION AND DESCRIPTION

The Project is located on approximately 12.59 acres within Assessor Parcel Numbers (APNs) 300-210-008, 300-210-007, 300-210-006, 300-210-026, 300-210-027, and 300-210-028, located along the east side of Redlands Avenue between Rider Street and Placentia Avenue in the City of Perris, Riverside County, California. Specifically, the Project is located within Township 4 South, Range 3 West, Section 17 on the United States Geological Survey (USGS) 7.5-minute Perris (1:24,000) topographic quadrangle map, San Bernardino Baseline and Meridian (Figures 2 and 3).

The Project involves the construction and operation of a 251,472 square foot warehouse building with a 4,000 square foot mezzanine, landscaping, and associated parking. Maximum planned depths for grading and utilities trenching are 10 feet and 15 feet respectively (Figure 4).

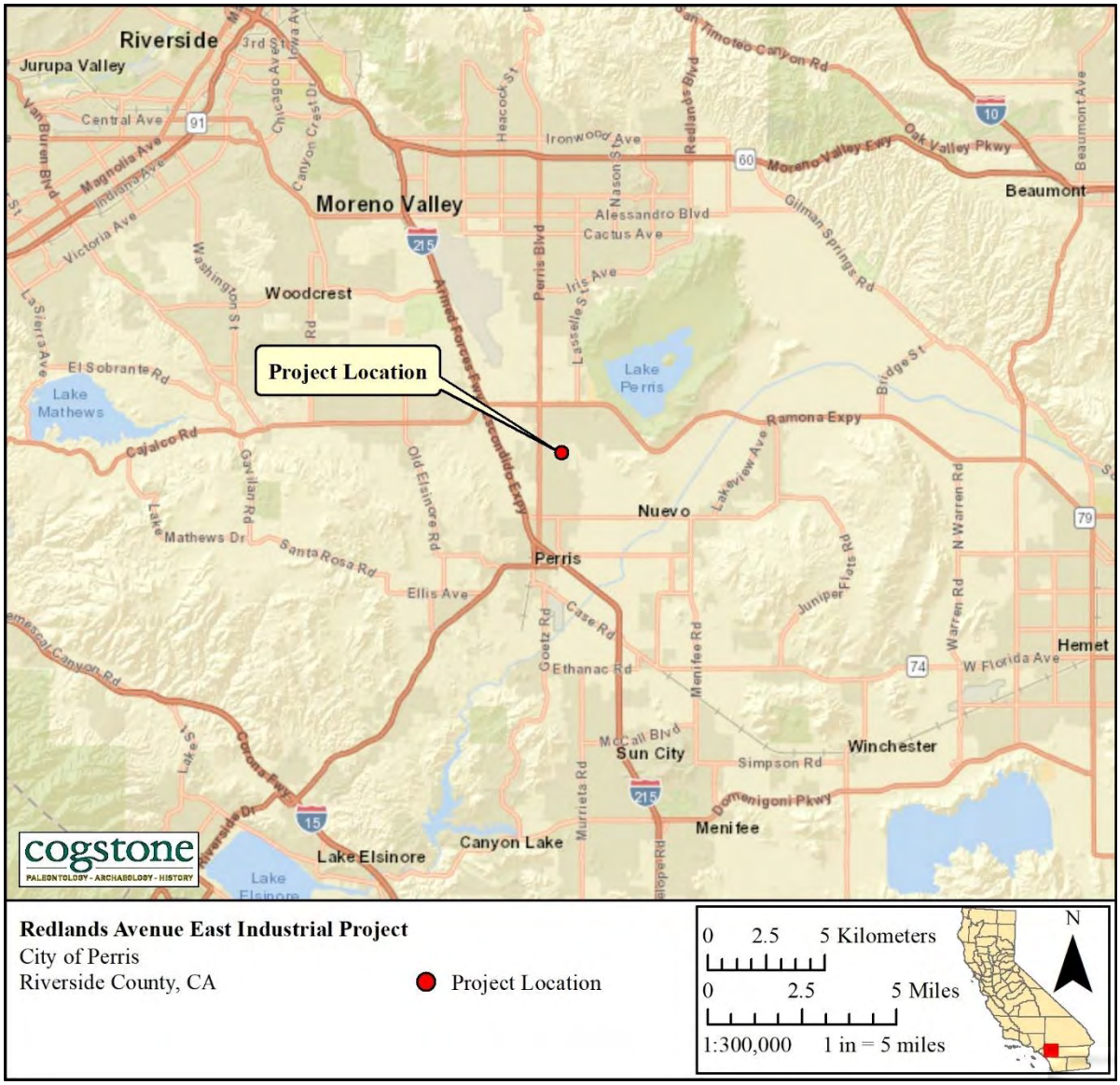

Figure 1. Project vicinity map

Figure 2. Project location map

Figure 3. Project aerial map

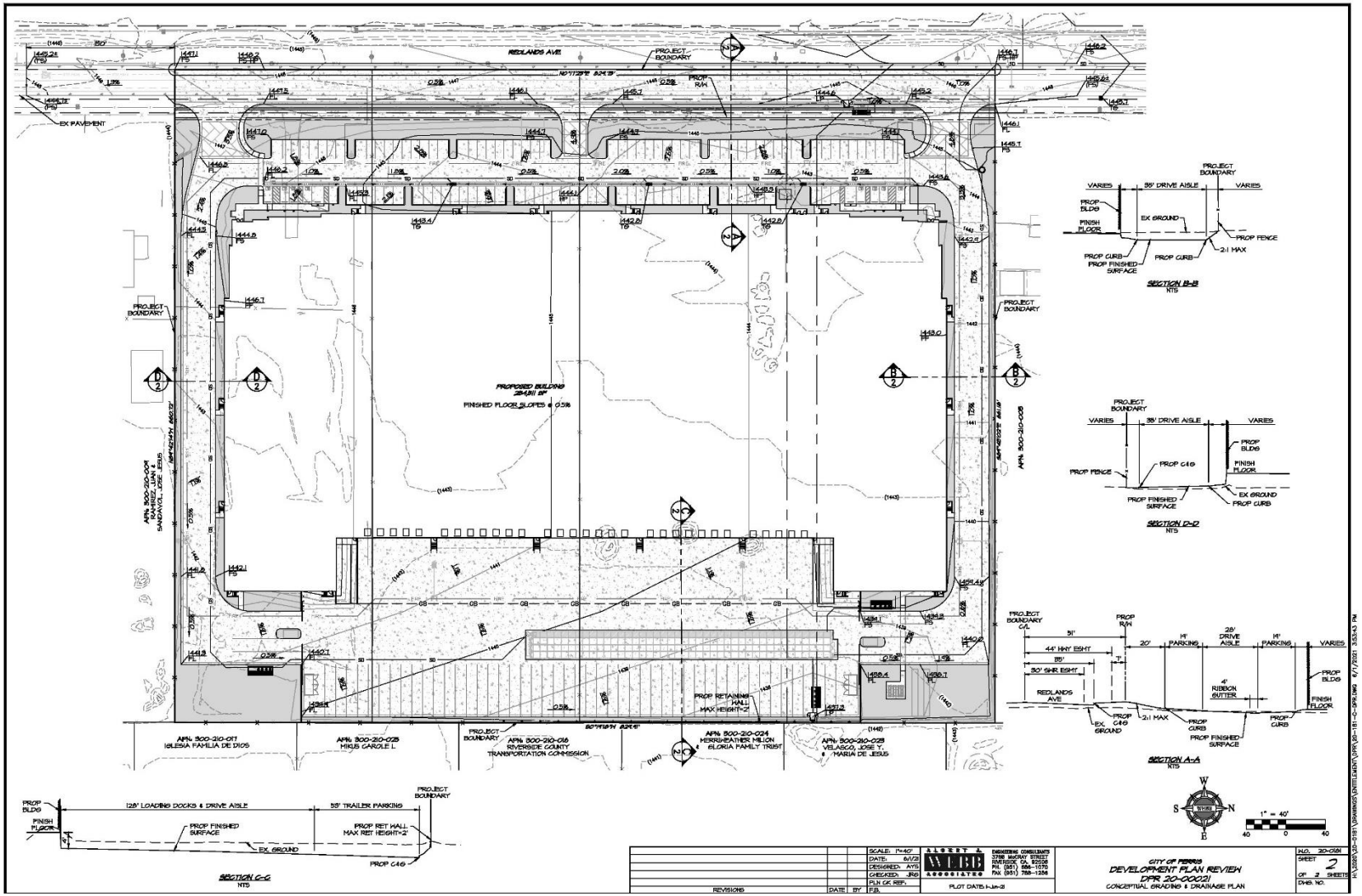

Figure 4. Grading plan

PROJECT PERSONNEL

Cogstone Resource Management, Inc. (Cogstone) carried out this assessment and drafted this report. Brief resumes of key project personnel are in Appendix A.

- Dr. John Gust, RPA, served as the Task Manager and Principal Investigator for Archaeology for the Project and reviewed this report. Dr. Gust has a Ph.D in Anthropology from the University of California (UC), Riverside, and over 9 years of experience in archaeology.

- Kim Scott served as the Principal Investigator for Paleontology for the Project and reviewed the geological and paleontological portions of this report. Ms. Scott has an M.S. in Biology with paleontology emphasis from California State University (CSU), San Bernardino, and over 27 years of experience in California paleontology and geology.

- Sandy Duarte conducted the field survey, and co-authored this report. Mrs. Duarte holds a B.A. in Anthropology from UC Santa Barbara (UCSB), and has more than 18 years of experience in California archaeology.

- Kelly Vreeland authored the geological and paleontological portions of this report. Ms. Vreeland has an M.S. and a B.S. in Geology, with an emphasis in paleontology, from CSU Fullerton (CSUF) as well as 10 years of experience in California paleontology and geology.

- Logan Freeberg prepared the Geographic Information System (GIS) maps throughout this report. Mr. Freeberg has a B.A. in Anthropology from UCSB and a GIS certification from CSUF and over 15 years of experience in California archaeology.

- Molly Valasik provided QA/QC for the Project. Ms. Valasik is a Registered Professional Archaeologist (RPA), and has an M.A. in Anthropology from Kent State University in Ohio and over 12 years of experience in southern California archaeology.

- Eric Scott provided QA/QC for the paleontology and geology sections of this report. Mr. Scott has an M.A. in Anthropology, with an emphasis in biological paleoanthropology, from the University of California, Los Angeles (UCLA), and more than 37 years of experience in California paleontology.

REGULATORY ENVIRONMENT

STATE LAWS AND REGULATIONS

CALIFORNIA ENVIRONMENTAL QUALITY ACT

CEQA states that: It is the policy of the state that public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures available which would substantially lessen the significant environmental effects of such projects, and that the procedures required are intended to assist public agencies in systematically identifying both the significant effects of proposed project and the feasible alternatives or feasible mitigation measures which will avoid or substantially lessen such significant effects.

CEQA declares that it is state policy to: "take all action necessary to provide the people of this state with...historic environmental qualities." It further states that public or private projects financed or approved by the state are subject to environmental review by the state. All such projects, unless entitled to an exemption, may proceed only after this requirement has been satisfied. CEQA requires detailed studies that analyze the environmental effects of a proposed project. In the event that a project is determined to have a potential significant environmental effect, the act requires that alternative plans and mitigation measures be considered.

TRIBAL CULTURAL RESOURCES

As of 2015, CEQA established that "[a] project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment" (Public Resources Code, § 21084.2). In order to be considered a "tribal cultural resource," a resource must be either:

(1) listed, or determined to be eligible for listing, on the national, state, or local register of historic resources, or
(2) a resource that the lead agency chooses, in its discretion, to treat as a tribal cultural resource.

To help determine whether a project may have such an effect, the lead agency must consult with any California Native American tribe that requests consultation and is traditionally and culturally affiliated with the geographic area of a proposed project. If a lead agency determines that a project may cause a substantial adverse change to tribal cultural resources, the lead agency must consider measures to mitigate that impact. Public Resources Code §20184.3 (b)(2) provides examples of mitigation measures that lead agencies may consider to avoid or minimize impacts to tribal cultural resources.

PUBLIC RESOURCES CODE

Section 5097.5: No person shall knowingly and willfully excavate upon, or remove, destroy, injure or deface any historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological site, including fossilized footprints, inscriptions made by human agency, or any other archaeological, paleontological or historical feature, situated on public lands (lands under state, county, city, district or public authority jurisdiction, or the jurisdiction of a public corporation), except with the express permission of the public agency having jurisdiction over such lands. Violation of this section is a misdemeanor. As used in this section, "public lands" means lands owned by, or under the jurisdiction of, the state, or any city, county, district, authority, or public corporation, or any agency thereof.

CALIFORNIA REGISTER OF HISTORICAL RESOURCES

The California Register of Historical Resources (CRHR) is a listing of all properties considered to be significant historical resources in the state. The California Register includes all properties listed or determined eligible for listing on the National Register, including properties evaluated under Section 106, and State Historical Landmarks number No. 770 and above. The California Register statute specifically provides that historical resources listed, determined eligible for listing on the California Register by the State Historical Resources Commission, or resources that meet the California Register criteria are resources which must be given consideration under CEQA (see above). Other resources, such as resources listed on local registers of historic registers or in local surveys, may be listed if they are determined by the State Historic Resources Commission to be significant in accordance with criteria and procedures to be adopted by the Commission and are nominated; their listing in the California Register, is not automatic.

Resources eligible for listing include buildings, sites, structures, objects, or historic districts that retain historical integrity and are historically significant at the local, state or national level under one or more of the following four criteria:

1) It is 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;
2) It is associated with the lives of persons important to local, California, or national history;
3) It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master or possesses high artistic values; or
4) It 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 to having significance, resources must have integrity for the period of significance. The period of significance is the date or span of time within which significant events transpired, or significant individuals made their important contributions. Integrity is the authenticity of a historical resource's physical identity as evidenced by the survival of characteristics or historic fabric that existed during the resource's period of significance.

Alterations to a resource or changes in its use over time may have historical, cultural, or architectural significance. Simply, resources must retain enough of their historic character or appearance to be recognizable as historical resources and to convey the reasons for their significance. A resource that has lost its historic character or appearance may still have sufficient integrity for the California Register, if, under Criterion 4, it maintains the potential to yield significant scientific or historical information or specific data.

NATIVE AMERICAN HUMAN REMAINS

Sites that may contain human remains important to Native Americans must be identified and treated in a sensitive manner, consistent with state law (i.e., Health and Safety Code §7050.5 and Public Resources Code §5097.98), as reviewed below:

In the event that human remains are encountered during project development and in accordance with the Health and Safety Code Section 7050.5, the County Coroner must be notified if potentially human bone is discovered. The Coroner will then determine within two working days of being notified if the remains are subject to his or her authority. If the Coroner recognizes the remains to be Native American, he or she shall contact the Native American Heritage Commission (NAHC) by phone within 24 hours, in accordance with Public Resources Code Section 5097.98. The NAHC will then designate a Most Likely Descendant (MLD) with respect to the human remains. The MLD then has the opportunity to recommend to the property owner or the person responsible for the excavation work means for treating or disposing, with appropriate dignity, the human remains and associated grave goods.

CALIFORNIA ADMINISTRATIVE CODE, TITLE 14, SECTION 4307

This section states that "No person shall remove, injure, deface or destroy any object of paleontological, archeological or historical interest or value."

CITY OF PERRIS LOCAL REQUIREMENTS

The following Goal, Policy, and Implementation Measures from Conservation Element of the City of Perris General Plan (City of Perris 2008) are in place to protect cultural and paleontological resources.

Goal IV - Cultural Resources

Protection of historical, archaeological and paleontological sites.

Policy IV.A

Comply with state and federal regulations and ensure preservation of the significant historical, archaeological and paleontological resources.

Implementation Measures

IV.A.1 For all private and public projects involving new construction, substantial grading, or demolition, including infrastructure and other public service facilities, staff shall require appropriate surveys and necessary site investigations in conjunction with the earliest environmental document prepared for a project.

IV.A.2 For all projects subject to CEQA, applicants will be required to submit results of an archaeological records search request through the Eastern Information Center, at the University of California, Riverside.

IV.A.3 Require Phase I Surveys for all projects located in areas that have not previously been surveyed for archaeological or historic resources, or which lie near areas where archaeological and/or historic sites have been recorded.

IV.A.4 In Area 1 and Area 2 shown on the Paleontological Sensitivity Map, paleontologic monitoring of all projects requiring subsurface excavations will be required once any excavation begins. In Areas 4 and 5, paleontologic monitoring will be required once subsurface excavations reach five feet in depth, with monitoring levels reduced if appropriate, at the discretion of a certified Project Paleontologist.

IV.A.5 Identify and collect previous surveys of cultural resources. Evaluate such resource and consider preparation of a comprehensive citywide inventory of cultural resources including both prehistoric sites and man-made resources.

IV.A.6 Create an archive for the City wherein all surveys, collections, records and reports can be centrally located.

IV.A.7 Strengthen efforts and coordinate the management of cultural resources with other agencies and private organizations.

PROJECT SPECIFIC REQUIREMENTS

Mitigation Measure – Cultural 1: Prior to the consideration by the City of Perris of implementing development or infrastructure projects for properties that are vacant, undeveloped, or considered to be sensitive for cultural resources by the City of Perris Planning Division, a Phase I Cultural Resources Study of the subject property prepared in accordance with the protocol of the City of Perris by a professional archeologist shall be submitted to the City of Perris Planning Division for review and approval. The Phase I Cultural Resources Study shall determine whether the subject implementing development would potentially cause a substantial adverse change to any significant paleontological, archaeological, or historic resources. The Phase I Cultural Resources Study shall be prepared to meet the standards established by Riverside County and shall, at a minimum, include the results of the following:

1. Records searches at the Eastern Information Center (EIC), the National or State Registry of Historic Places and any appropriate public, private, and tribal archives.
2. Sacred Lands File record search with the NAHC followed by project scoping with tribes recommended by the NAHC.
3. Field survey of the implementing development or infrastructure project site. The proponents of the subject implementing development projects and the professional archaeologists are also encouraged to contact the local Native American tribes (as identified by the California Native Heritage Commission and the City of Perris) to obtain input regarding the potential for Native American resources to occur at the project site. Measures shall be identified to mitigate the known and potential significant effects of the implementing development or infrastructure project, if any. Mitigation for historic resources shall be considered in the following order of preference:
    a. Avoidance
    b. Changes to the structure provided pursuant to the Secretary of Interior's Standards. Relocation of the structure.
    c. Recordation of the structure to Historic American Buildings Survey (HABS)/Historic American Engineering Record (HAER) standard if demolition is allowed. Avoidance is the preferred treatment for known significant prehistoric and historical archaeological sites, and sites containing Native American human remains. Where feasible, plans for implementing projects shall be developed to avoid known significant archaeological resources and sites containing human remains. Where avoidance of construction impacts is possible, the implementing projects shall be designed and landscaped in a manner, which will ensure that indirect impacts from increased public availability to these sites are avoided. Where avoidance is selected, archaeological resource sites and sites containing Native American human remains shall be placed within permanent conservation easements or dedicated open space areas.

The Phase I Cultural Resources Study submitted for each implementing development or infrastructure project shall have been completed no more than three (3) years prior to the submittal of the application for the subject implementing development project or the start of construction of an implementing infrastructure project.

DEFINITION OF SIGNIFICANCE FOR PALEONTOLOGICAL RESOURCES

Only qualified, trained paleontologists with specific expertise in the type of fossils being evaluated can determine the scientific significance of paleontological resources. Fossils are considered to be significant if one or more of the following criteria apply:

1. The fossils provide information on the evolutionary relationships and developmental trends among organisms, living or extinct;

2. The fossils provide data useful in determining the age(s) of the rock unit or sedimentary stratum, including data important in determining the depositional history of the region and the timing of geologic events therein;
3. The fossils provide data regarding the development of biological communities or interaction between paleobotanical and paleozoological biotas;
4. The fossils demonstrate unusual or spectacular circumstances in the history of life;
5. The fossils are in short supply and/or in danger of being depleted or destroyed by the elements, vandalism, or commercial exploitation, and are not found in other geographic locations.

As so defined, significant paleontological resources are determined to be fossils or assemblages of fossils that are unique, unusual, rare, uncommon, or diagnostically important. Significant fossils can include remains of large to very small aquatic and terrestrial vertebrates or remains of plants and animals previously not represented in certain portions of the stratigraphy. Assemblages of fossils that might aid stratigraphic correlation, particularly those offering data for the interpretation of tectonic events, geomorphologic evolution, and paleoclimatology are also critically important (Scott and Springer 2003, Scott et al. 2004).

BACKGROUND

GEOLOGICAL SETTING

This Project is located within the Peninsular Range Geomorphic Province, which extends from Mount San Jacinto in the north to Baja California in the south and includes the Inland Empire, Los Angeles, Orange County, and San Diego areas of California. The Peninsular Ranges Geomorphic Province is located in the southwestern corner of California and is bounded by the Transverse Ranges Geomorphic Province to the north and the Colorado Desert Geomorphic Province to the east. This geomorphic province is characterized by elongated northwest-trending mountain ridges separated by sediment-floored valleys. Many faults to the west of the Salton Trough section of the San Andreas Fault Zone parallel this northwest-southeast trending fault zone and have taken up some of the strain of the San Andreas. The San Jacinto Fault Zone at the base of the San Timoteo Badlands to the east of the Project is one such fault zone.

