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PALEONTOLOGY - ARCHAEOLOGY - HISTORY

CLASS III INVENTORY OF CULTURAL AND PALEONTOLOGICAL RESOUCRES FOR THE YUCCA VALLEY COMMUNITY PARK PROJECT, TOWN OF YUCCA VALLEY, CALIFORNIA

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March 2012

Cogstone Project Number: 2396
Type of Study: Paleontological and archaeological assessment
Fossil Localities: None
Archaeological Sites: None
USGS Quadrangle: Yucca Valley South 7.5' 1972, revised 1994
Area: 5-acres
Key Words: Serrano, Quaternary older Alluvium, Quaternary younger alluvium

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EXECUTIVE SUMMARY

The purpose of this study was to determine the potential effects on paleontological, archaeological and historical resources of the proposed Yucca Valley Community Park Project in the Town of Yucca Valley, San Bernardino County, California. This study was requested by HUD through the Town of Yucca Valley.

The project area is mapped as Quaternary younger alluvium. The paleontological records search indicated that no fossils are known in these sediments. However, there are fossils known nearby in the Quaternary older alluvium that underlie the younger alluvium.

The cultural resources records search determined that there are no known cultural resources within the project area boundaries or within a one mile-radius of the project area boundaries. Previously, no archaeological studies have been conducted within the project boundaries, and eight studies have been conducted within a one mile-radius of the current project boundaries.

The Native American Heritage Commission indicated that there are no known sacred lands in the vicinity. Letters requesting information on any known heritage sites, and containing maps and project information were sent to 12 Native American contacts on December 8, 2011. Follow-up emails and phone calls were made in addition. No responses were received.

Ground visibility in the entire project area was generally fair at 70%, owing to the presence of vegetation; some areas were more densely covered than others. The project area is at the base of gently sloping foothills and is relatively flat with a few gentle rises. Some modern trash was observed, such as modern alcohol bottle fragments, a mattress spring and butchered animal bone. The entire project area was surveyed. No historic or prehistoric resources were observed. No paleontological resources were observed. Nothing was collected.

Most proposed construction work involves minimal grading for playing fields, parking lots, etc. Subsurface excavation is limited to plumbing and other utilities. The potential for the presence of unanticipated resources is considered low given this scope.

We recommend cultural resources awareness training for project construction personnel. This brief field training presents the types of resources that might be present subsurface and outlines procedures to be followed if a discovery is made. Unanticipated finds during grading require that the project halt work in the vicinity of the find (minimum 50 foot radius) until it can be evaluated by a qualified paleontologist or archaeologist, as suitable.

INTRODUCTION

PURPOSE OF STUDY

The purpose of this study was to determine the potential effects on paleontological, archaeological, and historical resources of the proposed Yucca Valley Community Park Project in the Town of Yucca Valley, San Bernardino County, California (Figure 1). This study was requested by HUD through the Town of Yucca Valley.

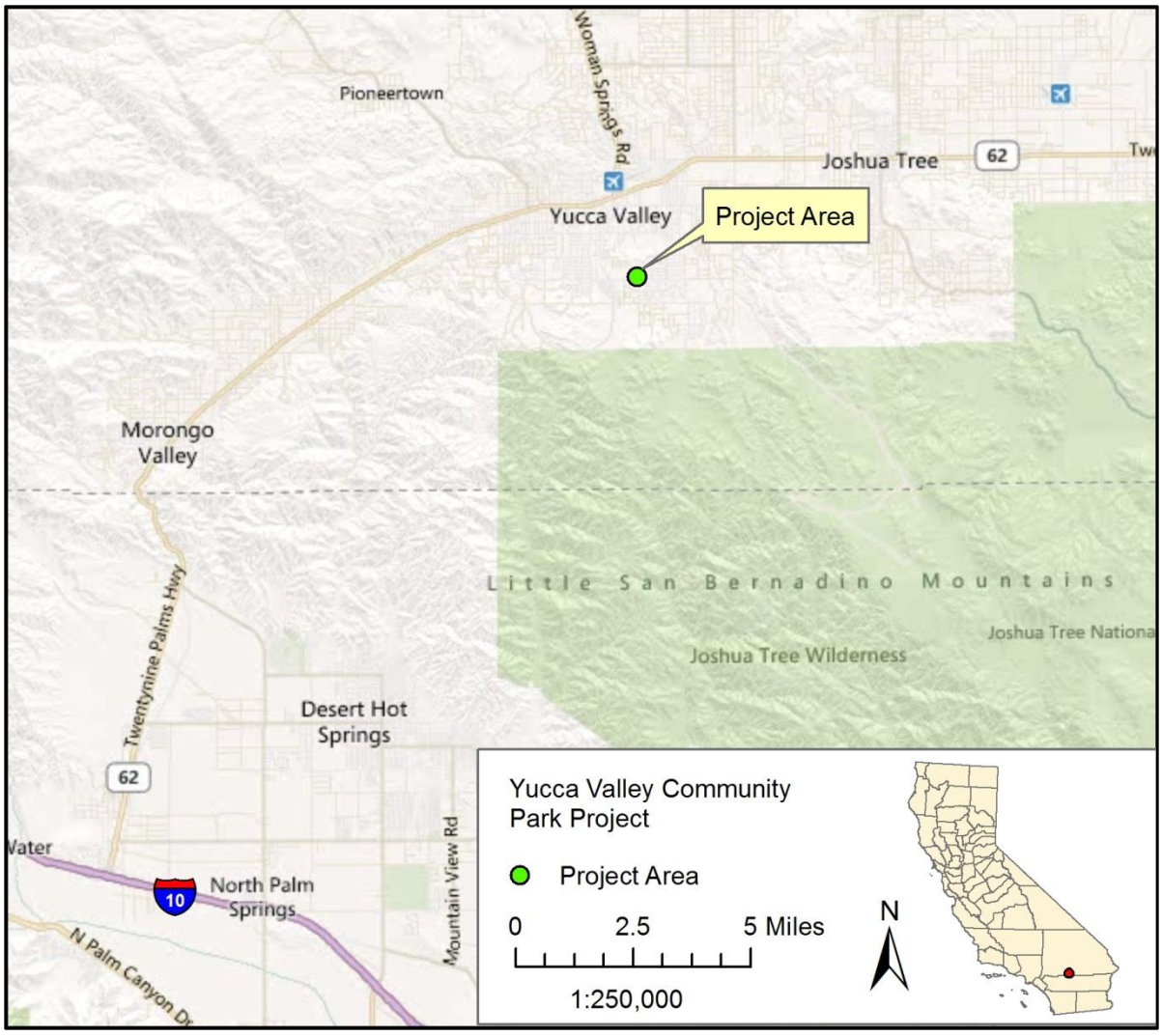

Figure 1. Project vicinity

PROJECT DESCRIPTION

The proposed project is located at the northwest corner of Joshua Land and Warren Vista Avenue in the Town of Yucca Valley (Figure 2, Figure 3). The proposed project is located on the Yucca Valley South 7.5 minute quadrangle in the SW ¼ of the NE ¼ of Section 12, Township 1 South, Range 5 East, San Bernardino Base and Meridian.

Phase 1A of the proposed project consists of a 1.5-acre dog park; two acres of playground; turf and hardscape improvements and approximately 19,000 square feet of parking. Alternates for Phase 1A include a restroom building, a shade structure and additional ancillary improvements. Future phases may include athletic fields; restrooms; a concessions building; additional playground and picnic areas; open space; additional vehicle parking; a native plant garden; volleyball courts; walking and exercise trails; a maintenance building; additional parking; barbecues and horseshoe and shuffleboard courts, expanding to 37.75-acres.

