



**PALEONTOLOGICAL AND CULTURAL RESOURCES
ASSESSMENT FOR THE
TOWN OF YUCCA VALLEY GENERAL PLAN UPDATE,
SAN BERNARDINO COUNTY, CALIFORNIA**

Public Version

Prepared for:

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USGS 7.5' Quadrangles: Yucca Valley North 1972; Yucca Valley South 1972; Joshua Tree North 1972;
Joshua Tree South 1972

Area: 25,470

Key Words: Old Woman Sandstone, Quaternary older alluvium, Quaternary older gravel, Quaternary
older fanglomerate, Serrano, ranching, gold mining, Warren's Well, Warren's Tank, Desert Christ Park,
CA State Route 63

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MANAGEMENT SUMMARY

The Town of Yucca Valley is located along the southwestern margin of the Mojave Desert in the southwestern portion San Bernardino County, California. The objective of this Paleontological and Cultural Resources Assessment is to review available information on known resources within the Town in support of the General Plan Update Environmental Documents.

The Town is mapped as geologic sediments of Quaternary alluvium, Quaternary older alluvium, Quaternary Older fan, Quaternary older gravel, Quaternary older fanglomerate, basalt, Old Woman Sandstone, quartz monzonite, monzonite porphyry, and gneissic rocks. The developed townsite is mostly on Quaternary alluvium and Quaternary older alluvium. Two vertebrate fossils of extinct horse and desert tortoise are known within the Town limits.

Fossils of extinct horse and desert tortoise are known within the city limits (west-central portion) in Quaternary older alluvium. 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 saber-toothed cat. Fossils are also known from the Old Woman Sandstone in the local region. These include extinct animals such as a zebra-like horse and Furlong's rabbit in addition to cotton rat, wood rat and brown bat.

The local vicinity has prehistoric resources ranged from about 10,000 years ago to 200 years ago. At the time of historic contact, the Project study region was within the ethnographic territory of the Serrano. During the 1870s leading up to the turn of the century, the region was used largely by ranchers and gold mining prospectors, especially after the discovery of gold east of what is now Twentynine Palms. Many individuals and families did not stay long, due to harsh living conditions such as lack of water and the general difficulty in raising crops in a desert environment. The first school in Yucca Valley was established in 1915. A telephone was not available in Yucca Valley until 1935 and population did not dramatically increase until after World War II, when hundreds of land patents were filed. The highway from Morongo Valley through Yucca Valley was constructed in 1937 but not paved until 1951. Electricity did not appear until 1946, three years after the Town streets were laid out.

The records search determined that there are nine prehistoric resources, three historical archaeological resources and five historic resources within the Town. The prehistoric archaeological sites recorded previously include five lithic artifact scatters, a camp site, a quarry sites, a bedrock milling site, and one isolated pottery sherd. The historical archaeological sites include two historic refuse scatters and a dove blind associated with a refuse scatter. The historic resources include a historical school house, Warren's Well, Warren's Ranch/Tanks, Desert Christ Park (a local folk art site), and State Route 62 (Twentynine Palms Highway). 82 cultural resources studies have been completed previously within the Town covering only 11 percent of the Town's acreage.

A Sacred Lands File search was requested from the Native American Heritage Commission on December 2, 2011. On December 5, the Commission replied that there were no known Native American cultural resources within the study area, and provided a list of 12 Native American

tribes or individuals to contact for further information. Letters requesting information on any cultural heritage sites and containing maps and study information were sent by U.S. Mail on December 7, 2011, to the 12 Native American contacts. After no responses were received, follow-up e-mails were sent and phone calls were placed to the Native America contacts on December 28, 2011, and again on January 5, 2012. No responses were received from the 12 Native American individuals or organizations.

A general analysis of impacts of future projects in the Town that may adversely affect paleontological, archaeological or historic resources is provided along with recommendations.

INTRODUCTION

The Town of Yucca Valley is located along the southwestern margin of the Mojave Desert in the southwestern portion San Bernardino County, California (Figure 1). The objective of this Paleontological and Cultural Resources Assessment is to review available information on known resources within the Town in support of the General Plan Update Environmental Documents. The Town of Yucca Valley's (Town's) General Plan is a policy document for the long-range comprehensive development of the Town. As a policy document, the General Plan provides the legal basis for all subdivision, zoning and related ordinances, and also the legal basis for the initiation and authorization for all public improvements and projects that may be proposed in the Town's General Plan Updates and various Specific Plans.

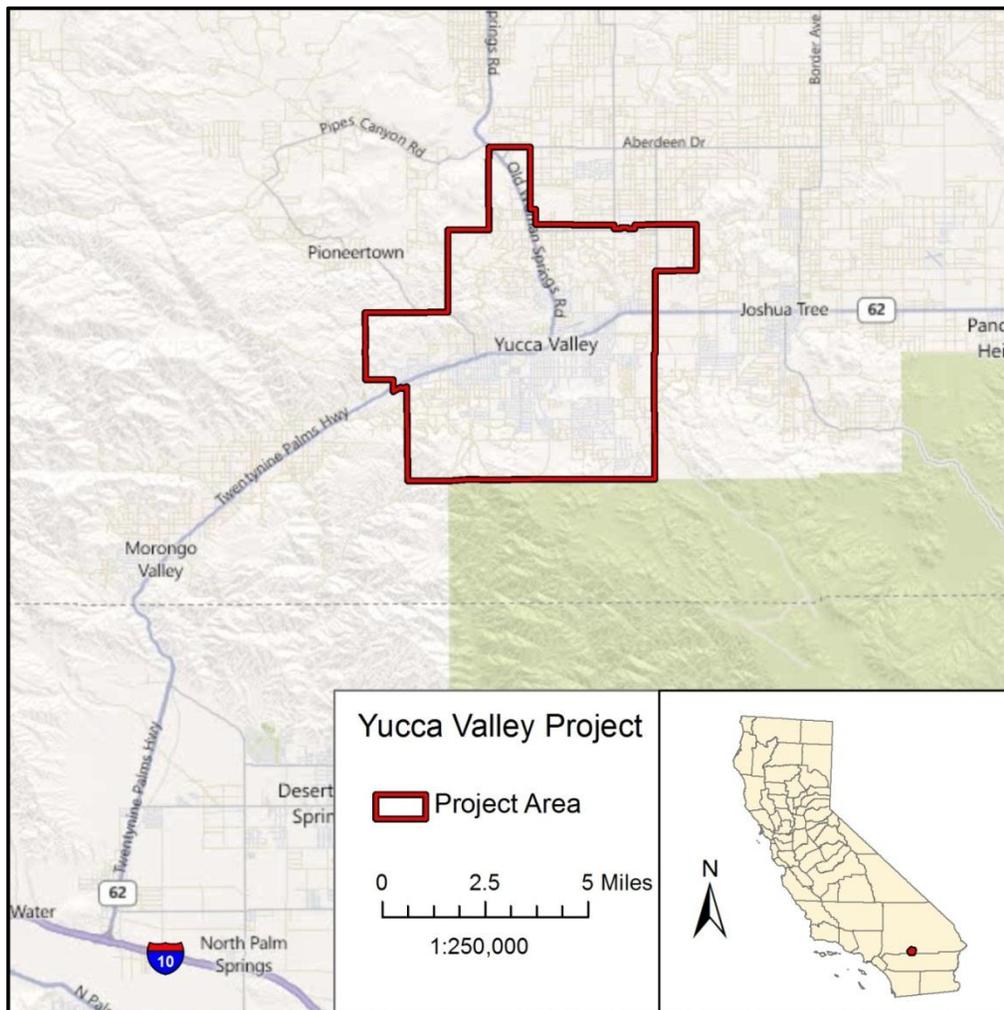


Figure 1. Town of Yucca Valley Vicinity

PROJECT DESCRIPTION

The Town of Yucca Valley is depicted on multiple U.S.G.S 7.5-minute series topographic quadrangles (Table 1), and is bordered to the north by the Sawtooth Mountains, to the west by Morongo Valley, to the south by Joshua Tree National Park, and to the east by the community of Joshua Tree (Figures 2a-2f). Of the 25,470 acre Town area, 1,038 acres are public lands administered by the Bureau of Land Management (BLM), comprising approximately 4 percent of the total study area. There are no lands within the Project study area administered by the Bureau of Indian Affairs (BIA).

Elevations within the Town’s general study region ranges from approximately 4,400 feet (ft) above mean sea level (amsl) in the northern portion of the study area (Figure 2b) and gradually declines to approximately 3,260-3,200 ft amsl at the community of Yucca Valley and the Yucca Valley Airport, respectively (Figure 2d). Desert Christ Park, a local historical landmark composed of folk art located at the northwestern corner of the Town proper, is at an approximate elevation of 3,400 ft amsl. At the south-central edge of the Project study area, elevations again gradually rise to 3,795 ft amsl and 4,395 ft amsl at Burnt Mountain and South Park Peak, respectively (Figure 2f). State Route 62 (Twentynine Palms Highway) is generally at an elevation of 3,300 ft amsl and transects the Project study area from northeast to southwest. (Figure 2d and 2e).

Table 1. Yucca Valley Study Area Locations

7.5’ Quad	Section	Township & Range
Yucca Valley North	11, 14, 22-27, 32-36	T 1N R 5E
	19, 20, 29-32	T 1N R 6E
Yucca Valley South	32-36	T 1N R 5E
	1-5, 9-16	T 1S R 5E
	31, 32	T 1N R 6E
	5-8, 17, 18	T 1S R 6E
Joshua Tree North	20, 21, 29, 32	T 1N R 6E
Joshua Tree South	32	T 1N R 6E
	5, 8, 17	T 1S R 6E