To the north of the Project, the San Andreas Fault Zone travels up Cajon Pass where it forms the boundary between the Pacific Plate and the North American Plate. The Transverse Ranges include the San Bernardino and San Gabriel mountains along with the paralleling ranges and result from these two plates grinding past each other and “catching” along the bend in the San

Andreas. The Project is located on the Pacific Plate which is composed of numerous blocks that can move independently (Wagner 2002).

STRATIGRAPHY

The Project is mapped at the surface as early to middle Pleistocene very old alluvial fan deposits (2.58 million years to 129,000 years old), and late Pleistocene to Holocene (less than 11,700 years old) young alluvial valley deposits (Morton and Miller 2006, Figure 5).

Young alluvial valley deposits, late Pleistocene to Holocene

The young alluvial valley deposits consist of unconsolidated alluvial clay, silt, and sand that were deposited by rivers along valley floors (Morton and Miller 2006).

Very old alluvial fan deposits, early to middle Pleistocene

These alluvial fans consist of moderately indurated, massive to moderately well bedded, yellowish-brown sands to sparse conglomerates (Morton and Miller 2006). A paleomagnetic study at March Air Force Base located 780,000 year old Brunhes-Matuyama paleomagnetic boundary at 9.8 feet (3 meters) below ground surface (Morton et al. 1997).

PALEONTOLOGICAL SETTING

This Project is mapped on Riverside County's General Plan, as having a high potential for fossil resources in sediments greater than four feet deep (County of Riverside 2015, p. 4.9-11 and Figure 4.9.3). Additionally, the Project Area is mapped as having high paleontological sensitivity within the City of Perris General Plan (City of Perris 2005, p. 26 – 27, Exhibit CN-7).

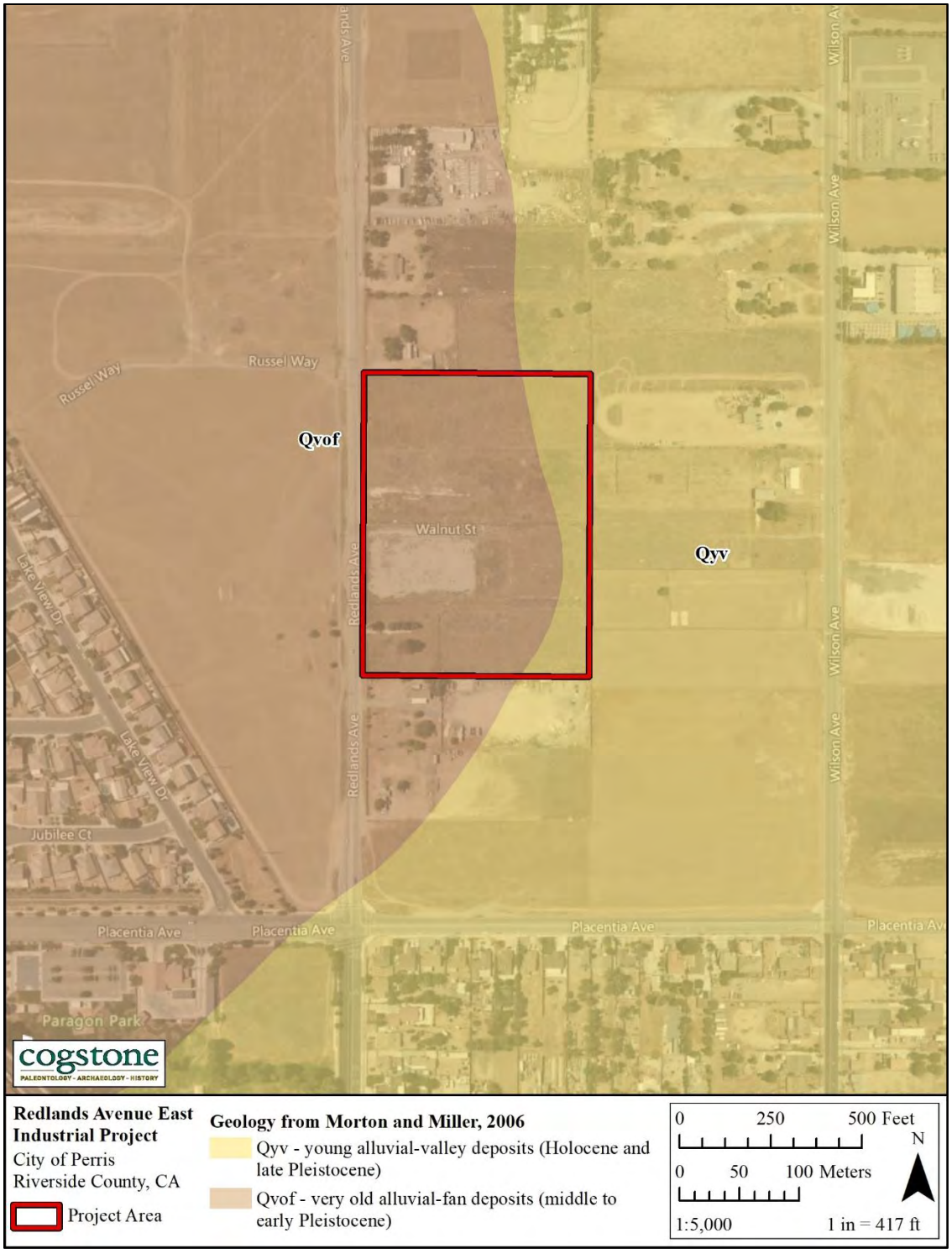

Figure 5. Geologic map of the Project Area

ENVIRONMENTAL SETTING

The Project Area is located in the Perris Valley. The valley floor bounded by the hills and mountains of the Badlands to the northeast, the San Jacinto Mountains to the East, and Steele Peak to the West (Jenkins 1976). The Project Area is characterized by a series of hills and valleys in a graben between the San Jacinto and Elsinore Faults zones and stretches from the Santa Ana River, southeast beyond Perris Valley (Scott and Goudey 1997). The majority of the area is within the watershed of the San Jacinto River. The climate of the area is characterized by warm, dry summers and mild winters. Most rain falls between the months of November and March. Winds around Moreno Valley are generally cyclic, blowing from the southwest and west, especially in the summer, during the day, while at night, especially during the winter, a weak off-shore breeze occurs. Occasionally in the fall these cyclical breezes are interrupted by strong, dry, warm desert winds (Santa Ana's) from the north/northeast.

The natural habitat of the Project Area is largely disturbed by urban development, weed abatement or agricultural activities. However, the majority of the Project Area would have been chaparral with riparian vegetation at the river (Rundell and Gustafson 2005).

The Project Area has a rich diversity of wildlife species. Mammals, including mule deer, and large carnivores, including coyotes, bobcats, badgers, and gray fox, exist in the undeveloped portions of the county. Opossums, raccoons, skunks, cottontail rabbits, and many rodent species are also common. A wide variety of reptiles can be found in the county as well. Additionally, over one hundred species of birds, including owls, hawks and other birds of prey can be found in the area.

PREHISTORIC SETTING

The latest cultural revisions for the Project Area define traits for time phases of the Greven Knoll Pattern of the Encinitas Tradition applicable to inland San Bernardino, Riverside, Los Angeles and Orange counties (Sutton and Gardner 2010). This pattern is subsequently replaced in the Project Area by the Peninsular Pattern of the Palomar Tradition later in time (Sutton 2011; Table 1).

Table 1. Cultural patterns and phases

Phase	Dates B.P.	Material Culture	Other Traits
Greven Knoll I	8,500 to 4,000	Abundant manos and metates; Pinto dart points for atlatls or spears; charmstones, cogged stones, and discoidals rare; no mortars or pestles; and general absence of shell artifacts.	No shellfish; hunting important; flexed inhumations; and cremations rare.
Greven Knoll II	4,000 to 3,000	Abundant manos and mutates; Elko dart points for atlatls or spears; core tools; late discoidals; few mortars and pestles; and	No shellfish; hunting and gathering important; flexed inhumations; and cremations rare.

Phase	Dates B.P.	Material Culture	Other Traits
		general absence of shell artifacts.	
Greven Knoll III (formerly Sayles complex)	3,000 to 900	Abundant manos and mutates; Elko dart points for atlatls or spears; scraper planes, choppers, and hammerstones; late discoidals; few mortars and pestles; and general absence of shell artifacts.	No shellfish; yucca and seeds as staples; hunting important but animal bones also processed; flexed inhumations beneath rock cairns; and cremations rare.
Peninsular I	900 to 750	Appearance of small points (Cottonwood points &, Desert Side-notched) for arrows; shaft straighteners; pottery; few stone ornaments or stone pipes; appearance of shell ornaments; use of obsidian glass from Coso, Obsidian Butte, Bagdad, and unknown sources; and use bedrock metates but few mortars and pestles.	Adoption of a lacustrine-based subsistence system; movement of people into the northern Coachella Valley from the interior valleys as Lake Cahuilla filled; establishment of major residential bases along the Lake Cahuilla shoreline; and primary pit cremations.
Peninsular II	750 to 300	Addition of brown ware pottery, ceramic pipes and figurines; use of same obsidian sources; and the use of stone fish traps as levels of Lake Cahuilla fluctuated and eventually declined.	Lacustrine based subsistence; and the appearance of the Peninsular Funerary Complex, with secondary cremations placed in ceramic "containers" and associated mourning ceremonies.
Peninsular III	300 to 150	Continued use of Cottonwood and Desert Side-notched points; brown ware and buff ware pottery; primary use of Obsidian Butte as an obsidian source; addition of new figurine types; addition of some cultigens such as melons and squash, and the introduction of Euro-American material culture (e.g., glass beads and metal tools).	Adoption of terrestrial-based subsistence system; full-time villages near springs; movement of some people west into the northern Peninsular Ranges as Lake Cahuilla became desiccated; use of domesticated species obtained from Colorado River Yumans and Euro-Americans; primary pit cremation as the principal mortuary practice; and retention of mourning ceremonies.

Greven Knoll sites tend to be in located in the inland valley areas characteristic of the Project Area. These inland people apparently did not switch from the use of manos and metates to the use of pestles and mortars that is seen in coastal sites dating to approximately 5000 years ago, possibly reflecting their closer relationship with desert cultural peoples who did not exploit acorns. The Greven Knoll toolkit is dominated by manos and metates throughout its 7,500 year extent. In Phase I, other typical characteristics were pinto dart points for atlatls or spears, charmstones, cogged stones, absence of shell artifacts, and flexed position burials. In Phase II, Elko dart points for atlatls or spears and core tools are observed along with increased indications of gathering. In Phase III, stone tools including scraper planes, choppers and hammerstones are added to the tool kit, and yucca and plant seeds are staple foods, animals bones are heavily processed (broken and crushed to extract marrow), and burials tend to be marked by stone cairns (Sutton and Gardner 2010).

Early Peninsular sites tend to be near sources of freshwater in valleys. The former Lake Cahuilla played a major role in the prehistory of the Colorado Desert. As detailed above, Lake Cahuilla formed periodically when the Colorado River broke its channel and flowed into the Salton Trough of the Coachella and Imperial Valleys, forming a large, deep body of fresh water. Sutton (2011) suggests that some San Luis Rey I people of Yuman descent split away and migrated east to the northern Peninsular Ranges and the northern Coachella Valley to exploit Lake Cahuilla, and in so doing became Peninsular I. The Peninsular Pattern then developed through the Peninsular I, II and III phases (Sutton 2011).

The Peninsular I phase is marked by small points for arrows, the appearance of bedrock mortars indicating use of acorns, pottery, the appearance of shell ornaments, and pit cremations are common. Hunting and gathering of terrestrial resources and the exploitation of Lake Cahuilla's lacustrine resources resulted in the development of new technologies for waterfowl decoys and fish traps and/or nets. The Peninsular II phase has some important new material traits including brown ware pottery, ceramic pipes and figurines, and secondary burials in containers. The Peninsular III phase reflects the archaeological signature of the ethnographic groups that had become established in Peninsular I and II phases with the addition of some Euro-American material culture (Sutton 2011).

ETHNOGRAPHY

CULTURAL AFFILIATION

The Project Area and the surrounding lands have been reviewed by number cultural reports for various projects over the last 30 years (O'Connell et al 1973; Bean and Vane 1979; Bean and Vane 1980; Bean 2005; Lerch and Cannon 2008; Horne and McDougall 2008; Eddy et al. 2014). A review of the ethnographic literature identifies the Project Area as being within the traditional territory of a number of different tribes, the Cahuilla, the Luiseño, the Gabrielino, and the Serrano.

Robert Heizer, in the map provided in volume 8 of the Smithsonian Institution's Handbook of North American Indians, California shows that the Project Area is in Cahuilla territory (Heizer 1978:ix). This information is based on the territory boundaries for the Cahuilla provided by Lowell Bean (1978:576) (Figure 6). Although Bean's decades long research of collecting and identifying Cahuilla place names did not identify Cahuilla place names for the Project Area, the oral histories documented by Francisco Patencio, nét of the Agua Caliente Band of Cahuilla Indians, in the book Legends and Stories of the Palm Springs Indians shows that the Perris Valley is important to the Cahuilla. Patencio stated that the Moreno Valley, located to the north of the Perris area, was where the first gathering of "a great people" occurred prior to separating and going to the four directions (Patencio 1943:99). It is also from Moreno Valley that Evon ga net, the leader of the Fox people (now known as the Agua Caliente Cahuilla), started naming areas on the landscape for the Cahuilla people (Patencio 1943:52).

Although not specifically called out in Legends and Stories, the stories that Patencio recounts came from the Cahuilla song cycles, short songs sung together describing Cahuilla origins, history and the lives of significant tribal leaders (Apodaca 1999:1). One such song cycle is the Bird Song Cycle which details the origination and migration of the Cahuilla people, much like birds, across the landscape to their final homes (Apodaca 1999:2). Other stories in Stories and Legends (e.g. Early People, Esel I Hut, Yellow Body, Head Man of Moreno, and the Story of the New Stars), also identify other leaders as residing in or travelling through Moreno Valley and its "hills", including the Project Area.

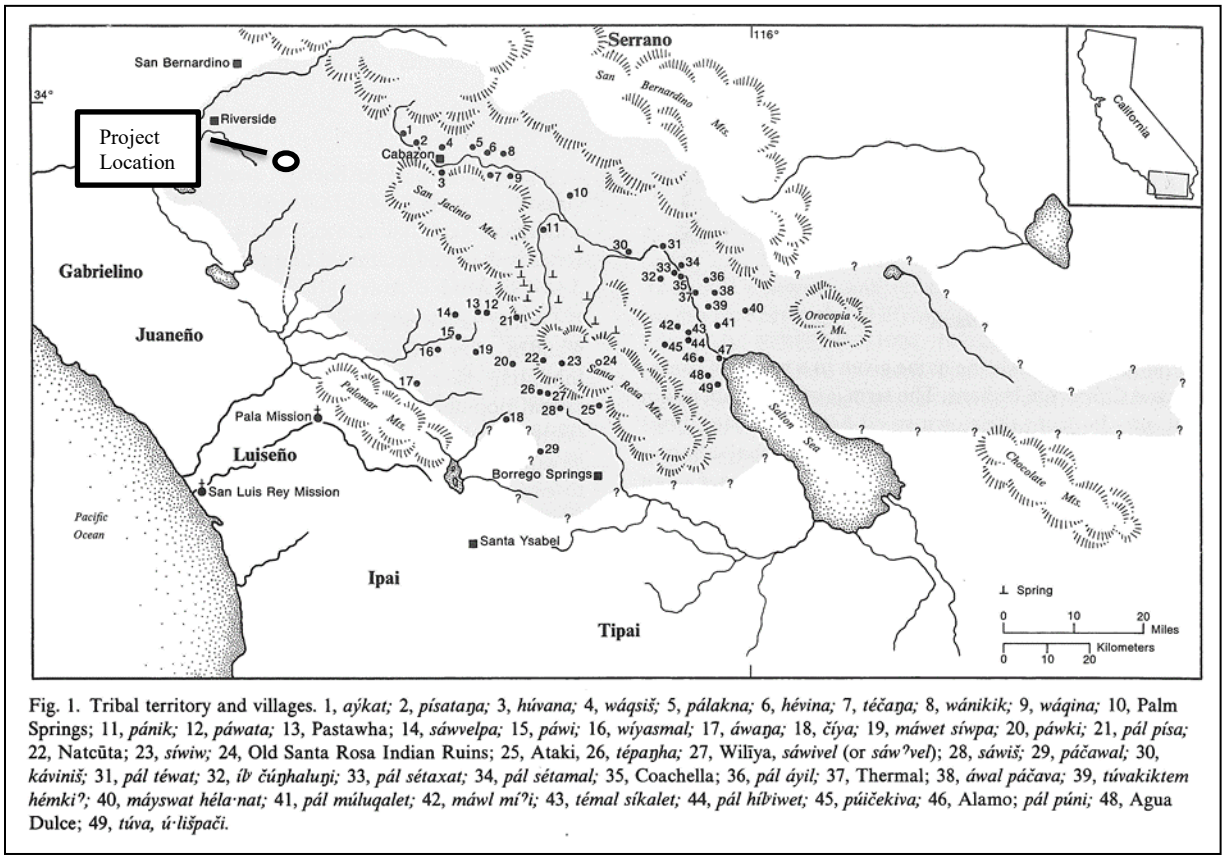

Fig. 1. Tribal territory and villages. 1, *aýkat;* 2, *písataŋa;* 3, *húvana;* 4, *wáqsiš;* 5, *pálakna;* 6, *hévina;* 7, *téčaŋa;* 8, *wánikik;* 9, *wáqina;* 10, Palm Springs; 11, *pánik;* 12, *páwata;* 13, Pastawha; 14, *sáwvelpa;* 15, *páwi;* 16, *wíyasmal;* 17, *áwaŋa;* 18, *číya;* 19, *máwet síwpa;* 20, *páwki;* 21, *pál písa;* 22, Natcūta; 23, *síwiw;* 24, Old Santa Rosa Indian Ruins; 25, Ataki, 26, *tépaŋha;* 27, Wilīya, *sáwivel* (or *sáwʔvel*); 28, *sáwiš;* 29, *páčawal;* 30, *káviniš;* 31, *pál téwat;* 32, *íbˀ čúŋhaluŋi;* 33, *pál sétaxat;* 34, *pál sétamal;* 35, Coachella; 36, *pál áyil;* 37, Thermal; 38, *áwal páčava;* 39, *túvakiktem hémkiʔ;* 40, *máyswat héla·nat;* 41, *pál múluqalet;* 42, *máwl míʔi;* 43, *témal síkalet;* 44, *pál híbˀiwet;* 45, *púičekiva;* 46, Alamo; *pál púni;* 48, Agua Dulce; 49, *túva, ú·lišpači.*

Figure 6. Cahuilla territory showing approximately location of Project Area (Bean 1978)

Katherine Sauvel, a Cahuilla elder originally from Santa Rosa Reservation, stated that Kúnvaxmal, (identified as Evon ga net by other Cahuilla bands) travelled to Perris, specifically to where Perris Lake is now located and sat down. She states that you can see where he sat (Sauvel and Elliot 2004c:1221-1222). Sauvel is probably referring to CA-RIV-62, petroglyph site in the pit and groove style interpreted as the outline of Evon ga net's genitals. The boulder is located in the Bernasconi Pass, 3.1 miles to the north east of the Project Area. Others believe this imprint was left by Tahquitz (Taakwic), an evil spirit which will be discussed in the Luiseño section below (Bean and Vane 1980: 5-17). The boulder was moved from its original location by

road construction (O'Connell eta al 1973:1). Further, she states that her father told her that Cahuilla territory reached all the way to Riverside, which includes the Project Area and all of Menifee Valley, located to the south east of the Project Area (Savel and Elliot 2004a:985). Sauvel also mentions Mystic Lake, an ephemeral fresh water lake that is 8.1 miles to the north east of the Project Area. She relates that her father told her that Kúnvaxmal named areas around the Mystic Lake area although she did not remember the specific Cahuilla name for Mystic Lake (Sauvel and Elliott 2004b:685).

Finally the investigations at the Peppertree site, CA-Riv-463, and other sites in the Lake Perris area, located 2.1 miles to the north east of the Project Area, show that Cahuilla from the Salton Sea area moved to the area approximately 500 years ago (Wilke 1973a, b).

Based on research conducted by Alfred Kroeber from 1903-1907 and published in his seminal work the Handbook of the California Indians in 1925, Kroeber firmly places the Project Area within the traditional territory of the Luiseño (Kroeber 1907, 1908, 1909, 1925: Plate 57) (Figure 7).