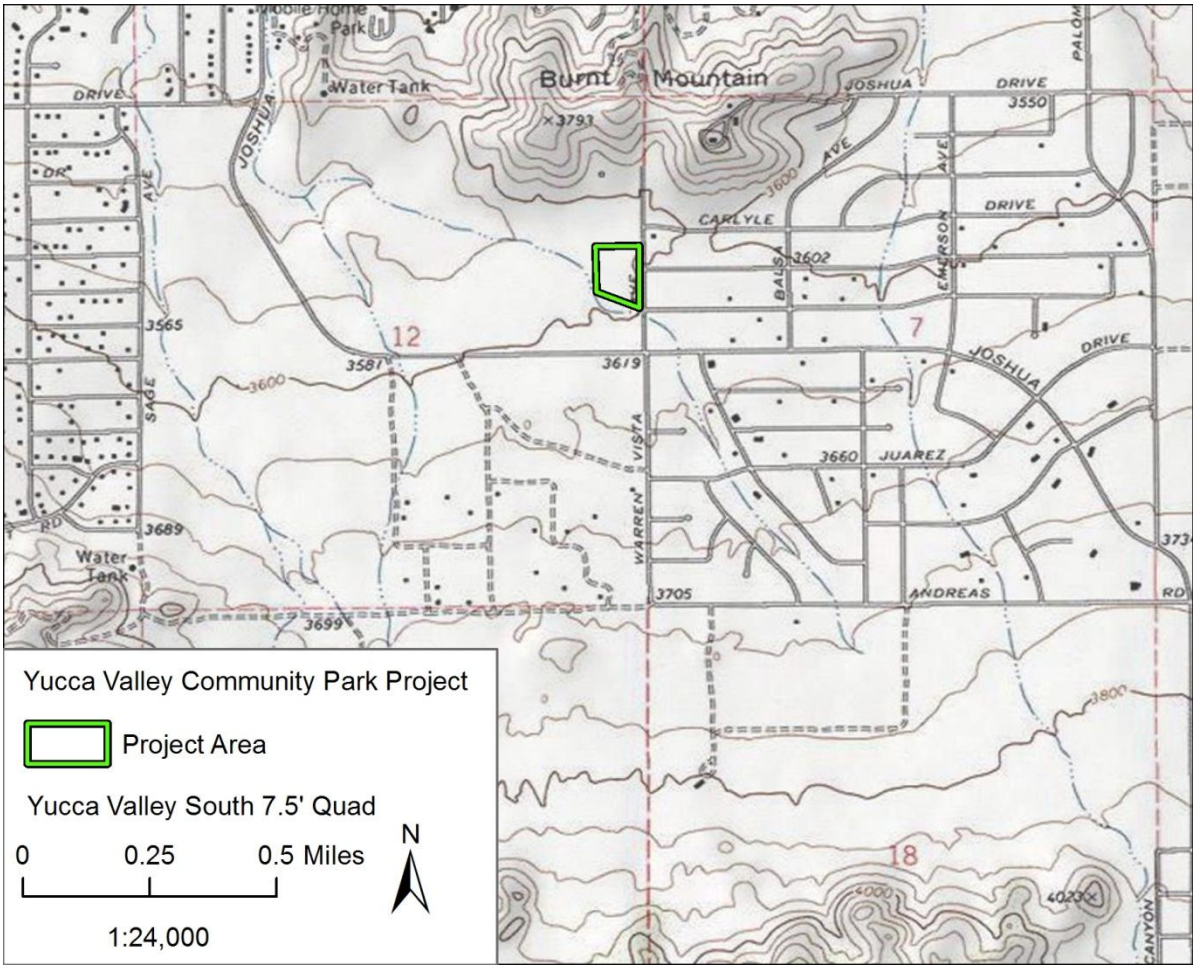

Figure 2. Project area

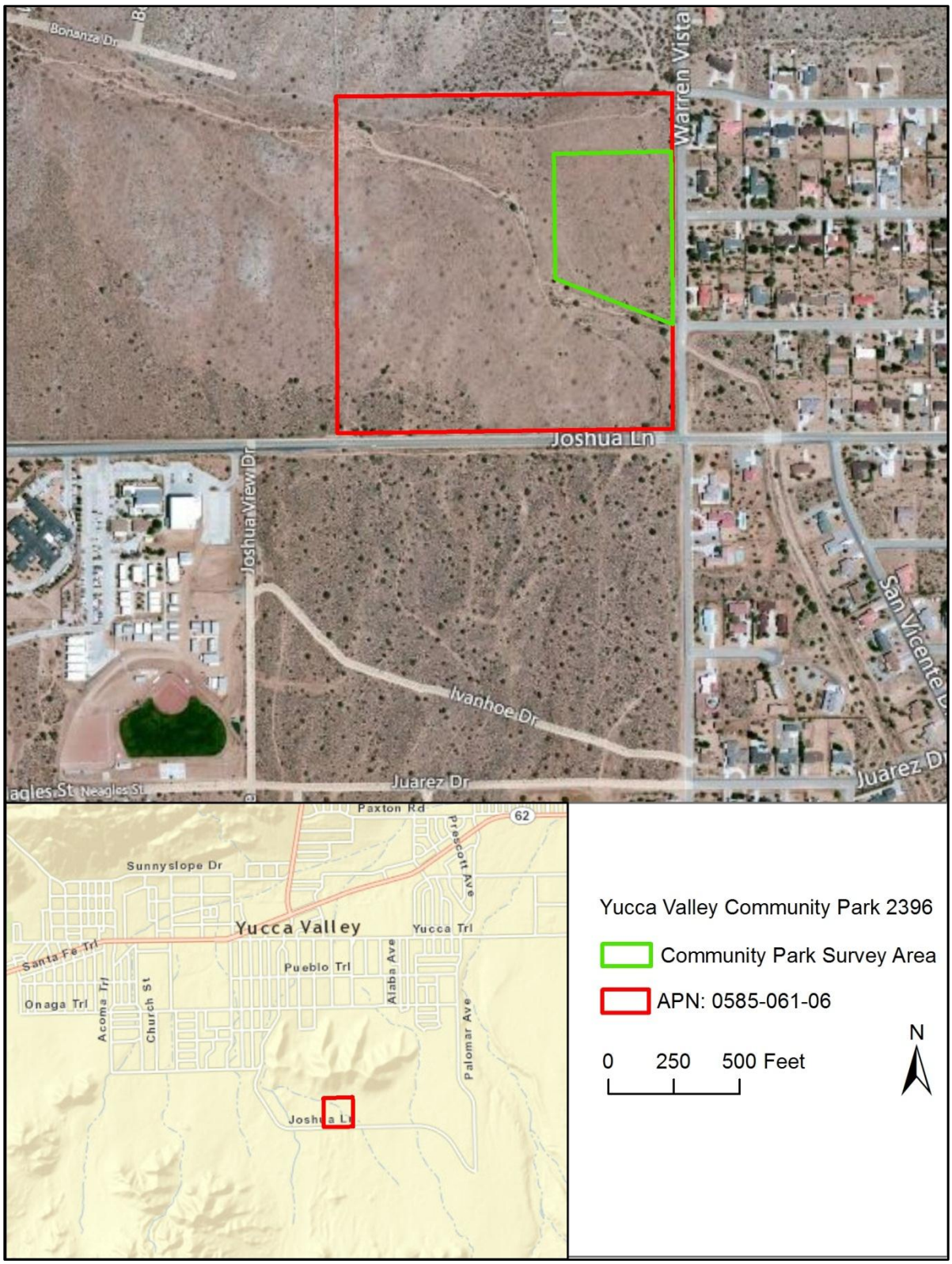

Figure 3. Project aerial

PROJECT PERSONNEL

Cogstone Resource Management Inc. (Cogstone) conducted the cultural resources studies. Sherri Gust served as the Principal Investigator for the project, supervised all work, prepared the recommendations and edited this report. Gust is a Qualified Principal Paleontologist and Registered Professional Archaeologist. She has a M.S. in Anatomy (Evolutionary Morphology) from the University of Southern California, a B.S. in anthropology from the University of California at Davis and over 30 years of experience in California.

Melinda Horne wrote portions of this report pertaining to the cultural resources regulatory framework and cultural history. Ms. Horne is a Registered Professional Archaeologist and received her B.A. and M.A. in Anthropology/Geography from the University of Utah in 1980 and 1984, respectively, and has more than 30 years of archaeological experience in California, Oregon, Nevada, and Utah.

Amy Glover performed the archaeological records search and wrote portions of the report, including the records search results, the historical setting and the survey results. Glover has a B.S. in Biological Anthropology from the University of California at Riverside and over six years of experience in Southern California archaeology. Todd Wirths conducted the paleontology research and prepared those sections of the Assessment pertaining to paleontological resources. Wirths holds a B.A. in geology from the University of California, Santa Cruz, and a M.S. in geology from San Diego State University. In addition, Wirths is a California Certified Professional Geologist (No. 7588) and has extensive paleontological research and field experience.

Molly Valasik prepared the maps. Valasik has a M.A. in anthropology from Kent State University in Ohio and over two years of experience in Southern California archaeology. Lindsay Porras performed the survey. Porras has a B.A. in Anthropology from the University of Nevada and more than three years of experience in California archaeology. Qualifications of key Cogstone personnel listed above are provided in Appendix A.

REGULATORY FRAMEWORK

In this section, the Federal and State laws and regulations governing paleontological and cultural resources are reviewed. Both resources types are governed by the over-arching National Environmental Policy Act (NEPA) and the Federal Land Policy and Management Act (FLPMA). The NEPA directs federal agencies to use all practicable means to "Preserve important historic, cultural, and natural aspects of our national heritage…" (42 USC 4321 Section 101(b) (4)). The FLPMA established public land policy and guidelines for the administration, management, protection, development and enhancement of BLM public lands.

Generally speaking, if the presence of a significant environmental resource, such as a paleontological and/or cultural resource, is identified during the scoping process, federal agencies and their agents must take the resource into consideration when evaluating project effects. Consideration of paleontological and cultural resources may be required under NEPA and FPLMA when a project is proposed for development on federal land or land under federal jurisdiction.

At the state level, the California Environmental Quality Act (CEQA) of 1970, as amended, 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. CEQA includes historical and archaeological cultural resources as integral features of the environment. If paleontological resources are identified as being within the proposed Project area, the sponsoring agency must also take those resources into consideration when evaluating Project effects.

FEDERAL LAWS AND REGULATIONS

PALEONTOLOGICAL RESOURCES PRESERVATION ACT

The Paleontological Resources Preservation Act (Public Law 111-011, Title VI, Subtitle D on Paleontological Resources Preservation) requires the Secretaries of the Interior and Agriculture to manage and protect paleontological resources on Federal land using scientific principles and expertise. The law affirms the authority for many of the policies the Federal land managing agencies already have in place for the management of paleontological resources such as issuing permits for collecting paleontological resources, curation of paleontological resources, and

confidentiality of locality data. It only applies to Federal lands. It provides authority for the protection of significant paleontological resources on Federal lands including criminal and civil penalties for fossil theft and vandalism. The act states (in part):

a) The term ‘‘paleontological resource’’ means any fossilized remains, traces or imprints of organisms preserved in or on the earth’s crust that are of paleontological interest and that provide information about the history of life on earth.
b) The Secretary shall manage and protect paleontological resources on Federal land using scientific principles and expertise.
c) The Secretary shall develop appropriate plans for inventory, monitoring and the scientific and educational use of paleontological resources, in accordance with applicable agency laws, regulations, and policies. These plans shall emphasize interagency coordination and collaborative efforts where possible with non-Federal partners, the scientific community and the general public.
d) A paleontological resource may not be collected from Federal land without a permit issued under this subtitle by the Secretary.
e) The Secretary may issue a permit for the collection of a paleontological resource pursuant to an application if the Secretary determines that:

    1) the applicant is qualified to carry out the permitted activity;
    2) the permitted activity is undertaken for the purpose of furthering paleontological knowledge or for public education;
    3) the permitted activity is consistent with any management plan applicable to the Federal land concerned; and
    4) the proposed methods of collecting will not threaten significant natural or cultural resources.

f) A permit for the collection of a paleontological resource issued under this section shall contain such terms and conditions as the Secretary deems necessary to carry out the purposes of this subtitle. Every permit shall include requirements that:

    1) the paleontological resource that is collected from Federal land under the permit will remain the property of the United States;
    2) the paleontological resource and copies of associated records will be preserved for the public in an approved repository, to be made available for scientific research and public education; and
    3) specific locality data will not be released by the permittee or repository without the written permission of the Secretary.

g) Any paleontological resource, and any data and records associated with the resource, collected under a permit, shall be deposited in an approved repository. The Secretary

may enter into agreements with non-Federal repositories regarding the curation of these resources, data, and records.

h) Information concerning the nature and specific location of a paleontological resource shall be exempt from disclosure under section 552 of title 5, United States Code and any other law unless the Secretary determines that disclosure would further the purposes of this subtitle, not create risk of harm to or theft or destruction of the resource or the site containing the resource and be in accordance with other applicable laws. [BLM 2009]

NATIONAL HISTORIC PRESERVATION ACT

Enacted in 1966, the *National Historic Preservation Act* (NHPA) has become the foundation and framework for historic preservation in the United States. Briefly, the NHPA authorizes the Secretary of the Interior to expand and maintain a National Register of Historic Places (NRHP); it establishes an Advisory Council on Historic Preservation (ACHP) as an independent federal entity; requires federal agencies to take into account the effects of their undertakings on historic properties; and affords the ACHP a reasonable opportunity to comment on any undertaking that may affect historic properties listed, or eligible for listing, in the NRHP. In addition, the NHPA delegates the heads of all federal agencies with the responsibility for the preservation of historic and archaeological properties owned or controlled by their agencies. As well, the NHPA authorizes funding for state programs with provisions for pass-through funding and participation by local governments. In summary, the NHPA provides the legal framework for most state and local preservation laws.

The National Park Service (NPS) has issued regulations governing the NRHP (36 CFR 60). Among the topics covered in detail in these regulations are the effects of listing under federal law, definition of key terms (e.g., building, site, structure and district), nomination procedures, nomination appeals and removing properties from the NRHP. Importantly, Section 60.4 of the regulations presents the criteria by which historic properties are evaluated for the NRHP.

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

1. That are associated with events that have made a significant contribution to the broad patterns of our history; or

2. That are associated with the lives of persons significant in our past; or

3. That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

4. That have yielded, or may be likely to yield, information important in prehistory or history (36 CFR 60.4).

A point to be emphasized is that a historic property does not have to be nominated for, or listed in, the NRHP to be afforded protection under the NHPA. Indeed, *most* of the properties managed under this and other federal historic-preservation authorities have never been nominated for the NRHP. The significance of a historic district, site, building, structure or object —and thus its required consideration under the law—is determined by the property's *eligibility* for the NRHP with respect to the criteria set forth in 36 CFR 60.4.

The NHPA established the Section 106 review procedure to protect historic and archaeological resources that are listed in or eligible for listing in the NRHP from impacts of projects by a federal agency, projects funded or permitted by a federal agency, or projects located on federally-owned land or Native American-owned land. State Historic Preservation Officers and programs in all states and U.S. territories receive federal funding to carry out the provisions of the NHPA. This funding comes from a yearly appropriation by the legislative branch of the federal government.

STATE LAWS AND REGULATIONS

CALIFORNIA ENVIRONMENTAL QUALITY ACT

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.

CEQA includes historic and archaeological resources as integral features of the environment. If paleontological resources are identified as being within the proposed project area, the sponsoring agency must take those resources into consideration when evaluating project effects. The level of consideration may vary with the importance of the resource.

CALIFORNIA REGISTER OF HISTORICAL RESOURCES

The register is 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 from No. 770 on. The criteria for listing are the same as those of the National Register. 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 historic 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, 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.

CALIFORNIA HISTORICAL LANDMARKS

California Historical Landmarks are buildings, structures, sites or places that have been determined to have statewide historical significance by meeting at least one of the criteria listed below. The resource also must be approved for designation by the County Board of Supervisors or the City/Town Council in whose jurisdiction it is located, such as the County of San Bernardino and the Town of Yucca Valley, respectively; be recommended by the State Historical Resources Commission; and be officially designated by the Director of California State Parks.

To be eligible for designation as a Landmark, a resource must meet at least one of the following criteria:

1) Be the first, last, only or most significant of its type in the state or within a large geographic region (Northern, Central or Southern California);

2) Be associated with an individual or group having a profound influence on the history of California; or

3) Be a prototype of, or an outstanding example of, a period, style, architectural movement or construction or is one of the more notable works or the best surviving work in a region of a pioneer architect, designer or master builder.

CALIFORNIA POINTS OF HISTORICAL INTEREST

California Points of Historical Interest are sites, buildings, features, or events that are of local (city or county) significance and have anthropological, cultural, military, political, architectural, economic, scientific or technical, religious, experimental, or other value.

Points of Historical Interest designated after December 1997 and recommended by the State Historical Resources Commission are also listed in the CRHR. No historical resource may be designated as both a State Historical Landmark and a State of Point Historical Interest. It should be noted that if a State Point of Historical Interest is subsequently granted status as a State Historical Landmark, the Point of Historical Interest designation will be retired. The criteria for designation as a State Point of Historical Interest, a resource must meet at least one of the listed above for California Historical Landmarks.

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.

ADDITIONAL RELEVANT GUIDANCE

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).

BACKGROUND

GEOLOGICAL SETTING

The project area is mapped as Quaternary alluvium (Figure 4; Dibblee 2008). Deposits of Quaternary alluvium (Qa) represent very young Pleistocene to Recent surficial deposits of loose sand and gravel in washes, with fine sand, silt and clay in valley areas (Dibblee 2008).