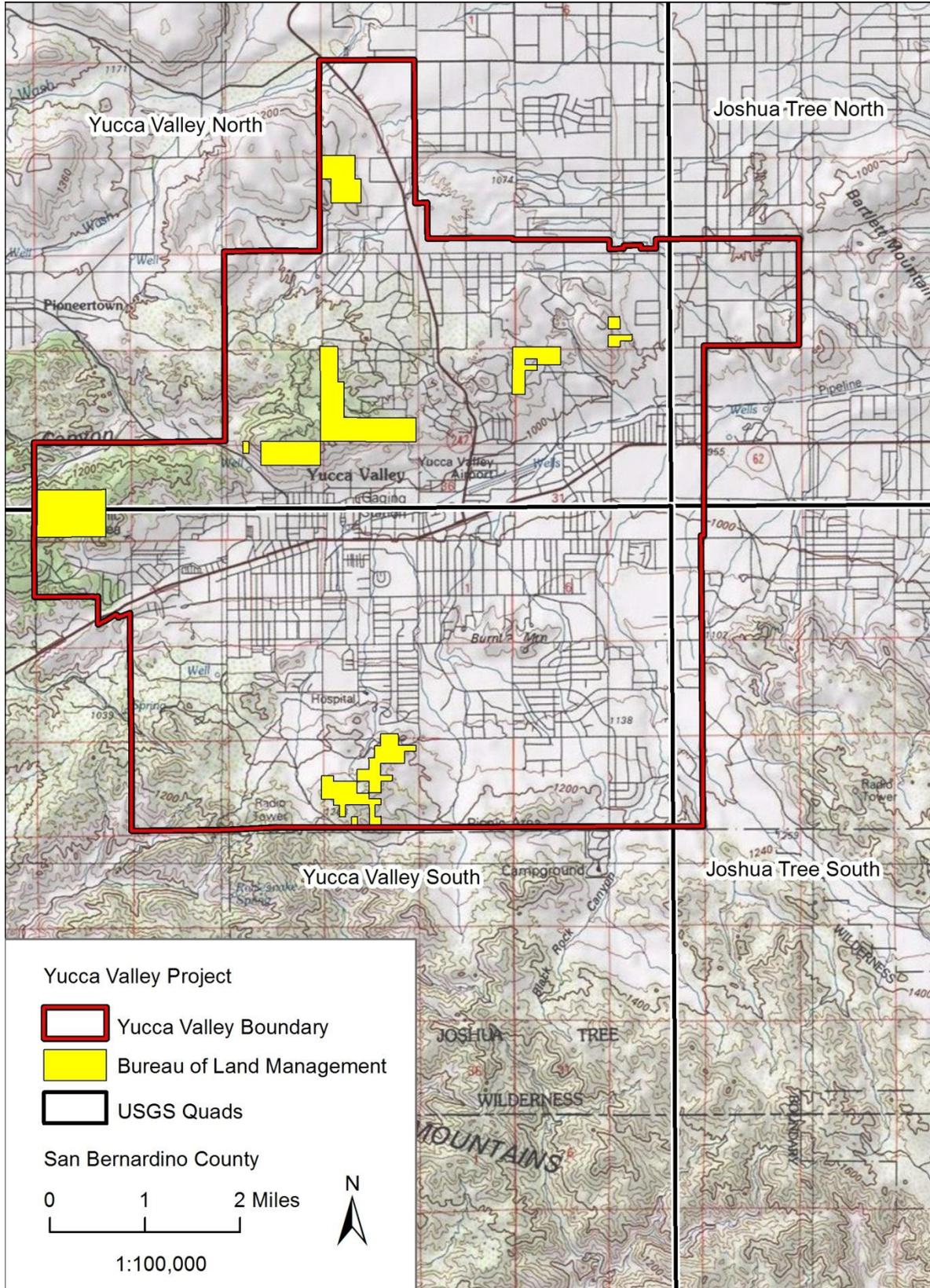


Figure 2a. Town of Yucca Valley Study Overview

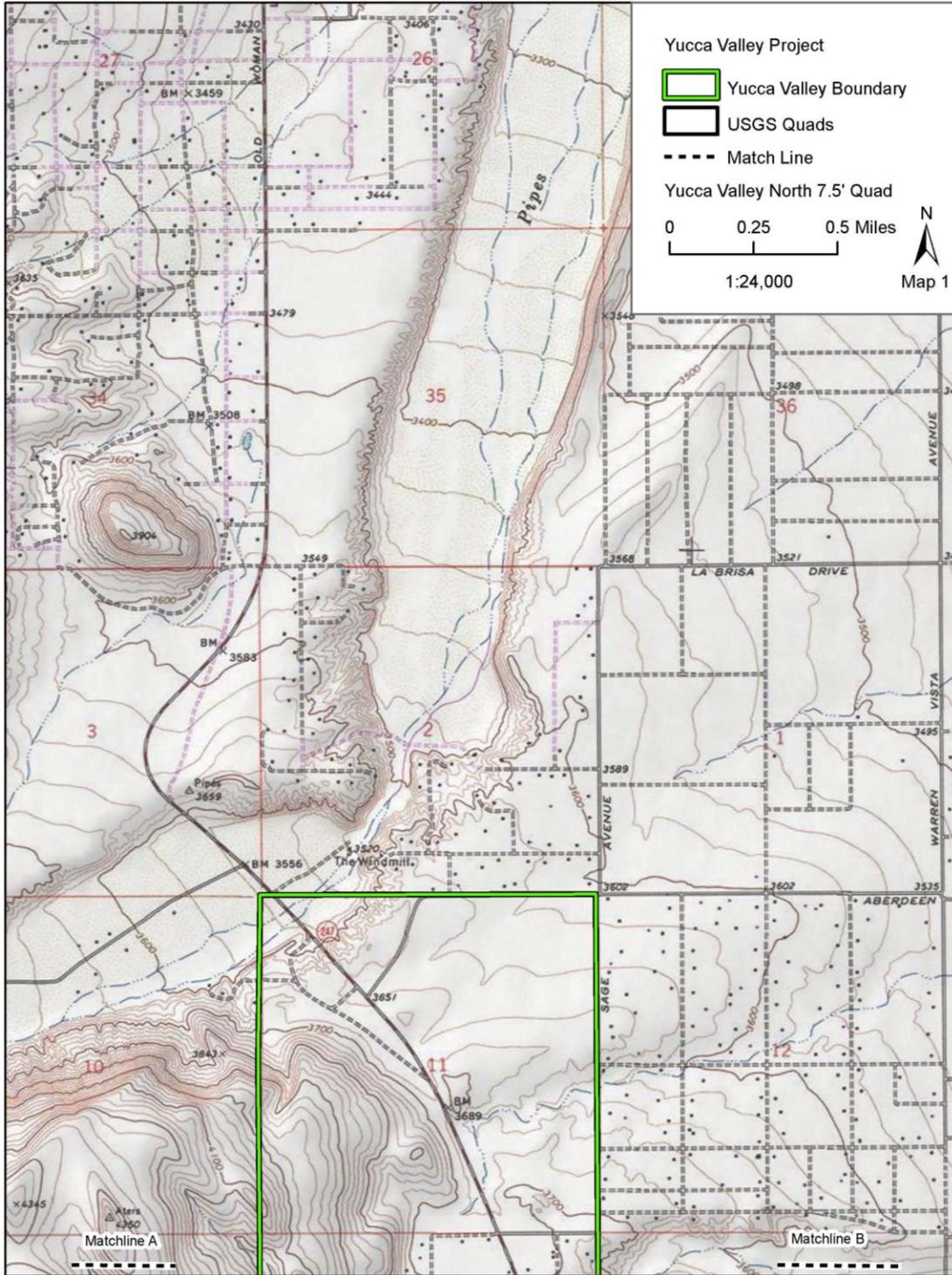


Figure 2b. Town of Yucca Valley Study Area Map 1

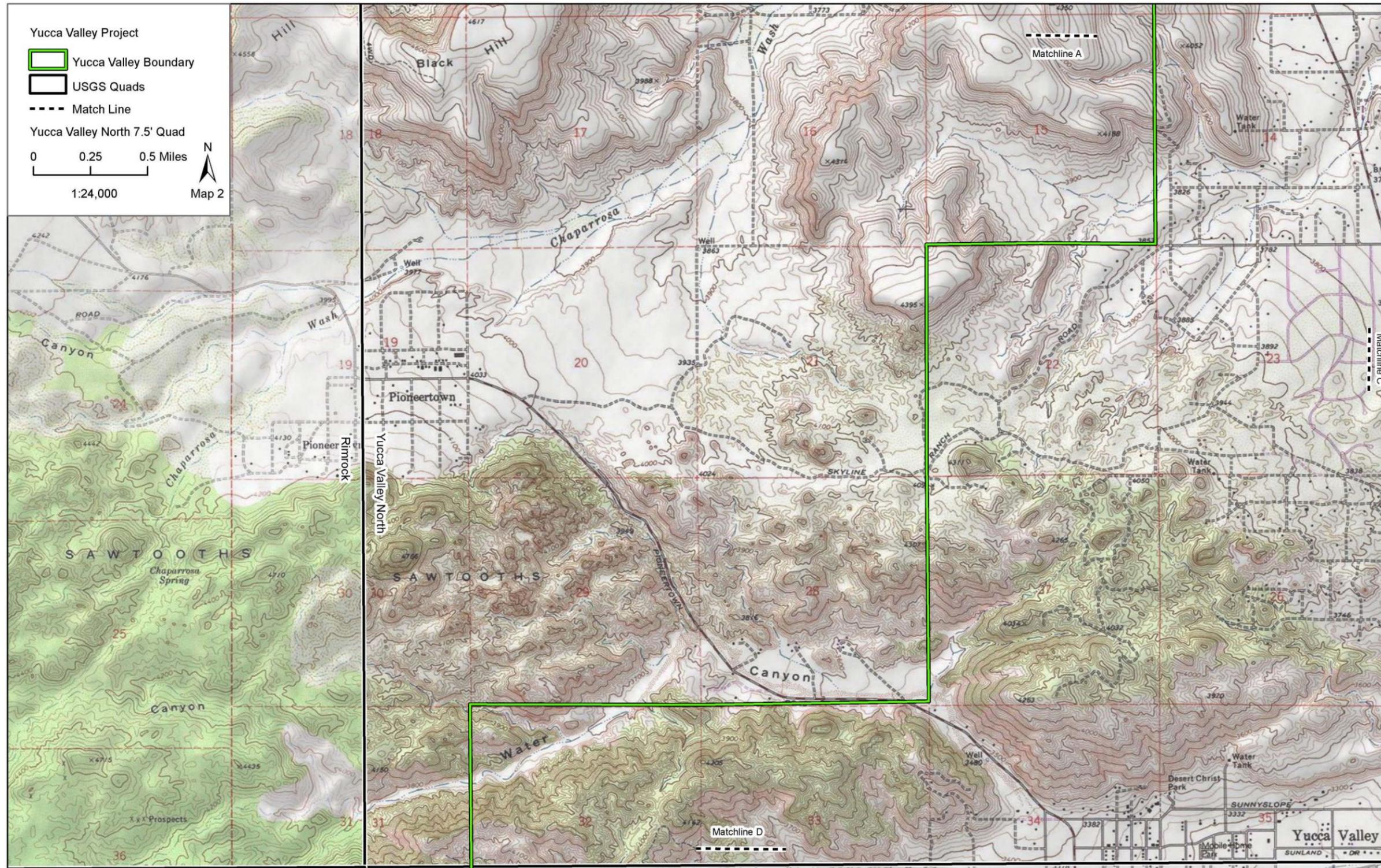


Figure 2c. Town of Yucca Valley Study Area Map 2

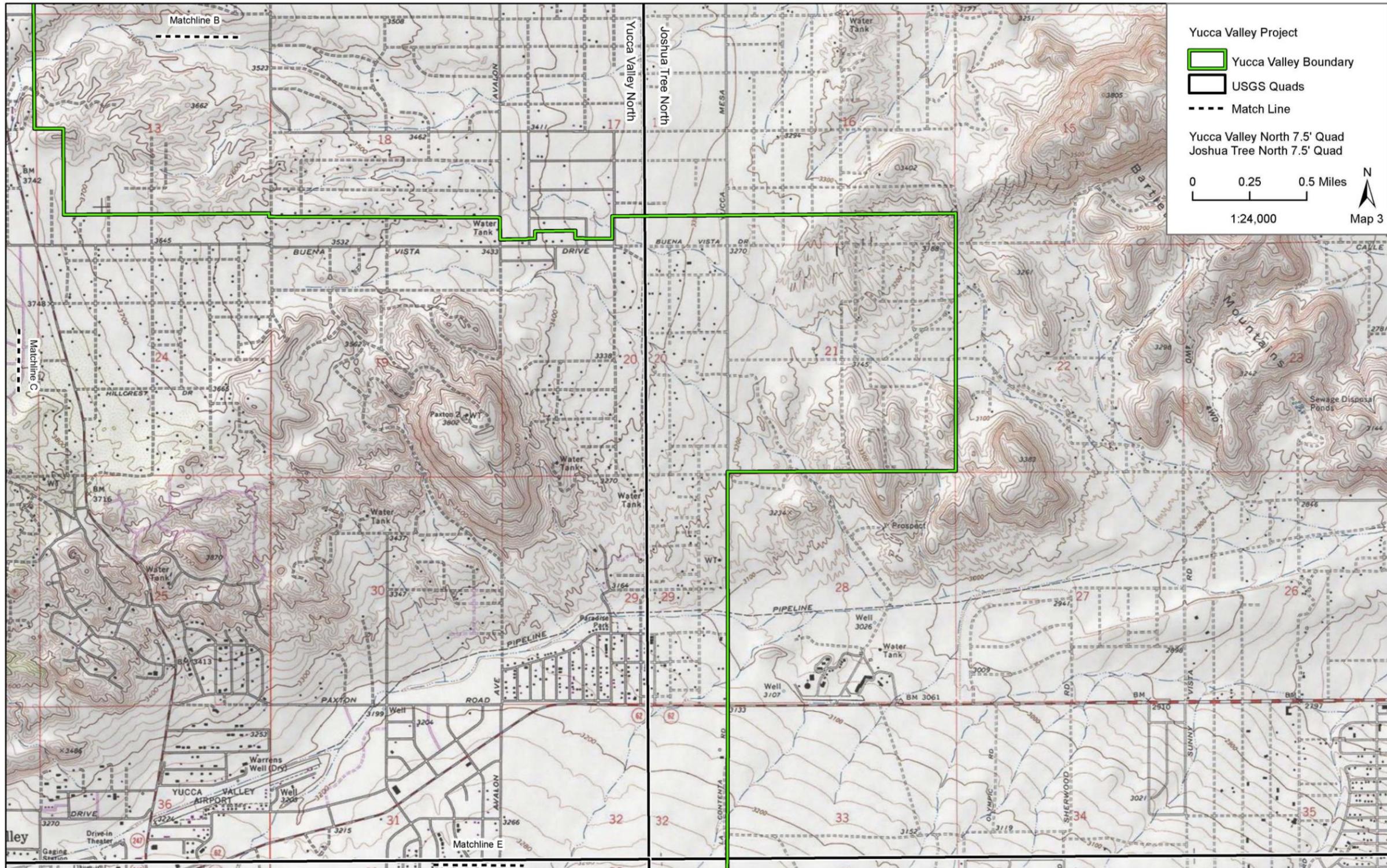


Figure 2d. Town of Yucca Valley Study Area Map 3

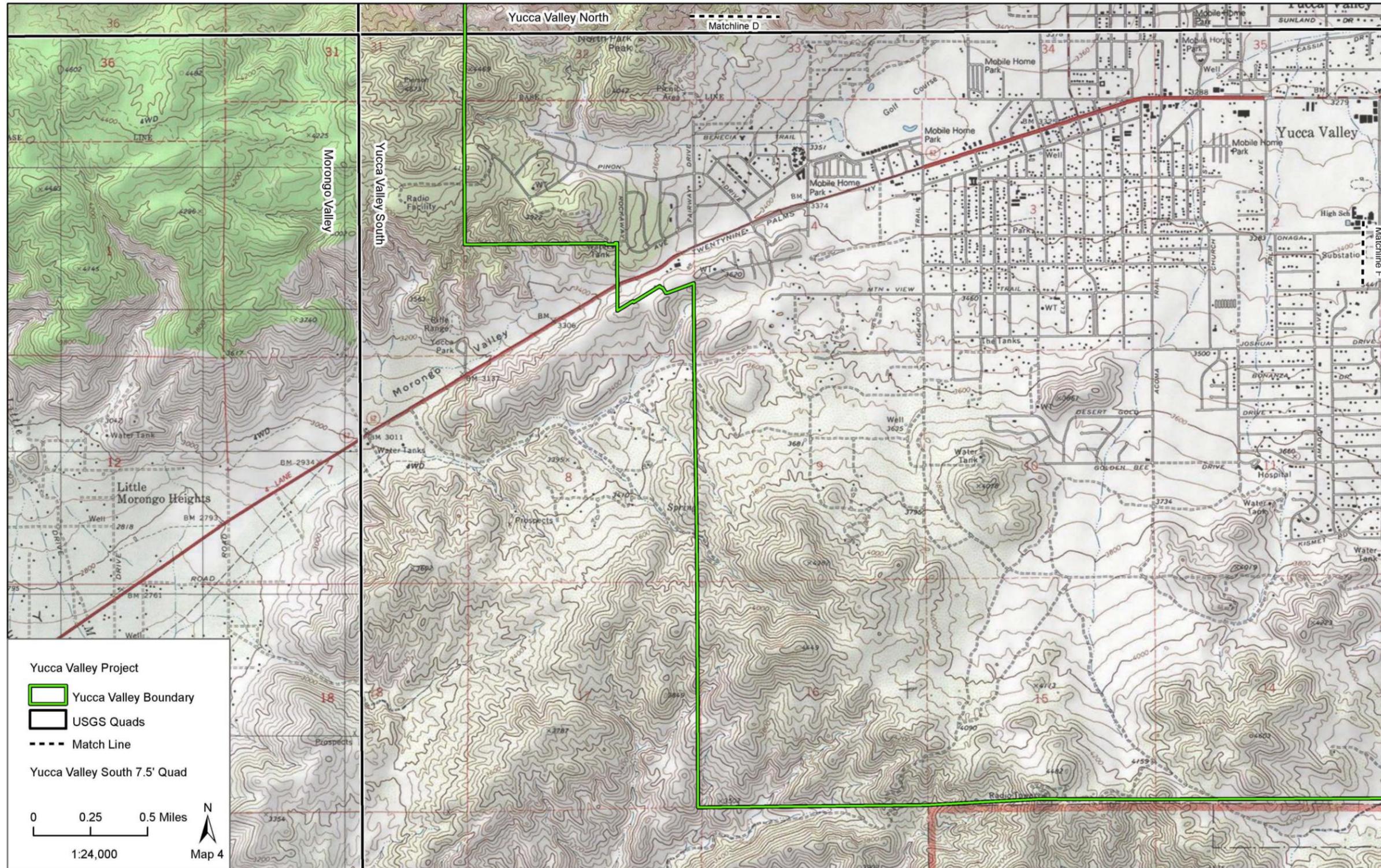


Figure 2e. Town of Yucca Valley Study Area Map 4



Figure 2f. Town of Yucca Valley Study Area Map 5

The Town of Yucca Valley has a number of land uses, but the vast majority of Town's land is either single-family land uses (24.0%) or vacant (73.4%). This is due to the Town's desert residential character and isolated high desert location. With a few exceptions, existing commercial and industrial uses are generally located within ½ mile of the SR-62 corridor and concentrated in the Old Town and Mid-Town areas. Yucca Valley does not contain any major water bodies or improved open space areas. Therefore, the Town's abundant vacant land generally consists of undeveloped desert saltbrush scrub, Joshua tree woodland, and pinyon-juniper woodland. The majority of roadways in the less developed portions of the Town are unimproved (e.g., dirt roads).