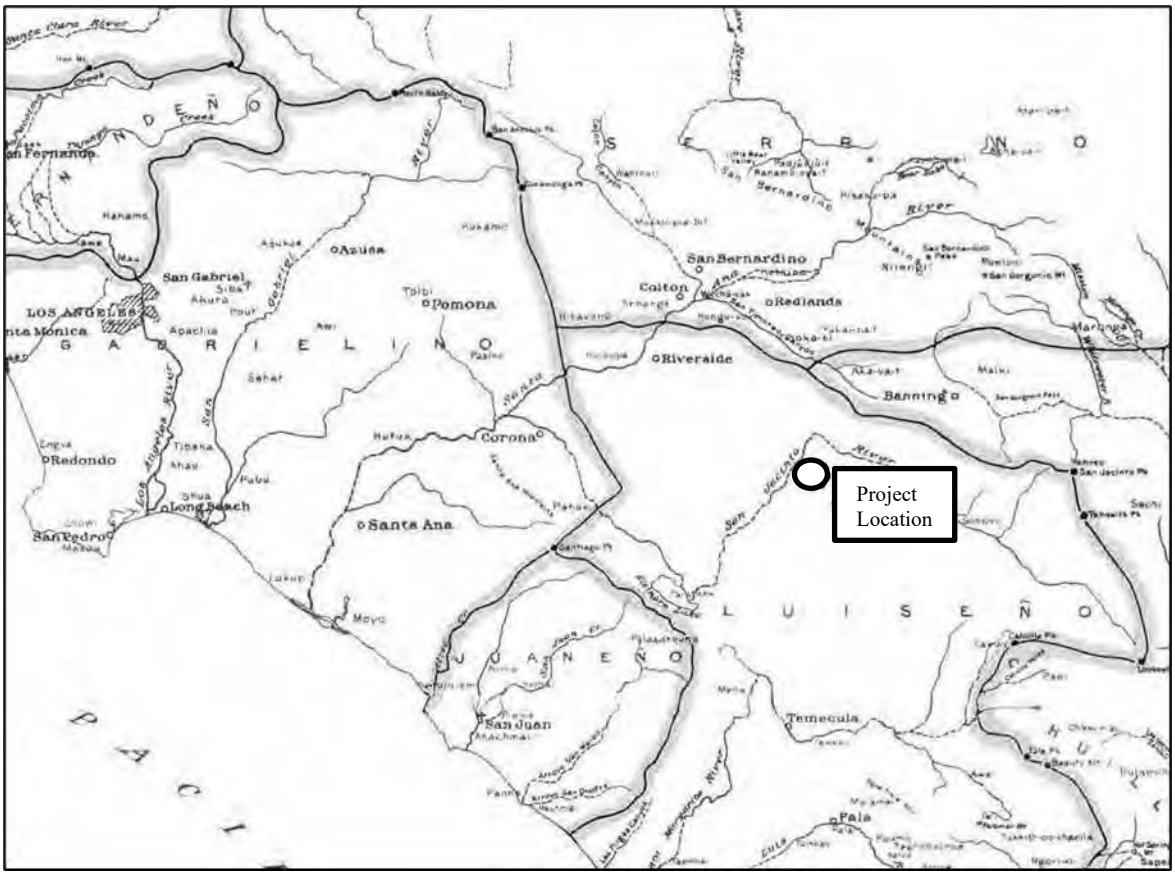

Figure 7. Luiseño territory (from Figure 7 Lerch and Cannon 2008 based on Kroeber 1925 Plate 57)

This is corroborated by the oral histories that have been collected from Luiseño tribal members during the historic period by early anthropologists, linguists, ethnologists, and ethnographers. These stories tell of the importance of Mystic Lake and the village of Paavo' located 5.6 miles to the east of the Project Area, and its relationship to Takwish, an evil spirit known to a number of southern California tribes with many spelling variants (e.g. Tauquitch, Takwich, Tahquitz, Takwic, Takwis, Ta-quich, Dakwish, Chuap) (Gunther 1984:14-15; James 1903; and Cabse 1910).

In 1903, George Wharton James, photographer, journalist and collector of all things California Native American, published a story of a fight between Takwish (spelled Tauquitch in the article) and Algoot, as told to him by Jose Pedro Lucero, a Luiseño. Algoot learns that his son and his friends have gone to challenge Takwish. Algoot goes after the boys only to learn that his son has been killed by Takwish. After training for many months, Algoot challenges Takwish to a fight and Takwish replies, "Fight thee? Yes!...Go you away to the valley where the river of my mountain flows into the lake, and there I will meet and fight you…". Algoot then goes "down into the valley, where Algooton, once called Lakeview, now is" (James 1903:157). During the fight, Takwish throws large granite boulders at Algoot, who picks them up and throws them back at Takwish. "Those who now wander about the San Jacinto and Moreno Valleys will see the piled-up granite boulders there, all of which were thrown by the mountain monster during this terrific conflict" (James 1903:158).

Father William Hughes recorded a variant of the Algoot and Takwish story from Bonefacio Cabse , a Captain of Soboba, in which the spirit of Takwish which took its flight eastward to Pahvoo, the hill southwest of Lakeview, upon which to this day a great green rock may be seen (Cabse 1910). Eddy et al 2014 posits that this area is located in the Bernasconi Hills

Kroeber (1916:34) states that Algooton may be a Spanish misspelling of the Luiseño word alwut which means raven. J.P. Harrington (1933:131), a well-known linguist and early ethnographer, records raven as Qawíi'alwut. Qawíi'alwut is considered a sacred Chinigchinich messenger (DuBois 1908:99). In a variant of the Takwish story from the Pauma Luiseño (spelled Dakwish in the article), Kroeber (1906:318) states that a chief and medicine man named Tukupar (which in Gabrielino means sky), turns himself into a raven in order to enter Dakwish's house.

In a letter prepared by the Pechanga Band of Luiseño Indians (Pechanga) regarding their comments on the Draft Environmental Impact Report (Draft EIR) for the Southern California Edison (SCE) Lakeview Substation Project, they state that the Paavo' and the Lakeview area is significant to their tribal members. According to a traditional song, after the death of Wuyóot, eagle searches for a place where there was no death. Starting at Temecula, he flies north to San Bernardino and then to the east, south, and west then returning to Temecula; probably flying over the Project Area (Hoover 2012).

Additionally, the Pechanga believe that portions of the modern Ramona Expressway, located approximately 1.1 miles north of the Project Area, was part of a large trade and travel route that connected the Luiseño villages of Qaxaalku, Tuu 'uv and Paxavxa in the Mead Valley and Corona areas and over the National Forest mountains to the Pacific Ocean and eastward through the Badlands to lands controlled by the Cahuilla (Hoover 2012).

Finally during discussion with tribal members of the Pechanga for the SCE Devers-Mira Loma 500 kV Transmission Line Route, which included the Perris area, members mentioned the Perris vicinity have several types of cultural resources they felt were important including rock art sites (Bean and Vane 1979: (1979:7-5). The Lake Perris Archaeological District was also identified by Pechanga tribal members as an area of concern.

Conversely, Raymond White states that the consultants that he talked to excluded the Project Area from Luiseño territory and placed it directly in Serrano territory (White 1963:105). He stated that the Luiseño moved into the after 1800. Phillip Drucker (1937), working with Soledad Mojado, a Serrano, stated that the Soboba Indian Reservation and the Project Area was Serrano territory (Figure 8).

Bean and Vane (1979:7-5) also recorded the importance of the Perris area to the San Manuel Band of Mission Indians. They identified the importance of native flora and archaeological sites in the area and that care should be taken to preserve the plants of this traditional gathering area. During conversations with the San Manuel Cultural Resources Department staff for the SCE evaluation of the Lakeview Cultural Landscape, they stated that San Manuel had interest in the Lakeview and surrounding area that had not been previously documented. However, this information was not provided so it is not known if this would have elaborated information that Bean and Vane (1979) had already reported (Martinez 2015).

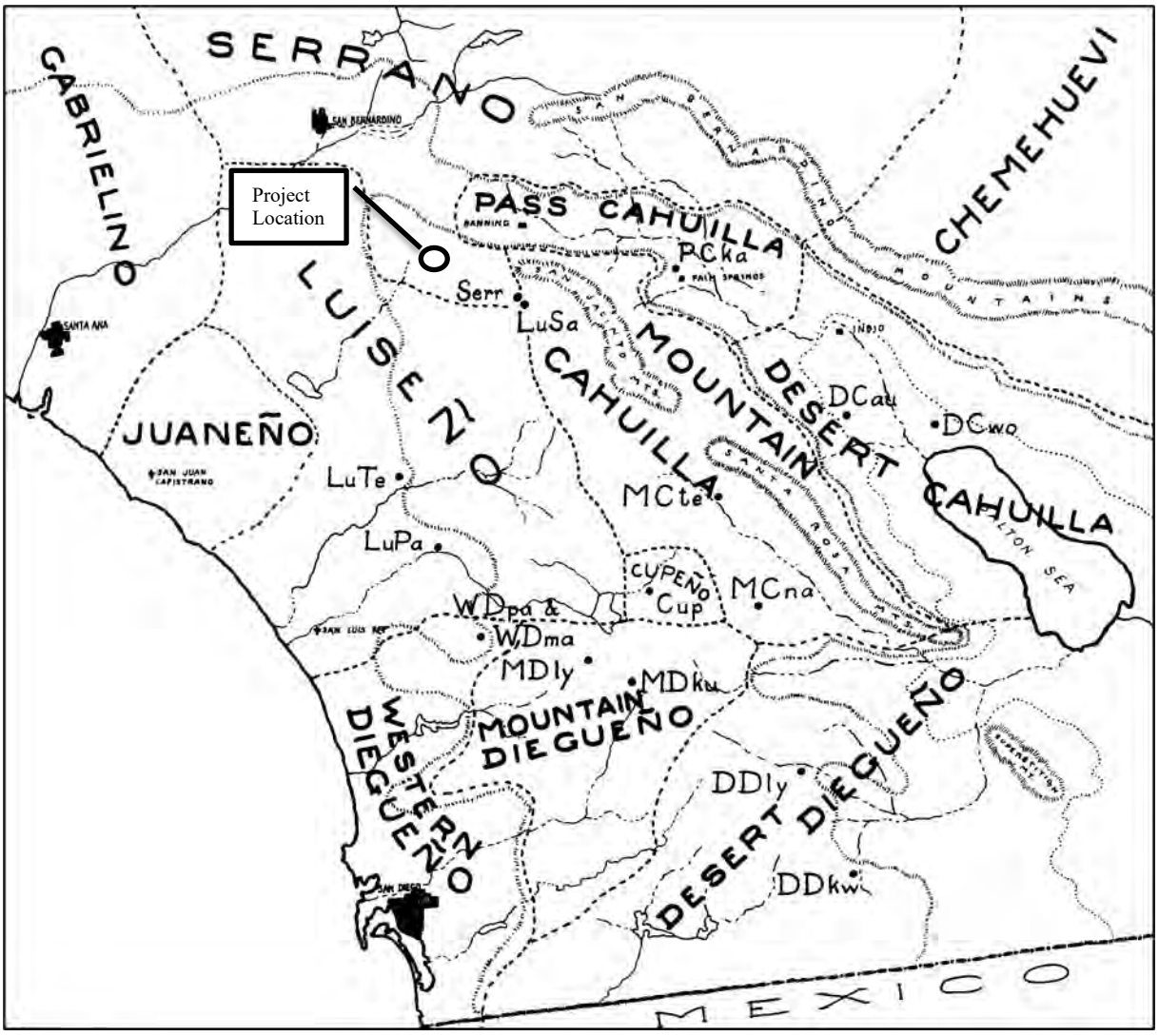

Figure 8. Serrano territory showing approximate location of Project Area (from Drucker 1937: Figure 1)

A cultural boundary map produced by Duncan Strong (1929: Figure 9) in his book Aboriginal Society in Southern California shows the Project Area within Gabrielino territory. However very little evidence has been found that connects the Gabrielino to Project Area. John P. Harrington, was a well-known linguist and ethnographer who collected information from various tribal members during the early 1900s, worked with Adan Castillo, a Cahuilla/Luiseño man who was born on the Soboba reservation (Mills and Brickfield 1986:76-77; Lerch and Cannon 2008:30).. Castillo told Harrington that the name for Mystic Lake, identified as San Jacinto Lake in the Harrington notes, was páyvI, a Gabrielino word. He further stated that the people at Soboba use the Gabrielino word that literally means "where the water stands" (Harrington Papers Reel 113, Frame 740). Why the people at Soboba used a word in the Gabrielino dialect to refer to Mystic Lake is unknown.

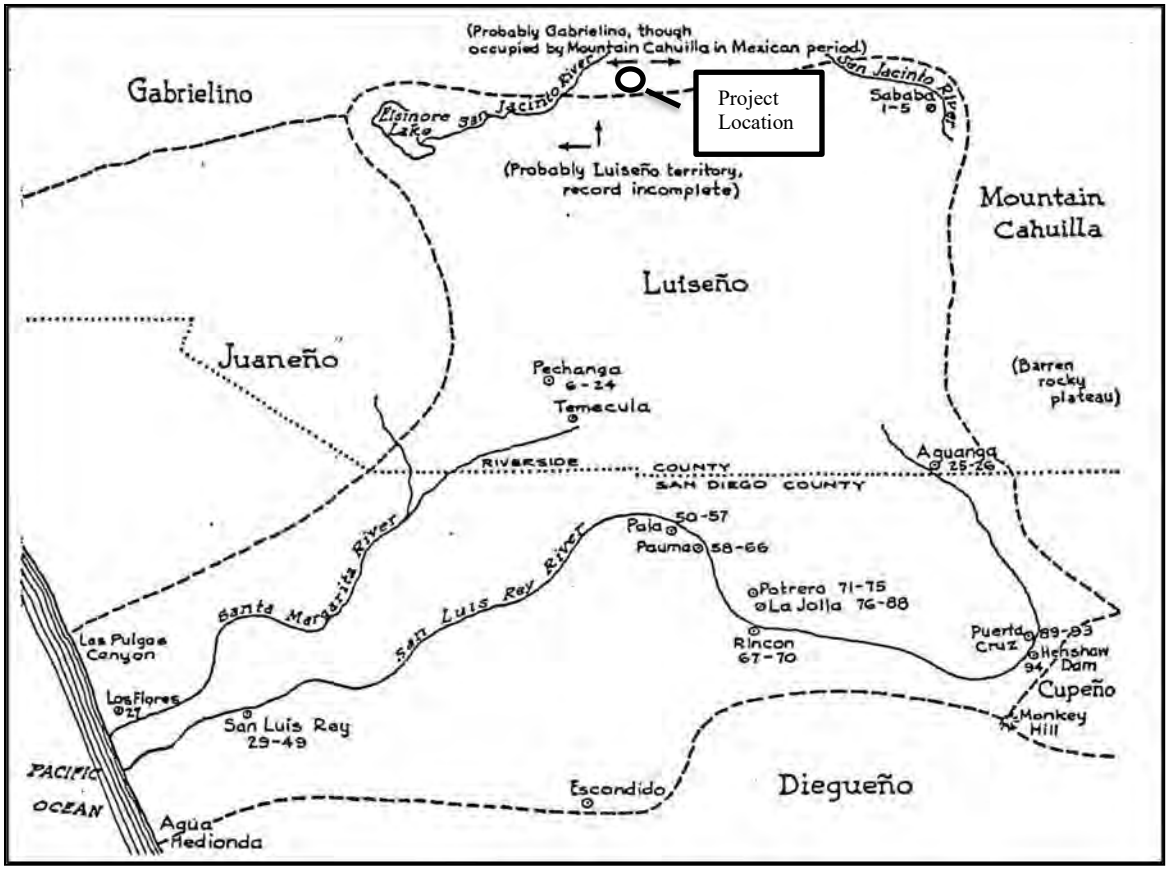

Figure 9. Gabrielino territory showing approximate location of Project Area (from Map 7 in Strong 1929: 275)

Bernice Johnson (1962:21) documented that the Gabrielino had a similar belief in the being Takwish (spelled Takwis) as the Cahuilla and Luiseño, with the story recorded being similar to the story Kroeber (1906) collected from his Pauma Luiseño informant. However there is no mention of his association with the Lakeview/Mystic Lake area.

Overall, the bulk of the archaeological and ethnographic evidence for habitation of the Project Area, best supports four possible options; 1) the area was home to an ancestral population that has since dispersed north to become the Serrano, south to become the Luiseño, west to become the Gabrielino, and east to become the Cahuilla; 2) the area reflects shifting control between regional groups through time, possibly related to periods of environmental stress or abundance; 3) that the Spanish missionary practice of reduccion, gathering tribal members from throughout the area into concentrated villages, left large expanses of territory void, allowing neighboring tribal groups to move into the area during the historic period; or 4) that the Project Area has been used by multiple groups without any exclusive control for a long period of time.

Locating the tribal use of the Project Area is further complicated by Spanish colonization and the displacement of the Native American communities through the American Period. Consequently,

this report recognizes that the Cahuilla, Gabrielino, Luiseño, and Serrano nations have used the Project Area and this section will review the ethnohistorical information for each tribe.

CAHUILLA

The Cahuilla occupied the San Gorgonio Pass (referred to as the Pass Cahuilla), San Jacinto and Santa Rosa Mountains (Mountain Cahuilla), and the Coachella Valley and the northern end of Imperial Valley (Desert Cahuilla). The Cahuilla are linked to other Takic language family groups such as the Serrano and Luiseño, and share many aspects of culture and religion with those tribes.

These peoples spoke the Cahuilla language but each person's primary identity was linked to clan lineage and moiety, rather than tribal affiliation. The two moieties of the Cahuilla were *Istam* (coyote) and *Tuktum* (wild cat). Affiliation was inherited from the father's moiety and members of one moiety had to marry into the other group. Each clan was an independent, politically autonomous land-holding unit (Bean and Saubel 1972, 1978; Strong 1929).

In addition to lineage residence areas and clan territory owned in common with other clan members, each lineage had ownership rights to various food collecting and hunting areas. Individuals also "owned" specific areas rich in plant resources, as well as hunting grounds, rock quarry locations, and sacred spots used only by shamans, healers, and ritual practitioners.

Cahuilla clans varied in size from several family groups to those composed of several thousand people. Clans were generally situated so that each lineage or community was located near a reliable water source and in proximity to significant food resources. Within each community, house structures were spatially placed at some distance from each other. Often a community would spread over a mile or two in distance with each nuclear and extended family having homes and associated structures for food storage and shaded work places (ramadas) for tool manufacture and food processing. Each community also contained a house clan leader.

In more recent times, a ceremonial house (*kishumnawat*) was placed within each community, and most major religious ceremonies of the clan were held there. In addition, house and ceremonial structures, storage granaries, sweat houses, and song houses (for recreational music) were present. Usually an area within one to three miles contained the bulk of materials needed for daily subsistence, although territories of a given clan might be larger, and longer distances were traveled to get precious exotic resources, usually found in the higher elevations of the surrounding mountains.

While most daily secular and religious activities took place within the community, there were locations at some distance from the community where people camped for extended periods to harvest acorns or piñon nuts. Throughout the area, there were sacred places used primarily for rituals, intergroup or inter-clan meetings, caches for sacred materials, and locations for use by

shamans or medicine men. Generally, hilly, rocky areas, cave sites, or walled cave sites were used for temporary camping, storage of foods, fasting by shamans, and as hunting blinds.

Between the mid-1500s and the 1800s, the Cahuilla were variously contacted by Spanish explorers, then Mexican ranchers, and later American settlers. By the mid-1800s, the Cahuilla were fully exposed to new peoples with new cultural ways, opportunities, and constraints. In the 1860s, several epidemics devastated the Cahuilla population and the increasing contact with Europeans continued to have a major impact on their traditional lifeway. Survivors of decimated Cahuilla clans joined villages that were able to maintain their ceremonial, cultural, and economic institutions (Bean 1978). Today there are 2,996 (alone) people who identify as Cahuilla (4,238 in any combination) according to the 2010 United States Census (United States Census Bureau 2006-2010).

LUISEÑO

Luiseño also speak a language of the Cupan group of the Takic subfamily of Uto-Aztecan. Luiseño social structure included complex ranks of shamans and secular leaders who guided the rancheria in community social and political tasks and for successful resource exploitation (White 1963:121). More specific details of Luiseño social structure are difficult to reconstruct due to the effects of missionization. It is clear, however, that Luiseño society was patrilineal and exogamous (White 1963). Certain parcels of land containing oak trees and other food resources traditionally used were generally recognized as belong to a specific lineage (Dubois 1908). It is unclear whether Luiseño lineages formed larger kinship units prior to historic contact.

The integral geographic and sociopolitical unit of the ethnohistoric Luiseño was the rancheria, which included one or more village locations. Abundant natural resources along the valley floor sustained semi-permanent villages whose residents claimed additional lands on Palomar Mountain (Gifford 1918). The traditional settlement pattern consisted of secondary and autonomous village groups, each with specific hunting, collecting, and fishing areas located in diverse ecological zones. Typically these were in valley bottoms, along streams or along coastal strands near mountain ranges (Bean and Shipek 1978:551).

Two or more permanent base camps were used along with number of special purpose camps such as quarry sites, hunting blinds and milling stations (True et al. 1974:78; True and Waugh 1983:109-114). One base camp was the winter village, which was occupied continuously for four to six months annually; this was where most ceremonies took place. Winter villages were generally located in sheltered valleys and often featured pictographs associated with rituals. The other base settlement was the late summer/fall, acorn-gathering and hunting camp, located near oak trees owned by the village group. The entire village lived and worked together in such base camps.

In spring, the winter village group was divided into smaller family groups. These would occupy different areas where fresh vegetables resources were available, or they would go to the coast for shellfish gathering. The spring disaggregation is a normal occurrence in gathering societies. It occurs after winter supplies have been depleted and compensates for the paucity of spring resources. The late summer/fall camps were also subdivisions of the main villages group and were occupied by kin-groups. The major coalescence occurred in the winter villages, after the varied resources were gathered and the subsistence of the village was assured for a period of time.