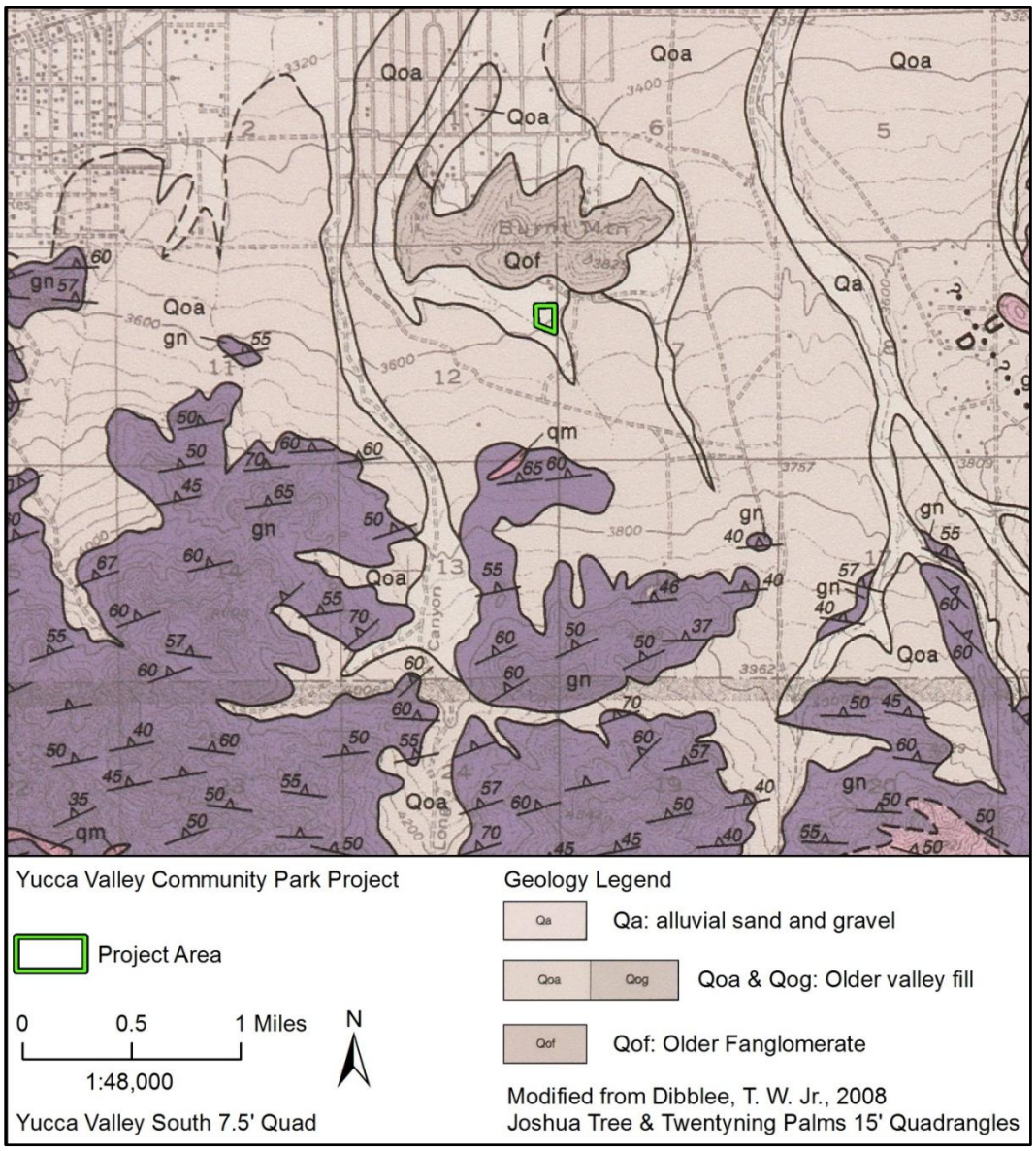

Figure 4. Geology of project area

PREHISTORIC SETTING

Excluding the controversial "Early Man" pre-projectile point materials from the Calico Ghost Town area, Native American occupation of the Yucca Valley and neighboring regions can be divided into five cultural periods: Paleoindian/San Dieguito (ca. 12,000 to 7000 years before present (B.P.); Pinto (ca. 7000 to 4000 B.P.); Gypsum Period (ca. 4000 to 1500 B.P.); Saratoga Springs Period (ca. 1500 to 750 B.P.); and the Late Prehistoric Period (ca. 750 to 200 B.P.) which ended in the ethnographic period (see also Warren 1984). Salient data regarding these temporal periods are briefly reviewed below.

Paleoindian/San Dieguito Period (ca. 12,000 B.P. to 7000 B.P.)

The Paleoindian Period is marked by deglacial climatic changes that began by about 13,000 B.P. In the desert interior, the change from glacial to postglacial ecosystems began by at least 11,700 B.P. but took millennia to complete (Spaulding 1995). Paleoclimatic and paleoecological data suggest that until about 7500 B.P. the prevailing westerly air flow pattern weakened, while the desert interior received moist monsoonal flow from the southeast. This resulted in the interior deserts having considerably higher levels of effective moisture than present. Thus, the desert interior was apparently less arid than cismontane southern California during this period and possessed an abundance of water sources and relatively productive ecosystems.

Both coastal and desert region designations for the early Holocene refer to a long period of human adaptation to environmental changes brought about by the transition from the late Pleistocene to the early Holocene geologic periods. As climatic conditions became warmer and more arid, Pleistocene megafauna perished abruptly between 13,000 and 10,000 B.P. Human populations responded to these changing environmental conditions by focusing their subsistence efforts on the procurement of a wider variety of faunal and floral resources. These early occupants of southern California are believed to have been nomadic large-game hunters whose tool assemblage included percussion-flaked scrapers and knives; large, well-made fluted, leaf-shaped, or stemmed projectile points (e.g., Lake Mojave, Silver Lake); crescentics; heavy core/cobble tools; hammerstones; bifacial cores; and choppers and scraper planes.

Many Lake Mojave deposits investigated in the southwestern Great Basin have also yielded some amount of milling equipment, usually large slabs with ephemeral wear and handstones, implying regular, albeit limited, use of vegetal resources (Basgall and Hall 1993:19). Although intact stratified sites dating to this period are very scarce, the limited data do suggest that the prehistoric populations of this period moved about the region in small, highly mobile groups, with a wetland-focused subsistence strategy based on hunting and foraging. Sites dating from this interval have generally been found around early Holocene marshes, lakes and streams which dominated much of the landscape.

Pinto Period (ca. 7000 B.P. to 4000 B.P.)
The Pinto Period is marked by the gradual transition from pluvial to arid conditions during the terminal Pleistocene-Early Holocene. Sites attributed to the Pinto Period are few in number in southern California, with those in the Pinto Basin, Salt Springs and Death Valley, as well as the Stahl site being best known. These sites are associated with ephemeral lakes and now-dry streams and springs, suggesting wetter conditions than now prevail in the deserts.

The distinctive characteristics of the Pinto Basin Complex as defined are projectile points of the Pinto series, generally coarse in manufacture as well as form, in association with heavy-keeled scrapers, flat milling stones and manos. Throughout most of the California desert region, sites containing elements of the Pinto Basin Complex are small and are usually limited to surface deposits, suggestive of temporary and perhaps seasonal occupation by small groups of people.

Warren postulates that the "Pinto Basin Complex evolved from the earlier hunting complexes of the Lake Mojave Period and that it represents a small population dependent on hunting and gathering, but lacking a well-developed milling technology" (Moratto 1984:414). As the Pleistocene lakes and rivers dried up, early hunting populations of the Lake Mojave Period likely withdrew to the margins of the deserts or concentrated around the few oases in the desert. According to Warren (Moratto 1984:414), with the return of moister conditions at approximately 4500 B.C., the Pinto Basin peoples appear to have reoccupied much of the lower Mojave Desert where shallow lakes had formed and along stream courses and major springs. With the return of more arid conditions at about 3500 B.C., these people again may have withdrawn to the desert margins and oases, leaving much of the desert region uninhabited until the end of the Pinto Period (ca. 4000 B.P.).

Gypsum Period (ca. 4000 B.P. to 1500 B.P.)
The Gypsum Period is marked by Humboldt Concave Base, Gypsum Cave and Elko series projectile points and is dated between ca. 4000 B.P. to 1500 B.P. A few Gypsum Period sites from the deserts of California, Nevada and Arizona have been excavated, including Gypsum Cave, Newberry Cave, Willow Beach, Rose Spring, Indian Hill Rockshelter and Ray, Baird and Chapman Caves. In addition to diagnostic projectile points, Gypsum Period sites include leaf-shaped points (e.g., Elko and Humbolt series), rectangular-based knives, flake scrapers, T-shaped drills and occasionally large scraper planes, choppers and hammerstones (Moratto 1984:416). Manos and milling stones are common; the mortar and pestle also were introduced during this period. Other artifacts include shaft smoothers, incised slate and sandstone tablets and pendants, bone awls, *Olivella* shell beads and *Haliotis* beads and ornaments. A wide range of perishable items dating to this period was recovered from Newberry Cave, including atlatl hooks, dartshafts and foreshafts, sandals and S-twist cordage, tortoise-shell bowls and split-twig animal figurines. The presence of both *Haliotis* and *Olivella* shell beads and ornaments and split-twig animal figurines indicates that the California desert occupants were in contact with populations from the

southern California coast and southern Great Basin (e.g., Arizona, Utah, and Nevada).

The beginning of the Gypsum period coincides with the beginning of the Little Pluvial (ca. 2000 B.C.), which apparently allowed for more intensive occupation of the California deserts. During the succeeding arid periods, it appears that these populations gradually adapted in a variety of technological and socioeconomic ways to the more arid desert environment. Technologically, the artifact assemblage of this period is similar to that of the preceding Pinto Basin Period; new tools also were added either as innovations or as "borrowed" cultural items. Included are the mortar and pestle, used for processing hard seeds (e.g., mesquite pods) and the bow and arrow, as evidenced by the presence of Rose Spring projectile points late in this period. Increased contact with neighboring groups likely provided the desert occupants important storable foodstuffs during less productive seasons or years, in exchange for valuable lithic materials such as obsidian and cryptocrystalline silicates for flaked stone tool manufacture.

Saratoga Springs Period (ca. 1500 B.P. to 750 B.P.)

The Saratoga Springs Period saw essentially a continuation of the Gypsum Period subsistence adaptation throughout much of the California desert. Unlike the preceding period however, the Saratoga Springs Period is marked by strong regional cultural developments, especially in the southern California desert regions, which were heavily influenced by the Hakataya culture of the lower Colorado River area.

Generally, the Saratoga Springs Period is marked by the dominance of Rose Spring and Eastgate arrow points replacing the earlier Elko and Humboldt series dart points. In the southern desert region, the impetus for change appears to have derived from the lower Colorado River as evidenced by the introduction of Buff and Brown Ware pottery and Cottonwood and Desert Side-notched arrow points. The initial date for the first Hakataya influence on the southern California desert region remains unknown; however, it does appear that by A.D. 800 to 900 the Mojave Sink to the north of the Yucca Valley study region was heavily influenced, if not occupied by, lower Colorado River peoples. In this area, large village sites developed and contain deep midden deposits and cemeteries which often contain large quantities of shell beads and steatite items that originated from the southern California coastal regions.

Late Prehistoric Period (ca. 750–200 B.P.)

The Late Prehistoric Period in the general study region is marked by the introduction of new artifact types and technological innovations to the previous transitional Late Archaic Saratoga Springs Period and has been defined as the Payatan Pattern (Cleland 1998; CSRI 1986; Schaefer 1994, 1995). New projectile point types, including Desert Side-notched and Cottonwood Triangular points, signify the introduction of the bow and arrow hunting technology, marking a pre-ceramic Payatan phase of the expansion of the earlier assemblages perhaps as early as 1500 B.P. Techniques of flood plain horticultural were also introduced to the inhabitants along

the Colorado River at the same time as ceramics. This period is also characterized by the introduction of ceramics, including brown ware from the Peninsular Range, buff wares from the Colorado River region and Lake Cahuilla shoreline (Schaefer 1995; Waters 1982). As well, burial practices changed from extended inhumations to cremated remains, sometimes buried in ceramic vessels. Typical of the Hohokam culture from southern Arizona, these traits were introduced to the Colorado River inhabitants and gradually spread west to the Peninsular Range and Coastal Plains of southern California. Only agriculture remains a problematic trait in regard to its spread beyond the Colorado River and Imperial Valley in late prehistoric times (CSRI 1986:35).

Three phases of Payatan are generally recognized, in addition to the pre-ceramic Payatan Phase (Schaefer 1995). These phases are defined by changes in pottery frequencies and by the cultural and demographic effects of the infilling and subsequent desiccation of ancient Lake Cahuilla in the Salton Sea Basin, south of the Project study area. The Payatan I phase appears to have been confined to the Colorado River region and began approximately 1,200 years ago with the introduction of pottery; the artifact assemblage of this phase bears the closest similarity to that of the Hohokam (Schaefer 1995; Waters 1982). The Payatan II phase, beginning about 950 years ago, is contemporary with Lacustrine Interval 2 of Lake Cahuilla. Attracted to highly productive microenvironments along the Lake Cahuilla shoreline, people on both its eastern and western shores were producing pottery by the time the lake was fully formed. New ceramic types indicate that sedimentary, nonmarine clays from the Peninsular Range were being utilized. The final Payatan III phase began approximately 500 years ago, coinciding with Lake Cahuilla Lacustrine Interval 4. This phase is characterized by new pottery types that reflect changes in settlement patterns, as well as with intensified communication between the Colorado River and Peninsular Range tribes as people living around the former Lake Cahuilla shoreline dispersed to their base territories, and the Imperial and Coachella valleys dried up, facilitating long distance travel (Schaefer 1995). Wilke (1976) has postulated that by approximately 250 years ago, with the final desiccation of Lake Cahuilla prior to the twentieth century, the native habitants occupying the lake shores began moving westward into areas such as Anza-Borrego, Coyote Canyon, the Upper Coachella Valley, the Little San Bernardino Mountains, the San Jacinto Valley and Perris Plain.

The Payatan III phase continued into the ethnographic period, ending in the late nineteenth century when Euro-American incursions disrupted the traditional culture. Although the Payatan III peoples include the Takic-speaking Cahuilla who occupied the western Colorado Desert region, as well as the Quechan, Mojave and Cocopa of the Colorado River region, the following discussion of the ethnographic setting will focus on the Serrano, who are known to have occupied the study regions encompassed by the current study area and the shores of ancient Lake Cahuilla.