The proposed project is an update to the Town of Yucca Valley General Plan. The Yucca Valley General Plan Update is intended to shape development within the Town for the next twenty years and beyond. The Update is guided by a set of community values that were developed by the Yucca Valley Town Council with input from the community and adopted by the Town Council on March 20, 2012. The community values are: Small town atmosphere, balanced growth, safe and established neighborhoods, fiscal sustainability, diverse range of community services, efficient infrastructure, strong economy, desert environment and natural resources, arts and culture and community pride and participation.

The update shifts the Town's goals slightly to reduce residential use and the Old Town Specific Plan areas, increase commercial and miscellaneous uses and adds a Westside Special Policy Area (Table 2). More detail can be found in the Initial Study for this general plan update (Planning Center 2012).

Table 2. Current and Proposed Land Use Percentages

Land Use Descriptions	Previous General Plan	Proposed General Plan
Residential	88.6%	82.4%
Commercial, Mixed & Industrial	3.7%	5.8%
Miscellaneous	3.6%	7.3%
Old Town Specific Plan	0.8%	0.7%
Westside Special Policy Area	0%	3.8%

PROJECT PERSONNEL

Cogstone Resource Management, Inc., performed the studies reported herein. Melinda Horne served as Principal Archaeologist for the study and wrote portions of this report pertaining to the cultural history and recommendations and edited this report. Horne is a Registered Professional Archaeologist and received her B.A. and M.A. in Anthropology/Geography from the University of Utah. She has more than 30 years of archaeological experience in California, Oregon, Nevada, and Utah. Sherri Gust served as Principal Paleontologist for the study, wrote the paleontological sections and recommendations, and edited this report. Gust is a Qualified Principal Paleontologist and Registered Professional Archaeologist with 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 more than 30 years of experience in California.

Amy Glover performed the archaeological records search, documented the results of this search, and assisted Horne with preparing the cultural context sections of the report. Ms. Glover has a B.S. in Anthropology from the University of California, Riverside and more than six years of experience in California archaeology. Todd Wirths wrote the geologic setting. He has a B.A. in geology from the University of California, Santa Cruz, and an M.S. in geology from San Diego State University. In addition, Mr. Wirths is a California Certified Professional Geologist (No. 7588).

Molly Valasik and Shanna Wexelblatt prepared the GIS maps presented in this document. Ms. Valasik has a M.A. in Anthropology and experience in California archaeology. Ms. Wexelblatt holds a Bachelor's degree in Philosophy, minoring in anthropology, and is currently working towards her Master's degree in anthropology. Further qualifications of Cogstone staff are provided (Appendix A).

REGULATORY FRAMEWORK

The General Plan Update is subject to state regulations. Future projects within the Town may be subject to federal, state or local regulations depending on land ownership. Information on federal laws provided here can also assist with evaluating National Register properties.

FEDERAL LAWS AND REGULATIONS

NATIONAL HISTORIC PRESERVATION ACT OF 1966, AS AMENDED

The National Historic Preservation Act (NHPA) is the primary federal law governing the preservation of cultural and historic resources in the United States. The law establishes a national preservation program and a system of procedural protections which encourage the identification and protection of cultural and historic resources of national, state, tribal and local significance. Primary components of the act include:

- a) Articulation of a national policy governing the protection of historic and cultural resources.
- b) Establishment of a comprehensive program for identifying historic and cultural resources for listing in the National Register of Historic Places.
- c) Creation of a federal-state/tribal-local partnership for implementing programs established by the act.
- d) Requirement that federal agencies take into consideration actions that could adversely affect historic properties listed or eligible for listing on the National Register of Historic Places, known as the Section 106 Review Process.
- e) Establishment of the Advisory Council on Historic Preservation, which oversees federal agency responsibilities governing the Section 106 Review Process.
- f) Placement of specific stewardship responsibilities on federal agencies for historic properties owned or within their control (Section 110 of the NHPA).

Section 106, as noted above (item d), requires the head of any Federal agency having direct or indirect jurisdiction over a proposed Federal or federally assisted undertaking in any State and the head of any Federal department or independent agency having authority to license any undertaking shall, prior to the approval of the expenditure of any Federal funds on the undertaking or prior to the issuance of any license, as the case may be, take into account the effect of the undertaking on any district, site, building, structure, or object that is included in or eligible for inclusion in the National Register. The head of any such Federal agency shall afford the Advisory Council on Historic Preservation a reasonable opportunity to comment with regard to such undertaking.

NATIONAL REGISTER OF HISTORIC PLACES

The National Register of Historic Places is the nation's official list of buildings, structures, objects, sites, and districts worthy of preservation because of their significance in American history, architecture, archeology, engineering, and culture. The National Register recognizes resources of local, state and national significance which have been documented and evaluated according to uniform standards and criteria.

Authorized under the National Historic Preservation Act of 1966, the National Register is part of a national program to coordinate and support public and private efforts to identify, evaluate, and protect historic and archeological resources. The National Register is administered by the National Park Service, which is part of the U. S. Department of the Interior.

To be eligible for listing in the National Register, a resource must meet at least one of the following criteria:

- A. Is associated with events that have made a significant contribution to the broad patterns of our history
- B. Is associated with the lives of persons significant in our past
- C. Embodies the distinctive characteristics of a type, period or method of construction, or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components may lack individual distinction
- D. Has yielded, or may be likely to yield, information important in history or prehistory

Effects of National Register Designation include:

- a) Tax incentives, in some cases, for rehabilitation of depreciable structures.
- b) Tax deduction available for donation of preservation easement.
- c) Local building inspector must grant code alternatives provided under State Historical Building Code.
- d) Local assessor may enter into contract with property owner for property tax reduction (Mills Act).
- e) Consideration in federally funded or licensed undertakings (Section 106, National Historic Preservation Act).
- f) Limited Protection: Environmental review may be required under the California Environmental Quality Act (CEQA) if property is threatened by a project. Contact the local government planning agency for more information.
- g) Automatic listing in California Register of Historical Resources. Owner may place his or her own plaque or marker at the resource site.
- h) Listing in the National Register may result in restrictions, such as design review, imposed locally pursuant to the California Environmental Quality Act (CEQA) or through local zoning and land use planning 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]

STATE LAWS AND REGULATIONS

CALIFORNIA ENVIRONMENTAL QUALITY ACT OF 1970, AS AMENDED

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 State Historical Resources Commission has designed this program for use by state and local agencies, private groups and citizens to identify, evaluate, register and protect California's historical resources. The Register is the authoritative guide to the state's significant historical and archeological resources.

The California Register program encourages public recognition and protection of resources of architectural, historical, archeological and cultural significance, identifies historical resources for state and local planning purposes, determines eligibility for state historic preservation grant funding and affords certain protections under the California Environmental Quality Act.

To be eligible for listing in the California Register, a resource must meet at least one of the following criteria:

- 1) Associated with events that have made a significant contribution to the broad patterns of local or regional history or the cultural heritage of California or the United States
- 2) Associated with the lives of persons important to local, California or national history
- 3) 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

- 4) Has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California or the nation

In addition 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.

Effects of Designation include:

- 1) Limited protection: Environmental review may be required under CEQA if property is threatened by a project. Contact your local planning agency for more information.
- 2) Local building inspector must grant code alternatives provided under State Historical Building Code.

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; 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.
- 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.

Effects of Designation include:

- 1) Registration will be recorded on the property deed.
- 2) Limited protection: Environmental review may be required under the California Environmental Quality Act (CEQA) if property is threatened by a project. Contact your local planning agency for more information.
- 3) Local assessor may enter into contract with property owner for property tax reduction using the Mills Act.
- 4) Local building inspector must grant code alternative provided under State Historic Building Code.
- 5) Automatic listing in California Register of Historical Resources.
- 6) Bronze plaque at site (underwritten by local sponsor) may be ordered through OHP; highway directional sign available through local Department of Transportation (Caltrans) district office.

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 California Register. No historical resource may be designated as both a Landmark and a Point. If a Point is subsequently granted status as a Landmark, the Point designation will be retired.

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

- 1) The first, last, only, or most significant of its type within the local geographic region (City or County).
- 2) Associated with an individual or group having a profound influence on the history of the local area.
- 3) 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 the local region of a pioneer architect, designer or master builder.

Effects of Designation include:

- 1) Limited protection: Environmental review may be required under CEQA if property is threatened by a project. Contact your local planning agency for more information.
- 2) Local assessor may enter into contract with property owner for property tax reduction (Mills Act).
- 3) Local building inspector must grant code alternative provided under State Historic Building Code.

- 4) Registration is recorded on property deed.
- 5) A small enamel directional sign (no text) available through local Caltrans district office. Owner may place his or her own marker at the site.

ADDITIONAL RELEVANT GUIDANCE

POTENTIAL FOSSIL YIELD CLASSIFICATION SYSTEM

The Potential Fossil Yield Classification (PFYC) System was developed by the USDA Forest Service and further refined by the BLM. Occurrences of paleontological resources are closely tied to the geologic units (i.e., formations, members, or beds) that contain them. The probability for finding paleontological resources can be broadly predicted from the geologic units present at or near the surface. Therefore, geologic mapping can be used for assessing the potential for the occurrence of paleontological resources.

Using the PFYC system, geologic units are classified based on the relative abundance of vertebrate fossils or scientifically significant invertebrate or plant fossils and their sensitivity to adverse impacts, with a higher class number indicating a higher potential. This classification is applied to the geologic formation, member, or other distinguishable unit, preferably at the most detailed mapable level. It is not intended to be applied to specific paleontological localities or small areas within units. Although significant localities may occasionally occur in a geologic unit, a few widely scattered important fossils or localities do not necessarily indicate a higher class; instead, the relative abundance of significant localities is intended to be the major determinant for the class assignment.

The PFYC system is meant to provide baseline guidance for predicting, assessing, and mitigating paleontological resources in a given region. The classification should be considered at an intermediate point in the analysis, and should be used to assist in determining the need for further mitigation assessment or actions (Appendix B).

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

ENVIRONMENTAL SETTING

The Town of Yucca Valley area is located near the Morongo Basin area along the southwestern margin of the Mojave Desert in the southwestern portion San Bernardino County, California. Elevations within the Town range from approximately 4,400 feet (ft) above mean sea level (amsl) in the northern portion of the study area (see Figure 2b) and gradually declines to approximately 3,260-3,200 ft amsl at the community of Yucca Valley and the Yucca Valley Airport, respectively (see Figure 2d). State Route 62 (Twentynines Plams Highway) is generally at an elevation of 3,300 ft amsl and transects the Project study area from northeast to southwest. (see Figure 2d and 2e). The climate of the Project region is generally hot and dry, with most precipitation occurring during the winter, although summer thunderstorms and resultant flash flooding do occur. Winter snowfall is common at the higher elevations (Schoenherr 1992:411). Although the Project study region is transected by numerous washes and arroyos generally draining from the northeast to the southwest, the primary drainage system is Pipes Wash that enters the Project study area from the north (see Figure 2b), and is a 0.5 mile-wide braided drainage with channel-and-bar topography incised to a depth of approximately 100 ft into the surrounding valley floor. Pipes Wash becomes known as Chaparrosa Wash near Pioneertown along the northwestern boundary of the Town's study area (see Figure 2c)

Native vegetation in the general Project study region is dominated by species of the Creosote Bush Scrub and Joshua Tree Woodland plant communities (Schoenherr 1992:435–442, 454–456). Typical member species of the Creosote Bush Scrub plant community include creosote

bush (*Larrea tridentata*), burr weed (*Ambrosia dumosa*), catclaw (*Acacia greggii*), cheesebush (*Hymenoclea salsola*), and various cacti (*Echinocactus spp.*, *Opuntia spp.*). The suite of species commonly found in the Joshua Tree Woodland community includes Joshua tree (*Yucca brevifolia*), Mohave yucca (*Y. schidigera*), and *Salazaria*, *Lycium*, *Salvia*, and *Eriogonum* species (Munz 1974:4).

Fauna in the Project area include antelope ground squirrel (*Ammospermophilus leucurus*), kangaroo rat (*Dipodomys spp.*), desert wood rat (*Neotoma lepida*), jackrabbit (*Lepus californicus*), Audubon cottontail (*Sylvilagus audubonii*), coyote (*Canis latrans*), bobcat (*Lynx rufus*), and desert tortoise (*Xerobates agassizii*). Cactus wrens (*Campylorhynchus brunneicapillus*) and Ladder-back Woodpeckers (*Picoides scalaris*) are commonly found in the Joshua Tree Woodland, and there are at least 12 common bat species. Small burrowing mammals are also common, as are a numerous species of reptiles, lizards, and venomous and non-poisonous snakes. A wide variety of raptors, ravens, and other birds also occur within the Yucca Valley study region. It should be noted that the nationally protected Desert Tortoise (*Gopherus agassizii*) is common within the Project study region.

Probably the most important environmental change in the southwestern Mojave Desert and the northwestern Colorado Desert in the past 2,000 years was the formation of Lake Cahuilla, also known geologically as Lake Le Conte and historically as Blake's Lake. Lake Cahuilla formed numerous times throughout the Pleistocene and Holocene in response to the western diversion of the Colorado River into the Salton Trough. It should be noted that while the shoreline of ancient Lake Cahuilla falls outside the Project study area to the south, periodic high stands of the Lake were undoubtedly relevant to the prehistoric cultural use and occupation of the overall Project study region.

GEOLOGIC SETTING

The project area is mapped as Quaternary alluvium, Quaternary older alluvium, Quaternary Older fan, Quaternary older gravel, Quaternary older conglomerate, basalt, Old Woman Sandstone, quartz monzonite, monzonite porphyry, and gneissic rocks (Figure 3; Dibblee 2008). The developed townsite is mostly on Quaternary alluvium and Quaternary older alluvium.

MESOZOIC AND PRE-MESOZOIC FORMATIONS

Pre-Mesozoic gneissic rocks are exposed in the northeastern and southern portions of the project area (refer to Figure 3). These rocks are likely metamorphosed Precambrian (>542 million years old) sediments, ranging from quartz diorite to quartz monzonite in composition. Minor outcrops of Mesozoic (between 65 and 251 million years ago) monzonite porphyry (mp), located at the extreme northeast corner of the project area, are characterized by large phenocrysts of potassic

feldspar, and intrude the older gneissic rocks. Intruding both the older gneissic rocks and monzonite porphyry is a homogeneous Mesozoic quartz monzonite (qm) (Dibblee 2008). Outcrops of the quartz monzonite are found throughout much of the north-central and northwestern portions of the project area.