With respect to precontact Luiseño population estimates, Kroeber (1925:649) opined that 3,000 was a low figure and 4,000 a liberally-allowed maximum. In 1856 The Luiseño numbered; over 2,500; in 1885, 1,142; and 983 in 1914 (cited in Bean and Shipek 1978:558. Today there are 5,067 (alone) people who identify as Luiseño (7,150 in any combination) according to the 2010 United States census (United States Census Bureau 2006-2010).

SERRANO

The name Serrano comes from a Spanish word meaning "mountaineer" or "highlander." The Serrano were nomadic and migratory, and according to lore passed down, they migrated to the cool, pine forests of the San Bernardino Mountains to the west during the summer and returned to the desert regions during the winter. The Serrano language is considered part of the Takic subfamily of the larger Uto-Aztecan language. The Serrano culture area extends from the San Bernardino Mountains south to Yucaipa Valley, east to the Mojave River watershed, and north to the Twentynine Palms region (Bean and Smith 1978:570). Most Serrano village sites were located in the foothills of the upper Sonoran zone with a few outliers located near permanent water sources on the desert floor, or in the forest transition zone.

The Serrano traded with the Mojave to the east and the Gabrielino to the west. They also traded with their close neighbors, the Cahuilla in the San Jacinto and Santa Rosa Mountains, the Banning Pass area, and the greater Coachella Valley. In addition, the Serrano traded with the Chemehuevi who occupied the lower Colorado River region, some of whom migrated westward towards the Project study area.

Prior to European contact, the Serrano were primarily hunters and gatherers. Women were responsible for most of the gathering and acorns, piñon nuts, and mesquite beans were collected as staple foods. Spring cactus fruits and berries were consumed fresh for both food and water. Flower blossoms were roasted and eaten. Yucca blossoms and stalks were blanched before being eaten. Roots were used for food and medicine, and leaves and stems were used for making tea. Digging sticks were frequently used to dig for plants and roots for subsistence and medicinal purposes (Johnston 1965:8). One main seed resource was chia, and stands of chia were periodically burned in order to increase yield. Other major plant foods included mesquite beans and the nuts from piñon pine and acorn. Acorns were leached by placing baskets of pounded and

shelled acorn meal into a sandy hole with just enough water to allow the dissolved tannic acid to seep out. Other plant seeds were parched and made into a mush by boiling or cooking and dropping a heated stone into a water-tight basket filled with seeds and water. Some seeds were dried and stored in baskets. Baskets were made from willow and mesquite branches and woven with bone awls.

Because of their migratory nature, the Serrano and neighboring tribes "cached" many of their possessions and provisions instead of transporting theses often heavy items long distances. These "caches" were guarded by "spirit sticks" that were left upright adjacent to the cache. Today there are 324 (alone) people who identify as Serrano (514 in any combination) according to the 2010 United States Census (United States Census Bureau 2006-2010).

GABRIELINO (TONGVA)

The name Gabrielino is Spanish in origin and was used in reference to the Native Americans associated with the Mission San Gabriel. It is unknown what these people called themselves before the Spanish arrived, but today they call themselves Tongva, meaning "people of the earth".

"Much of the southern California archaeological literature argues that the Gabrielino moved into southern California from the Great Basin around 4,000 Before Present (B. P.), "wedging" themselves between the Hokan-speaking Chumash, located to the north, and the Yuman-speaking Kumeyaay, located to the south (see Sutton 2009 for the latest discussion). This Shoshonean Wedge, or Shoshonean "intrusion" theory, is counter to the Gabrielino community's knowledge about their history and origins. Oral tradition states that the Gabrielino have always lived in their traditional territory, with their emergence into this world occurring at Puvungna, located in Long Beach" (Martinez and Teeter 2015:26).

The Tongva speak a language that is part of the Takic language family and at the time of Spanish contact, their territory encompassed a vast area stretching from Topanga Canyon in the northwest, to the base of Mount Wilson in the north, to San Bernardino in the east, Aliso Creek in the southeast and the Southern Channel Islands, in all an area of more than 2,500 square miles (Bean and Smith 1978, McCawley 1996). At European contact, the tribe consisted of more than 5,000 people living in various settlements throughout the area. Some of the villages could be quite large, housing up to 150 people.

The Tongva are considered to have been one of the wealthiest tribes and to have greatly influenced tribes they traded with (Kroeber 1925:621). Houses were domed and circular structures thatched with tule or similar materials (Bean and Smith 1978:542). The best known artifacts were made of steatite and were highly prized. Many common everyday items were decorated with inlaid shell or carvings reflecting an elaborately developed artisanship (Bean and Smith 1978:542).

The main food zones utilized were marine, woodland, and grassland (Bean and Smith 1978). Plant foods were, by far, the greatest part of the traditional diet at contact. Acorns were the most important single food source. Villages were located near water sources necessary for the leaching of acorns, which was a daily occurrence. Grass seeds were the next most abundant plant food used along with chia. Seeds were parched, ground, and cooked as mush in various combinations according to taste and availability. Greens and fruits were eaten raw or cooked or sometimes dried for storage. Bulbs, roots, and tubers were dug in the spring and summer and usually eaten fresh. Mushrooms and tree fungus were prized as delicacies. Various teas were made from flowers, fruits, stems and roots for medicinal cures as well as beverages (Bean and Smith 1978:538-540).

The principal game animals were deer, rabbit, jackrabbit, woodrat, mice, ground squirrels, antelope, quail, dove, ducks and other birds. Most predators were avoided as food, as were tree squirrels and most reptiles. Trout and other fish were caught in the streams, while salmon were available when they ran in the larger creeks. Marine foods were extensively utilized. Sea mammals, fish and crustaceans were hunted and gathered from both the shoreline and the open ocean, using reed and dugout canoes. Shellfish were the most common resource, including abalone, turbans, mussels, clams, scallops, bubble shells, and others (Bean and Smith 1978:538-540).

Today there are 1814 (alone) people who identify as Tongva (2,903 in any combination) according to the 2010 United States Census (United States Census Bureau 2006-2010).

HISTORIC SETTING

EARLY CALIFORNIA HISTORY

Juan Cabrillo was the first European to sail along the coast of California in 1542 and was followed in 1602 by Sebastian Vizcaino. Between 1769 and 1821 the Spanish had colonized California and established missions, presidios and pueblos (Bean and Rawls 1993).

In 1821, Mexico won its independence from Spain and worked to lessen the wealth and power held by the missions. The Secularization Act was passed in 1833, giving the vast mission lands to the Mexican governor and downgrading the missions' status to that of parish churches. The governor then redistributed the former mission lands in the form of grants, to private owners. Ranchos in California numbered over 500 by 1846, all but approximately 30 of which resulted from land grants (Bean and Rawls 1993).

The Project Area is within the San Jacinto Nuevo y Potrero land grant (Figure 10) that was given in 1845 by Governor Pio Pico to Jose Antonio Estudillo a high positioned administrator to Mission San Luis Rey. At the time this area was a part of San Diego County. In 1846, the land grant was given to Don Miguel De Pedrorena, a Spanish-born, high status gentleman who

married Maria Antonia Estudillo daughter of Jose Antonio Estudillo (San Diego History Center, 2021).

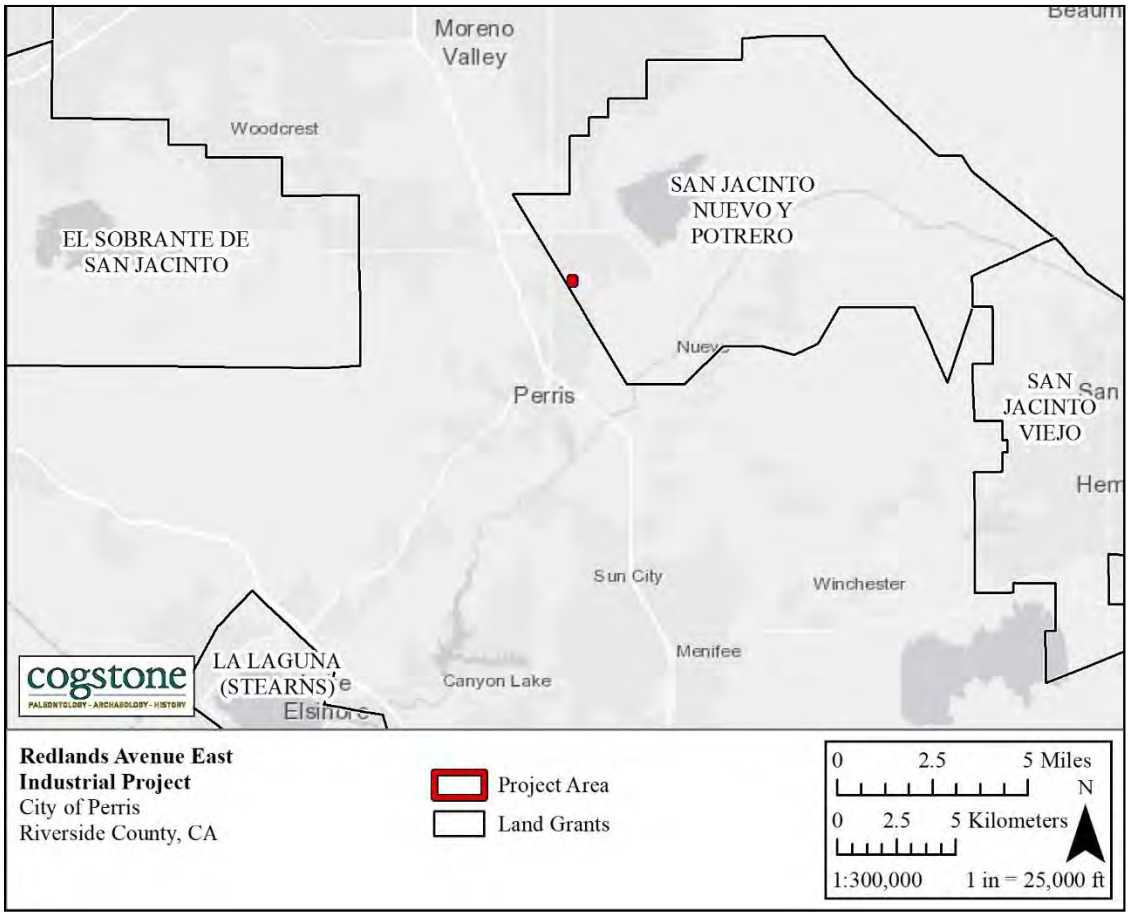

Figure 10. Land grant map

The Mexican-American War followed on the heels of the Bear Flag Revolt of June 1846 (Ohles 1997). General Andrés Pico and John C. Frémont signed the Articles of Capitulation in December 1847, and with the signing of the Treaty of Guadalupe Hidalgo in February 1848, hostilities ended and Mexico relinquished California to the United States. Under the treaty, Mexico ceded the lands of present-day California, New Mexico and Texas to the U.S. for $15 million (Fogelson 1993:10). Within two years following the treaty, California applied for admission as a state.

HISTORY OF THE CITY OF PERRIS

Prior to the 1880's, the Perris Valley was known as the San Jacinto Plains after the river that crosses it. Historic land use was primarily ranching, but mines were also present, including gold, tin, coal and clay. With the completion of the California Southern Railroad in 1882, settlers began flocking to the valley staking out homesteads.

By 1885 land for a new town was purchased from the Southern Pacific Railroad. The citizens offered to erect a depot, dig a well, and donate a number of lots to the railroad in exchange for establishing a station at the new town. The town site of Perris was officially named a station on the Transcontinental Route of the Santa Fe on April 1, 1886 and by 1887, six passenger trains and two freight trains stopped at Perris daily. This rapid growth proved short-lived when heavy storms repeatedly washed out the tracks in the Temecula Gorge in the early 1890s, causing the railroad to abandon service to San Diego by way of Perris.

In 1911 Perris became an incorporated city. While the railroad had played an important part in establishing the new town, the people now turned to agriculture for their future development. Because of limited groundwater, dry grain farming was the main crop before water was brought to the valley by the Eastern Municipal Water district in the early 1950s. Alfalfa, the King potato (which would produce two crops a year), and still later, sugar beets became the mainstay of farming the Perris Valley. With the construction of Lake Perris in the late 1960s and early 1970s Perris became attractive as a recreational area. Local attractions such as activities at the Lake, hot air ballooning, Orange Empire Railway Museum and skydiving are attracting international recognition (City of Perris n.d.).

PROJECT AREA HISTORY

The earliest historical topographic map for the Project Area is the 1901 Elsinore (1:125,000) USGS historical topographic map which shows no development within the Project Area. No development is depicted in the Project Area on later USGS quadrangle maps including the 1983 (Santa Ana; 1:100,00) the most recent map for the area.

The earliest available United States Department of Agriculture (USDA) historic aerial photograph dates to 1966 and shows no visible structure development but shows the Project Area being utilized as agricultural (NETROnline 1966). USDA aerial photographs from 1978 and 1997 indicate that unpaved roads are created within the Project Area and a building is constructed in the southwest corner of the Project Area between when these two photographs were taken (NETROnline 1978; 1997). USDA aerial photographs from 2002 and 2005 show more building development occurs east/southeast of Project Area between when these two photographs were taken (NETROnline 2002; 2005). The 2010 USDA historic aerial photograph shows most of buildings at south end of Project Area have been demolished (NETROnline 2010). The 2012 USDA aerial photograph shows concrete construction pad in southwest portion Project Area (NETROnline 2012).

RECORDS SEARCH

PALEONTOLOGICAL RECORD SEARCH

A paleontological records search for the Project was conducted by the Western Science Center (Radford 2021; Appendix B). Published literature along with online databases were also reviewed for fossil localities in the area including Springer et al. (2009, 2010), Jefferson (1991a, 1991b), the University of California Museum of Paleontology (UCMP) database (2021), and the PaleoBiology (PBDB) online database (2021).

RECORDS AND LITERATURE SEARCH RESULTS

Late Pleistocene (129,000 to 11,700 years old) sediments that are younger than those found within the proposed Project, but are similar in age to those at the Rancho La Brea "tar pits" in Los Angeles, have produced fossils nearby. The results of the record search showed that no fossils were recovered from the proposed Project Area, or within a one mile radius. However, late Pleistocene fossils were found in association with the Diamond Valley Reservoir and San Diego Pipeline 6/ Salt Creek Channel projects in southern Hemet, California, between 10 and 15 miles southeast of the current Project (Radford 2021, 2020). Thousands of Pleistocene fossils representing California turkey (1†*Meleagris californica*), ground sloths (†*Megalonyx jeffersonii*, †*Nothrotheriops shastensis*, †*Paramylodon harlani*), sabre-toothed cat (†*Smilodon fatalis*), dire wolf (†*Canis dirus*), short-faced bear (†*Arctodus* sp.), horses (†*Equus conversidens*, †*Equus occidentalis*), stilt-legged llama (†*Hemiauchenia macrocephala*), yesterday's camel (†*Camelops hesternus*), flat-headed peccary (†*Platygonus compressus*), diminutive pronghorn (†*Capromeryx minor*), bison (†*Bison antiquus*, †*Bison latifrons*), Pacific mastodon (†*Mammut pacificus*), and Columbian mammoth (†*Mammuthus columbi*) were recovered from this project (Springer et al. 2009, 2010; Table 1).

Table 2. Pleistocene fossils from the Diamond Valley Reservoir and San Diego Pipeline 6/ Salt Creek Channel projects

Group	Common Name	Vertebrate Taxon
amphibians	salamander	Urodela
	western spadefoot toad	*Scaphiopus hammondii*
	likely western toad	*Anaxyrus* sp. Cf. *A. boreas*
	likely California treefrog	*Pseudacris* sp. cf. *P. cadaverina*
reptiles	pond turtle	*Actinemys* sp.
	Desert tortoise	‡*Gopherus agassizii*
	whiptailed lizard	*Aspidoscelis tigris*

[1] † - the taxon is extinct, although there may be living relatives in same genus or family

	alligator lizard	*Elgaria* sp.
	Collared lizard	*Crotaphytus collaris*
	coast horned lizard	*Phrynosoma coronatum*
	likely sagebrush lizard	*Sceloporus* sp. cf. *S. graciosus*
	western fence lizard	*Sceloporus occidentalis*
	side-blotched lizard	*Uta stansburiana*
	iguana	Iguanidae
	kingsnake	*Lampropeltis* sp.
	Whipsnake	*Masticophis* sp.
	Pine snake	*Pituophis melanoleucus*
	blackhead snake	*Tantilla* sp.
	Garter snake	*Thamnophis* sp.
	Likely sidewinder	*Crotalus* sp. cf. *C. cerastes*
	rattlesnake	*Crotalus* sp.
Birds	duck	*Anas* sp.
	California turkey	†*Meleagris californica*
	golden eagle	*Aquila chrysaetos*
	likely Cooper's hawk	*Accipiter* sp. cf. *A. cooperi*
	falcon	*Falco* sp.
	Shore bird	Scolopacidae
	likely short-eared owl	*Asio* sp. cf. *A. flammeus*
	northern flicker	*Colaptes auratus*
	Steller's jay	*Cyanocitta stelleri*
	common raven	*Corvus corax*
	raven	Corvidae
	swallow	cf. *Hirundo* sp.
	Swallow	Hirundinidae
	likely American robin	cf. *Turdus migratorius*
	likely western meadowlark	cf. *Sturnella neglecta*
mammals	Jefferson's ground sloth	†*Megalonyx jeffersonii*
	Shasta's ground sloth	†*Nothrotheriops shastensis*
	Harlan's ground sloth	†*Paramylodon harlani*
	black-tailed jackrabbit	*Lepus californicus*
	desert cottontail	*Sylvilagus audubonii*
	antelope ground squirrel	‡*Ammospermophilus* sp.
	California ground squirrel	*Otospermophilus beecheyi*
	ground squirrel	*Otospermophilus* sp.
	Beechey's ground squirrel	*Eutamius* sp.
	Kangaroo rat	*Dipodomys* sp.
	Pocket mouse	*Perognathus* sp.
	Botta's pocket gopher	*Thomomys bottae*
	California meadow vole	*Microtus californicus*
	dusky-footed wood rat	*Neotoma fuscipes*
	desert wood rat	*Neotoma lepida*
	likely canyon mouse	*Peromyscus* sp. cf. *P. crinitus*
	harvest mouse	*Reithrodontomys* sp.
	Ornate shrew	*Sorex ornatus*

	broad-footed mole	*Scapanus latimanus*
	mouse-eared bat	*Myotis* sp.
	Bobcat	*Lynx rufus*
	sabre-toothed cat	†*Smilodon fatalis*
	coyote	*Canis latrans*
	dire wolf	†*Canis dirus*
	grey fox	*Urocyon cinereoargenteus*
	likely short-faced bear	cf. †*Arctodus sp.*
	Black bear	‡*Ursus americanus*
	skunk	*Mephitis* sp.
	Long-tailed weasel	*Mustela frenata*
	badger	*Taxidea taxus*
	Mexican ass	†*Equus conversidens*
	western horse	†*Equus occidentalis*
	stilt-legged llama	†*Hemiauchenia macrocephala*
	yesterday's camel	†*Camelops hesternus*
	flat-headed peccary	†*Platygonus compressus*
	diminutive pronghorn	†*Capromeryx minor*
	pronghorn	‡*Antilocapra americana*
	mule deer	*Odocoileus hemionus*
	antique bison	†*Bison antiquus*
	long-horned bison	†*Bison latifrons*
	Pacific mastodon	†*Mammut pacificus*
	Columbian mammoth	†*Mammuthus columbi*

Notes and Abbreviations:
† = the taxon is extinct, although there may be living relatives in same genus or family
‡ = animal extirpated
sp. = genus certain but species uncertain
cf. = compares favorably with or likely
From Springer et al. (2009, 2010)

CALIFORNIA HISTORIC RESOURCES INFORMATION SYSTEM

Cogstone requested a search of the California Historic Resources Information System (CHRIS) from the Eastern Information Center (EIC) on October 9, 2021, that included the entire proposed Project Area as well as a half-mile radius. The EIC completed the request on January 26, 2021. Results of the record search indicate that 21 previous studies have been completed within half-mile of the proposed Project Area including three that included the Project Area (Table 3).