ETHNOGRAPHIC CULTURAL SETTING

At the time of historic contact, the Project study region was within the ethnographic territory of the Serrano (Figure 5). 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 family that includes a number of language groups. Other Takic speakers include the Gabrielino, Luiseño and Cahuilla, whose territories share borders with the Serrano (Lerch et al. 2002:19). 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.

Traditional Serrano territory includes areas occupied by three clan groups: the Kitanemuk, Allikik and the Vanyume. The Kitanemuk were located on the upper Tejon and Paso Creeks near the Tehachapis and extended into the western portion of the Mojave Desert. The Allikik were located on the upper Santa Clara River, and the Vanyume were located along the Mojave River (Johnston 1965:1). These politically independent clan groups also belonged to one of two basic subdivisions or exogamous moieties, the Coyotes and Wildcats. The clans were divided into land holding lineages. Each of these lineages had a chief determined by heredity called the *kika*. The chief's assistant was the *paha*, who assisted him in ceremonial, political and economic affairs (Bean and Smith 1978:572).

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 pine 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, piñon pine nuts and acorns. 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.

Figure 5. Southern California tribal territories

Important game animals included coyotes, bobcats, gray foxes, ground squirrels, desert chipmunks, field mice, packrats, kangaroo rats, bighorn sheep, antelope, bear, deer, insects and a variety of reptiles, including the desert tortoise. Meat was either boiled in cooking ollas or broiled over hot coals; it was also roasted and dried in the sun. Hunting was performed with bows and arrows, using quartz, crystalline quartz, quartzite, a variety of cryptocrystalline silicates and obsidian for flaked stone projectile points. Arrow shafts were constructed from cane shoots and arrow weed, while bows were constructed from manzanita and desert willow. Horns obtained from big horn sheep and deer were made into flaking tools to create chipped tools such as projectile points, knives and a variety of scrapers. Hunters also utilized a long stick with a crook at the end to pull small animals from burrows; smaller game like rabbits, rodents and various birds were hunted with throwing sticks, nets and snares.

Men typically wore no clothing, while women wore an apron or sack-style dress furnished from animal skins. Moccasins and sandals made from juniper bark and yucca leaves were also worn. Hides used for clothing and footwear were scraped with a stone tool, cured and softened. Dried animal sinew was used as thread and bone awls were used to lace skins as well as to weave baskets.

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.

When the Spanish arrived in 1769, Serrano population levels were fairly high. By 1790, the westernmost Serrano groups began to enter Mission San Gabriel. After an attempted revolt in 1810, most of the San Bernardino Mountains and the western Mojave Desert Native groups were brought into the Mission. The Serrano in the easternmost desert, beyond the San Bernardino Mountains and Little San Bernardino Mountains, were beyond the reach of the Mission and absorbed Native peoples from a number cultural groups who fled the missions of greater southern California (Bean and Vane 2002:18).

Prehistoric and ethnohistoric archaeological sites likely to be found within the Town of Yucca Valley include: villages represented by residential bases with house features (stone and/or adobe), storage features, human burials and cremations, rock art (pictographs and/or petroglyphs); temporary encampments represented by flaked and ground stone scatters with fire hearths and possibly storage features; resource procurement and processing sites represented by bedrock milling stations, tool stone quarries, flaked and ground stone artifact scatters and/or hunting blinds; trails demarked by cairns and possibly rock art; isolated cultural features such as rock art, intaglios and/or shrines; isolated flaked or ground stone artifacts; and traditional cultural landscapes/sacred places that may include important gathering or collecting places, springs, mountain tops or rock outcroppings, burial grounds, etc.

HISTORICAL SETTING

THE SPANISH & MEXICAN PERIODS (C. 1769 TO 1848)

Although the Serrano continued to reside in the greater Yucca Valley study region as Spanish and Mexican prospectors started to make their way into the Valley, they suffered from devastating smallpox epidemics in 1825 and again in 1862 (Clark and Couzens 1966:6). Early colonizers largely ignored the arid, inland regions of southern California, including that of the Yucca Valley area. It is reported that the study area was first explored by Spaniards making forays northward from Mexico along the southern California coast and Colorado River area. Although never substantiated, oral tradition suggests that Captain Juan Iturbe sailed a large vessel into the Salton Sea from the Gulf of California and explored westerly as far as Joshua Tree National Park area. As the waters of Lake Cahuilla slowly receded, Iturbe's ship supposedly became landlocked in the area of the Salton Sea (Town of Yucca Valley 1995:IV-10). Evidence of other Spanish or Mexican explorers in the study area is rare or non-existent.

Under the Treaty of Cordova in 1821, Mexico gained independence from Spain and control of California. By 1834, the Spanish mission lands were being redistributed as private Mexican land grants called "ranchos." There is no historical evidence of any Spanish or Mexican settlements in the Yucca Valley area, although it was essentially under the influence of Mexico until the Treaty of Guadalupe Hidalgo in 1848, when southern California fell under the control of the United States Government. It should be noted that Morongo Basin was noted briefly by Brevet Captain John C. Fremont, who passed north of the Project area in 1844 and remarked that although the area was a desert, the presence of water presented the possibility of an oasis (Clark and Couzens 1966:3).

THE EARLY AMERICAN PERIOD (1850 TO 1900)

With the region under American control and the discovery of gold in California 1848, the stage was set for admittance of California into the union in 1850, which led to the dramatic influx of non-Native people from throughout the nation, as well as from other countries. Between 1855 and 1856, Colonel Henry Washington conducted the first U.S. Government surveys in the Morongo Basin. He noted signs of Native American occupation but no individuals (Evans 1965:6). In 1867, General William J. Palmer conducted a survey that led to the recommendation of the Morongo Basin route between present day Needles and the coastal and inland valley missions west of the San Gorgonio Pass.

During the 1870s leading up to the turn of the century, the general region was used largely by cattlemen and gold mining prospectors, especially after the discovery of gold east of what is now Twentynine Palms. Cattle were moved between Arizona and California, taking advantage of the watering holes in the great Morongo Basin year-round and the native grasses during the winter

months. The first settlers in the project area were the de Crevecoeur brothers and their families in approximately 1873, running both cattle and sheep.

Both cattle rustlers and legitimate cattlemen continued to use the region of the project area throughout the 1870s, and by the early 1880s both large and small gold mines were in operation in the study area with several continuing in operation until the mid-1910s (Town of Yucca Valley 1995:IV-10). In 1881, Mark "Chuck" Warren expanded his cattle operations west of his Big Morongo Canyon Ranch and dug a well in what was to become Yucca Valley. The well, windmill and small frame house were located adjacent to the present day Yucca Valley Airport (Town of Yucca Valley 1995:IV-11). Miners, a stage line, horse-drawn freighters and other travelers made heavy use of Warren's Ranch in Morongo Valley and Warren's Well in Yucca Valley for many years largely due to Warren's hospitality and his access to a reliable water supply. Warren's Well was severely damaged after a series of earthquakes in 1893 but repaired after 30 days (Clark and Couzens 1966:1-2). According to the BLM GLO records, no sizeable land patents were filed in the area during this era (BLM GLO n.d.; Town of Yucca Valley 1995:IV-10).

THE EARLY 20TH CENTURY (1900 TO 1949)

After the turn of the century, homesteading in the Morongo Basin began. A government land locator named Percy and Joseph and Mary Heard were among the first individuals who filed for land patents between 1910 and 1916, mostly in the western portion of the Town of Yucca Valley (Town of Yucca Valley 1995:IV-11). Many individuals and families did not stay in the Morongo Basin long due to harsh living conditions such as lack of water and the general difficulty in raising crops in a desert environment. Warren's Well, The Tunnel (a spring south of the Town) and the Oasis of Mara (in the Twentynine Palms area) provided the only water for settlers until they could dig their own wells (Long n.d.).

The first school in Yucca Valley was established in 1915 with 15 students, following the establishment of an earlier school in Morongo Valley. Most of the prospectors and mining activities had left the Morongo Basin by the onset of World War I. Following the war, veterans suffering from lung ailments such as tuberculosis and desiring the dry desert air settled in the area. Many of these veterans had been gassed during the war and some of them recovered, leading to non-veterans moving into the area to treat lung conditions. Despite the population increase, a telephone was not available in Yucca Valley until 1935 (Evans 1966:14; Town of Yucca Valley 1995:IV-10).

In 1936 the government withdrew over 870 square miles of public lands and formed the Joshua Tree National Monument (Evans 1965:22). Two years later in 1938, The "Baby Homestead Act" was passed, allowing homestead patents to be filed for five acres instead of the standard 160. However the population did not dramatically increase until after World War II, when hundreds of land patents were filed (Figure 6).

The highway from Morongo Valley through Yucca Valley was oiled in 1937 but washed out in 1938 during a flash flood (Evans 1965:26). It was re-oiled, but not resurfaced and paved until 1951. Electricity did not appear in the Town until 1946, three years after streets were laid out and the Yucca Water Company, Ltd. was established (Evans 1966:14). Water availability had been less of an issue in the Morongo Valley and Twentynine Palms area, leading to more rapid growth in these areas, most notably the replacement of the Navy Glider Base with the Twentynine Palms Marine Base.

The last cattle drive through Yucca Valley was in 1947, the same year the Yucca Valley Airstrip was constructed to accommodate moviemakers who were accessing nearby Pioneertown located west of the Town to film westerns in the late 1940s, 1950s and 1960s (Town of Yucca Valley 1995:IV-1).

LATE 20TH CENTURY ERA (POST-1950)

By 1966, Yucca Valley had a population of 8,197 and encompassed approximately 33 square miles. Only two years earlier, natural gas lines were installed. Primary industries in the Town switched from mining, cattle, and crops to real estate and construction, reflecting the population growth (Clark and Couzens 1966:15). Multiple businesses, shopping facilities and professional services developed within the Town during the 1950s and 1960s. The 1950s saw the creation of the Yucca Valley Chamber of Commerce, Morongo Unified School District, the Yucca Valley Sheriff's Reserve Unit and the Yucca Valley Park District. During the 1960s, due to the increased population growth, chain stores such as Safeway and Bank of America were built in Yucca Valley, as were the Hi-Desert Memorial Hospital facility and the Hi-Desert Nature Center. Also during this time, much of the frontage properties were developed along State Route 62 (Twentynine Plams Highway). In 1964, an attempt to incorporate Yucca Valley into a city was vetoed by voters (Clark and Couzens 1966:22); however by 1991 Yucca Valley was incorporated as a town and had a population of 20,700 as of the 2010 census.

PROJECT AREA HISTORY

According to a 1955 topographic map, there was no development within the project area boundaries (Figure 6). A search of the Bureau of Land Management General Land Office Records available on the Internet revealed that one individual had obtained a land patent for the project area (BLM n.d.). In 1919, William S. Smalley obtained the south half of the northeast quarter of Section 12, which includes the project area.

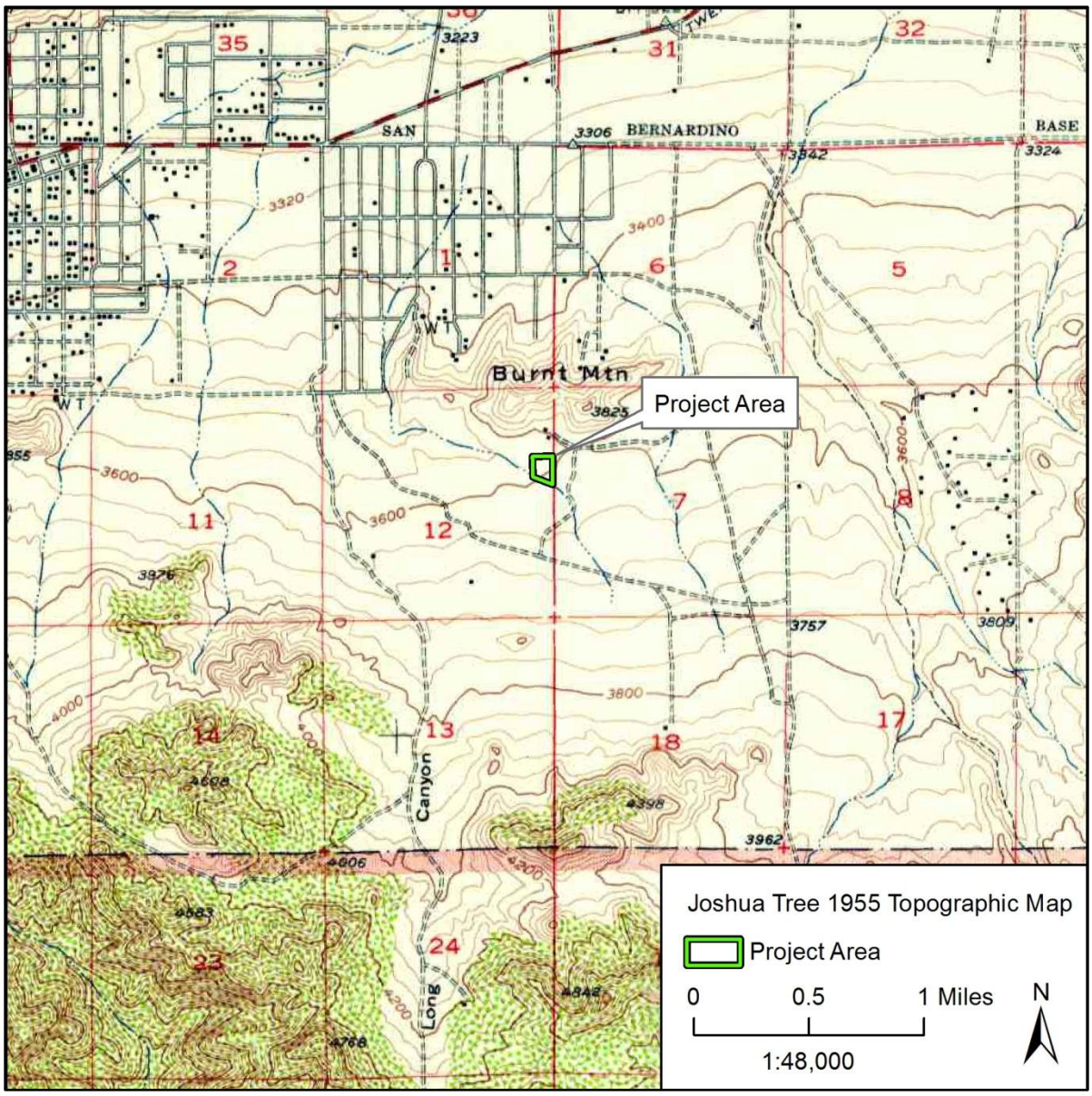

Figure 6. 1955 topographic map of the project area

RECORD SEARCHES

PALEONTOLOGY

A paleontological records search for entire town of Yucca Valley was conducted in 2012 by the San Bernardino County Museum (Appendix B; Table 1). In addition, online paleontological databases and paleontological literature were searched by Cogstone staff.