OLD WOMAN SANDSTONE

Two small outcrops of the late Tertiary Old Woman Sandstone (To) are mapped within the northern portion of the project area (refer to Figure 3; Dibblee 2008). The Old Woman sandstone is characterized by interbedded units of arkosic sandstone, conglomerate, silt, and clay, with scattered clasts of limestone and basalt.

BASALT

Flows of late Tertiary to early Quaternary (from approximately 3 to 1.5 million years ago) basalt (QTb) overlie, and rest conformably on, the Old Woman Sandstone, in the extreme north of the project area (refer to Figure 3; Dibblee 2008).

OLDER FANGLOMERATE

Deposits of late Quaternary older fanglomerate (Qof) are located along the western edge of the project area and compose most of Burnt Mountain near the center of the project area. These outcrops represent erosional remnants of light gray, massive deposits of unsorted boulders and cobbles in a weakly cemented arkose matrix (Dibblee 2008).

QUATERNARY OLDER GRAVEL

These deposits represent probable early Pleistocene valley fill sediments consisting mostly of quartz monzonite detritus of poorly bedded cobbles, pebbles and coarse sand (Qog), and are located along the northern portion of the project area (refer to Figure 3; Dibblee 2008).

QUATERNARY OLDER ALLUVIUM

The older alluvial deposits (Qoa) are characterized by poorly bedded to nonbedded cobbles, gravels and sand. There are some surface exposures but these sediments often underlie the other types of Quaternary sediments.

QUATERNARY ALLUVIUM

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).

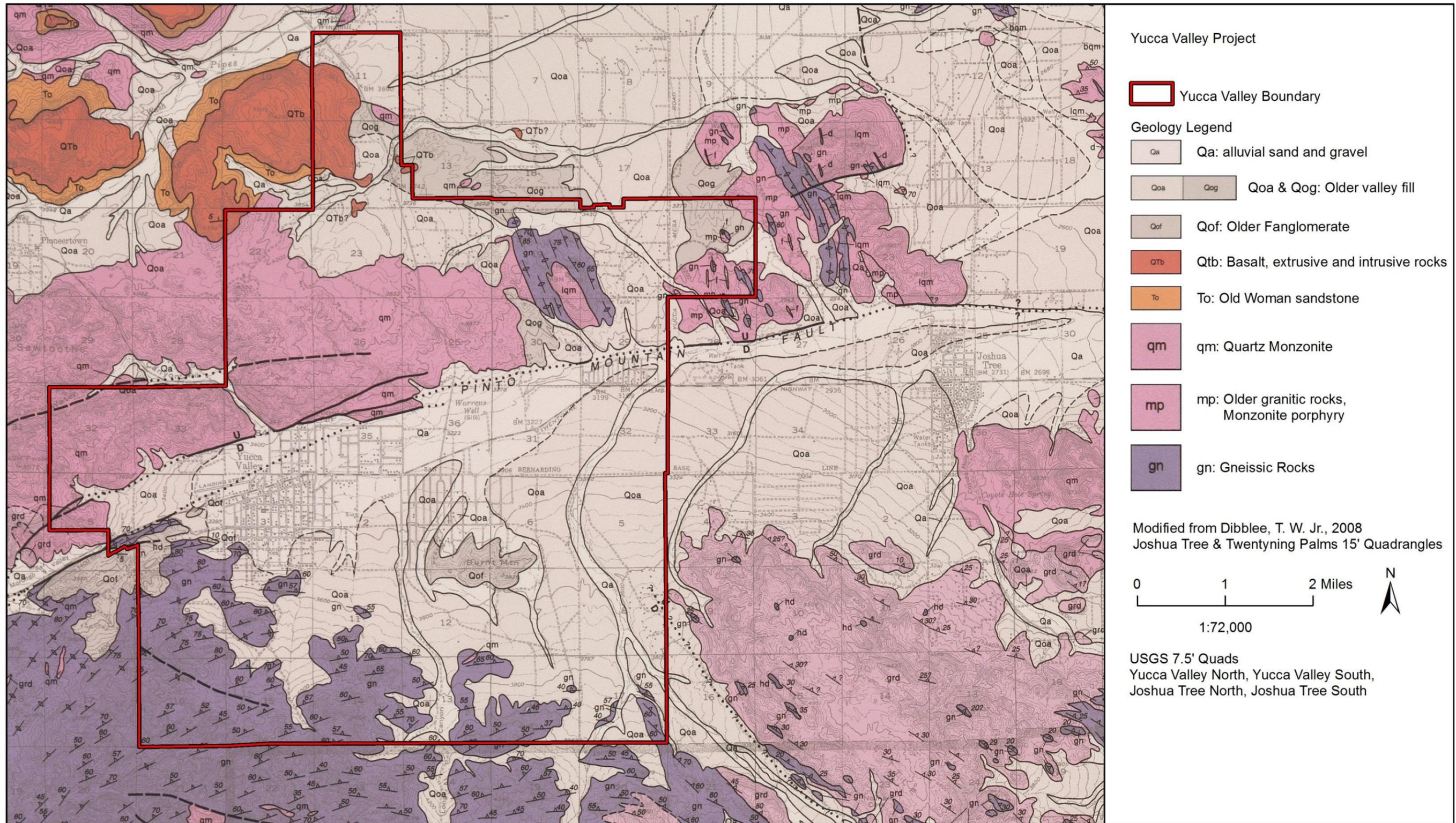


Figure 3. Yucca Valley Geology Map

PREHISTORIC CULTURAL 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. 12,000–7000 years before present¹ (B.P.); Pinto (ca. 7000–4000 B.P.); Gypsum Period (ca. 4000–1500 B.P.); Saratoga Springs Period (ca. 1500–750 B.P.); and the Late Prehistoric Period (ca. 750–200 B.P.) which ended in the ethnographic period (see 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. (Spaulding 1995), but took millennia to complete. 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

¹ Before present is defined as 1950 – the year in which nuclear weapons testing artificially altered carbon isotopes present

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.).

GYP SUM 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 Humboldt 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.

ETHNOGRAPHIC SETTING

At the time of historic contact, the Project study region was within the ethnographic territory of the Serrano (Figure 4). 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. 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. 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.

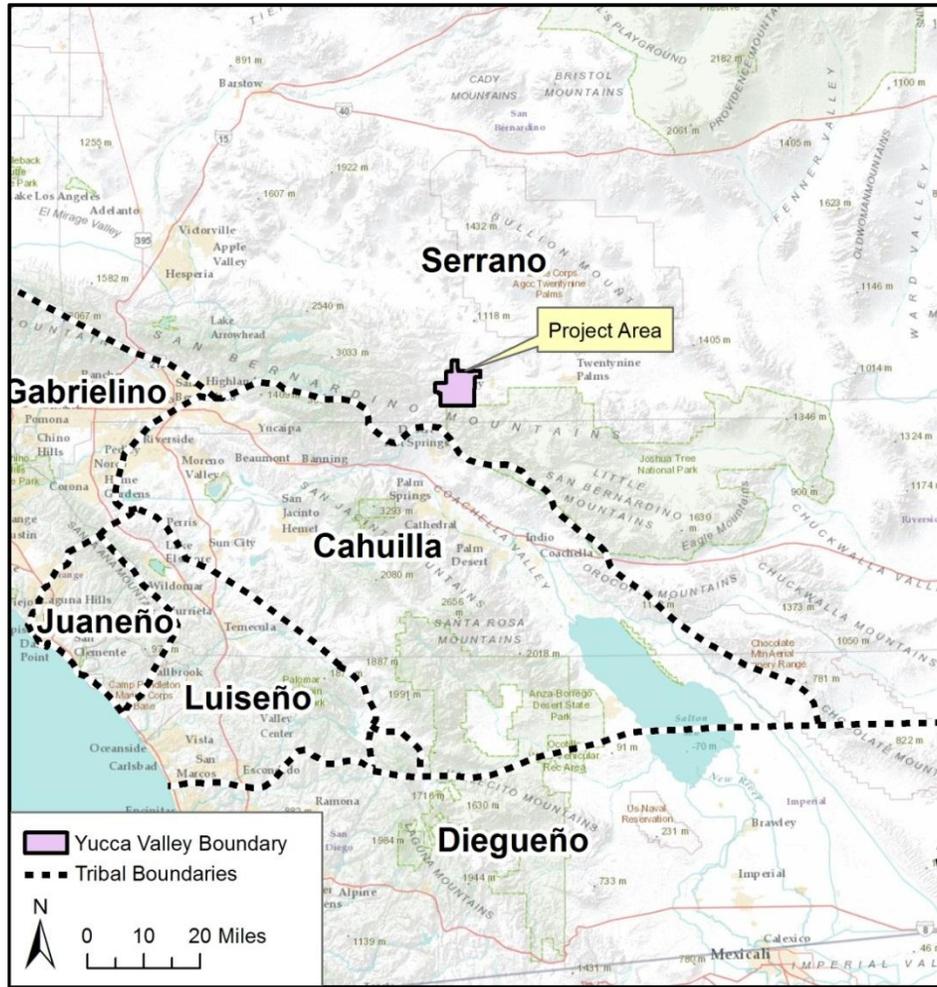


Figure 4. Southern California tribal territories

Prior to European contact, the Serrano were primarily hunters and gatherers. Women were responsible for most of the gathering and acorns, piñon nuts, and mesquite beans were collected as staple foods. Spring cactus fruits and berries were consumed fresh for both food and water. Flower blossoms were roasted and eaten. Yucca blossoms and stalks were blanched before being eaten. Roots were used for food and medicine, and leaves and stems were used for making tea. Digging sticks were frequently used to dig for plants and roots for subsistence and medicinal purposes (Johnston 1965:8). One main seed resource was chia, and stands of chia were periodically burned in order to increase yield. Other major plant foods included mesquite beans and the nuts from piñon pine and acorn. Acorns were leached by placing baskets of pounded and shelled acorn meal into a sandy hole with just enough water to allow the dissolved tannic acid to seep out. Other plant seeds were parched and made into a mush by boiling or cooking and dropping a heated stone into a water-tight basket filled with seeds and water. Some seeds were dried and stored in baskets. Baskets were made from willow and mesquite branches and woven with bone awls.

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, and 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 were also worn, made from juniper bark and yucca leaves. Hides used for clothing and footwear were scraped with a stone tool and 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 these 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’s planning area 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.

HISTORIC SETTING

SPANISH & MEXICAN PERIODS (CA. 1769-1848)

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 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, it has been reported that Iturbe's ship 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 Project 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).

EARLY AMERICAN PERIOD (1850-1900)

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 Project study region area 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 study 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 Project study 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, 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 Mr. 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 IV-10).

EARLY 20TH CENTURY (1900-1949)

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 Project study area near Big Skies County Club (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 activity had left 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 such as tuberculosis. Despite the population increase, a telephone was not available in Yucca Valley until 1935 (Evans 1966:14; Town of Yucca Valley 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. 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 Project study area 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's study area (see Figure 2c) to film westerns in the late 1940s, 1950s and 1960s (Town of Yucca Valley IV-1).

According to the BLM Government Land Office (GLO) records (n.d.), the State of California and the Southern California Railroad Company acquired the vast majority of land patents within the Project study region between the years 1903 and 1915 (Appendix D). Twenty-six individuals filed for patents of 160 acres or more between 1914 and 1934, and nine individuals filed for patents of five acres or more between 1939 and 1949 following the Baby Homestead Act which allowed for a significantly smaller land patent.

Fred and Barbara Pearce had a land patent in the Project study area dating to 1916 where they built a rest home in the Pipes Canyon area in 1924 (Figure 5; Evans 1965:18). The couple moved to Yucca Valley in 1912 from Corona, making this arduous journey with four children and two milk cows in an eight day period (Pearce 1988:38).

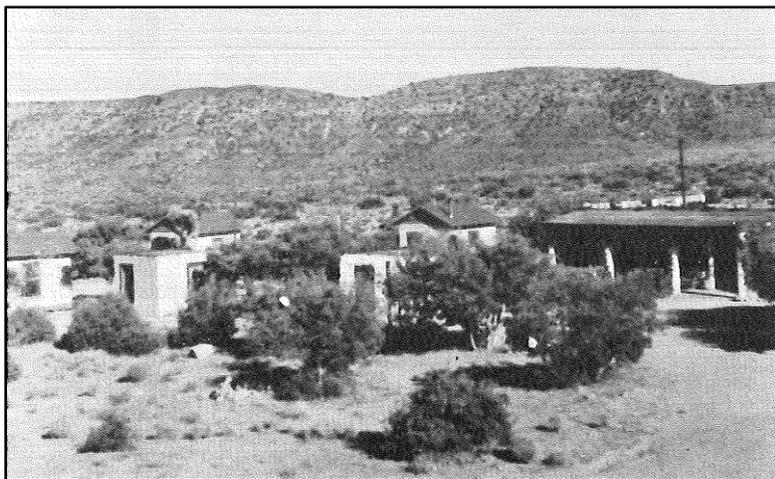


Figure 5. Pearce Rest Home in the 1920s (Evans 1965)

Walter A. Harrell, who filed a patent in 1923, installed the first gas pump in the Town of Yucca Valley (Town of Yucca Valley IV-11; Figure 6). The gas station was also the first between the

communities of Whitewater and Twentynine Palms. Harrell named his station the Lone Star Ranch; Lone Star was what Harrell wanted Yucca Valley named, and the town actually appeared as Lone Star on AAA maps of the Mojave and Colorado deserts between 1937 and 1949, despite the name officially being changed to Yucca Valley in 1945 (Wilson and Grubb 1985:50; Evans 1965:23; Figure 7). Later in the 1940s, John Stephenson built and owned the first Texaco station in the area (Wilson and Grubb 1985:51). Stephenson sold the station to Sam Anderson and Doc Toothacker in 1951 and filed a land patent in the study area in 1960 (Evans 1965:8). Kenneth Witting filed a land patent in 1958. Witting sold real estate and published a newspaper from a location at Twentynine Palms Highway and Victorville Road (Wilson and Grubb 1985:57).