Table 3. Previous cultural resource studies

Report No. (RI-)	Authors	Title	Year	Distance (miles) from Project Area
00572	William H. Breece	Cultural Resource Survey of the Metro Park Project Proposed Race-Track, Riverside County, California	1979	0-0.25
00573	Christopher E. Dover	Environmental Impact Evaluation: An Archaeological Assessment of Tentative Tract 20,538 Near Perris, Riverside County, California	1984	0-0.5
01886	Drover, Christopher E.	An Archaeological Assessment of a Planned Residential Development at the intersection of Orange Ave and Murrieta Road, Perris, California	1984	0.25-0.5
02323	Scientific Resource Surveys, Inc.	Archaeological Assessment Form: May Project	1988	0.25-0.5
02340	Drover, C.E.	A Cultural Resource Inventory – New Horizons Project-Perris, California	1988	0.25-0.5
04404	Jones and Stokes Associates, Inc.	Final Cultural Resources Inventory Report for the Williams Communications, Inc, Fiber Optic Cable System Installation Project, Riverside to San Diego, California Vol I-IV.	2000	0.25-0.5
05027	Jeanette A. McKenna	A Phase I Cultural Resources Investigation of the Vesta Telecommunications, Inc. Fiber Optic Alignment, Riverside County to San Diego County, California	2000	0.25-0.5
05549	Applied Earthworks	Phase I Cultural Resources Survey of the Rider Street Improvements Project, City of Perris, Riverside County, CA	2004	0.25-0.5
06837	Hooper, Anna M., Kristie R. Blevins, Leslie Nay Irish, and William R. Gillean	A phase I Archaeological Records Search and Survey Report on APN 306-380-023, +-2.5 Acres, Wilson Avenue, City of Perris, Riverside County, California	2006	Within
06956	Bholat, Sara	Cultural Resources Survey, of a 1.9 Acre Parcel, (APN-303-275-036), Perris, Riverside County, California.	2007	0.25-0.5
07133	Moreno, Adrian Sanchez	Archaeological Survey Report for Southern California Edison Company: Sentrex Street Light Relocation Project Located on the Harrier 12kV Circuit, Riverside County, California (WO#6677-4054, AI#R6733)	2007	0-0.25
07491	McKenna, Jeanette A.	A Phase I Cultural Resources Investigation for the Proposed West End Middle School in the City of Perris, Riverside County, California	2007	0-0.25
07538	Tang, Bai "Tom", Michael Hogan, Clarence Bodmer, Josh Smallwood, and Melissa Hernandez	Cultural Resources Technical Report, North Perris Industrial Specific Plan, City of Perris, Riverside County, California	2007	Within

Report No. (RI-)	Authors	Title	Year	Distance (miles) from Project Area
08793	Wayne H. Bonner, Sarah A. Williams, and Kathleen A. Crawford	Cultural Resources Records Search and Site Visit Results for Sprint Nextel Candidate RV75XC117 (Bunker Hill Sub)	2011	0.25-0.5
09471	Riordan Goodwin	Cultural Resource Assessment Perris Estates Project City of Perris County of Riverside, California	2016	0.25-0.5
09621	Heather R. Puckett	Cultural Resources Summary for the Proposed Verizon Wireless, Inc., Property at the Periwinkle Site, 57 Business Park Drive, Perris, Riverside County, California 92571	2014	0.25-0.5
09756	Hannah Haas, Robert Ramirez, and Kevin Hunt	City of Perris Valley Storm Channel Trail Project Cultural Resource Study	2015	0.25-0.5
10199	Phil Fulton	Discovery and Monitoring Plan for the Mid County Parkway	2014	Within
10712	Porras, P. and B. Vargas	Cultural Resources Study for the Proposed Mobile Home Park, Perris, California	2018	0.25-0.5
10787	Brian F. Smith and Associates	Cultural Resources Monitoring Report for the Rider Distribution Center I Project, DPR No. 06-0635, City of Perris, Riverside County, California	2018	0.25-0.5
10788	Brian F. Smith and Associates	Cultural Resources Monitoring Report for the Rider Distribution Center III Project, PM 35268, City of Perris, Riverside County, California	2018	0.25-0.5

The records search also determined no previously recorded resources are located within the Project boundaries. Six cultural resources, all historic built environment resources, are located within one-half mile of the Project Area (Table 4).

Table 4. Known cultural resources located within one-half mile of Project Area

Primary No. P-33-	Trinomial No. CA-RIV-	Resource Type	Resource Description	Date Recorded	Distance to Project Area
007641	--	Historic-era Site	Single family property, Farm	1982	0.25-0.5
007659	--	Historic Building	Standing structure, Military property	1982	0.25-0.5
011265	006726H	Historic Structure	Colorado River Aqueduct-Old Aqueduct Road	2000, 2001, 2003, 2005, 2008, 2009, 2011, 2016	0-0.5
028896	--	Historic-era Site	Water conveyance system	2019	0-0.25
029117	--	Historic Structure	Wells/Cistern	2020	0-0.25

Primary No. P-33-	Trinomial No. CA-RIV-	Resource Type	Resource Description	Date Recorded	Distance to Project Area
029118	013010	Historic-era Site	Water conveyance system	2020	0.25-0.5

OTHER SOURCES

In addition to the EIC records search, a variety of sources were consulted in March 2021 to obtain information regarding the cultural context of the Project Area (Table 5). Sources included the National Register of Historic Places (NRHP), the California Register of Historic Resources (CRHR), California Built Environment Resource Directory (BERD), California Historical Landmarks (CHL), and California Points of Historical Interest (CPHI). Specific information about the Project Area, obtained from historic-era maps and aerial photographs, is presented in the Project Area History section.

Table 5. Additional sources consulted

Source	Results
National Register of Historic Places (NRHP)	Negative
Historic USGS Topographic Maps	see Project Area History
Historic US Department of Agriculture Aerial Photographs	see Project Area History
California Register of Historical Resources (CRHR)	Negative
California Built Environment Resource Directory (BERD)	Negative
California Historical Landmarks (CHL)	Negative
California Points of Historical Interest (CPHI)	Negative
Caltrans Historic Bridge Inventory (2016)	Negative
Bureau of Land Management (BLM) General Land Office Records	Negative

HISTORICAL SOCIETY REQUEST FOR INFORMATION

A total of three historical societies were consulted for information regarding the Project. As of July 7, 2021 no responses have been received. A summary of the consultation attempts is with each party is located in Appendix C.

SACRED LANDS FILE SEARCH AND NATIVE AMERICAN SCOPING

Cogstone requested a Sacred Lands File (SLF) search from the Native American Heritage Commission (NAHC) on April 13, 2021. The NAHC responded on April 27, 2021, with a negative SLF search result (Appendix D). The NAHC recommended that 21 Native American tribal organizations and individuals be contacted for further information regarding the Project vicinity. Cogstone sent Native American scoping letter to these 21 Native American tribal organizations and individuals on April 28, 2021, via United States Postal Service certified mail (Appendix D). Follow up emails were sent on May 17, 2021 and follow up telephone calls were

made on June 7-8, 2021. The City of Perris is conducting consultations to meet the requirements of Assembly Bill 52 (AB 52).

As of August 2, 2021, seven tribes have responded to the scoping letters.

- On June 1, 2021, Lacy Padilla, archaeologist of the Agua Caliente Band of Cahuilla Indians Tribal Historic Preservation Office responded and noted that Project is within the Tribe's traditional use area ,and requested the record search results and report for the Project. The record search results were sent to the Tribe on June 17, 2021.
- On June 7, 2021, administrator for the Augustine Band of Mission Indians answered the telephone call and asked to forward a copy of the scoping letter to info@augustine-nsn.gov. The letter was sent to the requested email address.
- On June 7, 2021, Bobby Esparza, California Cultural Department with the Cahuilla Band of Mission Indians of the Cahuilla Reservation, responded that their group is interested in the Project and would like to have monitors during all ground disturbances.
- On May 11, 2021, Cheryl Madrigal, Tribal Historic Preservation Officer (THPO) for Rincon Band of Mission Indians replied by email indicating the Tribe has no knowledge of cultural resources within the proposed Project Area and requested the archaeological record search results. On May 13, 2021 Cogstone replied that no prehistoric or archaeological cultural resources were identified by the record search.
- On June 8, 2021, Ms. Suzette Hernandez, Liaison for Rincon Band of Mission Indians California, asked for the letter to be sent to her letter to her and Ms. Suzette will forward to the cultural department on behalf of Chairperson Bo Mazzetti. The letter was sent as requested.
- On June 8, 2021, Vivian Hamilton responded on behalf of Santa Rosa Band of Cahuilla Indians, California Chairperson Lovina Redner with no comments.
- On June 8, 2021, Joseph Ontiveros, Cultural Resources Department of the Soboba Band of Mission Indians responded with concerns and requested a consultation with the lead agency to disclose information.
- On May 5, 2021, Jill McCormick, Historic Preservation Officer of the Quechan Tribe of the Fort Yuma Reservation replied by electronic mail that the Tribe has no comments and defers to more local tribes.

SURVEY

METHODS

The survey stage is important in a Project's environmental assessment phase to verify the exact location of each identified cultural resource, the condition or integrity of the resource, and the proximity of the resource to areas of cultural resources sensitivity. All undeveloped ground surface areas within the ground disturbance portion of the Project Area were examined. Existing ground disturbances (e.g., cutbanks, ditches, animal burrows, etc.) were visually inspected. Photographs of the Project Area, including ground surface visibility and items of interest, were taken with a digital camera.

For paleontological resources, the purpose is to confirm that field observations conform to the geological maps of the Project Area. Sediments were assessed for their potential to contain fossils. Additionally, if there are known paleontological resources the survey will verify the exact location of those resources, the condition or integrity of each resource, and the proximity of the resource to the Project Area.

For cultural resources, the purpose is to verify the exact location of each identified resource, the condition or integrity of the resource, and the proximity of the resource to areas of cultural resources sensitivity, if any. The surveyor searched for artifacts (e.g., flaked stone tools, tool-making debris, stone milling tools, or fire-affected rock), soil discoloration that might indicate the presence of a cultural midden, soil depressions, and features indicative of the former presence of structures or buildings (e.g., postholes, foundations), or historic-era debris (e.g., metal, glass, ceramics).

RESULTS

Cogstone archaeologist and cross-trained paleontologist Sandy Duarte surveyed the Project Area on April 1, 2021. The Project Area has been heavily disturbed with clearing, rock base hardscaping as well as concrete driveways at street entrance. The intensive pedestrian survey consisted of two to three meter wide transects. Ground visibility within the Project Area was generally poor (approximately 20 percent) due to vegetation overgrowth (Figures 11, 12). Much of the area was covered in grass, weeds, and modern refuse. Where visible, surficial sediments primarily consisted of yellowish-brown sandy silts, consistent with geologic mapping by Morton and Miller (2006) (Figure 13). No cultural or paleontological resources were observed.

Figure 11. Overview from southeast corner of Project Area, facing west

Figure 12. Overview from northwest corner of the Project Area, facing east

Figure 13. Surficial sediments within Project Area

IMPACT ANALYSIS

PALEONTOLOGICAL SENSITIVITY

A multilevel ranking system was developed by professional resource managers within the Bureau of Land Management (BLM) as a practical tool to assess the sensitivity of sediments for fossils. The Potential Fossil Yield Classification (PFYC) system (BLM 2016; Appendix E) has a multi-level scale based on demonstrated yield of fossils. The PFYC system provides additional guidance regarding assessment and management for different fossil yield rankings.

Fossil resources occur in geologic units (e.g., formations or members). The probability for finding significant fossils in a project area can be broadly predicted from previous records of fossils recovered from the geologic units present in and/or adjacent to the study area. The geological setting and the number of known fossil localities help determine the paleontological sensitivity according to PFYC criteria.

Sediments that are close to their basement rock source are typically coarse; those farther from the basement rock source are finer. The chance of fossils being preserved greatly increases once the average size of the sediment particles is reduced to 5 millimeters in diameter or less. Moreover, fossil preservation also greatly increases after natural burial in rivers, lakes, or oceans. Remains left on the ground surface become weathered by the sun or consumed by scavengers and bacterial activity, usually within 20 years or less. So the sands, silts, and clays of rivers, lakes, and oceans are the most likely sediments to contain fossils.

Using the PFYC system, geologic units are classified according to the relative abundance of vertebrate fossils or scientifically significant invertebrate or plant fossils and their sensitivity to adverse impacts within the known extent of the geological unit. Although significant localities may occasionally occur in a geologic unit, a few widely scattered important fossils or localities do not necessarily indicate a higher PFYC value; instead, the relative abundance of localities is intended to be the major determinant for the value assignment.

Based on other recorded localities, Pleistocene fossils typically begin appearing about 8 to 10 feet deep in California valleys. Shallower sediments in the valleys usually do not contain the remains of extinct animals, although Holocene (less than 11,700 years old) remains may be present. The middle to early Pleistocene very old alluvial fan deposits are assigned different sensitivities depending on how deep the impacts are. As per this study and the Riverside County General Plan, impacts less than four feet below the original ground surface in areas mapped as very old alluvial fan deposits and the young alluvial valley deposits are given a low sensitivity (PFYC 2) while deeper sediments have a moderate sensitivity (PFYC 3).

CULTURAL SENSITIVITY

Based on the results of the pedestrian survey, the cultural records search, and the negative SLF search, the Project Area has low sensitivity for prehistoric cultural resources. Analysis of these data sources and historical USDA aerial photographs indicate that the Project Area also has low sensitivity for buried historical archaeological features such as foundations or trash pits. No further cultural resources work is recommended.

CONCLUSION AND RECOMMENDATIONS

PALEONTOLOGY

Based upon recorded fossil locality data in and near the Project Area, impacts less than four feet below the original ground surface in areas mapped as very old alluvial fan deposits and young alluvial valley deposits are here assigned a low paleontological sensitivity (PFYC 2) while deeper sediments have moderate sensitivity (PFYC 3).

At present, based upon the anticipation of impacts to the very old alluvial fan deposits and the young alluvial valley deposits within the Project Area, a Paleontological Resources Impact Mitigation Plan should be developed and implemented, which should include development of a paleontology Worker Environmental Awareness Program (WEAP) and paleontological monitoring.

In the event of an unanticipated discovery, all work must be suspended within 25 feet of the find until a qualified paleontologist can evaluate the find and make recommendations.

CULTURAL

No cultural resources were identified within the Project Area during the intensive pedestrian survey or during any previous investigations. In addition, the CHRIS and SLF searches conducted in support of the Project indicate that no cultural or tribal resources have been previously recorded within the Project Area. These negative findings along with a review of historic USDA aerial photographs indicate that the potential for subsurface cultural resource deposits is low. No further cultural resources work is recommended for the Project.

In the event of an unanticipated discovery, all work must be suspended within 50 feet of the find until a qualified archaeologist evaluates it. In the unlikely event that human remains are encountered during project development, all work must cease near the find immediately.

In accordance with California Health and Safety Code Section 7050.5, the County Coroner must be notified if potentially human bone is discovered. The Coroner will then determine within two working days of being notified if the remains are subject to his or her authority. If the Coroner recognizes the remains to be Native American, he or she shall contact the Native American Heritage Commission (NAHC) by phone within 24 hours, in accordance with Public Resources Code Section 5097.98. The NAHC will then designate a Most Likely Descendant (MLD) with respect to the human remains. The MLD then has the opportunity to recommend to the property owner or the person responsible for the excavation work means for treating or disposing, with appropriate dignity, the human remains and associated grave goods. Work may not resume in the vicinity of the find until all requirements of the health and safety code have been met.

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APPENDIX A. QUALIFICATIONS

cogstone
PALEONTOLOGY - ARCHAEOLOGY - HISTORY

MOLLY VALASIK
QA/QC

EDUCATION

2009 M.A., Anthropology, Kent State University, Kent, Ohio
2006 B.A., Anthropology, Ohio State University, Columbus, Ohio

SUMMARY OF QUALIFICATIONS

Ms. Valasik is a Registered Professional Archaeologist (RPA) with more than 12 years of experience. She is a skilled professional who is well-versed in the compliance procedures of CEQA and Section 106 of the NHPA and regularly prepares cultural resources assessment reports for a variety of federal, state, and local agencies throughout California. Ms. Valasik has managed a variety of projects at Cogstone in the water, transportation, energy, development, and federal sectors. She meets the qualifications required by the Secretary of the Interior's *Standards and Guidelines for Archaeology and Historic Preservation*. She is accepted as a principal investigator for prehistoric archaeology by the State Office of Historic Preservation's Information Centers.

SELECTED EXPERIENCE

Creekside Specific Plan, City of San Juan Capistrano, Orange County, CA. Cogstone conducted a study to determine the potential impacts to cultural and paleontological resources for the proposed demolition of an existing 123,000 square-foot building and construction of 188 residential units on 15.3 acres. Services included records searches, background research, and an intensive-level pedestrian survey. Based on the results of the record search and ethnographic data, it was found likely that substantive archaeological deposits exist. The project area was considered moderately sensitive for cultural and paleontological resources and archaeological and paleontological monitoring during all ground-disturbing activities was recommended. The City of San Juan Capistrano acted as lead CEQA agency. Sub to PlaceWorks. Principal Investigator for Archaeology. 2019-2020

Fire Station 172 Project, Rancho Cucamonga Fire Protection District, San Bernardino County, CA. Cogstone determined the potential effects of paleontological, archaeological, and historical resources on the proposed project. The project involved relocation of the Fire Station from 9612 San Bernardino Road to 8870 San Bernardino Road. Services included the management of record searches, a Sacred Lands File search, a pedestrian survey, and completion the cultural resources assessment report. Sub to Michael Baker International. Principal Investigator for Archaeology. 2018

La Verne General Plan Update, City of La Verne, Los Angeles County, CA. Cogstone reviewed and summarized available information regarding known paleontological, archaeological, and historical resources within the boundaries of the City of La Verne to support an update of the City's General Plan. Cogstone conducted archaeological and paleontological record searches, extensive historical research at City Hall, a Sacred Lands File (SLF) search was requested from the Native American Heritage Commission (NAHC), and a general analysis of impacts of future projects within the city that may adversely affect paleontological, archaeological, or historic resources was provided along with mitigation recommendations. Sub to De Novo. Principal Investigator for Archaeology. 2018

Magnolia Avenue Improvements, Caltrans District 8, City of Riverside, Riverside County, CA. For this local assistance project on behalf of the City of Riverside, the project involved producing an Archaeological Survey Report (ASR), Historical Resources Evalutation Report (HRER), and Historical Property Survey Report (HPSR) for Section 106 of the NHPA compliance. The City proposed widening Magnolia Avenue between Buchanan and Banbury by narrowing the existing median. Managed record search, Sacred Lands File search, Native American consultations, intensive-level pedestrian archaeological and architectural surveys, as well as coordination and approval by District 8 of an Area of Potential Effects (APE) map. The HRER included DPR series 523 forms for the evaluation of six properties all of which were determined not eligible for listing in the National Register. Sub to Michael Baker/PMC. Principal Investigator. 2016-2017

cogstone
PALEONTOLOGY - ARCHAEOLOGY - HISTORY

ERIC SCOTT
Paleontology QA/QC

EDUCATION

1990 M.A., Anthropology (Biological), University of California, Los Angeles
1985 B.A., Anthropology (Physical), California State University, Northridge

SUMMARY OF QUALIFICATIONS

Mr. Scott is a professional vertebrate paleontologist with 37 years of experience in paleontological mitigation, fieldwork, curation, and research. He is an emeritus paleontology curator of the San Bernardino County Museum, an adjunct at California State University, San Bernardino, and a research associate of the Natural History Museum of Los Angeles County and the La Brea Tar Pits and Museum, where he was lead excavator of the Pit 91 excavation from 1985-1991. He is a 30+ year member of the Society of Vertebrate Paleontology, an international society of professional scientists where he currently serves on the Government Affairs Committee; he also holds membership in the Geological Society of America and other professional societies. Eric has published over 40 research articles in professional scientific journals.

SELECTED EXPERIENCE

Purple Line Extension (Westside Subway), Sections 1 and 2, Metropolitan Transit Authority (METRO), Los Angeles, CA. The project involves construction of seven stations from the existing Purple Line at Wilshire/Western Avenue along Wilshire Boulevard to the Veterans Administration Hospital in Westwood for 8.6 miles. Manages all paleontological services for Sections 1 and 2 of the subway project including budgets, WEAP training, monitoring, fossil recovery, lab work, analysis, and reporting. Sub to JV West (Stantec/Jacobs JV) (Section 1), AECOM (Section 2). Program Manager. 2016-*ongoing*

Los Angeles World Airports (LAWA) Ongoing Technical Support for Environmental, Mitigation Reporting, and Sustainability Issues Associated with LAWA Construction Projects, LAX, Los Angeles County, CA. Cogstone conducted cultural and paleontological resources monitoring during proposed consolidation and modernization of existing facilities. The project involved redeveloping multiple facilities including hangars and associated structures for Delta Airlines and United Arilines, among others. Upon completion of monitoring, Cogstone prepared Cultural and Paleontological Resources Monitoring Compliance Reports. The City of Los Angeles acted as lead agency for the project. Sub to CDM Smith. Program Manager. 2019-2021

Deep Soil Mixing Pilot Project, Community of Pacific Palisades, Los Angeles County, CA. As part of an on-call contract with the Los Angeles Bureau of Engineering (LABOE), Cogstone provided cultural and paleontological resources monitoring as well as managed Native American monitoring during ground-disturbing activities. The City of Los Angeles was the lead agency under the California Environmental Quality Act (CEQA). Monitoring for the Project was conducted in compliance with the Contingency Plan conditions for the Coastal Development Permit (CDP) from the California Coastal Commission (CCC). No cultural or paleontological resources were identified. No further work was necessary. Sub to ICF. Principal Investigator for Paleontology. 2020

Gates Canyon Stormwater Capture Project, unincorporated area of Calabasas, Los Angeles County, CA. Cogstone conducted cultural and paleontological resources monitoring for 31 days during proposed improvements to Gates Canyon Park that will allow the capture and storage of stormwater runoff from an adjacent 105-acre residential area. Monitoring complied with program mitigation measures and as defined by the County of Los Angeles, Department of Public Works (LACDPW). LACDPW was the project proponent and acted as the lead agency under CEQA. Sub to Aspen Environmental. Task Manager. 2019

Eastside Reservoir Project (Diamond Valley Lake), City of Hemet, Riverside County, CA. The project developed southern California's largest freshwater reservoir. Paleontological monitoring and mitigation provided by San Bernardino County Museum. Supervised fieldwork, conducted and supervised lab work, wrote weekly, annual, and final reports. Paleontology Curator, Field Supervisor, and Report Author. 1993-2003

cogstone
PALEONTOLOGY - ARCHAEOLOGY - HISTORY

JOHN GUST
Principal Investigator for Archaeology & Task Manager

EDUCATION

2016 Ph.D., Department of Anthropology, University of California, Riverside (UCR)
2011 M.A., Department of Anthropology, UCR
2007 M.A., Applied Geography, University of Colorado, Colorado Springs (UCCS)
2002 B.A., Department of Anthropology, minor in Geography/Environmental Studies, UCCS

SUMMARY OF QUALIFICATIONS

Dr. Gust is a Registered Professional Archaeologist (RPA) with over 9 years of experience in field archaeology. He meets the qualifications required by the Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation and his field expertise includes pedestrian surveys, excavation monitoring, resource recording, and historic artifact analysis. Dr. Gust has managed a variety of projects at Cogstone in the water, development, residential, transportation, telecommunications, and public works sectors. Dr. Gust is a member of the Society for California Archaeology, Society for American Archaeology, and the American Anthropological Association.