No fossils are known in the Quaternary young alluvium. Fossils are known in the type of sediments that underlie these deposits. Specifically fossils of extinct horse and desert tortoise are known within the city limits (west-central portion) in Quaternary older alluvium (Table 1). Additional fossils are known regionally in the same sediments (near Twentynine Palms) and include extinct animals such as mammoth, ground sloths, camel, horse, llama, dwarf pronghorn and sabre-toothed cat (refer to Table 1).

ARCHAEOLOGY AND HISTORY

CALIFORNIA HISTORIC RESOURCES INVENTORY SYSTEM

A search for archaeological and historical records was previously completed at the San Bernardino Information Center (SBIC) of the California Historic Resources Inventory System (CHRIS) on December 6, 2011 by Amy Glover. The record search covered the project area plus a one mile-radius.

The records search determined that there are no cultural resources within the project area or within a one mile-radius. The cultural resources records and literature search indicate that no cultural resource studies have been completed within the project area, and eight cultural resources studies have been completed previously within a one mile-radius of the project area (Table 2).

Table 1. Regional fossils from Quaternary older alluvium

† indicates extinct species

Common name	Taxon	Location	Locality	Source
HERBIVORES				
mammoth	*Mammuthus* sp. †	Campbell Hill/ Twentynine Palms Gravel Pit	LACM 4281-4283; SBCM 1.86.4, 1.86.9	Scott 2012; Jefferson 2003
ground sloth, Jefferson's	*Megalonyx* sp. †	Campbell Hill/ Twentynine Palms Gravel Pit	LACM 4281-4283; SBCM 1.86.4, 1.86.9	Scott 2012; Jefferson 2003
ground sloth, Shasta	*Nothrotheriops* sp. †	Campbell Hill/ Twentynine Palms Gravel Pit	LACM 4281-4283; SBCM 1.86.4, 1.86.9	Scott 2012; Jefferson 2003
camel	*Camelops* sp. †	Campbell Hill/ Twentynine Palms Gravel Pit	LACM 4281-4283; SBCM 1.86.4, 1.86.9	Scott 2012; Jefferson 2003
camel	*Camelops* sp. †	Surprise Springs, Twentynine Palms	LACM 3350	Jefferson 2003
bison	*Bison* sp. †	Surprise Springs, Twentynine Palms	LACM 3350	Jefferson 2003
horse	*Equus* sp. †	within city limits of Yucca Valley	SBCM 1.95.1 and 1.95.8	Scott 2012; Jefferson 2003
horse	*Equus* sp. †	Surprise Springs, Twentynine Palms	LACM 3350	Jefferson 2003
horse	*Equus* sp. (large) †	Campbell Hill/ Twentynine Palms Gravel Pit	LACM 4281-4283; SBCM 1.86.4, 1.86.9	Scott 2012; Jefferson 2003
horse	*Equus* sp. (small) †	Campbell Hill/ Twentynine Palms Gravel Pit	LACM 4281-4283; SBCM 1.86.4, 1.86.9	Scott 2012; Jefferson 2003
llama	*Hemiauchenia* sp. †	Campbell Hill/ Twentynine Palms Gravel Pit	LACM 4281-4283; SBCM 1.86.4, 1.86.9	Scott 2012; Jefferson 2003
llama	*Hemiauchenia* sp. †	Surprise Springs, Twentynine Palms	LACM 3350	Jefferson 2003
deer	*Odocoileus* sp.	Campbell Hill/ Twentynine Palms Gravel Pit	LACM 4281-4283; SBCM 1.86.4, 1.86.9	Scott 2012; Jefferson 2003
sheep, bighorn	*Ovis* sp. cf. *O. canadensis*	Campbell Hill/ Twentynine Palms Gravel Pit	LACM 4281-4283; SBCM 1.86.4, 1.86.9	Scott 2012; Jefferson 2003
pronghorn, dwarf	*Capromeryx* sp. †	Campbell Hill/ Twentynine Palms Gravel Pit	LACM 4281-4283; SBCM 1.86.4, 1.86.9	Scott 2012; Jefferson 2003
CARNIVORES				
cat, sabre-toothed	*Smilodon* sp. cf. *S. fatalis* †	Campbell Hill/ Twentynine Palms Gravel Pit	LACM 4281-4283; SBCM 1.86.4, 1.86.9	Scott 2012; Jefferson 2003
puma	*Felis concolor*	Campbell Hill/ Twentynine Palms Gravel Pit	LACM 4281-4283; SBCM 1.86.4, 1.86.9	Scott 2012; Jefferson 2003
badger	*Taxidea taxus*	Campbell Hill/ Twentynine Palms Gravel Pit	LACM 4281-4283; SBCM 1.86.4, 1.86.9	Scott 2012; Jefferson 2003
OTHER				
gopher, pocket	*Thomomys* sp.	Campbell Hill/ Twentynine Palms Gravel Pit	LACM 4281-4283; SBCM 1.86.4, 1.86.9	Scott 2012; Jefferson 2003
tortoise	*Gopherus* sp.	within city limits of Yucca Valley	SBCM 1.95.1 and 1.95.8	Scott 2012; Jefferson 2003

Table 2. Previous archaeological studies within a one mile-radius

Author	Ref	Title	Date	Quad	Distance from Project
Hearn, Joseph E.	1060708	Cultural Resources Assessment of Assessors Parcels Numbers 58506233 and 58506238, Yucca Valley Area	1978	Yucca Valley South	Adjacent
SBCMA	1060748	Cultural Resources Assessment, Assessor's Parcels 588-031-01 and 588-031-02, Yucca Valley Area	1979	Yucca Valley South	Within 1-mile
Simpson, Ruth D.	1060859	Cultural Resources Assessment: A Portion of Ex. 18, T1SR6E, Yucca Valley Area	1979	Yucca Valley South	Within 1-mile
Simpson, Ruth D.	1060898	Cultural Resources Assessment, Sec. 12, T1S R5E, Yucca Valley	1980	Yucca Valley South	Within ½-mile
SBCMA	1060987	Cultural Resources Assessment: Burnt Mountain Club, Yucca Valley, California	1980	Yucca Valley South	Within ¼-mile
Smith, Gerald A.; Lerch, Michael K.	1061112	Cultural Resources Assessment of Tentative Tract No., 11917, Yucca Valley, California	1981	Yucca Valley South	Adjacent
Brock, James	1065845	Phase I Archaeological and Historical Resources Assessment for TTM17862, Copper Hill Homes, Yucca Valley, San Bernardino County, California (GPA 06-01)	2007	Yucca Valley South	Within 1-mile
Bonner, Wayne H.	1066849	Cultural Resource Records Search and Site Visit Results for T-Mobile USA Candidate IE242278-A (Joshua Springs), 57352 Joshua Lane, Yucca Valley, San Bernardino County, California	2010	Yucca Valley South	Within ¼-mile

ADDITIONAL SOURCES

In addition to the records at the SBIC, a variety of sources were consulted by Glover in March 2012 to obtain information regarding the project area (Table 3). Specific information about the project area, obtained from historical maps (USGS 2012) and land patent records (BLM GLO n.d.), is presented above in Project Area History.

Table 3. Additional sources consulted

Source	Results
National Register of Historic Places (1979-2002 & supplements)	Negative
Historic United States Geological Survey topographic maps	Do not show any buildings in vicinity of project area
Historic United States Department of Agriculture aerial photos	Not available
California Register of Historical Resources (1992-2010)	Negative
California Inventory of Historic Resources (1976-2010)	Negative
California Historical Landmarks (1995 & supplements to 2010)	Negative
California Points of Historical Interest (1992 to 2010)	Negative
California Department of Transportation Historic Bridge Inventory (Caltrans 2007)	Negative
Local Historical Register Listings (Morongo Basin Historical Society n.d.)	Negative
Bureau of Land Management General Land Office Records	Shows one owner

NATIVE AMERICAN CONSULTATION

A sacred lands record search was previously requested by Cogstone staff from the Native American Heritage Commission on December 1, 2011 for the entire town the Yucca Valley. On December 5, the Commission responded, stating there were no known sacred lands within the project area boundaries (Appendix C); however, they requested that 12 Native American tribes or individuals be contacted for further information.

Letters requesting information on any heritage sites and containing maps and study information were sent by mail on December 7, 2011 to the 12 Native American contacts (Appendix D). After no responses were received, follow-up e-mails were sent and phone calls were placed with the Native America contacts on December 28, 2011 and again on January 5, 2012 (Appendix E). No responses have been received from the 12 Native American tribes or individuals contacted.

SURVEY

SURVEY METHODS

The reconnaissance stage is important to verify the exact location of each cultural resource, the condition or integrity of the resource, and the proximity of the resource to areas of sensitivity. Cogstone conducted an intensive-level pedestrian survey (federal Class III inventory) of the proposed project area on March 8, 2012. The survey consisted of the archaeologist walking in parallel north/south transects spaced at approximately five to ten meter intervals over the project parcel, while closely inspecting the ground surface. Photographs of the project area were taken with a digital camera, and the area was documented using a handheld Trimble Geo XH handheld unit. The average percentage of ground visibility was fair at 70% (Figure 7).

Figure 7. Typical ground visibility, view to north

SURVEY RESULTS

Ground visibility in the entire project area was generally fair, owing to the presence of vegetation; some areas were more densely covered than others. The project area is at the base of gently sloping foothills and is relatively flat with a few gentle rises. Vegetation in the project area boundaries consists of juniper; yucca; Joshua tree; cholla; pancake cactus; desert grasses

and scrub. Some charred vegetation suggests a recent fire has occurred. Fauna observed within the project area boundaries are lizards and birds, as well as numerous burrows. An ephemeral drainage/wash, approximately three feet in depth, exists along the western and southern boundaries of the project area (Figure 8). Some modern trash was observed, such as modern alcohol bottle fragments, a mattress spring and butchered animal bone (Figure 9, Figure 10). The entire project area was surveyed. No historic or prehistoric resources were observed. No paleontological resources were observed. Nothing was collected.

Figure 8. Overview of drainage/wash, view to west

Figure 9. Modern alcohol bottle fragment

Figure 10. Animal rib

POTENTIAL RESOURCES

PALEONTOLOGICAL RESOURCES

The surface sediments are too young to contain fossils. Only subsurface excavations have potential to impact sediments old enough to yield fossils and the likihood is considered low.

ARCHAEOLOGICAL RESOURCES

Archaeological and historical archaeological resources are considered to be significant if they possess integrity and may contribute information important in prehistory or history. Based on the prior research and survey results, the potential to impact resources is discussed below.

There are no known archaeological resources within the project area or within a one mile-radius of the project area. However given the presence of an ephemeral water source within the project area, there is a possibility that the project area may contain significant (as defined by CEQA) subsurface prehistoric resources.

HISTORIC RESOURCES

No structures, buildings or other types of built-environment have been previously recorded or were observed within the project area. The project area is considered to have zero sensitivity for historic resources.

RECOMMENDATIONS

The potential for the presence of paleontological resources is considered to be of low probability. In the event of unanticipated finds, the project must halt work in the vicinity of the find until it can be evaluated by a qualified paleontologist.

Based on the results of the cultural resources studies completed for the 5-acre Yucca Valley Community Park Project, there is a low potential for previously undetected archaeological deposits and features to be encountered during project-related ground disturbing. In the event of unanticipated finds, the project must halt work in the vicinity of the find until the find can be evaluated by a qualified archaeologist.

We recommend cultural resources awareness training for project construction personnel. This brief field training presents the types of resources that might be present subsurface and outlines procedures to be followed if a discovery is made.