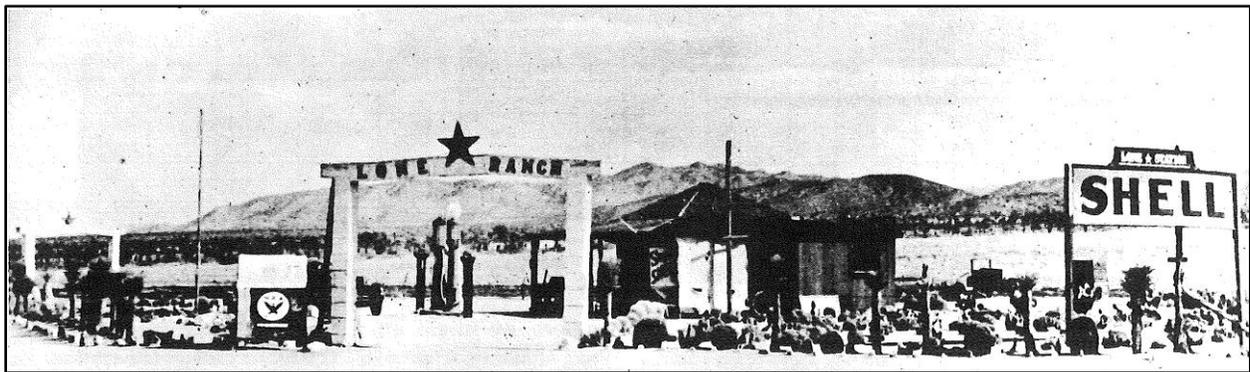


Figure 6. The Lone Star Ranch & Gas Station in the 1920s (Evans 1965)

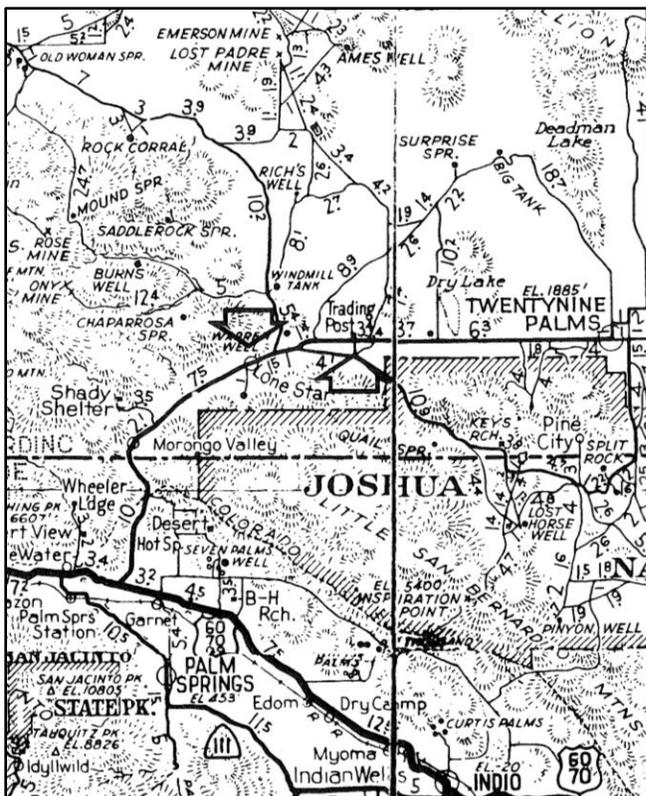


Figure 7. Circa 1947 AAA map of Yucca Valley area (Wilson and Grubb 1988)

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 Project study area 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.

The significant mid-century population growth of the Town of Yucca Valley is reflected in the number of land patents filed after 1950 (Appendix D; Figure 8; BLM GLO n.d.). The State of California and 140 individuals filed patents for five acres or more between 1950 and 1959. However, the number of patents filed between 1960 and 1966 dropped almost by half to 79 individuals. The Yucca Valley Lions Club Company, the Yucca Valley Parks and Recreation, and the County of San Bernardino filled out the remainder of land patents filed during this era.

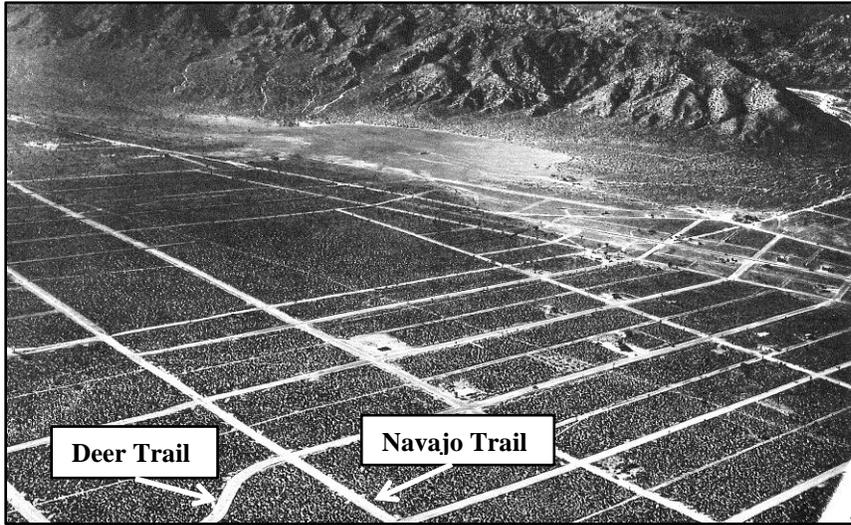


Figure 8a. 1947 aerial of Yucca Valley, view to northwest (Evans 1965)

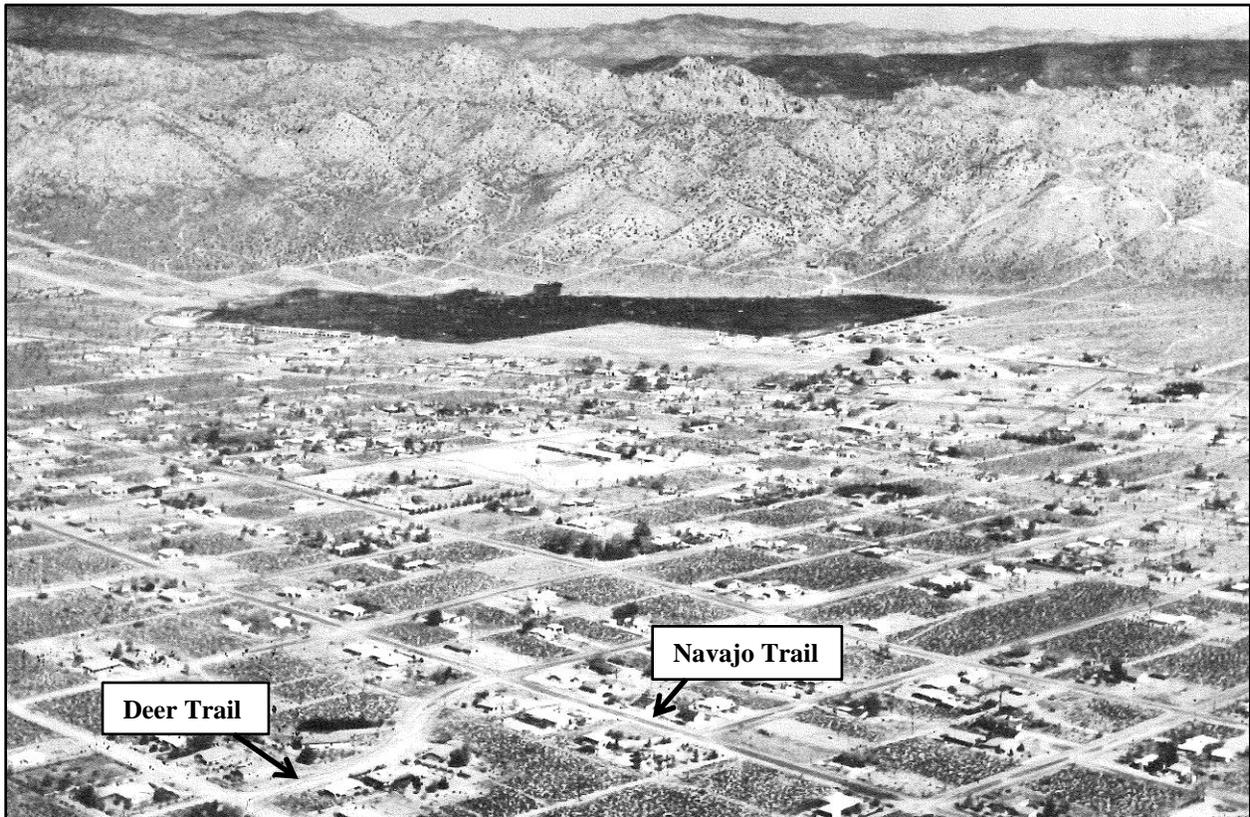


Figure 8b. 1965 aerial of Yucca Valley, view to northwest (Evans 1965)

RECORDS SEARCH AND LITERATURE REVIEW

PALEONTOLOGICAL RESOURCES

A paleontological records search for the project area was conducted in 2012 by the San Bernardino County Museum (Appendix G; Table 2). In addition, online paleontological databases and paleontological literature were searched by Cogstone staff.

Fossils of extinct horse and desert tortoise are known within the city limits (west-central portion) in Quaternary older alluvium (Table 2). 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 saber-toothed cat (Table 3).

Fossils are also known from the Old Woman Sandstone in the local region. These include extinct animals such as a zebra-like horse and Furlong's rabbit in addition to cotton rat, wood rat and brown bat (Table 4).

CULTURAL RESOURCES

CALIFORNIA HISTORIC RESOURCES INVENTORY SYSTEM

A search for archaeological and historical records was completed at the San Bernardino Information Center (SBIC) of the California Historic Resources Inventory System (CHRIS) on December 6, 2011 by Amy Glover. The records search covered the entire 25,470 acre Project study area.

The records search determined that there are nine prehistoric resources, three historical archaeological resources and five historic resources with the Town (Table 5). The prehistoric archaeological sites recorded previously include five lithic artifact scatters, a camp site, a quarry sites, a bedrock milling station site, and one isolated pottery sherd. The historical archaeological sites include two historic refuse scatters and a dove blind associated with a refuse scatter. The historic resources include a historical school house, Warren's Well, Warren's Ranch/Tanks, Desert Christ Park – a local folk art site, and State Route 62 (Twentynine Palms Highway).

The cultural resources records and literature search completed at the SBCM of the CHRIS indicate that 82 cultural resources studies have been completed previously within the Project study area, composing of approximately 2,860 acres or only 11 percent of the overall study area (Appendix E).

Table 3. Regional Fossils from Quaternary older alluvium

† indicates extinct species

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

Table 4. Fossils from Old Woman Sandstone in region

Common name	Taxon	Location	Locality	Source
horse, zebra-like	<i>Equus simplicidens</i> †	Lucerne Valley	SBCM 01.94.10	Jefferson 2003, Reynolds 1992, Czaplewski 1993
rat, cotton	<i>Sigmodon medius</i> or <i>S. minor</i>			
rat, wood	<i>Neotoma (Paraneotoma)</i> sp.			
rabbit, Furlong's	<i>Hypolagus furlongi</i> †			
bat, brown	<i>Eptesicus</i> sp.			

Table 5. Previously Recorded Cultural Resources

Reference	Site Type	Date	Time Period	USGS Quad
P1033-1H	Historical school house	n.d.	Mid-20 th century	Yucca Valley South
P-36-001605	Prehistoric camp site	1975	Prehistoric	Joshua Tree North
P-36-002379	Prehistoric lithic artifact scatter	1973	Prehistoric	Yucca Valley North
P-36-002380	Prehistoric lithic artifact scatter	1973	Prehistoric	Yucca Valley North
P-36-004851	Prehistoric quarry site	1981	Prehistoric	Yucca Valley North
P-36-004852	Prehistoric lithic artifact scatter	1981	Prehistoric	Yucca Valley North
P-36-004853	Prehistoric lithic artifact scatter	1981	Prehistoric	Yucca Valley North
P-36-004854	Prehistoric lithic artifact scatter	1981	Prehistoric	Yucca Valley North
P-36-009610	Historical ranch complex (Warren's Well)	1999	Late 19 th Century	Yucca Valley North
P-36-009988	Historical can scatter	2000	Early 20 th century	Yucca Valley North
P-36-009994	Historical ranch complex (Warren's Tanks)	1999	Turn of the 20 th century	Yucca Valley South
P-36-010525	Historical road (CA State Route 62)	2000	Mid-20 th century	Joshua Tree North, Yucca Valley North, Yucca Valley South
P-36-011658	Historical dove blind and associated trash	2004	Early to mid-20 th century	Yucca Valley North
P-36-013387	Prehistoric milling slick	2007	Prehistoric	Yucca Valley North
P-36-013394	Historical folk art sculptures (Desert Christ Park)	2007	Mid-20 th century	Yucca Valley North

Reference	Site Type	Date	Time Period	USGS Quad
P-36-013413	Prehistoric pottery sherds isolate	2007	Prehistoric	Yuccan Valley South
P-36-014407H	Historical trash	2008	Mid-20 th century	Yucca Valley South

OTHER SOURCES CONSULTED

In addition to the records at the SBIC of the CHRIS, a variety of other sources were consulted by Glover in December 2011 to obtain additional cultural resources information regarding the Project study area (Table 6). Sources include the National Register of Historical Places (HRER), California Register of Historic Resources (CRHR), California Historical Resources Inventory (CHRI), California Historical Landmarks (CHL), and California Points of Historical Interest (CPHI). As shown, no previously-recorded resources are listed as eligible for the NRHPO, CRHR, CHL, or CPHI.

Table 6. Additional Sources Consulted

Source	Results
National Register of Historic Places (NRHP; 1979-2002 & supplements)	Negative
Historical United States Geological Survey topographic maps	Show 20th-century development
Historical United States Department of Agriculture aerial photos	Not available
California Register of Historical Resources (CRHR; 1992-2010)	Negative
California Historical Resources Inventory (HRI; 1976-2010)	Positive
California Historical Landmarks (CHL; 1995 & supplements to 2010)	Negative
California Points of Historical Interest (CPHI; 1992 to 2010)	Negative
California Department of Transportation Historic Bridge Inventory (Caltrans 2007)	Negative
Local Historical Register Listings (Morongo Basin Historical Society n.d.)	Positive
Bureau of Land Management General Land Office Records	Show multiple land owners

Local County Registries were also examined and indicate that four historical resources are listed by the HRI and six historical resources are listed on local registers (Table 7).

Table 7. Historical Resources within the Town of Yucca Valley

Resource	HRI	Local
Water Canyon		X
Desert Christ Folk Art Park (P-36-013394)		X
Warren's Well (P-36-00961)		X
The Water Tanks (P-36-009994)		X

Resource	HRI	Local
Historical School House (P1033-1H)		X
Yucca Valley Elks Club		X
7858 Elk Trail	X	
56831 Little League Drive	X	
7593 Lucerne Vista	X	
55486 Onaga Trail	X	

Perhaps one of the more noteworthy historical sites within the Town's study area that deserves recognition as a present and future historical site is the Desert Christ Park (P-36013394) built by members of the Yucca Valley and composed of biblical figures designed and sculpted by Frank Antone Martin. A monumental figure of Christ was the first sculpture placed in the Park in 1951; additional figures were added to the Park until Martin's death in 1961 (Town of Yucca Valley 1995:IV-11). Another historical site is the Talmadge Brothers Tanks in the southwest quadrant of the Project study area that was built at a spring before 1903 to water cattle. The old Yucca Valley Elementary School (P1033-1H), now known as the "Scout House," located north of Yucca Trail, is also a site of special local interest, while Juney Joy Paxton's home on Paxton Road is another example of early historical settlement in the general Yucca Valley region (Town of Yucca Valley 1995:IV-11).