SELECTED EXPERIENCE

University of California Natural Reserve System San Joaquin Marsh Reserve Water Conveyance and Drainage Improvement Project, City of Irvine, Orange County, CA. Cogstone conducted a cultural and paleontological resources assessment to determine the potential impacts to cultural and paleontological resources for the proposed long-term water management improvements and habitat value of the Marsh Reserve. Services included pedestrian survey, records searches, Sacred Lands File search from the NAHC, background research, and reporting. Due to the proximity of the project to the San Diego Creek, the project required a Clean Water Act Section 404 permit from the United States Army Corps of Engineers (USACE) and Section 106 NHPA compliance. University of California acted as the lead CEQA agency and USACE acted as lead agency under NEPA. Sub to Moffat & Nichol. Principal Investigator for Archaeology. 2020-2021

Dogwood Road Project, City of El Centro, Imperial County, CA. Cogstone conducted a cultural resources assessment to determine the potential effects to cultural resources resulting from the construction of United States Department of Agriculture (USDA) Part 70-B RD Funding assisted housing on a 2.2-acre parcel. Cogstone conducted a record search, pedestrian survey, and determined that no further cultural resources work was necessary. The assessment provided environmental documentation as required by Section 106 of the National Historic Preservation Act (NHPA) and the California Environmental Quality Act (CEQA). The City of El Centro acted as the lead agency. Sub to Partner Science & Engineering, Inc. Principal Investigator for Archaeology. 2019-2020

Jackson St HUD 58 EA Project, City of Riverside, Riverside County, CA. Cogstone conducted a cultural resources assessment to determine the potential effects to cultural resources resulting from the construction of United States Department of Housing and Urban Development (HUD) assisted housing on a 3.58-acre parcel. This assessment provided environmental documentation as required by Section 106 of the National Historic Preservation Act (NHPA). The City of Riverside was the lead agency. Cogstone conducted a records search, a Sacred Lands File Search, a pedestrian survey, and produced a report. Sub to Partner Science & Engineering. Principal Investigator for Archaeology and Report Author. 2019

Corona Affordable Housing Monitoring Project, City of Corona, Riverside County, CA. Cogstone conducted cultural and paleontological resources monitoring, analyzed recovered artifacts, and prepared a monitoring compliance report during grading for the development of affordable multi-family apartment buildings. Conducted lab work and artifact analysis. Sub to C&C Development. Archaeology Supervisor & Report Author. 2018-2019

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PALEONTOLOGY - ARCHAEOLOGY - HISTORY

KIM SCOTT
Principal Investigator for Paleontology

EDUCATION

2013 M.S., Biology with a paleontology emphasis, California State University, San Bernardino
2000 B.S., Geology with paleontology emphasis, University of California, Los Angeles

TRAINING AND CERTIFICATIONS

Trained and certified in geomorphology techniques, National Park Service, National Center for Preservation Technology and Training

SUMMARY OF QUALIFICATIONS

Ms. Scott has 27 years of experience in California as a paleontologist and sedimentary geologist. Scott has worked extensively in the field surveying, monitoring, and salvaging fossils on hundreds of projects. In addition, she has special skills in jacketing large fossils, fossil preparation (cleaning and stabilization) and in the preparation of stratigraphic sections and other documentation for fossil localities. She frequently authors paleontological assessments, paleontological mitigation plans, and monitoring compliance reports to all agency requirements. She authors and conducts crew sensitivity training, serves as company safety officer, and has authored both the company safety and paleontology manuals.

SELECTED EXPERIENCE

Purple Line Extension (Westside Subway), Sections 1 and 2, Metropolitan Transit Authority (METRO), Los Angeles, CA. The project involves construction of seven stations from the existing Purple Line at Wilshire/Western Avenue along Wilshire Boulevard to the Veterans Administration Hospital in Westwood for 8.6 miles. Manages all paleontological services for Sections 1 and 2 of the subway project including budgets, WEAP training, monitoring, fossil recovery, lab work, analysis, and reporting. Sub to JV West (Stantec/Jacobs JV) (Section 1), AECOM (Section 2). Principal Investigator for Paleontology. 2014-*ongoing*

Bell Gardens Water Reservoir Project, City of Bell Gardens, Los Angeles County, CA. Cogstone conducted a cultural and paleontological resources assessment to determine the potential impacts to cultural and paleontological resources during improvements which included a new two-million-gallon reservoir, booster pump station, well to be drilled, and other components. Services included record searches, Sacred Lands File search from the Native American Heritage Commission, and an intensive-pedestrian survey of the 1.7-acre project area. Sub to Infrastructure Engineers. Principal Investigator for Paleontology. 2019-2020

Corona Affordable Housing Monitoring Project, City of Corona, Riverside County, CA. Cogstone conducted cultural and paleontological resources monitoring, analyzed recovered artifacts, and prepared a monitoring compliance report during grading for the development of affordable multi-family apartment buildings. Conducted lab work and artifact analysis. Sub to C&C Development. Principal Investigator for Paleontology. 2018-2019

Fire Station 172 Project, Rancho Cucamonga Fire Protection District, San Bernardino County, CA. Cogstone determined the potential effects of paleontological, archaeological, and historical resources on the proposed project. The project involved relocation of the Fire Station from 9612 San Bernardino Road to 8870 San Bernardino Road. Services included the management of record searches, a Sacred Lands File search, a pedestrian survey, and completion the cultural resources assessment report. Sub to Michael Baker International. Principal Investigator for Paleontology. 2018

San Bernardino Countywide On-Call Services, San Bernardino, CA. As prime contractor, Cogstone provided cultural, historical, and paleontological resource services for short term projects. Task services included cultural resources assessments and monitoring in compliance with CEQA, NEPA, Section 106 of the NHPA, and County regulations. Short-term projects included Pioneertown and other roads, Bear Springs, Aldorf Road, Elder Creek, NTH Bridges, Marshall Boulevard, Cajon Creek, Dola Bridge, Lanzit Ditch, and Luna Road. Principal Investigator for Paleontology. 2016-2017

cogstone
PALEONTOLOGY - ARCHAEOLOGY - HISTORY

SANDY DUARTE
Archaeologist & Report Co-Author

EDUCATION

2002 B.A., Cultural Anthropology, University of California, Santa Barbara

TRAINING AND CERTIFICATIONS

HAZWOPER Certified - Certified American Red Cross CPR; Certified American Red Cross Standard First Aid
Applied Archaeology of Southern California, USDA Forest Service, San Bernardino National Forest
Railroad Security Certified

SUMMARY OF QUALIFICATIONS

Ms. Duarte is a paleontologist and archaeologist with over 18 years of experience in paleontological and archaeological monitoring, surveying, and excavation in southern California. Ms. Duarte has experience with Native American consultation as required by Section 106 of the National Historic Preservation Act (NHPA) and under Senate Bill 18 for the protection and management of cultural resources. Beginning in 2006, Ms. Duarte worked for the U.S. Forest Service in the Biology, Timber, and Geology Department as an archaeologist, including serving as a trained wild-land firefighter to preserve archaeological sites from forest fires. Additional skills include paleontological identification, fossil preparation, artifact identification and preparation, and final report preparation.

SELECTED EXPERIENCE

Santiago Canyon Estates Fuel Mod Project, unincorporated Orange County, CA. Cogstone conducted a cultural resources assessment to determine the potential for surface cultural resources for compliance with Orange County Fire Authority's Precise Fuel Modification Plan for zones of the Santiago Canyon Estates Community. Services included a cultural resources records search, Sacred Lands File search from the Native American Heritage Commission, and conducted a reconnaissance survey. Sub to Fire Safe Council East Orange County Canyons. Archaeologist/Co-Author. 2020

Newport Village Project, City of Newport Beach, Orange County, CA. Cogstone conducted a cultural and paleontological resources assessment to determine the potential impacts to cultural and paleontological resources during proposed constructon of 14 residential condominium units, 108 apartment units, and 121,370 square feet of mixed-use development. The project would also have publicly accessible waterfront promenade with 844 parking spaces in surface-level and subterranean parking. Services included records searches, pedestrian survey, Sacred Lands File search from the NAHC, background research, and reporting. The City of Newport Beach acted as the lead agency under CEQA. Sub to Cox, Castle & Nicholson LLP. Archaeologist. 2019-2020

Prologis Vermont Avenue and Redondo Beach Industrial Project, City of Los Angeles, Los Angeles County, CA. Cogstone conducted a cultural and paleontological resources assessment to determine the potential impacts to cultural and paleontological resources during proposed construction of an industrial center, 223 automobile parking spaces, 32 bicycle parking spaces, 36 high truck loading positions, and parking stalls for truck trailers. Services included records searches, pedestrian survey, Sacred Lands File search from the NAHC, background research, and reporting. The City of Los Angeles acted as the lead agency under CEQA. Sub to PlaceWorks. Archaeologist. 2019-2020

Cannon Serrano Intersection Widening Project, City of Orange, Orange County, CA. Cogstone conducted a cultural and paleontological resources assessment to determine the potential impacts to cultural and paleontological resources during proposed road improvements. Services included records searches, pedestrian survey, Sacred Lands File search from the NAHC, background research, and reporting. The City of Orange acted as the lead agency under CEQA. Sub to Michael Baker. Archaeologist. 2019-2020

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PALEONTOLOGY - ARCHAEOLOGY - HISTORY

KELLY VREELAND
Paleontologist & Co-Author

EDUCATION

2014 M.S., Geology, California State University, Fullerton
2010 B.S., Geology, California State University, Fullerton

SUMMARY OF QUALIFICATIONS

Ms. Vreeland is a Paleontologist with over 10 years of experience in field paleontology. Her field and laboratory experience includes fieldwork and research projects throughout California and Nevada, as well as conducting fieldwork and surficial geologic mapping in Montana. Ms. Vreeland has expertise in invertebrate paleontology and paleoecology. Ms. Vreeland is a member of the Geological Society of America, the Paleontological Society, the Society for Sedimentary Geology, and the Association for Women in Geoscience.

SELECTED EXPERIENCE

State Route 60 Truck Lanes Project, RCTC, Caltrans District 8, City of Banning, Riverside County, CA. RCTC in cooperation with Caltrans proposed to construct an eastbound truck-climbing lane and westbound truck-descending lane – along with inside and outside standard shoulders in both directions. The total length of the project is 4.51 miles. A combined Paleontological Identification Report and Paleontological Evaluation Report (PIR/PER) found a high likelihood for this project to impact paleontological resources. Mitigation measures included a Paleontological Mitigation Plan (PMP) which included requiring a paleontological Worker Environmental Awareness Program (WEAP) training, signed repository agreement with the San Bernardino County Museum, monitoring by a principal paleontologist, and defined standard field and laboratory methods. Cogstone is providing paleontological monitoring. At the end of construction, Cogstone will prepare a Paleontological Monitoring Report (PMR). Caltrans is the lead agency under NEPA and CEQA. Sub to ECORP. Supervisor. 2020-*ongoing*

University of California Natural Reserve System San Joaquin Marsh Reserve Water Conveyance and Drainage Improvement Project, City of Irvine, Orange County, CA. Cogstone conducted a cultural and paleontological resources assessment to determine the potential impacts to cultural and paleontological resources for the proposed long-term water management improvements and habitat value of the Marsh Reserve. Services included pedestrian survey, records searches, Sacred Lands File search from the NAHC, background research, and reporting. Due to the proximity of the project to the San Diego Creek, the project required a Clean Water Act Section 404 permit from the United States Army Corps of Engineers (USACE) and Section 106 NHPA compliance. University of California acted as the lead CEQA agency and USACE acted as lead agency under NEPA. Sub to Moffat & Nichol. Paleontology Supervisor. 2020-2021

Los Angeles World Airports (LAWA) United Airlines East Maintenance Hangar and Ground Support Equipment Project, LAX, Los Angeles County, CA. Cogstone conducted cultural and paleontological monitoring during the proposed consolidation and modernization of existing facilities. The project intended to redevelop an approximately 35-acre site. Planned vertical impacts were up to 6 feet deep for footings, at least 10.5 feet for stormwater detention, and 50 to 70 feet deep for auguring. Upon completion of monitoring, Cogstone prepared a Cultural and Paleontological Resources Monitoring Compliance Report. The City of Los Angeles acted as lead agency for the project. Sub to CDM Smith. Paleontology Supervisor. 2020-2021

Jack Ranch San Luis Obispo Agricultural Cluster Project, City of San Luis Obispo, San Luis Obispo County, CA. Cogstone prepared a cultural and paleontological assessment to propose effective mitigation of potential adverse impacts to paleontological resources resulting from a proposed subdivision of a 299-acre property into 13 residential lots as well as a Conditional Use Permit to allow for a Major Agricultural Cluster project. Cogstone provided archaeological and paleontological monitoring and submitted a Cultural and Paleontological Resources Monitoring Compliance Report upon completion. Sub to Kirk Consulting. Paleontology Supervisor. 2020-2021

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PALEONTOLOGY - ARCHAEOLOGY - HISTORY

LOGAN FREEBERG
GIS Supervisor

EDUCATION

2018 Geographic Information Systems (GIS) Certificate, California State University, Fullerton
2003 B.A., Anthropology, University of California, Santa Barbara

SUMMARY OF QUALIFICATIONS

Mr. Freeberg has over 15 years of experience in cultural resource management and has extensive experience in field surveying, data recovery, monitoring, and excavation of archaeological and paleontological resources associated with land development projects in the private and public sectors. He has conducted all phases of archaeological work, including fieldwork, laboratory analysis, research, and reporting. Mr. Freeberg also has a strong grounding in conventional field and laboratory methods and is skilled in the use of ArcGIS.

SELECTED EXPERIENCE

New Cuyama Dump Sites 1, 2, and 3, BLM Bakersfield Office, Santa Barbara County, CA. The Project involved identifying archaeological and historical resources present within three illegal dump sites on BLM land. This study included an assessment of the historic potential of dump refuse and NRHP eligibility recommendations for debris demonstrating affirmative evidence for an age of greater than 45 years. A Class III Cultural Resources survey was conducted and included an intensive-level pedestrian survey of the APE and a total of three historic trash scatters were identified during the survey and a total of four historic isolates were identified. These resources were recorded on Department of Parks and Recreation 523 (DPR 523) forms. No archaeological sites or isolates were identified. No artifacts were collected. The deliverables were accepted by the BLM without revisions. Archaeologist & GIS Supervisor. 2020-2021

University of California Natural Reserve System San Joaquin Marsh Reserve Water Conveyance and Drainage Improvement Project, City of Irvine, Orange County, CA. Cogstone conducted a cultural and paleontological resources assessment to determine the potential impacts to cultural and paleontological resources for the proposed long-term water management improvements and habitat value of the Marsh Reserve. Services included pedestrian survey, records searches, Sacred Lands File search from the NAHC, background research, and reporting. Due to the proximity of the project to the San Diego Creek, the project required a Clean Water Act Section 404 permit from the United States Army Corps of Engineers (USACE) and Section 106 NHPA compliance. University of California acted as the lead CEQA agency and USACE acted as lead agency under NEPA. Sub to Moffat & Nichol. GIS Supervisor. 2020-2021

Bell Gardens Water Reservoir Project, City of Bell Gardens, Los Angeles County, CA. Cogstone conducted a cultural and paleontological resources assessment to determine the potential impacts to cultural and paleontological resources during improvements which included a new two-million-gallon reservoir, booster pump station, well to be drilled, and other components. Services included record searches, Sacred Lands File search from the Native American Heritage Commission, and an intensive-pedestrian survey of the 1.7-acre project area. Sub to Infrastructure Engineers. GIS Supervisor. 2019-2020

Dogwood Road Project, City of El Centro, Imperial County, CA. Cogstone conducted a cultural resources assessment to determine the potential effects to cultural resources resulting from the construction of United States Department of Agriculture (USDA) Part 70-B RD Funding assisted housing on a 2.2-acre parcel. Cogstone conducted a records search, pedestrian survey, and determined that no further cultural resources work was necessary. The assessment provided environmental documentation as required by Section 106 of the National Historic Preservation Act (NHPA) and the California Environmental Quality Act (CEQA). The City of El Centro acted as the lead agency. Sub to Partner Science & Engineering, Inc. GIS Supervisor. 2019-2020

APPENDIX B. PALEONTOLOGICAL RECORD SEARCH

WESTERN SCIENCE CENTER

Cogstone Resource Management
Logan Freeberg
1518 W Taft Avenue
Orange, CA 92865

November 18, 2020

Dear Mr. Freeberg,

This letter presents the results of a record search conducted for the Redlands Avenue East and Redlands Avenue West Industrial Project in the city of Perris, Riverside County, California. The project site consists of two areas south Rider Street, one east of Redlands Avenue and one West of Redlands Avenue in Section 11 and 17, Township 4 South and Range 3 West on the *Perris, CA* USGS 7.5 minute topographic quadrangle.

The geologic unit underlying the western project area is mapped entirely as very old alluvial fan deposits dating to the early Pleistocene, while the eastern project area is mapped as roughly half very old alluvial fan deposits dating to the early Pleistocene and half young alluvial fan deposits dating to the late Pleistocene or Holocene (Morton, Bovard, & Alvarez, 2003). Pleistocene alluvial units are considered to be of high paleontological sensitivity. The Western Science Center does not have localities within the project area, but does have numerous localities within similarly mapped alluvial sediments throughout the region. Pleistocene alluvial deposits in southern California are well documented and known to contain abundant fossil resources including those associated with Columbian mammoth (*Mammuthus columbi*), Pacific mastodon (*Mammut pacificus*), Sabertooth cat (*Smilodon fatalis*), Ancient horse (*Equus sp.*) and many other Pleistocene megafauna.

Any fossils recovered from the Redlands Avenue East and Redlands Avenue West Industrial Project areas would be scientifically significant. Excavation activity associated with development of both areas has the potential to impact the paleontologically sensitive Pleistocene alluvial units below and it is the recommendation of the Western Science Center that a paleontological resource mitigation plan be put in place to monitor, salvage, and curate any recovered fossils associated with the current study areas.

If you have any questions, or would like further information, please feel free to contact me at dradford@westerncentermuseum.org

Sincerely,

Darla Radford
Collections Manager

2345 Searl Parkway ♦ Hemet, CA 92543 ♦ phone 951.791.0033 ♦ fax 951.791.0032 ♦ WesternScienceCenter.org

APPENDIX C. HISTORIC SOCIETY CONSULTATION

cogstone

PALEONTOLOGY - ARCHAEOLOGY - HISTORY

November 23, 2020 (1st attempt: November 12, 2020)

Perris Valley Historical Archives
400 S. D St,
Perris, CA 92570

RE: Request for Information regarding the Phase I Cultural and Paleontological Resources Assessment for the Redlands Avenue East Industrial Project, City of Perris, Riverside County, California

To Whom It May Concern:

Cogstone is to conduct a Phase I cultural and paleontological resources assessment for the Redlands Avenue East Industrial Project (Project) located on approximately 12.59 acres within Assessor Parcel Numbers (APNs) 300-210-008, 300-210-007, 300-210-006, 300-210-026, 300-210-027, and 300-210-028 located along the east side of Redlands Avenue between Rider Street and Placentia Avenue in the City of Perris, Riverside County, California.

The Project involves the construction and operation of a 251,472 square foot warehouse building with a 4,000 square foot mezzanine, landscaping, and associated parking. The Project Area has not been previously developed. The parcel at APN 300-210-008 appears to have a driveway but no structure is present as of the 2020 aerial photograph. The other parcels appear to have been graded at an unknown time and contain dirt trails and roads within the parcels.

We are contacting you because we would like to invite members of the Perris Valley Historical Archives to provide input regarding the redevelopment of the Project Area. We appreciate your providing any information regarding the history of the Project Area as well as any comments, issues, and/or concerns relating to the history of the Project Area. Please contact me at slopez@cogstone.com or at (714) 974-8300. Thank you for your attention to this matter.