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APPENDIX A: QUALIFICATIONS

cogstone
PALEONTOLOGY - ARCHAEOLOGY - HISTORY

SHERRI GUST

Project Manager & Principal Investigator, Paleontology and Archaeology

EDUCATION

1994 M. S., Anatomy (Evolutionary Morphology), University of Southern California, Los Angeles
1979 B. S., Anthropology (Physical), University of California, Davis

SUMMARY QUALIFICATIONS

Gust has more than 30 years of experience in California, acknowledged credentials for meeting national standards, and is a certified/qualified principal archaeologist and paleontologist in all California cities and counties that maintain lists. Gust is an Associate of the Natural History Museum of Los Angeles County in the Vertebrate Paleontology and Rancho La Brea Sections. She is a Member of the Society of Vertebrate Paleontology, Society for Archaeological Sciences, Society for Historical Archaeology, the Society for California Archaeology and others. She has special expertise in the identification and analysis of human, animal and fossil bone. In addition, she is a Reader at the Huntington Library and is knowledgeable about archival research.

SELECTED PROJECTS

Tehachapi Renewable Transmission Project, Segments 1-3. Paleontological resources management plans, Phase I activities, archaeological and paleontological monitoring, artifact and fossil recovery, lab work, GIS mapping, multiple supplement survey and variance reports for construction of new electrical transmission facilities in Los Angeles and Kern Counties. Project Manager and Principal Archaeologist for Cogstone's work and Principal Paleontologist for entire project. 2007-9.

First Street Trunk Line Water Project. Archaeological and paleontological assessment and monitoring of installation of new water main in Los Angeles. Project Manager and Principal Paleontologist. 2006-9.

Opid's Camp. Archaeological Resource Damage Assessment for Locus 1 of Historic Archaeological Site (FS 05-01-51-82) within the Camp Hi-Hill Historic District, Angeles National Forest, Los Angeles County. Project Manager and Principal Archaeologist. 2009.

Pixar Animation Studios Construction Stage 1 Project. Archaeological and paleontological monitoring of studio expansion, artifact recovery and monitoring compliance report in Emeryville, California. Project Manager and Principal Paleontologist and Archaeologist. 2009.

Irvine Business Complex. Archaeological and Paleontological Evaluation of business complex with recent high density housing additions in Irvine, California. Project Manager and Principal Paleontologist and Archaeologist. 2009.

Scattergood Olympic Line. Archaeological and Paleontological Assessment and Mitigation Plan for new 11 mile underground electrical transmission line in Los Angeles. Project Manager and Principal Paleontologist and Archaeologist. 2008-9.

Spring Trails Project. Archaeological and Paleontological Resources Assessment of 350 acre residential development with evaluation of previous work and Mitigation Plan in San Bernardino. Project Manager and Principal Paleontologist and Archaeologist. 2008-9.

cogstone
PALEONTOLOGY - ARCHAEOLOGY - HISTORY

AMY GLOVER
Archaeologist/ Cross-Trained Paleontologist
& Laboratory Supervisor

EDUCATION

2004 B.S., Anthropology (Biological), University of California, Riverside

2004 Archaeological Collections Management Internship, San Diego Archaeological Center

SUMMARY QUALIFICATIONS

Glover has more than four years of archaeological experience in California, and knowledge in lab procedures, including the preparation of collections for curation. Glover specializes in historic artifacts, and has over 48 hours of paleontology cross-training.

SELECTED PROJECTS AND REPORTS

Eastside Goldline Light Rail/Subway Project & Historic Los Angeles Cemetery. Archaeology/paleontology monitor, lab supervisor. Performed archaeological/paleontological monitoring, data recovery and field lab supervision, cataloguing, identification, and analysis of Euro-American and Chinese artifacts from over 150 human interments. Also co-authored the final report. 1,968 total hours on project. 2005-Present.

Santa Ysabel Ranch. Archaeology/paleontology monitor, lab supervisor. 200-acre land development in San Luis Obispo counting. Performed mitigation monitoring, artifact and fossil recovery, laboratory processing of prehistoric artifacts for curation. 967 hours on project. 2004-2005

Tehachapi Renewable Transmission Project. Installation of new electrical facilities in Los Angeles & Kern County. Archaeology/paleontology Monitor for Segments 1, 2, and 3. Also performed supplemental surveys, site record preparation, and co-authored supplemental survey reports. 470 hours on project. 2008-2009

Rosedale Development /Monrovia Nursery Project. Mixed-use development of roughly 500 acres of land previously used as a plant nursery. Archaeology/paleontology monitor, lab supervisor. Performed cultural resources monitoring, recovery of artifacts, laboratory processing and preparation for curation. 345 hours on project. 2004-2007

Komar Desert Center Project. Development of roughly 18-acres for retail space and associated parking. Archaeology/Paleontology monitor and lab supervisor. Performed mitigation monitoring, fossil and artifact recovery, laboratory processing and preparation of artifacts for curation. Lead author on final report. 266 hours on project. 2007-2008

Pomona Valley Creamery. Redevelopment of the historic creamery into a new educational building on the Western University campus. Archaeology/paleontology monitor, lab supervisor. Performed archaeological pedestrian survey, excavation of three historic trash pits, construction monitoring and the identification, cataloguing and analysis of historic artifacts. Lead author on the final report. 225 hours on project. 2007

Malburg Generating Station. Construction of the Malburg Generating Station, a 134-megawatt power plant adjacent to the City of Vernon's existing Station A, natural gas and water pipelines, and associated lay-down and storage areas. Lab supervisor. Performed artifact recovery and analysis. 193 hours on project.

cogstone
PALEONTOLOGY - ARCHAEOLOGY - HISTORY

TODD A. WIRTHS

Paleontologist and Geologist

EDUCATION

1995	M.S. Geological Sciences, San Diego State University
1992	B.A. Earth Sciences, University of California, Santa Cruz
1988	A.A. Earth Sciences, Santa Barbara City College

SUMMARY QUALIFICATIONS

Wirths is a certified California Professional Geologist (#7588) with more than two years' experience in paleontological survey, monitoring, and excavation. At Santa Barbara City College, he gained experience with the excavation, preparation, and curation of vertebrate fossils. He earned his Bachelor's degree in Earth Sciences at University of California, Santa Cruz. As an undergraduate, he studied early Cambrian faunal assemblages and environments as well as invertebrate classification and taxonomy. Wirths subsequently earned his Master's degree in Geological Sciences at San Diego State University. Although he began his career as a paleontological monitor for the San Diego Natural History Museum, Wirths then spent more than fourteen years as a consulting environmental geologist. In early 2011, he returned to paleontology. Wirths is currently the President of the San Diego Association of Geologists.

SELECTED PROJECTS

High Speed Rail Project, Bakersfield to Palmdale Segment. Paleontologist**.** Participated in five-day paleontological survey of portions of project study area highly sensitive for fossils in Kern County. Authored survey results section of report for Cogstone. 2011

SDG&E Sunrise Powerlink Project. Paleontologist**.** Electrical transmission project in San Diego and Imperial Counties. Performed paleontological monitoring lasting several months and covering a wide area. San Diego Natural History Museum Paleo Services. 2011

San Diego City College Expansion. Paleontologist**.** Grading for college expansion in downtown San Diego, California. Performed paleontological monitoring. San Diego Natural History Museum Paleo Services. 2011

Pygmy Mammoth Recovery. Paleontologist**.** Assisted with recovery of Pygmy Mammoth from Santa Rosa Island with personnel from San Diego State University and the Museum of Northern Arizona. 1994

Fossil Fish Recovery. Paleontologist**.** Assisted with saw-cut extraction of a Miocene halibut in Monterey Fm. at Gaviota State Beach with personnel from Santa Barbara City College. 1988

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PALEONTOLOGY - ARCHAEOLOGY - HISTORY

MELINDA C. HORNE
Principal Investigator for Archaeology

EDUCATION

1984	M.A.	Geography, University of Utah, Salt Lake City.
1980	B.A.	Archaeology, University of Utah, Salt Lake City, *cum laude*.

SUMMARY QUALIFICATIONS

Ms. Horne has more than 30 years of experience in prehistoric archaeology and cultural resources management. With more than 27 years of supervisory experience, Ms. Horne has served variously as project manager, research associate, and field director on more than 150 projects throughout California, Oregon, Nevada, and Utah. Ms. Horne also has specialized training in preparing agreement documents under Section 106 of the NHPA and federal project and historic preservation law.

SELECTED PROJECTS

State Route 58 (SR-58) Realignment Project through Kramer Junction, San Bernardino County. Project Manager Applied EarthWorks, Inc. contract with Caltrans District 8. Supervision of a Phase I archaeological survey and archaeological site documentation; Native American and agency consultation; preparation of a Positive Historic Property Survey Report/Archaeological Survey Report; project budgeting and tracking. 2007–2010

Emergency Data Recovery Excavations at CA-RIV-5211. Project Manager. Supervision of emergency excavation of a large Cahuilla cremation cemetery; coordinating all special analyses studies; extensive Native American and agency consultation; preparation of a Final Synthetic Report of Findings; project budgeting and tracking. 2006–2010

Ivanpah Solar Generating System Project, San Bernardino County. Project Manager. Contract with Aspen Environmental and Applied EarthWorks, Inc. Supervision of a Phase I archaeological survey and archaeological site documentation; agency consultation; preparation of a Phase I Cultural Resources Report; project budgeting and tracking. 2009

Antelope Valley–East Kern Water Agency North Buttes WSSP Water Banking Project. Project Manager. Contract with Boyle Engineering and Applied EarthWorks, Inc. Supervision of a Phase I archaeological survey and archaeological site documentation; Native American and agency consultation; preparation of a Phase I Cultural Resources Report; project budgeting and tracking. 2008–2009

Travertine Point Specific Plan, located northwest of the Salton Sea in eastern Riverside and Imperial counties. Project Manager. Applied EarthWorks, Inc. contract with Federated Insurance. Supervision of a Phase I archaeological survey and archaeological site documentation; Native American and agency consultation; preparation of a Phase I Cultural Resources Survey Report; project budgeting and tracking. 2007–2009

Fort Yuma-Quechan Native American Training Project. Project Manager. Contract with the Fort Yuma-Quechan Tribe and Applied EarthWorks, Inc. Responsible for the design and implementation of presentations to educate interested Native American monitors on cultural resources management, the prehistory of the Palm Springs region, lithic technology, human remains identification, local flora identification, and field training in archaeological survey, site identification, mapping, and site documentation. 2007

The Mojave Water Agency Water Banking Project, San Bernardino County. Project Manager. Contract with J. Monroe Consulting Services and Applied EarthWorks, Inc. on behalf of the Mojave Water Agency. Supervision of a Phase I archaeological survey of approximately 1,500 acres; identification and documentation of three cultural resources; Native American and agency consultation; report preparation; project budgeting and tracking. 2005

APPENDIX B: PALEONTOLOGY RECORD SEARCH

19 December 2011

Cogstone Resource Management
attn: Sherri Gust
1518 W. Taft Avenue
Orange, CA 92865

re: **PALEONTOLOGY LITERATURE AND RECORDS REVIEW, YUCCA VALLEY GENERAL PLAN UPDATE, SAN BERNARDINO COUNTY, CALIFORNIA**

Dear Sherri,

The Division of Geological Sciences of the San Bernardino County Museum (SBCM) has completed a literature review and records search for the above-referenced study area in the Yucca Valley area of San Bernardino County, California. The proposed study area encompasses portions of the sections 11, 14, 22 - 27, and 32 - 36, Township 1 North, Range 5 East, as well as portions of sections 19 - 21 and 29 - 32, T 1N, R 6E, sections 1 - 5 and 9 - 16, T 1S, R 5E, and sections 5 - 8, 17, and 18, T 1S, R 6E, San Bernardino Base and Meridian, as seen on the Joshua Tree North, California (1972 edition), the Joshua Tree South, California (1972 edition), the Yucca Valley North, California (1972 edition, photorevised 1979), and the Yucca Valley South, California (1972 edition) 7.5' United States Geological Survey topographic quadrangle maps.

Geologic mapping by Bortugno and Spittler (1986) and Dibblee (2008) indicates that the proposed Yucca Valley General Plan boundaries encompass multiple rock units, including (from oldest to youngest): sheared and deformed gneiss of uncertain age (= unit **gn**); granitic rocks, quartz monzonite, and monzonite porphyry of possible Jurassic age (= **qm**, **mp**); sedimentary rocks of the Old Woman Sandstone (= **To**); Neogene and/or Quaternary basalts (= **QTb**); and surface and subsurface Quaternary alluvial valley fill sediments, primarily undifferentiated Pleistocene older alluvium (= unit **Qoa**) but also including well-dissected Pleistocene fans and gravels (= **Qof**, **Qog**), all overlain in many low-lying areas by recent alluvial sand and gravel (= **Qa**). Of these, the Mesozoic rocks, the basalts, and recent alluvium all have low potential to contain fossil resources, and so are assigned low paleontologic sensitivity. In contrast, the sediments of the Old Woman Sandstone and the older Pleistocene alluvial deposits have high potential to contain significant nonrenewable paleontologic resources, and so are assigned high paleontologic sensitivity depending upon their lithology.

Exposures of the Old Woman Sandstone are restricted to the northern part of the study area. These outcrops consist of interbedded units of arkosic sandstone, conglomerate, silt, and clay, with

scattered clasts of limestone and basalt (Sadler, 1982). May and Repenning (1982) reported the presence of late Pliocene and early Pleistocene vertebrate fossils from the resistant sandstone unit of the Old Woman Sandstone, demonstrating the high paleontologic sensitivity of this formation.