Known historical archaeological site types that may be found in the Yucca Valley Project study area may include: numerous water conveyance features (e.g., canals and canal remnants, standpipes, weirs, pump houses) dating to the late 1800s and early 1900s, historical roads, and historical structural remains associated with former homestead and ranching locations. In addition, other types of historical archaeological resources, such as buried hollow features (e.g., cisterns, privies) containing historical refuse deposits are often associated with former homestead locations.

NATIVE AMERICAN CONSULTATION

CEQA consultation was conducted by Cogstone. The City is required to separately consult with tribes under SB 18 for this update. A Sacred Lands File search was requested from the Native American Heritage Commission (NAHC) on December 2, 2011. On December 5, the NAHC replied that there were no known Native American cultural resources previously documented within the Project study area. However, the NAHC did recommend that 12 Native American tribes or individuals be contacted that may have additional knowledge of the religious and cultural significance of historic properties within or immediately adjacent to the Project study area for further information (Appendix F).

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

IMPACT ANALYSIS AND MITIGATION

The potential impacts to paleontological and cultural resources within the Town are reviewed. Because the *Town's General Plan Update* does not directly address specific future projects, these impacts are described generically. For most projects within the Town, CEQA will apply. However, for all sections under management of the BLM, federal laws will apply.

PAL-1. POTENTIAL IMPACTS TO PALEONTOLOGICAL RESOURCES

The core of the Town of Yucca Valley is situated on low-sensitivity Quaternary alluvium underlain by moderately sensitive Quaternary older alluvium (Table 8, refer to Figure 3). The Quaternary alluvium is composed of mostly recent sediments that do not usually contain fossils as the sediments are too young. Therefore, it is ranked 2 or low. The Quaternary older alluvium has previously produced two fossils within the Town limits and many others in the region. Throughout southern California, the Quaternary older alluvium has produced scientifically important fossils in unpredictable locations. Based on these criteria it is ranked as 3a or moderate but unevenly distributed. The Old Woman Sandstone, which is found in a tiny portion of the northern extension of the town limits, has produced limited fossils in the region. This formation is ranked 3a or moderate but unevenly distributed.

The Quaternary older gravels and Quaternary older fanglomerate have not produced fossils in the past. Generally, fine-grained sediments produce many more fossils than coarse sediments. These formations are ranked as 3b or unknown based on the fact that they have not been heavily impacted in the past and thus their potential is undemonstrated.

The basalts and the metamorphic rock units consisting of monzonites, granitics and gneissic rocks are ranked as 1 or very low. This is due to their igneous origin as the extreme heat and pressure that has affected these rocks would have destroyed any fossils which might have been present.

Table 8. Potential Fossil Yield Classification Results

PFYC ranking	5a: very high & exposed	4: high	3a: moderate-patchy distribution	3b: moderate-undemonstrated	2: low	1: very low
Rock Units						
Quaternary alluvium					X	
Quaternary older alluvium			X			
Quaternary older gravel/fanglomerate				X		
Old Woman Sandstone			X			
Basalt						X
Monzonite/Granitics						X
Gneissic rocks						X

POTENTIAL IMPACTS TO CULTURAL RESOURCES

Three basic impacts to cultural resources may occur through the implementation of future projects: (1) adverse changes in the elements of historical structures, features, and landscapes that make them significant resources; (2) potential destruction of prehistoric and historical archaeological resources; and (3) potential to disturb Native American human remains. Each of these impacts is described more fully below.

CUL-1. ADVERSE CHANGES TO HISTORICAL BUILT ENVIRONMENT RESOURCES

The Town was visited and permanently settled by Euro-Americans since the later part of the eighteenth century, through the nineteenth century, and into the twentieth century. As a result, potentially significant historical structures and other historical features may be found within the Town’s planning area.

The historical neighborhoods in the Town's planning area can provide a context and setting for many types of the Town's historical resources. The setting of many of the late nineteenth and early twentieth-century historical buildings has, in many instances, been compromised by lot splits, zoning changes, variances, or conversion to other housing. Saving a historical building also requires retaining the historical context of the structure and its immediate surroundings. Modern buildings crowded next door to an early historic homestead give a completely different impression than the structure in its original neighborhood with original plantings.

For the most part, the Town's early neighborhoods developed as the unique result of changing technology, ways of life and philosophies, new architectural fashions, and innovations in urban planning. The late nineteenth- and early twentieth-century structures and development patterns are key elements of these neighborhoods. Because these neighborhoods seem so ordinary, many people tend to overlook their unique qualities or consider them undeserving of special attention. Consequently, new construction and development, building alterations, land-use plans and zoning have frequently ignored the heritage of these neighborhoods. Modern factory-produced building materials and lack of information about earlier building techniques have often resulted in inappropriate alterations; insensitive alterations and changes can destroy the important historical characteristics of these early neighborhoods. As a consequence, intact historical neighborhoods are becoming increasingly rare in southern California.

Future Town development may occur in areas that may contain significant historical structures and features. Although the Town of Yucca Valley currently has policies to protect and minimize adverse impacts to historical structures and features (Town of Yucca Valley 1995:IV), the potential exists for significant impacts to these resources to occur as a result of development projects proposed or permitted by the Town, as defined in the CEQA Guidelines, Section 15064.5.

CUL-2. ADVERSE CHANGES TO ARCHAEOLOGICAL RESOURCES

Based on what is known of the histories of local Native American groups and prehistoric and historical archaeological sites recorded previously, potentially significant archeological resources are known to exist within the Town's planning area. Future projects may require ground disturbance (e.g., earthmoving activities) which may cause the destruction of significant archaeological resources, or previously unknown buried archaeological resources as defined in the CEQA Guidelines, Section 15064.5(b). As stated, a project with an effect that may cause a substantial adverse change in the significance of an archaeological resource is a project that may have a significant effect on the environment. Effects on an archaeological resource deemed to be significant could be considered adverse if they involve physical demolition, destruction, or alteration of the resource or its immediate surroundings such that the significance of a resource would be materially impaired. Thus, significant prehistoric and historical archaeological

resources must be considered in the Town’s project planning and development process, and any proposed Town project that may affect significant archaeological cultural resources must be submitted to the State Historic Preservation Officer (SHPO) for review and comment prior to project approval by the Town and prior to construction.

CUL-3. POTENTIAL TO DISTURB NATIVE AMERICAN HUMAN REMAINS

Although Native American human remains are normally associated with former residential village locations, isolated burials and cremations have been found in many other locations. Future projects may disturb or destroy buried Native American human remains, including those interred outside of formal cemeteries. Consistent with state laws protecting these remains (that is, Health and Safety Code Section 7050.5 and Public Resources Code Section 5097.98), sites containing Native American human remains must be treated in a sensitive manner.

MITIGATION MEASURES

MM PAL-1. Town staff shall require applicants for future proposed projects with planned impacts greater than 5 feet below the current surface in undisturbed sediments ranked PFYC 3 or above to provide a technical paleontological assessment consisting of a record search, survey, background context and project specific recommendations performed by a qualified paleontologist. If resources are known or reasonably anticipated the recommendations shall provide a detailed mitigation plan which shall require monitoring during grading and other earthmoving activities in undisturbed sediments, provides a fossil recovery protocol that includes data to be collected, requires professional identification, radiocarbon dates and other special studies as appropriate, requires curation at an accredited museum such as the San Bernardino County Museum for fossils meeting significance criteria, requires a comprehensive final mitigation compliance report including a catalog of fossil specimens with museum numbers and an appendix containing a letter from the museum stating that they are in possession of the fossils.

MM CUL-1. Town staff shall require applicants for future proposed projects with intact extant building(s) more than 45 years old to provide a historic resource technical study evaluating the significance and data potential of the resource. If significance criteria are met, detailed mitigation recommendations are required as part of the technical study. All work will be performed by a qualified architectural historian meeting Secretary of the Interior Standards.

MM CUL-2. Town staff shall require applicants for future proposed projects in areas of known or inferred archaeological resources, prehistoric or historic, to provide a technical cultural resources assessment consisting of a record search, survey, background context and project specific recommendations performed by a qualified archaeologist. If resources are known or reasonably anticipated the recommendations shall provide a detailed mitigation plan which shall

require monitoring during grading and other earthmoving activities in undisturbed sediments, provide a treatment plan for potential resources that includes data to be collected, requires professional identification, other special studies as appropriate, requires curation at an accredited museum such as the San Bernardino County Museum for artifacts meeting significance criteria, requires a comprehensive final mitigation compliance report including a catalog of specimens with museum numbers and an appendix containing a letter from the museum stating that they are in possession of the materials.

MM CUL-3. Unanticipated discoveries of human remains shall require immediate cessation of ground disturbance and notification to Town staff and shall follow state law as stated in Health and Safety Code Section 7050.5 and Public Resources Code Section 5097.98.

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1985 *Yucca Valley: Reflections of the Past*. Joan Wilson, Yucca Valley

APPENDIX A: QUALIFICATIONS

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. Her areas of expertise include the prehistory of California and the Great Basin, archaeological method and theory, prehistoric settlement patterns, predictive modeling, land-use planning, facility siting, environmental impact analyses, and synthetic analyses, as well as proposal preparation, contract coordination, and budgeting, planning, and directing field research. 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

**SHERRI GUST**Project Manager & Principal Investigator**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. Gust is a Riverside County Certified Archaeologist (No.116) and is also a Riverside County Certified Paleontologist.

SELECTED PROJECTS

WECC Path 42 Transmission Line Upgrades, Palm Springs area. Supervised cultural and paleontological resources Phase I studies for 14.5 mile segment on BLM and private lands on behalf of SCE. Project Manager and Principal Archaeologist and Paleontologist. 2011-2012

San Juan Capistrano Town Center Master Plan Update, San Juan Capistrano. Supervised archaeological and paleontological record searches, research, and survey plus Native American consultation for 31 acre town center. Also evaluation of resources including updated site records and impact assessment. Principal Archaeologist and Paleontologist and Project Manager. 2011

City of Chino Hills General Plan Update. Cultural and paleontological resources programmatic technical study with recommendations for entire City. Principal Archaeologist and Paleontologist. 2011

Mojave Water Agency Ground Water Replenishment Project. Cultural and Paleontological Resources Management Plan was prepared, including an updated assessment, and submitted to SHPO. Cultural resources sensitivity training provided to all construction personnel and both archaeological and paleontological monitoring performed. Principal Archaeologist and Paleontologist and Project Manager. 2010-2012

Falcon Ridge Substation and Transmission Lines. Archaeological survey, assessment and recording of historical archaeological features on 287 acres in Fontana and Rialto, San Bernardino County, A. Principal Archaeologist and Paleontologist and Project Manager. 2010

El Casco Transmission Project. Conducted preconstruction mitigation measures and prepared Paleontological Resources Treatment Plan for new SCE transmission project in Riverside County. Project Manager and Principal Paleontologist. 2009

Chuckwalla Valley Raceway. Paleontological assessment, Paleontological Mitigation Plan and Paleontological Monitoring Compliance Report for 1100 acres in Riverside County, CA. Project Manager and Principal Paleontologist. 2009-2010

San Bernardino County Road Improvement Projects. (Caltrans District 8 On-Call Contract). Paleontology subconsultant to Applied Earthworks. Prepared portions of Paleontological Identification Reports, Paleontological Evaluation Reports and Paleontological Mitigation Plan for projects including I10, SR58, SR138, SR247. Supervised paleontological monitoring for SR138, recovered significant fossils and prepared Paleontological Mitigation Report. Field and Lab Director. 2005-present



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.

EDUCATION

- 1995 M.S., Geology, San Diego State University
 1992 B.A., Geology, University of California, Santa Cruz
 1988 A.A., Geology, San Diego 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 AND REPORTS

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. 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. 2011.

SDG&E Wood to Steel Projects. Paleontologist: Several electrical transmission projects in San Diego County, performing paleontological monitoring. 2011.

San Diego City College Expansion. Paleontologist: Grading for college expansion in downtown San Diego, California. Performed paleontological monitoring. 2011.

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

Fossil Horse Recovery. Assisted with excavation of a partial skeleton and skull of Merychippus from Cuyama Badlands, Ventura County, with personnel from Santa Barbara City College. 1987.

APPENDIX B: PFYC

FEDERAL POTENTIAL FOSSIL YIELD CLASSIFICATION SYSTEM

The PFYC System was developed by the United States Department of Agriculture (USDA) Forest Service and refined by the BLM (2007). Occurrences of paleontological resources are closely tied to the geologic units (i.e., formations, members, or beds) that contain them. The probability for finding paleontological resources can be broadly predicted from the geologic units present at or near the surface. Therefore, geologic mapping can be used for assessing the potential for the occurrence of paleontological resources.

Using the PFYC system, geologic units are classified based on the relative abundance of vertebrate fossils or scientifically significant invertebrate or plant fossils and their sensitivity to adverse impacts, with a higher class number indicating a higher potential. This classification is applied to the geologic formation, member, or other distinguishable unit, preferably at the most detailed mapable level. It is not intended to be applied to specific paleontological localities or small areas within units. Although significant localities may occasionally occur in a geologic unit, a few widely scattered important fossils or localities do not necessarily indicate a higher class; instead, the relative abundance of significant localities is intended to be the major determinant for the class assignment.

The PFYC system is meant to provide baseline guidance for predicting, assessing, and mitigating paleontological resources. The classification should be considered at an intermediate point in the analysis, and should be used to assist in determining the need for further mitigation assessment or actions.

The descriptions for the classes below are written to serve as guidelines rather than as strict definitions. Knowledge of the geology and the paleontological potential for individual units or preservational conditions should be considered when determining the appropriate class assignment. Assignments are best made by collaboration between land managers and knowledgeable researchers.

CLASS 1 – VERY LOW. Geologic units that are not likely to contain recognizable fossil remains. The probability for impacting any fossils is negligible. Assessment or mitigation of paleontological resources is usually unnecessary. The occurrence of significant fossils is non-existent or extremely rare. This class includes:

- Units that are igneous or metamorphic, excluding reworked volcanic ash units.
- Units that are Precambrian in age or older.

Class 1 Management notes:

- 1) Management concern for paleontological resources in Class 1 units is usually negligible or not applicable.
- 2) Assessment or mitigation is usually unnecessary except in very rare or isolated circumstances.