Sincerely,

Shannon Lopez, M.A.
Architectural Historian
(714) 974-8300 x.108
slopez@cogstone.com

1518 West Taft Avenue
Orange, CA 92865
Office (714) 974-8300

Branch Offices
San Diego - Riverside - Morro Bay - Sacramento
Arizona

cogstone.com
Toll free (888) 333-3212

Federal Certifications EDWOSB , SDB
State Certifications DBE, WBE, SBE, UDBE

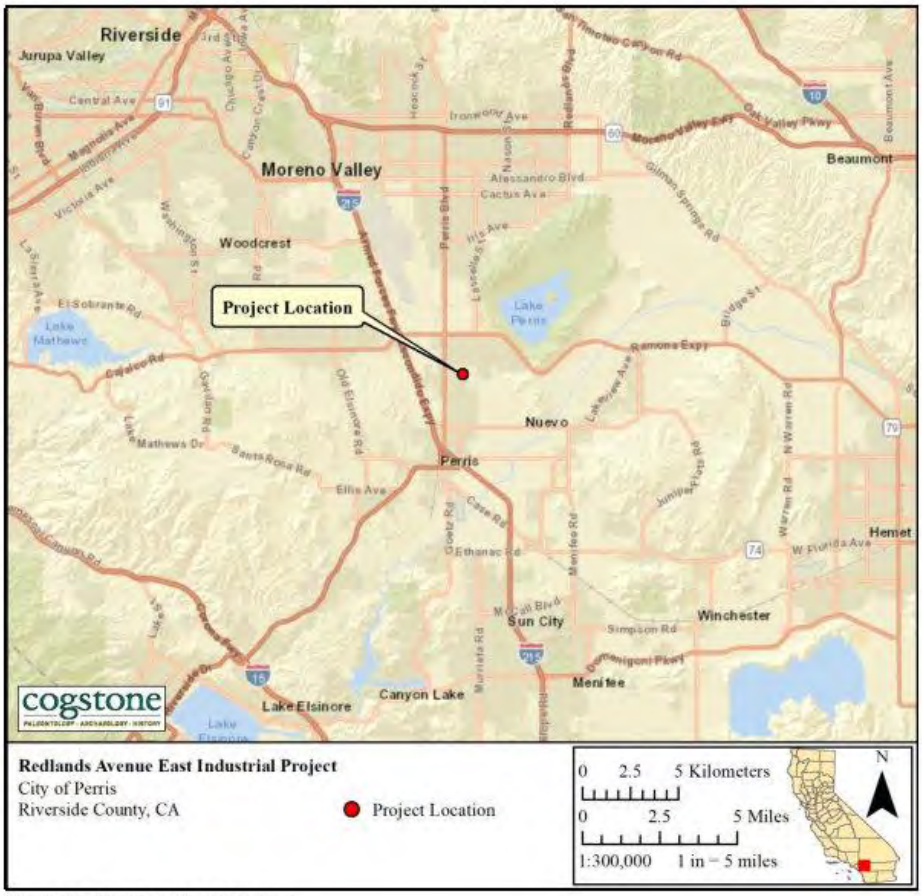

Figure 1. Project Vicinity map

Figure 2. Project Location map

cogstone.com

Figure 3. Project aerial map

cogstone.com

cogstone

PALEONTOLOGY - ARCHAEOLOGY - HISTORY

April 5, 2021

Perris Valley Historical Museum
P.O. Box 343
Perris, CA 92572

RE: Request for Information regarding the Phase I Cultural and Paleontological Resources Assessment for the Redlands Avenue East Industrial Project, City of Perris, Riverside County, California

To Whom It May Concern:

Cogstone is to conduct a Phase I cultural and paleontological resources assessment for the Redlands Avenue East Industrial Project (Project) located on approximately 12.59 acres within Assessor Parcel Numbers (APNs) 300-210-008, 300-210-007, 300-210-006, 300-210-026, 300-210-027, and 300-210-028 located along the east side of Redlands Avenue between Rider Street and Placentia Avenue in the City of Perris, Riverside County, California.

The Project involves the construction and operation of a 251,472 square foot warehouse building with a 4,000 square foot mezzanine, landscaping, and associated parking. The Project Area has not been previously developed. The parcel at APN 300-210-008 appears to have a driveway but no structure is present as of the 2020 aerial photograph. The other parcels appear to have been graded at an unknown time and contain dirt trails and roads within the parcels.

We are contacting you because we would like to invite members of the Perris Valley Historical Museum to provide input regarding the redevelopment of the Project Area. We appreciate your providing any information regarding the history of the Project Area as well as any comments, issues, and/or concerns relating to the history of the Project Area. Please contact me at slopez@cogstone.com or at (714) 974-8300. Thank you for your attention to this matter.

Sincerely,

Shannon Lopez, M.A.
Architectural Historian
(714) 974-8300 x.108
slopez@cogstone.com

1518 West Taft Avenue
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Federal Certifications EDWOSB, SDB
State Certifications DBE, WBE, SBE, UDBE

cogstone.com
Toll free (888) 333-3212

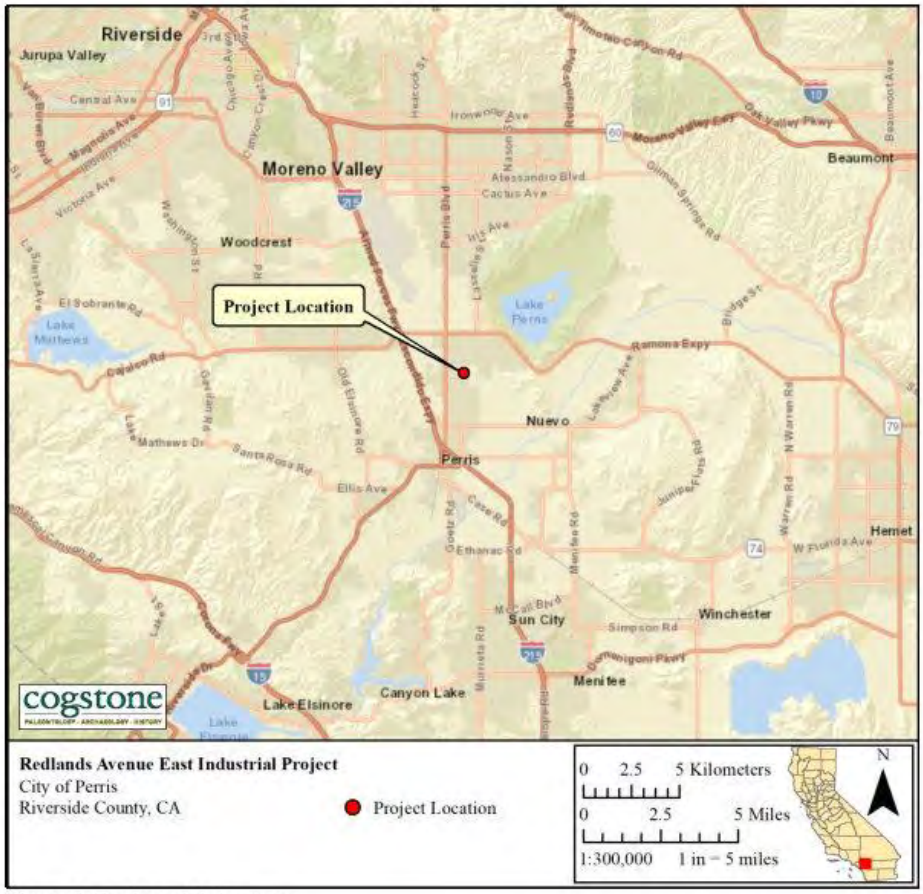


Figure 1. Project vicinity map

Figure 2. Project location map

cogstone.com

Figure 3. Project aerial map

cogstone.com

cogstone

PALEONTOLOGY - ARCHAEOLOGY - HISTORY

April 5, 2021

Riverside County Heritage Association
P. O. Box 21168
Riverside, CA 92516-1168

RE: Request for Information regarding the Phase I Cultural and Paleontological Resources Assessment for the Redlands Avenue East Industrial Project, City of Perris, Riverside County, California

To Whom It May Concern:

Cogstone is to conduct a Phase I cultural and paleontological resources assessment for the Redlands Avenue East Industrial Project (Project) located on approximately 12.59 acres within Assessor Parcel Numbers (APNs) 300-210-008, 300-210-007, 300-210-006, 300-210-026, 300-210-027, and 300-210-028 located along the east side of Redlands Avenue between Rider Street and Placentia Avenue in the City of Perris, Riverside County, California.

The Project involves the construction and operation of a 251,472 square foot warehouse building with a 4,000 square foot mezzanine, landscaping, and associated parking. The Project Area has not been previously developed. The parcel at APN 300-210-008 appears to have a driveway but no structure is present as of the 2020 aerial photograph. The other parcels appear to have been graded at an unknown time and contain dirt trails and roads within the parcels.

We are contacting you because we would like to invite members of the Riverside County Heritage Association to provide input regarding the redevelopment of the Project Area. We appreciate your providing any information regarding the history of the Project Area as well as any comments, issues, and/or concerns relating to the history of the Project Area. Please contact me at slopez@cogstone.com or at (714) 974-8300. Thank you for your attention to this matter.

Sincerely,

Shannon Lopez, M.A.
Architectural Historian
(714) 974-8300 x.108
slopez@cogstone.com

1518 West Taft Avenue
Orange, CA 92865
Office (714) 974-8300

Branch Offices
San Diego – Riverside – Morro Bay – Sacramento – Arizona

cogstone.com
Toll free (888) 333-3212

Federal Certifications EDWOSB, SDB
State Certifications DBE, WBE, SBE, UDBE

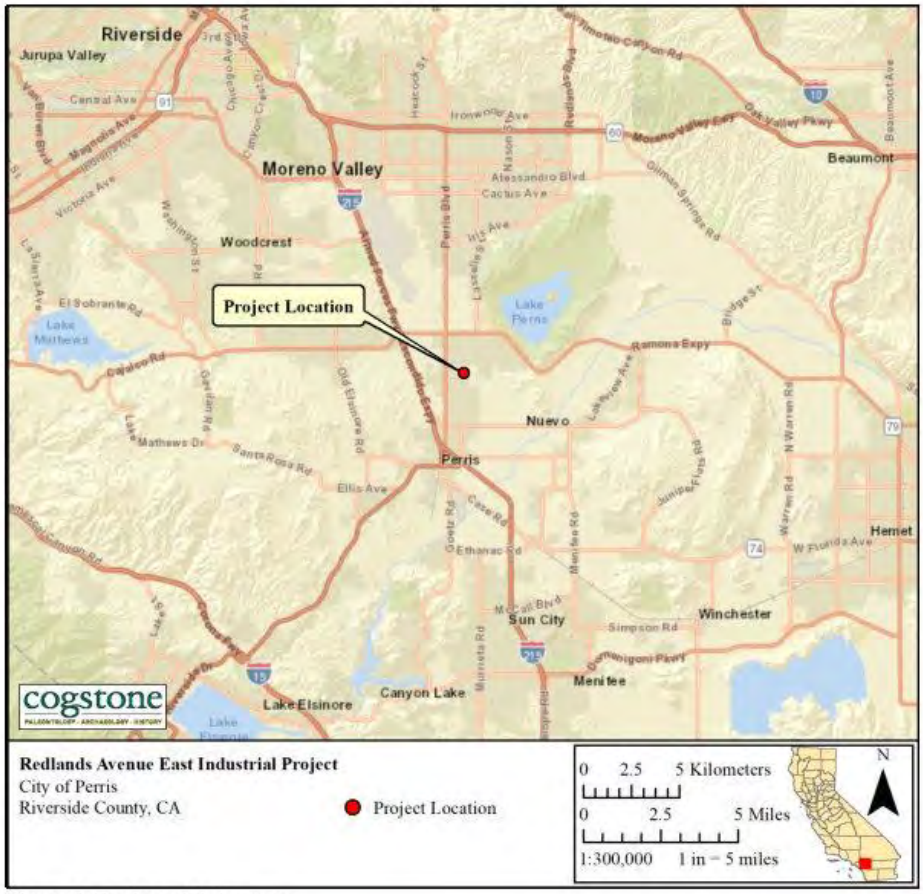


Figure 1. Project vicinity map

Figure 2. Project location map

cogstone.com

Figure 3. Project aerial map

cogstone.com

Historical Society consultation log

Historical Society	Address	Phone number	Email	1st Attempt	2nd Attempt	3rd Attempt	4th attempt	Response
Perris Valley Historical Archives	400 S. D St, Perris, CA 92570	(951) 657-6700	None found	Mail, November 16, 2020	Mail, November 23, 2020	Telephone call; 12pm, December 29.2020; phone number has been disconnected		Received returned letter from post office, "Return letter to sender no such number unable to forward". Dated 12/4/2020
Perris Valley Historical Museum	120 W. 4th St., Perris, CA 92570	(951) 657-0274		Mail, November 16, 2020	Mail, November 23, 2020	Telephone call; 12 pm, December 29.2020; no answer, unable to leave a message	Email; April 5, 2021	Facebook profile has not been updated since February 2020. Received letters "Return to Sender. Not deliverable as addressed, unable to forward." March 17, 2021. Letter sent November 16, 2020 returned as "non deliverable" on March 17, 2021.
Riverside County Heritage Association	Steve Lech, c/o Riverside County Heritage Association, P. O. Box 21168, Riverside, CA 92516-1168		rivcoheritageassoc@gmail.com	Email; April 5, 2021				

APPENDIX D. SACRED LANDS FILE SEARCH AND NATIVE AMERICAN SCOPING

Sacred Lands File & Native American Contacts List Request

Native American Heritage Commission
1550 Harbor Blvd, Suite 100
West Sacramento, CA 95691
916-373-3710
916-373-5471 – Fax
nahc@nahc.ca.gov

Information Below is Required for a Sacred Lands File Search

Project: Redlands Avenue East Industrial

County: Riverside County

USGS Quadrangle Name: Perris 7.5'

Township: 4S **Range:** 3W **Section(s):** 17

Company/Firm/Agency: Cogstone Resource Management

Street Address: 1518 W. Taft Ave.

City: Orange **Zip:** 92865

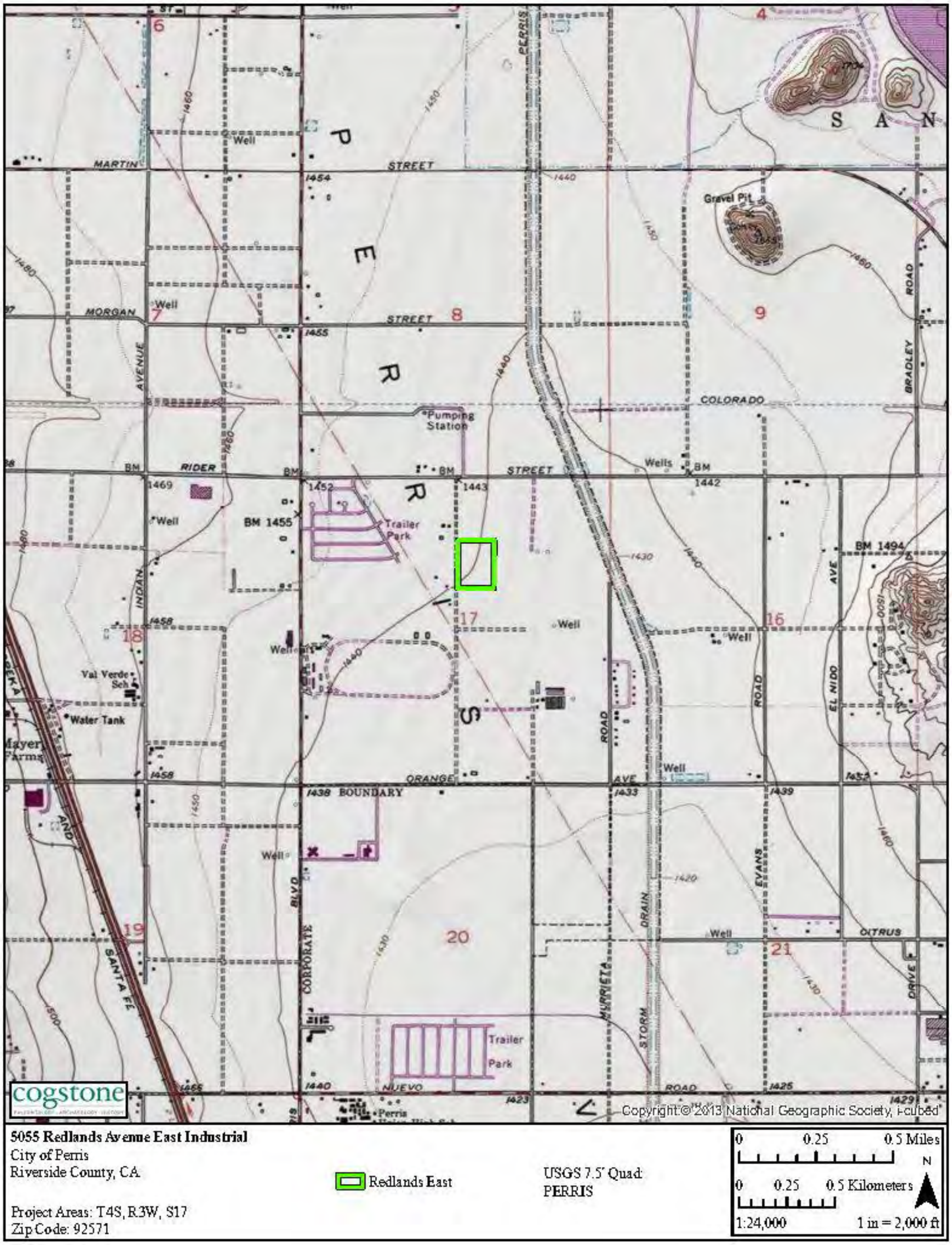
Phone: 714-974-8300

Fax: 714-974-8303

Email: cogstoneconsult@cogstone.com

Project Description:

The Project involves the construction and operation of a 251,472 square foot warehouse building with a 4,000 square foot mezzanine, landscaping, and associated parking.


MARTIN
STREET
MORGAN
STREET
AVENUE
COLORADO
Pumping Station
RIDER
STREET
Trailer Park
BM 1455
INDIAN
Val Verde Sch
Water Tank
Mayer Farms
ORANGE
BOUNDARY
AVE
ROAD
CORPORATE
BLVD
SANTA FE
MURRIETA
STORM DRAIN
EVANS
CITRUS
DRIVE
EL NIDO
BRADLEY
ROAD
NUEVO
Gravel Pit
BM 1494
Trailer Park
Well
Wells
cogstone
Copyright:© 2013 National Geographic Society, i-cubed
5055 Redlands Avenue East Industrial
City of Perris
Riverside County, CA
Project Areas: T4S, R3W, S17
Zip Code: 92571
Redlands East
USGS 7.5' Quad:
PERRIS
0 0.25 0.5 Miles
0 0.25 0.5 Kilometers
N
1:24,000
1 in = 2,000 ft

STATE OF CALIFORNIA — Gavin Newsom, Governor

NATIVE AMERICAN HERITAGE COMMISSION

NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov
NAHC.ca.gov

April 27, 2021

Cogstone Resource Management

Via Email to: cogstoneconsult@cogstone.com

Re: Redlands Avenue East Industrial Project, Riverside County

To Whom It May Concern:

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were negative. However, the absence of specific site information in the SLF 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.

Attached is a list of Native American tribes who may also have knowledge of cultural resources in the project area. 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. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call or email to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from tribes, please notify me. With your assistance, we can assure that our lists contain current information.

If you have any questions or need additional information, please contact me at my email address: Andrew.Green@nahc.ca.gov.

Sincerely,

Andrew Green

Andrew Green
Cultural Resources Analyst

Attachment

Page 1 of 1

Native American Heritage Commission
Native American Contact List
Riverside County
4/27/2021

Pechanga Band of Luiseno Indians
Paul Macarro, Cultural Resources Coordinator
P.O. Box 1477 — Luiseno
Temecula, CA, 92593
Phone: (951) 770 - 6306
Fax: (951) 506-9491
pmacarro@pechanga-nsn.gov

Quechan Tribe of the Fort Yuma Reservation
Jill McCormick, Historic Preservation Officer
P.O. Box 1899 — Quechan
Yuma, AZ, 85366
Phone: (760) 572 - 2423
historicpreservation@quechantribe.com

Quechan Tribe of the Fort Yuma Reservation
Manfred Scott, Acting Chairman Kw'ts'an Cultural Committee
P.O. Box 1899 — Quechan
Yuma, AZ, 85366
Phone: (928) 750 - 2516
scottmanfred@yahoo.com

Ramona Band of Cahuilla
John Gomez, Environmental Coordinator
P. O. Box 391670 — Cahuilla
Anza, CA, 92539
Phone: (951) 763 - 4105
Fax: (951) 763-4325
jgomez@ramona-nsn.gov

Ramona Band of Cahuilla
Joseph Hamilton, Chairperson
P.O. Box 391670 — Cahuilla
Anza, CA, 92539
Phone: (951) 763 - 4105
Fax: (951) 763-4325
admin@ramona-nsn.gov

Rincon Band of Luiseno Indians
Cheryl Madrigal, Tribal Historic Preservation Officer
One Government Center Lane — Luiseno
Valley Center, CA, 92082
Phone: (760) 297 - 2635
crd@rincon-nsn.gov

Rincon Band of Luiseno Indians
Bo Mazzetti, Chairperson
One Government Center Lane — Luiseno
Valley Center, CA, 92082
Phone: (760) 749 - 1051
Fax: (760) 749-5144
bomazzetti@aol.com

Santa Rosa Band of Cahuilla Indians
Lovina Redner, Tribal Chair
P.O. Box 391820 — Cahuilla
Anza, CA, 92539
Phone: (951) 659 - 2700
Fax: (951) 659-2228
lsaul@santarosa-nsn.gov

Soboba Band of Luiseno Indians
Isaiah Vivanco, Chairperson
P. O. Box 487 — Cahuilla
San Jacinto, CA, 92581 — Luiseno
Phone: (951) 654 - 5544
Fax: (951) 654-4198
ivivanco@soboba-nsn.gov

Soboba Band of Luiseno Indians
Joseph Ontiveros, Cultural Resource Department
P.O. BOX 487 — Cahuilla
San Jacinto, CA, 92581 — Luiseno
Phone: (951) 663 - 5279
Fax: (951) 654-4198
jontiveros@soboba-nsn.gov

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed Redlands Avenue East Industrial Project, Riverside County.