Pleistocene older alluvium throughout much of this region of the Mojave Desert has been previously demonstrated to be fossiliferous (Jefferson, 1991; Scott and Cox, 2008). In the Twentynine Palms region, for example, older Pleistocene sediments have yielded fossil remains of the following Pleistocene taxa (Bacheller, 1978; Jefferson, 1991, 1992; Scott and Cox, 2008):

Megalonyx sp. . . . . flat-footed ground sloth
Nothrotheriops sp. . . . . Shasta ground sloth
Thomomys sp. . . . . pocket gopher
Taxidea taxus . . . . . badger
Smilodon sp. cf. *S. fatalis* . . . . . sabre-toothed cat
Felis concolor . . . . . puma
Mammuthus sp. . . . . mammoth
Equus sp. (large) . . . . . large horse
Equus sp. (small) . . . . . small horse
Camelops sp. . . . . large camel
Hemiauchenia sp. . . . . llama
Odocoileus sp. cf. *O. virginianus* . . . . . deer
Capromeryx sp. . . . . dwarf pronghorn
Bison sp. . . . . possible long-horned bison
Ovis sp. cf. *O. canadensis* . . . . . bighorn sheep

Additionally, fossils reported from Pleistocene older alluvium in the Pinto Basin area in eastern Joshua Tree National Park represent extinct mammoth (*Mammuthus*), wolf-sized canid (*Canis*), large and small horses (*Equus* spp.), llamas (*Hemiauchenia*), and large camel (*Camelops*) (Jefferson, 1991; Scott and others, 2006), as well as bison (*Bison*). Although these localities are at some distance from the proposed study area, they nevertheless demonstrate the high paleontologic sensitivity of Pleistocene alluvium in this general region of San Bernardino County, depending upon the depositional context and lithology.

For this report, I conducted a review of the Regional Paleontologic Locality Inventory (RPLI) at the SBCM. The results of this review indicated that two previously recorded fossil localities, SBCM 1.95.1 and 1.95.8, are located within the west-central portion of the study area. These localities yielded fossil remains of extinct horse (*Equus*) and tortoise (?*Gopherus*) from Pleistocene older alluvial sediments.

Recommendations

The results of the literature review and the check of the RPLI at the SBCM suggest that multiple rock units within the Yucca Valley General Plan study area have high potential to contain significant

nonrenewable paleontologic resources. A qualified vertebrate paleontologist must develop a program to mitigate potential adverse impacts to such resources for any excavation in the sensitive rock units. This program must include curation of recovered resources (Scott and others, 2004) and be consistent with the provisions of the California Environmental Quality Act (Scott and Springer, 2003), as well as with regulations currently implemented by the County of San Bernardino and the proposed guidelines of the Society of Vertebrate Paleontology.

The County of San Bernardino (Development Code §82.20.040) defines a qualified vertebrate paleontologist as meeting the following criteria:

Education: An advanced degree (Masters or higher) in geology, paleontology, biology or related disciplines (exclusive of archaeology).

Professional experience: At least five years professional experience with paleontologic (not including cultural) resources, including the collection, identification and curation of the resources.

The County of San Bernardino (Development Code §82.20.030) requires that paleontologic mitigation programs include, but not be limited to:

(a) Field survey before grading. In areas of potential but unknown sensitivity, field surveys before grading shall be required to establish the need for paleontologic monitoring.

(b) Monitoring during grading. A project that requires grading plans and is located in an area of known fossil occurrence, or that has been demonstrated to have fossils present in a field survey, shall have all grading monitored by trained paleontologic crews working under the direction of a qualified professional, so that fossils exposed during grading can be recovered and preserved. Paleontologic monitors shall be equipped to salvage fossils as they are unearthed, to avoid construction delays, and to remove samples of sediments that are likely to contain the remains of small fossil invertebrates and vertebrates. Monitors shall be empowered to temporarily halt or divert equipment to allow removal of abundant or large specimens. Monitoring is not necessary if the potentially-fossiliferous units described for the property in question are not present, or if present are determined upon exposure and examination by qualified paleontologic personnel to have low potential to contain fossil resources.

(c) Recovered specimens. Qualified paleontologic personnel shall prepare recovered specimens to a point of identification and permanent preservation, including washing of sediments to recover small invertebrates and vertebrates. Preparation and stabilization of all recovered fossils is essential in order to fully mitigate adverse impacts to the resources.

(d) Identification and curation of specimens. Qualified paleontologic personnel shall identify and curate specimens into the collections of the Division of Geological Sciences, San Bernardino County Museum, an established, accredited museum repository with permanent retrievable paleontologic storage. These procedures are also essential steps in effective paleontologic mitigation and CEQA

compliance. The paleontologist must have a written repository agreement in hand prior to the initiation of mitigation activities. Mitigation of adverse impacts to significant paleontologic resources is not considered complete until curation into an established museum repository has been fully completed and documented.

(e) Report of findings. Qualified paleontologic personnel shall prepare a report of findings with an appended itemized of specimens. A preliminary report shall be submitted and approved before granting of building permits, and a final report shall be submitted and approved before granting of occupancy permits. The report and inventory, when submitted to the appropriate Lead Agency along with confirmation of the curation of recovered specimens into the collections of the San Bernardino County Museum, will signify completion of the program to mitigate impacts to paleontologic resources.

References

Bacheller, J. III, 1978. Quaternary geology of the Mojave Desert - eastern Transverse Ranges boundary in the vicinity of Twentynine Palms, California. Unpublished MS thesis, Department of Geology, University of California, Los Angeles. Copy on file, Division of Geological Sciences, SBCM.

Bortugno, E.J. and T. E. Spittler, l986. Geologic map of California, San Bernardino sheet, scale 1:250,000. California Division of Mines and Geology Regional Geologic Map Series, Map 3A.

Dibblee, T.W. Jr., 2008. Geologic map of Joshua Tree & Twentynine Palms 15 minute quadrangles : Riverside & San Bernardino Counties, California. Dibblee Map Series, edited by J. Minch.

Jefferson, G.T., 1991. A catalogue of late Quaternary vertebrates from California: Part Two, mammals. Natural History Museum of Los Angeles County Technical Reports, No. 7.

Jefferson, G.T. 1992. Pleistocene vertebrate fossils from Twentynine Palms, California. *In* Old routes to the Colorado, ed. J. Reynolds, 43-45. Redlands: San Bernardino County Museum Association.

May, S.R. and Repenning, C.A., 1982. New evidence for the age of the old Woman sandstone, Mojave Desert, California. *In* Sadler, P.M. and Kooser, M.A. (eds.), Late Cenozoic stratigraphy and structure of the San Bernardino Mountains. Geological Society of America, Cordilleran Section, 78th Annual Meeting Field Trip Guidebook, p. 93-96.

Sadler, P.M., 1982. Provenance and structure of late Cenozoic sediments in the northeast San Bernardino Mountains. *In* Sadler, P.M. and Kooser, M.A. (eds.), Late Cenozoic stratigraphy and structure of the San Bernardino Mountains. Geological Society of America, Cordilleran Section, 78th Annual Meeting Field Trip Guidebook, p. 82-91.

Scott, E. and S.M. Cox, 2008. Late Pleistocene distribution of *Bison* (Mammalia; Artiodactyla) in the Mojave Desert of southern California and Nevada. *In* X. Wang and L.G. Barnes (eds.) Geology and Vertebrate Paleontology of Western and Southern North America, Contributions in Honor of David P. Whistler. Natural History Museum of Los Angeles County Science Series No. 41, p. 359 - 382.

APPENDIX C: NATIVE AMERICAN HERITAGE COMMISSION

STATE OF CALIFORNIA — Edmund G. Brown, Jr., Governor

NATIVE AMERICAN HERITAGE COMMISSION
915 CAPITOL MALL, ROOM 364
SACRAMENTO, CA 95814
(916) 653-6251
Fax (916) 657-5390
Web Site www.nahc.ca.gov
ds_nahc@pacbell.net

December 5, 2011

Ms. Sherri Gust, RPA, Principal
Cogstone Resource Management
1518 W. Taft Avenue
Orange, CA 92865

Sent by FAX to: 714-974-8303
No. of Pages: 5

Re: Sacred Lands File Search and Native American Contacts list for the **"Proposed Yucca Valley General Plan Update Project No. 2179;"** located in the Yucca Valley area of San Bernardino County, California

Dear Mr. Gust:

The Native American Heritage Commission (NAHC) conducted a Sacred Lands File search of the 'area of potential effect,' (APE) based on the USGS coordinates provided and **Native American cultural resources were not identified** in the project area of potential effect (e.g. APE): you specified. Also, please note; the NAHC Sacred Lands Inventory is not exhaustive and does not preclude the discovery of cultural resources during any project groundbreaking activity.

This project is subject to California Government Code §§65352.3, 65352.4 *et seq.*

California Public Resources Code §§5097.94 (a) and 5097.96 authorize the NAHC to establish a Sacred Land Inventory to record Native American sacred sites and burial sites. These records are exempt from the provisions of the California Public Records Act pursuant to. California Government Code §6254 (r). The purpose of this code is to protect such sites from vandalism, theft and destruction.

In the 1985 Appellate Court decision (170 Cal App 3rd 604), the court held that the NAHC has jurisdiction and special expertise, as a state agency, over affected Native American resources, impacted by proposed projects including archaeological, places of religious significance to Native Americans and burial sites

The California Environmental Quality Act (CEQA – CA Public Resources Code §§ 21000-21177, amendments effective 3/18/2010) requires that any project that causes a substantial adverse change in the significance of an historical resource, that includes archaeological resources, is a 'significant effect' requiring the preparation of an Environmental Impact Report (EIR) per the CEQA Guidelines defines a significant impact on the environment as 'a substantial, or potentially substantial, adverse change in any of physical conditions within an area affected by the proposed project, including ...objects of historic or aesthetic significance." In order to comply with this provision, the lead agency is required to assess whether the project will have an adverse impact on these resources within the 'area of potential

effect (APE), and if so, to mitigate that effect. CA Government Code §65040.12(e) defines "environmental justice" provisions and is applicable to the environmental review processes.

Early consultation with Native American tribes in your area is the best way to avoid unanticipated discoveries once a project is underway. Local Native Americans may have knowledge of the religious and cultural significance of the historic properties of the proposed project for the area (e.g. APE). Consultation with Native American communities is also a matter of environmental justice as defined by California Government Code §65040.12(e). We urge consultation with those tribes and interested Native Americans on the list the NAHC has attached in order to see if your proposed project might impact Native American cultural resources. Lead agencies should consider avoidance as defined in §15370 of the CEQA Guidelines when significant cultural resources as defined by the CEQA Guidelines §15064.5 (b)(c)(f) may be affected by a proposed project. If so, Section 15382 of the CEQA Guidelines defines a significant impact on the environment as "substantial," and Section 2183.2 which requires documentation, data recovery of cultural resources.

The 1992 *Secretary of the Interiors Standards for the Treatment of Historic Properties* were revised so that they could be applied to all historic resource types included in the National Register of Historic Places and including cultural landscapes. Also, federal Executive Orders Nos. 11593 (preservation of cultural environment), 13175 (coordination & consultation) and 13007 (Sacred Sites) are helpful, supportive guides for Section 106 consultation. The aforementioned Secretary of the Interior's *Standards* include recommendations for all 'lead agencies' to consider the historic context of proposed projects and to "research" the cultural landscape that might include the 'area of potential effect.'

Partnering with local tribes and interested Native American consulting parties, on the NAHC list, should be conducted in compliance with the requirements of federal NEPA (42 U.S.C 4321-43351) and Section 106 4(f), Section 110 (f)(k) of federal NHPA (16 U.S.C. 470 *et seq*), 36 CFR Part 800.3 (f) (2) & .5, the President's Council on Environmental Quality (CSQ, 42 U.S.C 4371 *et seq*. and NAGPRA (25 U.S.C. 3001-3013) as appropriate. The 1992 *Secretary of the Interiors Standards for the Treatment of Historic Properties* were revised so that they could be applied to all historic resource types included in the National Register of Historic Places and including cultural landscapes. Also, federal Executive Orders Nos. 11593 (preservation of cultural environment), 13175 (coordination & consultation) and 13007 (Sacred Sites) are helpful, supportive guides for Section 106 consultation. The NAHC remains concerned about the limitations and methods employed for NHPA Section 106 Consultation.

Also, California Public Resources Code Section 5097.98, California Government Code §27491 and Health & Safety Code Section 7050.5 provide for provisions for accidentally discovered archeological resources during construction and mandate the processes to be followed in the event of an accidental discovery of any human remains in a project location other than a 'dedicated cemetery', another important reason to have Native American Monitors on board with the project.

To be effective, consultation on specific projects must be the result of an ongoing relationship between Native American tribes and lead agencies, project proponents and their contractors, in the opinion of the NAHC. An excellent way to reinforce the relationship between a project and local tribes is to employ Native American Monitors in all phases of proposed projects including the planning phases.

Confidentiality of "historic properties of religious and cultural significance" may also be protected under Section 304 of he NHPA or at the Secretary of the Interior discretion if not

eligible for listing on the National Register of Historic Places. The Secretary may also be advised by the federal Indian Religious Freedom Act (cf. 42 U.S.C., 1996) in issuing a decision on whether or not to disclose items of religious and/or cultural significance identified in or near the APE and possibility threatened by proposed project activity.

If you have any questions about this response to your request, please do not hesitate to contact me at (916) 658-6251.