CLASS 2 – LOW. Sedimentary geologic units that are not likely to contain vertebrate fossils or scientifically significant nonvertebrate fossils. The probability for impacting vertebrate fossils or scientifically significant invertebrate or plant fossils is low. Assessment or mitigation of paleontological resources is not likely to be necessary. Localities containing important resources may exist, but would be rare and would not influence the classification. These important localities would be managed on a case-by-case basis. This class includes:

- Vertebrate or significant invertebrate or plant fossils not present or very rare.
- Units that are generally younger than 10,000 years before present.
- Recent aeolian deposits.
- Sediments that exhibit significant physical and chemical changes (i.e., diagenetic alteration).

Class 2 Management notes:

- (1) Management concern for paleontological resources is generally low.
- (2) Assessment or mitigation is usually unnecessary except in rare or isolated circumstances.

CLASS 3 – MODERATE OR UNKNOWN. Fossiliferous sedimentary geologic units where fossil content varies in significance, abundance, and predictable occurrence; or sedimentary units of unknown fossil potential. This classification includes a broad range of paleontological potential. It includes geologic units of unknown potential, as well as units of moderate or infrequent occurrence of significant fossils. Management considerations cover a broad range of options as well, and could include pre-disturbance surveys, monitoring, or avoidance. Surface-disturbing activities will require sufficient assessment to determine whether significant paleontological resources occur in the area of a proposed action, and whether the action could affect the paleontological resources. These units may contain areas that would be appropriate to designate as hobby collection areas due to the higher occurrence of common fossils and a lower concern about affecting significant paleontological resources. This class includes:

- Formations with sporadic known occurrences of vertebrate fossils - often marine in origin.
- Vertebrate fossils and scientifically significant invertebrate or plant fossils known to occur intermittently; predictability known to be low.
- Poorly studied and/or poorly documented formations. Potential yield cannot be assigned without ground reconnaissance.

Class 3 Management notes:

- (1) Management concern for paleontological resources is moderate; or cannot be determined from existing data.
- (2) Surface-disturbing activities may require field assessment to determine appropriate course of action.

CLASS 3A – MODERATE POTENTIAL. Units are known to contain vertebrate fossils or scientifically significant nonvertebrate fossils, but these occurrences are widely scattered. Common invertebrate or plant fossils may be found in the area, and opportunities may exist for hobby collecting. The potential for a project to be sited on or impact a significant fossil locality is low, but is somewhat higher for common fossils.

CLASS 3B – UNKNOWN POTENTIAL. Units exhibit geologic features and preservational conditions that suggest significant fossils could be present, but little information about the paleontological resources of the unit or the area is known. This may indicate the unit or area is poorly studied, and field surveys may uncover significant finds. The units in this Class may eventually be placed in another Class when sufficient survey and research is performed. The unknown potential of the units in this Class should be carefully considered when developing any mitigation or management actions.

CLASS 4 – HIGH. Geologic units containing a high occurrence of significant fossils. Vertebrate fossils or scientifically significant invertebrate or plant fossils are known to occur and have been documented, but may vary in occurrence and predictability. Surface disturbing activities may adversely

affect paleontological resources in many cases. The probability for impacting significant paleontological resources is moderate to high, and is dependent on the proposed action. Mitigation considerations must include assessment of the disturbance, such as removal or penetration of protective surface alluvium or soils, potential for future accelerated erosion, or increased ease of access resulting in greater looting potential. If impacts to significant fossils can be anticipated, on-the-ground surveys prior to authorizing the surface disturbing action will usually be necessary. On-site monitoring or spot-checking may be necessary during construction activities. This class includes:

- Extensive soil or vegetative cover; bedrock exposures are limited or not expected to be impacted.
- Areas of exposed outcrop are smaller than two contiguous acres.
- Outcrops from cliffs of sufficient height and slope so that impacts are minimized by topographic conditions.
- Other characteristics are present that lower the vulnerability of both known and unidentified paleontological resources.

Class 4 Management notes:

- (1) Management concern for paleontological resources in Class 4 is moderate to high, depending on the proposed action.
- (2) A field survey by a qualified paleontologist is often needed to assess local conditions.
- (3) Management prescriptions for resource preservation and conservation through controlled access or special management designation should be considered.
- (4) Class 4 and Class 5 units may be combined as Class 5 for broad applications, such as planning efforts or preliminary assessments, when geologic mapping at an appropriate scale is not available. Resource assessment, mitigation, and other management considerations are similar at this level of analysis, and impacts and alternatives can be addressed at a level appropriate to the application.

CLASS 4A – HIGH AND EXPOSED. Unit is exposed with little or no soil or vegetative cover. Outcrop areas are extensive with exposed bedrock areas often larger than two acres. Paleontological resources may be susceptible to adverse impacts from surface disturbing actions. Illegal collecting activities may impact some areas.

CLASS 4B – HIGH AND UNEXPOSED. These are areas underlain by geologic units with high potential but have lowered risks of human-caused adverse impacts and/or lowered risk of natural degradation due to moderating circumstances. The bedrock unit has high potential, but a protective layer of soil, thin alluvial material, or other conditions may lessen or prevent potential impacts to the bedrock resulting from the activity.

CLASS 5 – VERY HIGH. Highly fossiliferous geologic units that consistently and predictably produce vertebrate fossils or scientifically significant invertebrate or plant fossils, and that are at risk of human-caused adverse impacts or natural degradation. The probability for impacting significant fossils is high. Vertebrate fossils or scientifically significant invertebrate fossils are known or can reasonably be expected to occur in the impacted area. On-the-ground surveys prior to authorizing any surface disturbing activities will usually be necessary. On-site monitoring may be necessary during construction activities. This class includes:

- Extensive soil or vegetative cover; bedrock exposures are limited or not expected to be impacted.
- Areas of exposed outcrop are smaller than two contiguous acres.
- Outcrops from cliffs of sufficient height and slope so that impacts are minimized by topographic conditions.

- Other characteristics are present that lower the vulnerability of both known and unidentified paleontological resources.

Class 5 Management notes:

- (1) Management concern for paleontological resources in Class 5 areas is high to very high.
- (2) A field survey by a qualified paleontologist is usually necessary prior to surface disturbing activities or land tenure adjustments. Mitigation will often be necessary before and/or during these actions.
- (3) Official designation of areas of avoidance, special interest, and concern may be appropriate.

CLASS 5A – VERY HIGH AND EXPOSED. Unit is exposed with little or no soil or vegetative cover. Outcrop areas are extensive with exposed bedrock areas often larger than two contiguous acres. Paleontological resources are highly susceptible to adverse impacts from surface disturbing actions. Unit is frequently the focus of illegal collecting activities.

CLASS 5B – VERY HIGH AND UNEXPOSED. These are areas underlain by geologic units with very high potential but have lowered risks of human-caused adverse impacts and/or lowered risk of natural degradation due to moderating circumstances. The bedrock unit has very high potential, but a protective layer of soil, thin alluvial material, or other conditions may lessen or prevent potential impacts to the bedrock resulting from the activity. [BLM 2007]

APPENDIX C: PALEONTOLOGICAL RECORDS 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):

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

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Please do not hesitate to contact us if you have any further questions.

Sincerely,

Eric Scott, Curator of Paleontology
Division of Geological Sciences
San Bernardino County Museum

APPENDIX D: GLO LAND PATENTS

BLM land patents for study area between 1903 and 1949

Section	Township	Range	Name	Date
36	1N	5E	State of California	1903
16	1S	5E	State of California	1903
11	1N	5E	Southern Pacific Railroad Company	1910
21	1N	6E	Southern Pacific Railroad Company	1910
19	1N	6E	Southern Pacific Railroad Company	1910; 1915
29	1N	6E	Southern Pacific Railroad Company	1910; 1915
35	1N	5E	Southern Pacific Railroad Company	1915; 1921
34	1N	5E	Heard, Joseph H.	1914
23	1N	5E	Southern Pacific Railroad Company	1915
25	1N	5E	Southern Pacific Railroad Company	1915
27	1N	5E	Southern Pacific Railroad Company	1915
33	1N	5E	Southern Pacific Railroad Company	1915
1	1S	5E	Southern Pacific Railroad Company	1915
3	1S	5E	Southern Pacific Railroad Company	1915
5	1S	5E	Southern Pacific Railroad Company	1915
9	1S	5E	Southern Pacific Railroad Company	1915
11	1S	5E	Southern Pacific Railroad Company	1915
13	1S	5E	Southern Pacific Railroad Company	1915
15	1S	5E	Southern Pacific Railroad Company	1915
5	1S	6E	Southern Pacific Railroad Company	1915
7	1S	6E	Southern Pacific Railroad Company	1915
17	1S	6E	Southern Pacific Railroad Company	1915
32	1N	6E	Leslie, Wilford	1916
2	1S	5E	Pearce, Fred A.	1916
4	1S	5E	Quick, Hezekiah	1916
6	1S	6E	Ellis, Albert E.	1917
6	1S	6E	Sargent, Mabel Francis	1917
12	1S	5E	Smalley, William S.	1919
2	1S	5E	Fuller, Martin V.	1920
12	1S	5E	Smalley, Isaac W.	1920
31	1N	6E	Southern Pacific Railroad Company	1921
6	1S	6E	Dutton, William D.	1922
10	1S	5E	State of California	1925
32	1N	6E	Cain, Tatum E.	1926
2	1S	5E	Harrell, Walter A.	1926
4	1S	5E	Redden, John L.	1926
30	1N	6E	Hudson, William J.	1927
10	1S	5E	Peeden, Jether L.	1927

Section	Township	Range	Name	Date
34	1N	5E	State of California	1927
32	1N	6E	Colon, Albert E.	1928
2	1S	5E	Anderson, Claude R.	1929
32	1N	6E	Widdifield, Cecil James	1930
4	1S	5E	Peden, William Leslie R.	1930
8	1S	6E	Young, Arthur Charles	1930
18	1S	6E	Thomerson, Joseph R.	1931
30	1N	6E	Redwine, John Dee	1933
12	1S	5E	Rolston, Howard W.	1933
8	1S	6E	Gould, John D.	1933
20	1N	6E	McConnell, Dee	1934
12	1S	5E	Heffelfinger, Miles Akin	1934
22	1N	5E	Bull, Francis N.	1939
22	1N	5E	State of California	1939
18	1S	6E	Bergstrom, Jesse S.	1939
22	1N	5E	Curtis, Dick	1949
20	1N	6E	Ehlers, Fred	1949
20	1N	6E	Weber, William	1949
8	1S	6E	Gingrich, Raymond F.	1949
8	1S	6E	Martin, Alan Joseph	1949
8	1S	6E	Wiblishouser, Ruth Ann	1949

BLM land patents for study area between 1950 and 1966

Section	Township	Range	Name	Date
8	1S	6E	Jones, Raymond S.	1950
8	1S	6E	Rausch, Earl L.	1950
8	1S	6E	Snyder, Lee Harley	1950
8	1S	6E	Thedieck, Myrtle & Thedieck, Alvin John	1950
14	1N	5E	English, Ruth M.	1951
8	1S	6E	Christopher, Otto & Garver, Clifford	1951
8	1S	6E	Snyder, Loren Russell	1951
8	1S	6E	Williams, John Wilberforce	1951
8	1S	6E	Wrightsmen, Otis F.	1951
24	1N	5E	Blauvelt, Everett J.	1952
24	1N	5E	Warren, George Blackstone	1952
26	1N	5E	Cantelo, Franklin James	1952
20	1N	6E	Larson, Hans A.	1952
20	1N	6E	Redmon, Lavella Marguerita	1952
8	1S	6E	Clarke, Agnes F. & Pendley, Floyd J.	1952

Section	Township	Range	Name	Date
8	1S	6E	Hall, Dorothy M.	1952
8	1S	6E	Hume, James N. & Warren, Otis Stephen	1952
8	1S	6E	Gazdik, William	1953
8	1S	6E	Hatheway, Donald	1953
8	1S	6E	Hershberger, Andrew B.	1953
8	1S	6E	Manwell, Ethel May	1953
8	1S	6E	Marble, Fred F. & Gonzalez, Alfonso Humberto	1953
8	1S	6E	Orr, Grier Emerson	1953
8	1S	6E	Peeples, Lewis L.	1953
34	1N	5E	Mortensen, William Peter	1954
34	1N	5E	Rice, Robert James	1954
34	1N	5E	Sentous, Frank Leon	1954
20	1N	6E	Baldwin, Edward A.	1954
8	1S	6E	Clark, Howard L.	1954
8	1S	6E	Dotson, Anna	1954
8	1S	6E	Taylor, Thomas Richard	1954
34	1N	5E	State of California	1954; 1957
34	1N	5E	Courtney, William Roy	1955
8	1S	6E	Manley, Georgina Booth	1955
8	1S	6E	Popjoy, Dannie Mac	1955
8	1S	6E	Woods, Joseph Colley	1955
34	1N	5E	Chiabotti, Peter	1956
34	1N	5E	Garver, Edward Oliver	1956
34	1N	5E	Hull, Lillian Anne	1956
34	1N	5E	Miranaian, Sarkis Katchadur	1956
34	1N	5E	Rice, John W.	1956
8	1S	6E	Beck, Elsie Elizabeth Omer & Omer, Elsie Elizabeth	1956
8	1S	6E	Dixon, Clara Delaney	1956
8	1S	6E	Johnson, Jennie May Hall & Hall, Jennie May	1956
8	1S	6E	Johnson, Paul William	1956
8	1S	6E	Peoples, Joe Ben	1956
8	1S	6E	Schaffer, Florence Ruth	1956
8	1S	6E	Shepherdson, Evelyn Virginia	1956
8	1S	6E	Webb, Edwin Ellis	1956
12	1S	5E	Kelly, Maurine	1957
12	1S	5E	Kingston, Ralph Theodore	1957
14	1S	5E	Blakely, Etta Inez	1957
14	1S	5E	Gigante, Frank Richard	1957
14	1S	5E	Giombini, Gloria Annunziate	1957
14	1S	5E	Hoffman, William Edward	1957