PROJ-2021-002282 — 4/27/2021 11:31 AM — 2 of 3

Native American Heritage Commission
Native American Contact List
Riverside County
4/27/2021

Agua Caliente Band of Cahuilla Indians
Jeff Grubbe, Chairperson
5401 Dinah Shore Drive — Cahuilla
Palm Springs, CA, 92264
Phone: (760) 699 - 6800
Fax: (760) 699-6919

Agua Caliente Band of Cahuilla Indians
Patricia Garcia-Plotkin, Director
5401 Dinah Shore Drive — Cahuilla
Palm Springs, CA, 92264
Phone: (760) 699 - 6907
Fax: (760) 699-6924
ACBCI-THPO@aguacaliente.net

Augustine Band of Cahuilla Mission Indians
Amanda Vance, Chairperson
P.O. Box 846 — Cahuilla
Coachella, CA, 92236
Phone: (760) 398 - 4722
Fax: (760) 369-7161
hhaines@augustinetribe.com

Cabazon Band of Mission Indians
Doug Welmas, Chairperson
84-245 Indio Springs Parkway — Cahuilla
Indio, CA, 92203
Phone: (760) 342 - 2593
Fax: (760) 347-7880
jstapp@cabazonindians-nsn.gov

Cahuilla Band of Indians
Daniel Salgado, Chairperson
52701 U.S. Highway 371 — Cahuilla
Anza, CA, 92539
Phone: (951) 763 - 5549
Fax: (951) 763-2808
Chairman@cahuilla.net

Los Coyotes Band of Cahuilla and Cupeño Indians
Ray Chapparosa, Chairperson
P.O. Box 189 — Cahuilla
Warner Springs, CA, 92086-0189
Phone: (760) 782 - 0711
Fax: (760) 782-0712

Morongo Band of Mission Indians
Robert Martin, Chairperson
12700 Pumarra Road — Cahuilla, Serrano
Banning, CA, 92220
Phone: (951) 755 - 5110
Fax: (951) 755-5177
abrierty@morongo-nsn.gov

Morongo Band of Mission Indians
Ann Brierty, THPO
12700 Pumarra Road — Cahuilla, Serrano
Banning, CA, 92220
Phone: (951) 755 - 5259
Fax: (951) 572-6004
abrierty@morongo-nsn.gov

Pala Band of Mission Indians
Shasta Gaughen, Tribal Historic Preservation Officer
PMB 50, 35008 Pala Temecula Rd. — Cupeno, Luiseno
Pala, CA, 92059
Phone: (760) 891 - 3515
Fax: (760) 742-3189
sgaughen@palatribe.com

Pechanga Band of Luiseno Indians
Mark Macarro, Chairperson
P.O. Box 1477 — Luiseno
Temecula, CA, 92593
Phone: (951) 770 - 6000
Fax: (951) 695-1778
epreston@pechanga-nsn.gov

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed Redlands Avenue East Industrial Project, Riverside County.

PROJ-2021-002282 — 4/27/2021 11:31 AM — 1 of 3

Native American Heritage Commission
Native American Contact List
Riverside County
4/27/2021

Torres-Martinez Desert Cahuilla Indians
Michael Mirelez, Cultural Resource Coordinator
P.O. Box 1160 Cahuilla
Thermal, CA, 92274
Phone: (760) 399 - 0022
Fax: (760) 397-8146
mmirelez@tmdci.org

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed Redlands Avenue East Industrial Project, Riverside County.

PROJ-2021-002282 04/27/2021 11:31 AM 3 of 3

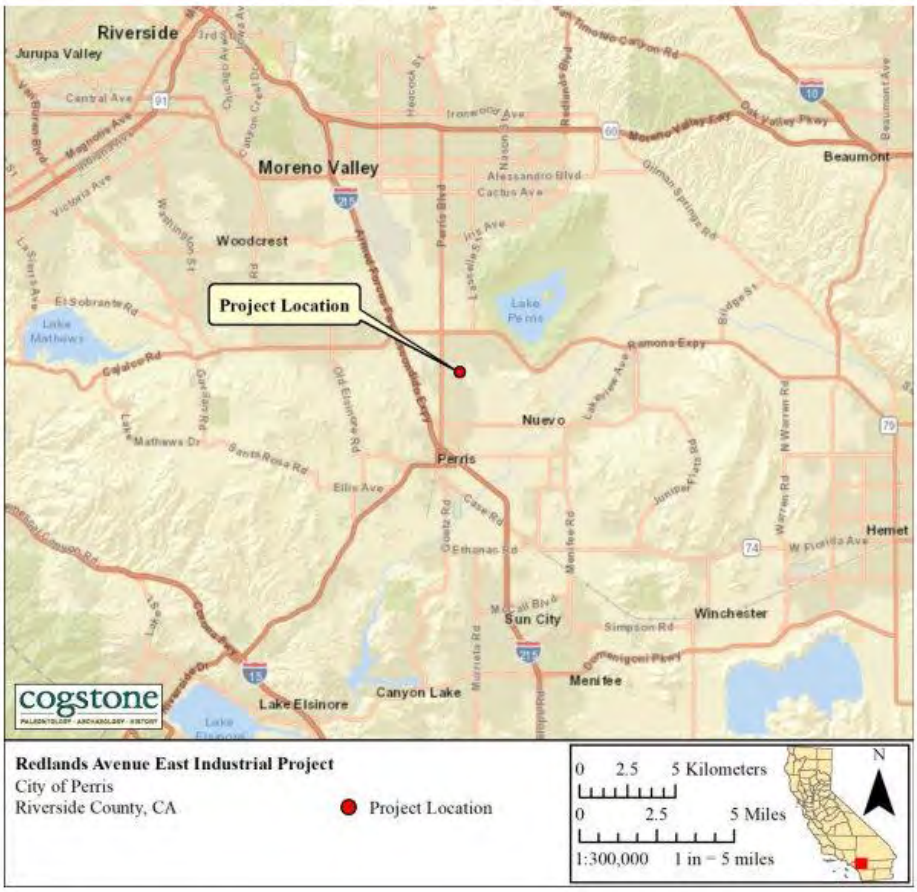


Figure 1. Project vicinity map

an impact to these resources and/or spaces and places, we would like to discuss possible ways to avoid, minimize or mitigate the potential effects.

The Native American Heritage Commission (NAHC) was contacted on April 13, 2021 to perform a search of the Sacred Lands File. The NAHC responded on April 27, 2021 and reported negative results for any Native American sacred sites or heritage resources located within the same USGS Quadrangle, Township, Range and Section as the Project Area.

Cogstone requested a record search of the Project Area and a Half-Mile buffer from the Eastern Information Center located at the University of California, Riverside on October 9, 2020. Results of the record search indicate that there is no resources recorded within the Project Area boundary, and no resources have been recorded within the Project Area and seven cultural resources have been recorded within the half-mile radius.

An intensive pedestrian survey was conducted on April 1, 2021 and no cultural resources were observed. This is not a tribal consultation request. The City of Perris is conducting tribal consultations under Assembly Bill 52. Cogstone would appreciate receiving any comments, issues and/or concerns relating to cultural resources and sacred lands that you may have within the Project Area so that they can be included in the assessment that is being prepared. All information provided will be kept confidential.

If you have any questions or concerns with the Project, please do not hesitant to contact me by phone (714-974-8300), email (cogstoneconsult@cogstone.com), or fax (714-974-8303).

Thank you for your assistance.

John Gust
Principal Investigator

Attachments: Project vicinity map
Project location map

2

cogstone
PALEONTOLOGY - ARCHAEOLOGY - HISTORY

April 28, 2021

Cogstone 5054

[FIRST LAST]
[TRIBE]
[TITLE/ROLE]
[ADDRESS, STREET]
[CITY, CA, ZIP]

RE: Native American Scoping Request for the Redlands Avenue East Industrial Project, City of Perris, Riverside County, California.

[TITLE & LAST NAME]:

The City of Perris (City) proposes to develop the Redlands Avenue East Industrial Project (Project) in Riverside County, California (Figure 1). Specifically, the Project is located on approximately 12.59 acres within Assessor Parcel Numbers (APNs) 300-210-008, 300-210-007, 300-210-006, 300-210-026, 300-210-027, and 300-210-028 located along the east side of Redlands Avenue between Rider Street and Placentia Avenue in the City of Perris, Riverside County, California (Figure 2). The Project involves the construction and operation of a 251,472 square foot warehouse building with a 4,000 square foot mezzanine, landscaping, and associated parking. This Project will comply with the California Environmental Quality Act (CEQA) and a combination cultural and paleontological resources assessment report will be prepared. The contact for this project is listed below.

Point of Contact Information	
Name/Title:	John Gust, Principal Investigator Cogstone Resource Management
Address:	1518 W. Taft Avenue
City:	Orange, CA 92865
Tel:	714-974-8300
Fax:	714-974-8303
E-Mail:	jgust@cogstone.com

We are contacting the [TRIBE] because the Native American Heritage Commission (NAHC) stated on April 27, 2021, that the [TRIBE] may have knowledge of cultural resources in the Project area. Cogstone Resource Management, Inc. (Cogstone) has been retained to assist the City with the combination cultural and paleontological resources assessment report. We invite you to help identify cultural resources and/or areas of religious and cultural significance that might be affected by the Project. If the Project might have

1518 West Taft Avenue
Orange, CA 92865
Office (714) 974-8300

Branch Offices
San Diego – Riverside – Morro Bay – Sacramento – Arizona

cogstone.com
Toll free (888) 333-3212

Federal Certifications WOSB, EDWOSB, SDB
State Certifications DBE, WBE, SBE, UDBE

Figure 2. Project location map

John Gust

From: Quechan Historic Preservation Officer <historicpreservation@quechantribe.com>
Sent: Wednesday, May 5, 2021 12:00 PM
To: jgust@cogstone.com; cogstoneconsult@cogstone.com
Subject: Redlands Avenue East Industrial Project, City of Perris, Riverside County, CA

This email is to inform you that we have no comments on this project. We defer to the more local Tribes and support their decisions on the project.

Thank you,
H. Jill McCormick, M.A.

Quechan Indian Tribe
Historic Preservation Officer
P.O. Box 1899
Yuma, AZ 85366-1899
Office: 760-572-2423
Cell: 928-261-0254
E-mail: historicpreservation@quechantribe.com

Native American Group and Contact	Date(s) and Method of First Contact Attempt	Date(s) and Method of Second Contact Attempt	Date(s) and Method of Third Contact Attempt	Date(s) of Replies Received	Comments
Agua Caliente Band of Cahuilla Indians - Patricia Garcia-Plotkin, Director	Certified USPS mail letter, 4/28/2021	Email, 5/17/2021	--	Email, 6/1/2021	On 6/1/2021, Lucy Padilla, archaeologist of the Tribal Historic Preservation Office responded and noted that Project is within the Tribe's traditional use area and requested the record search results and report for the project. The record search results were sent on June 2, 2021
Agua Caliente Band of Cahuilla Indians - Jeff Grubbe, Chairman	Certified USPS mail letter, 4/28/2021	Email to Patricia Garcia-Plotkin, 5/17/2021	--	--	See above
Augustine Band of Mission Indians - Amanda Vance, Chairperson	Certified USPS mail letter, 4/28/2021	Email, 5/17/2021	Telephone call, 6/7/2021	Telephone call, 6/7/2021	On 6/7/2021, an administrator answered telephone call and asked to forward copy of scoping letter to info@augustine-nsn.gov. Letter was sent to requested email address.
Cabazon Band of Mission Indians - Doug Welmas, Chairperson	Certified USPS mail letter, 4/28/2021	Email, 5/17/2021	Telephone call, 6/7/2021 left voicemail		No response as of 6/24/2021
Cahuilla Band of Mission Indians of the Cahuilla Reservation, California - Daniel Salgado, Chairman	Certified USPS mail letter, 4/28/2021	Email, 5/17/2021	Telephone call, 6/7/2021	Telephone call, 6/7/2021	Bobby Esparza with the Cultural Department responded that their group is interested in the project and would like to have monitors during all ground disturbances.
Morongo Band of Mission Indians - Ann Brierty, THPO	Certified USPS mail letter, 4/28/2021	Email, 5/17/2021	Telephone call, 6/7/2021	Telephone call, 6/7/2021; Telephone number disconnected, email resent	No response as of 6/24/2021

Native American Group and Contact	Date(s) and Method of First Contact Attempt	Date(s) and Method of Second Contact Attempt	Date(s) and Method of Third Contact Attempt	Date(s) of Replies Received	Comments
Morongo Band of Mission Indians, California - Robert Martin, Chairman	Certified USPS mail letter, 4/28/2021	Email to Ann Brierty, 5/17/2021	Telephone call, 6/7/2021	Telephone call, 6/8/2021, left voicemail	No response as of 6/24/2021
Pala Band of Mission Indians - Shasta Gaughen, THPO	Certified USPS mail letter, 4/28/2021	Email, 5/17/2021	Telephone call, 6/7/2021, left voicemail		No response as of 6/24/2021
Pechanga Band of Mission Indians - Paul Macarro, Cultural Resources Coordinator	Certified USPS mail letter, 4/28/2021	Email, 5/17/2021	Telephone call, 6/7/2021, left voicemail		No response as of 6/24/2021
Pechanga Band of Mission Indians - Mark Macarro, Chairperson	Certified USPS mail letter, 4/28/2021	Email, 5/17/2021	Telephone call, 6/7/2021, left voicemail		See above
Rincon Band of Mission Indians California - Bo Mazzetti, Chairman	Certified USPS mail letter, 4/28/2021	Email, 5/17/2021	Telephone call, 6/8/2021	Telephone call, 6/8/2021	On 6/8/2021, Ms. Suzette Hernandez Liaison for Rincon Band of Mission Indians of the Rincon Reservation asked during the telephone call for the letter to be sent to her and Ms. Suzette will forward to the cultural department on behalf of Chairperson Bo Mazzetti. Letter sent as requested.
Rincon Band of Mission Indians - Cheryl Madrigal, THPO	Certified USPS mail letter, 4/28/2021			Email, 5/11/2021	THPO Cheryl Madrigal replied by email indicating the Tribe has no knowledge of cultura resources within the proposed project area and requesting archaeological record search results be sent. On 5/13/2021 Cogstone replied that no prehistoric or archaeological cultural resources were identified by the record search

Native American Group and Contact	Date(s) and Method of First Contact Attempt	Date(s) and Method of Second Contact Attempt	Date(s) and Method of Third Contact Attempt	Date(s) of Replies Received	Comments
Santa Rosa Band of Cahuilla Indians, California - Lovina Redner, Chairperson	Certified USPS mail letter, 4/28/2021	Email, 5/17/2021	Telephone call, 6/8/2021	Telephone call, 6/8/2021	Ms. Vivian Hamilton indicated during the telephone call has no comments on behalf of Chairperson Lovina Redner
Soboba Band of Mission Indians - Isaiah Vivanco, Chairperson	Certified USPS mail letter, 4/28/2021	Email, 5/17/2021	Telephone call, 6/8/2021, Left voicemail		See below
Soboba Band of Mission Indians - Joseph Ontiveros, Cultural Resources	Certified USPS mail letter, 4/28/2021	Email, 5/17/2021	Telephone call, 6/8/2021	phone call, 6/8/2021	Mr. Ontiveros responded during the telephone call with concerns and requested a consultation with the lead agency to disclose information.
Quechan Tribe of the Fort Yuma Reservation - Jill McCormick, Historic Preservation Officer	Certified USPS mail letter, 4/28/2021	--	--	Email, 5/5/2021	Historic Preservation Officer Jill McCormick responded by email that the Tribe has no comments and defers to more local Tribes
Quechan Tribe of the Fort Yuma Reservation - Manfred Scott, Acting Chairman Kw'ts'an Cultural Committee	Certified USPS mail letter, 4/28/2021	--	--	Email, 5/5/2021	See above

Native American Group and Contact	Date(s) and Method of First Contact Attempt	Date(s) and Method of Second Contact Attempt	Date(s) and Method of Third Contact Attempt	Date(s) of Replies Received	Comments
Los Coyotes Band of Cahuilla & Cupeno Indians, California - Ray Chapparosa, Chairperson	Certified USPS mail letter, 4/28/2021	Email, 5/17/2021	Telephone call, 6/8/2021, left voicemail		No response as of 6/24/2021
Ramona Band of Cahuilla, California - Joseph Hamilton, Chairman	Certified USPS mail letter, 4/28/2021	Email, 5/17/2021	Telephone call, 6/8/2021	Telephone call, 6/8/2021	Representative said John Gomez will respond to email sent.
Ramona Band of Mission Indians - John Gomez, Environmental Coordinator	Certified USPS mail letter, 4/28/2021	Email, 5/17/2021	Telephone call, 6/8/2021	Telephone call, 6/8/2021	See above
Torres-Martinez Band of Desert Cahuilla Indians - Michael Mirelez, Cultural Resource Coordinator	Certified USPS mail letter, 4/28/2021	Email, 5/17/2021	phone call, 6/8/2021	Telephone call, 6/8/2021; Voicemail box full	No response as of 6/24/2021

APPENDIX E. PALEONTOLOGICAL SENSITIVITY RANKING CRITERIA

PFYC Description Summary (BLM 2016)	PFYC Rank
Very Low. The occurrence of significant fossils is non-existent or extremely rare. Includes igneous (excluding air-fall and reworked volcanic ash units), metamorphic, or Precambrian rocks. Assessment or mitigation of paleontological resources is usually unnecessary except in very rare or isolated circumstances that result in the unanticipated presence of fossils.	1
Low. Sedimentary geologic units that are unlikely to contain vertebrate or scientifically significant nonvertebrate fossils. Includes rock units less than 10,000 years old and sediments with significant physical and chemical changes (e.g., diagenetic alteration) which decrease the potential for fossil preservation. Assessment or mitigation of paleontological resources is not likely to be necessary.	2
Moderate. Units are known to contain vertebrate or scientifically significant nonvertebrate fossils, but these occurrences are widely scattered and/or of low abundance. Common invertebrate or plant fossils may be found and opportunities may exist for casual collecting. Paleontological mitigation strategies will be based on the nature of the proposed activity. Management considerations cover a broad range of options that may include record searches, pre-disturbance surveys, monitoring, mitigation, or avoidance. Surface-disturbing activities may require assessment by a qualified paleontologist to determine whether significant paleontological resources occur in the area of a proposed action, and whether the action could affect the paleontological resources.	3
High. Geologic units containing a high occurrence of significant fossils. Fossils must be abundant per locality. Vertebrates or scientifically significant invertebrate or plant fossils are known to occur and have been documented, but may vary in occurrence and predictability. Mitigation plans must consider the nature of the proposed disturbance, such as removal or penetration of protective surface alluvium or soils, potential for future accelerated erosion, or increased ease of access that could result in looting. Detailed field assessment is normally required and on-site monitoring or spot-checking may be necessary during land disturbing activities. In some cases avoidance of known paleontological resources may be necessary.	4
Very High. Highly fossiliferous geologic units that consistently and predictably produce vertebrate or scientifically significant invertebrate or plant fossils. Vertebrate fossils or scientifically significant invertebrate fossils are known or can reasonably be expected to occur in the impacted area. Paleontological resources are highly susceptible to adverse impacts from surface disturbing activities. Paleontological mitigation may be necessary before or during surface disturbing activities. The area should be assessed prior to land tenure adjustments. Pre-work surveys are usually needed and on-site monitoring may be necessary during land use activities. Avoidance or resource preservation through controlled access, designation of areas of avoidance, or special management designations should be considered.	5
Unknown. An assignment of "Unknown" may indicate the unit or area is poorly studied and field studies are needed to verify the presence or absence of paleontological resources. The unit may exhibit features or preservational conditions that suggest significant fossils could be present, but little information about the actual unit or area is known. Literature searches or consultation with professional colleagues may allow an unknown unit to be provisionally assigned to another Class, but the geological unit should be formally assigned to a Class after adequate survey and research is performed to make an informed determination.	U
Water or Ice. Typically used only for areas which have been covered thus preventing an examination of the underlying geology.	W, I