Sincerely,

Dave Singleton

Attachment: Native American Contact List

California Native American Contacts
San Bernardino County
December 5, 2011

Ramona Band of Cahuilla Mission Indians
Joseph Hamilton, Chairman
P.O. Box 391670 Cahuilla
Anza , CA 92539
admin@ramonatribe.com
(951) 763-4105
(951) 763-4325 Fax

Chemehuevi Reservation
Charles Wood, Chairperson
P.O. Box 1976 Chemehuevi
Chemehuevi Valley CA 92363
chair1cit@yahoo.com
(760) 858-4301
(760) 858-5400 Fax

San Manuel Band of Mission Indians
James Ramos, Chairperson
26569 Community Center Drive Serrano
Highland , CA 92346
(909) 864-8933
(909) 864-3724 - FAX
(909) 864-3370 Fax

Fort Mojave Indian Tribe
Tim Williams, Chairperson
500 Merriman Ave Mojave
Needles , CA 92363
(760) 629-4591
(760) 629-5767 Fax

Twenty-Nine Palms Band of Mission Indians
Darrell Mike, Chairperson
46-200 Harrison Place Chemehuevi
Coachella , CA 92236
tribal-epa@worldnet.att.net
(760) 775-5566
(760) 808-0409 - cell - EPA
(760) 775-4639 Fax

Colorado River Indian Tribe
Ginger Scott, Museum Curator; George Ray, Coor
26600 Mojave Road Mojave
Parker , AZ 85344 Chemehuevi
crit.museum@yahoo.com
(928) 669-9211-Tribal Office
(928) 669-8970 ext 21
(928) 669-1925 Fax

Joseph R. Benitez (Mike)
P.O. Box 1829 Chemehuevi
Indio , CA 92201
(760) 347-0488
(760) 408-4089 - cell

AhaMaKav Cultural Society, Fort Mojave Indian
Linda Otero, Director
P.O. Box 5990 Mojave
Mohave Valley AZ 86440
(928) 768-4475
LindaOtero@fortmojave.com
(928) 768-7996 Fax

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

Distribution of this list does not relieve any person of the statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is applicable for contacting local Native Americans with regard to cultural resources for the proposed Yucca Valley General Plan Update Project No. 2179; located in the Yucca Valley area of San Bernardino County, California for which a Sacred Lands File search and Native American Contacts list were requested.

California Native American Contacts
San Bernardino County
December 5, 2011

Morongo Band of Mission Indians
Michael Contreras, Cultural Heritage Prog.
12700 Pumarra Road Cahuilla
Banning , CA 92220 Serrano
(951) 201-1866 - cell
mcontreras@morongo-nsn.gov
(951) 922-0105 Fax

San Manuel Band of Mission Indians
Ann Brierty, Policy/Cultural Resources Departmen
26569 Community Center. Drive Serrano
Highland , CA 92346
(909) 864-8933, Ext 3250
abrierty@sanmanuel-nsn.gov
(909) 862-5152 Fax

Serrano Nation of Indians
Goldie Walker
P.O. Box 343 Serrano
Patton , CA 92369

(909) 862-9883

Ernest H. Siva
Morongo Band of Mission Indians Tribal Elder
9570 Mias Canyon Road Serrano
Banning , CA 92220 Cahuilla
siva@dishmail.com
(951) 849-4676

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

Distribution of this list does not relieve any person of the statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is applicable for contacting local Native Americans with regard to cultural resources for the proposed Yucca Valley General Plan Update Project No. 2179; located in the Yucca Valley area of San Bernardino County, California for which a Sacred Lands File search and Native American Contacts list were requested.

APPENDIX D: NATIVE AMERICAN OUTREACH

cogstone
PALEONTOLOGY - ARCHAEOLOGY - HISTORY

December 7, 2011

Dear Sir or Madam,

A project is proposed for the general plan update of the City of Yucca Valley, San Bernardino County, California. A map of the project location and all other information are provided.

The Native American Heritage Commission was contacted on December 2, 2001 to perform a search of the Sacred Lands file. The NAHC has no record of Native American sacred sites in the immediate vicinity of the project area. The NAHC also provided to us a list of Native American individuals/organizations that may have knowledge of cultural resources within the project area and recommended that we contact you, among others.

In an effort to evaluate cultural resources, I am requesting any information not contained in the present NAHC database. I would appreciate it if you could notify me if you have records of any sacred lands or other heritage sites that might be impacted by the proposed project. All information provided regarding cultural and historic sites or other areas of concern would be treated as confidential material. We need your response within 2 weeks to meet the deadline for our report. You can email or fax your response if you like (amy@cogstone.com or number below). Thank you for your assistance.

Sincerely,

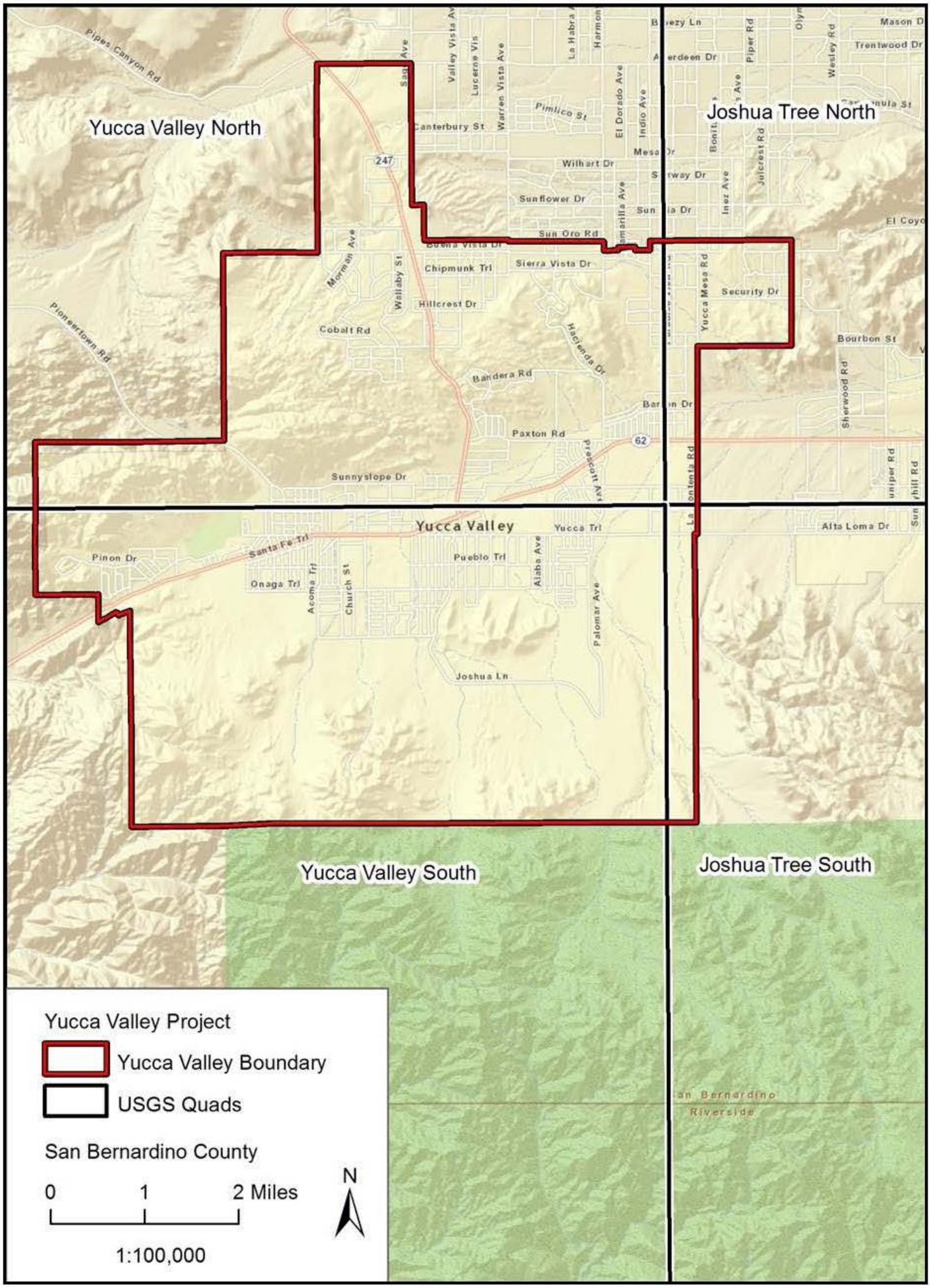
Amy Glover
Lab Supervisor
Cogstone Resource Management Inc.

1518 West Taft Avenue
Orange, CA 92865
Office (714) 974-8300
Toll free (888) 497-0700

Branch Offices
West Sacramento - Morro Bay - Inland Empire

cogstone.com

COGSTONE CULTURAL RESOURCES INFO REQUEST	
DATE	12/02/2011
COGSTONE PROJECT NUMBER:	2179
COGSTONE PROJECT NAME:	Yucca Valley
DESCRIPTION:	Yucca Valley General Plan Update
USGS 7.5' QUAD:	Yucca Valley North 1972 PR 1979 Yucca Valley South 1972 Joshua Tree North 1972 Joshua Tree South 1972
COUNTY:	San Bernardino
TOWNSHIP/SECTION:	T 1N R 5E Sec 11, 14, 22, 23, 24, 25, 26, 27,32, 33, 34, 35, 36, T 1N R 6E Sec 19, 20, 21, 29, 30, 31, 32 T 1S R 5E Sec 1, 2, 3, 4, 5, 9, 10, 11, 12, 13, 14, 15, 16 T 1S R 6E Sec 5, 6, 7, 8, 17, 18
ACRES:	25,470 acres
TYPE OF SEARCH:	Sacred Sites
map attached	√
Thank you.	
Please Mail to:	Sherri Gust 1518 W. Taft Ave. Orange, CA 92865 (714) 974-8303 fax admin@cogstone.com


Yucca Valley North
Joshua Tree North
Yucca Valley
Yucca Valley South
Joshua Tree South
Yucca Valley Project
Yucca Valley Boundary
USGS Quads
San Bernardino County
0
1
2 Miles
1:100,000
N

APPENDIX E: NATIVE AMERICAN CONTACT LOG

Native American Group/Individual	Date(s) of First Contact Attempt	Date(s) of Replies Rec'd	Date(s) of 2nd Contact Attempt	Date(s) of 3rd Contact Attempt	Comments
Ramona Band of Cahuilla Mission Indians, Joseph Hamilton	12/7/2011	N/A	12/28/2011	1/5/2012	On December 7, 2011 a letter and map detailing the project location were mailed to Mr. Hamilton. When no response was received, two emails were sent and no responses were received.
San Manuel Band of Mission Indians, James Ramos	12/7/2011	N/A	12/28/2011	1/5/2012	On December 7, 2011 a letter and map detailing the project location were mailed to Mr. Ramos. When no response was received, two phone calls were placed and two messages were left. No responses were received.
Twenty-Nine Palms Band of Mission Indians, Darrell Mike	12/7/2011	N/A	12/28/2011	1/5/2012	On December 7, 2011 a letter and map detailing the project location were mailed to Mr. Mike. When no response was received, two emails were sent and no responses were received.
Joseph R. Benitez	12/7/2011	N/A	12/28/2011	1/5/2012	On December 7, 2011 a letter and map detailing the project location were mailed to Mr. Benitez. When no response was received, two phone calls were placed and two messages were left. No responses were received.
Chemehuevi Reservation, Charles Wood	12/7/2011	N/A	12/28/2011	1/5/2012	On December 7, 2011 a letter and map detailing the project location were mailed to Mr. Wood. When no response was received, two emails were sent and no responses were received.
Fort Mojave Indian Tribe, Tim Williams	12/7/2011	N/A	12/28/2011	1/5/2012	On December 7, 2011 a letter and map detailing the project location were mailed to Mr. Williams. When no response was received, two phone calls were placed and two messages were left. No responses were received.
Colorado River Indian Tribe, Ginger Scott	12/7/2011	N/A	12/28/2011	1/5/2012	On December 7, 2011 a letter and map detailing the project location were mailed to Ms. Scott. When no response was received, two emails were sent and no responses were received.
AhaMaKav Cultural Society, Linda Otero	12/7/2011	N/A	12/28/2011	1/5/2012	On December 7, 2011 a letter and map detailing the project location were mailed to Ms. Otero. When no response was received, two emails were sent and no responses were received.
Morongo Band of Mission Indians, Michael Contreras	12/7/2011	N/A	12/28/2011	1/5/2012	On December 7, 2011 a letter and map detailing the project location were mailed to Mr. Contreras. When no response was received, two emails were sent and no responses were received.

San Manuel Band of Mission Indians, Ann Brierty	12/7/2011	N/A	12/28/2011	1/5/2012	On December 7, 2011 a letter and map detailing the project location were mailed to Ms. Brierty. When no response was received, two emails were sent and no responses were received.
Serrano Nation of Indians, Goldie Walker	12/7/2011	N/A	12/28/2011	1/5/2012	On December 7, 2011 a letter and map detailing the project location were mailed to Ms. Walker. When no response was received, two phone calls were placed and two messages were left. No responses were received.
Morongo Band of Mission Indians, Ernest H. Siva	12/7/2011	N/A	12/28/2011	1/5/2012	On December 7, 2011 a letter and map detailing the project location were mailed to Mr. Siva. When no response was received, two emails were sent and no responses were received.