Section	Township	Range	Name	Date
14	1S	5E	Hopson, Dessie	1957
14	1S	5E	Penko, Joseph Peter	1957
14	1S	5E	Snyder, Saul	1957
14	1S	5E	Soble, Naomi F.	1957
14	1S	5E	Stallings, Manford C.	1957
14	1S	5E	Sturtz, William John A.	1957
8	1S	6E	Allen, Lisle Tate	1957
8	1S	6E	Ferris, Frank Earl	1957
8	1S	6E	Mocabee, Clarence Douglas	1957
8	1S	6E	Sullivan, Erin Brown	1957
8	1S	6E	Weeda, Anthony Jerry	1957
8	1S	6E	York, Pauline A. & Bild, John J.	1957
34	1N	5E	Bertrand, Charles Raymond	1958
34	1N	5E	Duell, Elsie Tucker	1958
34	1N	5E	Duval, Ann Catherine & Loveland, Roberta Briggs	1958
34	1N	5E	Stone, Elaine Fredericka	1958
12	1S	5E	Bourke, Donall Garraid	1958
12	1S	5E	Dedominic, John	1958
12	1S	5E	Dickey, Medea Hazel	1958
12	1S	5E	Lamain, John	1958
12	1S	5E	Turner, Harvey Allen	1958
14	1S	5E	Anderson, A. William	1958
14	1S	5E	Bagley, Byron Wilson	1958
14	1S	5E	Bradley, Kenneth James	1958
14	1S	5E	Brown, Katherine Sue	1958
14	1S	5E	Campbell, Ray Grant	1958
14	1S	5E	Chatten, Victor H.	1958
14	1S	5E	Dresser, Donald Lockett	1958
14	1S	5E	Duncan, Richard Graves	1958
14	1S	5E	Heard, Howard	1958
14	1S	5E	Hill, Harold Burler	1958
14	1S	5E	Hill, Lloyd George	1958
14	1S	5E	Hill, Richard Allen	1958
14	1S	5E	Kulik, Elizabeth	1958
14	1S	5E	Lemke, Irene Anne	1958
14	1S	5E	Nelson, Robert Kent	1958
14	1S	5E	Ryman, Sidney Alonzo	1958
14	1S	5E	Stephenson, Jesse Charles	1958
14	1S	5E	Stockdale, George Robert	1958
14	1S	5E	Watkins, Charles Stuart	1958

Section	Township	Range	Name	Date
14	1S	5E	Witting, Kenneth Braun	1958
8	1S	6E	Guggie, Robert Charles & Steele, Grace Schock	1958
8	1S	6E	Mortimer, Roy C. & Burkett, Paul J.	1958
8	1S	6E	Whittle, Louie Carroll	1958
34	1N	5E	Altenburger, Betty Ann	1959
34	1N	5E	Chaiten, Louise & Martin, Antone	1959
34	1N	5E	Laurie, Morris Keith	1959
34	1N	5E	Scott, Mildred N.	1959
34	1N	5E	Wallis, Robert H. & Ham, Elmer R.	1959
34	1N	5E	Williams, Desmond Arthur & Tabor, Henry L.	1959
34	1N	5E	Wood, Edith Roberta	1959
12	1S	5E	Bourke, Richard William	1959
12	1S	5E	Butler, Harrison & Richards, John D.	1959
12	1S	5E	Cooper, Roy C.	1959
12	1S	5E	Ellis, Jane Francis	1959
12	1S	5E	Grauer, Ralph L.	1959
12	1S	5E	Gulebian, Edith M. Forbes	1959
12	1S	5E	Housh, Mabel Jane	1959
14	1S	5E	Brady, Vera A.	1959
14	1S	5E	Cummings, John Robert	1959
14	1S	5E	Fallis, Lotsee Marie	1959
8	1S	6E	Backes, Kathleen Ann	1959
8	1S	6E	Dennhardt, Margaret Ilene	1959
8	1S	6E	Drum. Robert Cornelius	1959
8	1S	6E	Elizey, Madelyne	1959
8	1S	6E	Enger, Leslie E.	1959
8	1S	6E	Jessup, Bertha	1959
8	1S	6E	Lane, Anna V.	1959
8	1S	6E	Puddy, Alpha Gertrude	1959
8	1S	6E	Simpson, Edward B.	1959
8	1S	6E	Slanina, Francis	1959
8	1S	6E	Somers, Michael J.	1959
8	1S	6E	Williams, Everett R.	1959
8	1S	6E	Williams, Luella Smith	1959
34	1N	5E	Bruton, Lawrence Layne	1960
34	1N	5E	Covington, Chester Walter	1960
34	1N	5E	Cumrow, Willard Louis	1960
34	1N	5E	Goraki, Mary Catherine	1960
34	1N	5E	Gray, Dudley Willard	1960
34	1N	5E	Jacoby, Blanche D.	1960

Section	Township	Range	Name	Date
34	1N	5E	Jenkins, Marie Luella	1960
34	1N	5E	Krieger, Lawrence L.	1960
34	1N	5E	Papendick, Gerald W. & Smith, Myra Antoinette	1960
34	1N	5E	Pierce, Roy V.	1960
34	1N	5E	Rice, Margaret T.	1960
12	1S	5E	Eberhard, Dorothy D.	1960
12	1S	5E	Hamilton, Charles K. & Talbot, Robert Herbert	1960
14	1S	5E	Anderson, Clarence Dean	1960
14	1S	5E	Balazs, George	1960
14	1S	5E	Belcher, Kermit Thornton	1960
14	1S	5E	Boldizsar, Julius Ervin	1960
14	1S	5E	Clark, Albert Leon	1960
14	1S	5E	Dysart, Russell Doan	1960
14	1S	5E	Flint, August John	1960
14	1S	5E	Harmon, John Philip	1960
14	1S	5E	Harmon, William Thomas	1960
14	1S	5E	Ingels, Mack	1960
14	1S	5E	Irby, William Wall	1960
14	1S	5E	Kamin, Aviva S.	1960
14	1S	5E	Kruder, Edwin Otto	1960
14	1S	5E	MacDonald, Elspeth Catherine	1960
14	1S	5E	Mamath, Patsy Ann	1960
14	1S	5E	Miller, Glenn	1960
14	1S	5E	Newton, Harold Joseph	1960
14	1S	5E	Pekarovich, Daniel Paul	1960
14	1S	5E	Reyman, Cora Esther	1960
14	1S	5E	Ross, Charles Laycester	1960
14	1S	5E	Royal, William	1960
14	1S	5E	Sakshaug, Ingvald Carl	1960
14	1S	5E	Stephenson, John Martin	1960
14	1S	5E	Williams, John Oliver	1960
8	1S	6E	Burley, Kenneth Monroe	1960
8	1S	6E	Cundiff, Norman Francis	1960
8	1S	6E	Davis, Melvin Glenn	1960
8	1S	6E	Gibson, Gwynn	1960
8	1S	6E	Keyes, Mary Agnes	1960
8	1S	6E	Krug, Albert Louis	1960
8	1S	6E	Kyle, Richard Lawrence	1960
8	1S	6E	Vogel, Julia Catherine	1960
14	1S	5E	Wyne, Dora Ella	1961

Section	Township	Range	Name	Date
14	1S	5E	Conroy, Earnest	1962
14	1S	5E	Crain, Calvin E.	1962
14	1S	5E	Donaher, Philip Andrew	1962
14	1S	5E	Yucca Valley Lions Club Co	1962
32	1N	5E	Yucca Valley Park and Recreation	1963
14	1S	5E	Brock, Eleanor A.	1963
14	1S	5E	Brock, Jack	1963
14	1S	5E	Curtin, Raymond Leo	1963
14	1S	5E	Curtin, Virginia Eileen	1963
14	1S	5E	Gillespie, Agnes R.	1963
14	1S	5E	Gillespie, Joseph D.	1963
14	1S	5E	Hilterbrand, Carl Leon	1963
14	1S	5E	Hopkins, Juanita Jewel	1963
14	1S	5E	Hunt, Emma R.	1963
14	1S	5E	Johnson, Robert Glenn	1963
14	1S	5E	Kyle, Dorothy	1963
14	1S	5E	Largent, Donnie Lee	1963
14	1S	5E	Osgood, Zanna Matilda	1963
14	1S	5E	Peters, Louis Donald	1963
14	1S	5E	Peterson, John Erling	1963
14	1S	5E	Proud, John Cranston	1963
14	1S	5E	Savoie, Angeline Louise Miela	1963
14	1S	5E	Shoner, Doris Jean	1963
14	1S	5E	Shoner Marshall Monce	1963
14	1S	5E	Smallwood, Manza Beavers	1963
14	1S	5E	Swanson, Virginia L.	1963
14	1S	5E	Thompson, Wilbur Wayne	1963
18	1S	6E	Yucca Valley Park and Recreation	1963
14	1S	5E	Perlberg, Bobbe	1964
32	1N	5E	County of San Bernardino	1965
14	1S	5E	Blackwood, Allen Thurman	1965
14	1S	5E	Bodo, Joseph J.	1965
14	1S	5E	Ryan, Kenneth Edward	1965
14	1S	5E	Swint, Virginia Londeree	1965
18	1S	6E	Heirs of Cummings, J. Carl	1966

APPENDIX E: PREVIOUS CULTURAL RESOURCES STUDIES

Author	Doc. No.	Title	Date	USGS Quad
Walker, Edwin F.	1060004	Introduction and General Description.	1931	Overview
Campbell, Elizabeth W. Crozer	1060005	An Archaeological Survey of the Twenty Nine Palms Region	1931	Overview
King, Samuel A.	1060026	A History of Joshua Tree National Monument	1954	Overview
King, Thomas F.	1060108	An Archaeological Survey of the Proposed Right-of-Way of the Morongo-Yucca-Upper Coachella Valley Pipeline	1971	Yucca Valley North, Yucca Valley South
Decker, Dean A.	1060152	The Archaeological Impact of a Residential Development North of Yucca Valley California	1973	Yucca Valley North
Cardiff, Eugene A.	1060174	Environmental Impact Survey – Yucca Valley	1973	Yucca Valley North
Schuiling, Walter C.	1060175	Environmental Impact Report – Zone Change – Yucca Valley – ZC550-71	1973	Yucca Valley South
San Bernardino County Museum Assoc.	1060187	Archaeological, Paleontological, Historical and Natural History Values – Long Canyon Channel, Yucca Valley	1974	Yucca Valley South
King, Thomas	1060282	Fifty Years of Archaeology in the California Desert: An Archaeological Overview of Joshua Tree National Monument.	1975	Overview
Hearn, Joseph E.	1060411	Archaeological – Historical Resources Assessment of Existing Yucca Valley Park and Recreation District Park Site	1976	Yucca Valley South
Hearn, Joseph E.	1060472	Archaeological – Historical Resources Assessment of Tract 6572. Yucca Valley Area	1977	Yucca Valley North
Hearn, Joseph E.	1060499	Archaeological – Historical Resources Assessment at the Southwest Corner of Balsa Avenue and Twentynine Palms Highway, Yucca Valley Area	1977	Yucca Valley North
Hearn, Joseph E.	1060524	Archaeological – Historical Resources Assessment of Hi Desert Memorial Hospital Property, Yucca Valley	1977	Yucca Valley South
Hearn, Joseph E.	1060570	Archaeological – Historical Resources Assessment of Northeast Corner of Kickapoo and Santa Fe in Yucca Valley	1977	Yucca Valley South
Hearn, Joseph E.	1060595	Assessment of Archaeological – Historical Resources, Burnt Mountain Wash, Yucca Valley Area	1978	Yucca Valley North, Yucca Valley South
Hearn, Joseph E.	1060598	Archaeological – Historical Resources Assessment of the Northeast Corner of Barberry Avenue and Twentynine Palms	1978	Yucca Valley South

Author	Doc. No.	Title	Date	USGS Quad
		Highway		
Hearn, Joseph E.	1060618	Archaeological – Historical Resources Assessment, Sec. 10, T1S R5E, Yucca Valley Area	1978	Yucca Valley South
Litel, Gerald F.	1060674	Archaeological – Historical Resources Assessment for Yucca Trail, Indio Avenue to Olympic Road	1978	Yucca Valley South
Joseph Hearn	1060686	Archaeological – Historical Resources Assessment of Sec. 5, T1S R6E, Joshua Tree Quadrangle	1978	Yucca Valley South, Joshua Tree South
San Bernardino County Museum Assoc.	1060687	Archaeological Resources Assessment of Sec. 8, T1S R6E, Yucca Valley Area	1978	Yucca Valley South
Hearn, Joseph E.	1060704	Archaeological – Historical Resources Assessment of Parcel #60141407, Yucca Valley Area	1978	Yucca Valley North
Hearn, Joseph E.	1060705	Archaeological Resources Assessment of Assessors Parcels No. 58709142, 58709143, 58709144, and 58709120 in the Yucca Valley Area	1978	Yucca Valley South
Hearn, Joseph E.	1060708	Cultural Resources Assessment of Assessors Parcels Numbers 58506233 and 58506238, Yucca Valley Area	1978	Yucca Valley South
Coombs, Gary B.; McCarty, Richard; Shepperson, Tara; Dean, Sharon	1060719	The Archaeology of the Western Mojave (Class II Cultural Resources Inventory of the Calico, Kramer, Stoddard, Johnson-Morongo and 29 Palms Planning Units)	1979	Overview
SBCMA	1060748	Cultural Resources Assessment, Assessor's Parcels 588-031-01 and 588-031-02, Yucca Valley Area	1979	Yucca Valley South
SBCMA	1060767	Environmental Impact Analysis, Cultural Resources, AP 586-421-01, Yucca Valley	1979	Yucca Valley South
Hearn, Joseph E.	1060789	Cultural Resources Assessment of AP 595-371-10, Yucca Valley Area for Santa Anita Development Corporation	1979	Yucca Valley South
Simpson, Ruth D.	1060816	Cultural Resources Assessment: Parcel Number 1 of Parcel Map 2757, Yucca Valley Area	1979	Yucca Valley South
SBCMA	1060817	Cultural Resources Assessment: Assessor's Parcel Number 601-331-01, Yucca Valley Area	1979	Yucca Valley South
SBCMA	1060832	Cultural Resources Assessment: Yucca Valley Area	1980	Yucca Valley North
SBCMA	1060840	AP 595012393872, Cultural Resources Assessment, Yucca Valley Area	1979	Yucca Valley North, Yucca Valley South

Author	Doc. No.	Title	Date	USGS Quad
Simpson, Ruth D.	1060859	Cultural Resources Assessment: A Portion of Ex. 18, T1SR6E, Yucca Valley Area	1979	Yucca Valley South
SBCMA	1060862	Cultural Resources Assessment: Yucca Valley, California	1979	Joshua Tree North
Bean, Lowell J.; Brakke-Vane, Sylvia	1060878	Allen-Warner Valley Energy System: Western Transmission System Ethnographic and Historical Resources	1979	Overview
Stickel, E.G.; Weinman-Roberts, Lois J.	1060891	An Overview of the Cultural Resources of the Western Mojave Desert	1980	Overview
Simpson, Ruth D.	1060898	Cultural Resources Assessment, Sec. 12, T1S R5E, Yucca Valley	1980	Yucca Valley South
Simpson, Ruth D.	1060919	Cultural Resources Assessment, Tract no. 11024, Yucca Valley	1980	Yucca Valley North
Smith, Gerald A.	1060974	Cultural Resources Assessment, Sec. 18, T1S R6E, Yucca Valley Area	1980	Yucca Valley South
SBCMA	1060987	Cultural Resources Assessment: Burnt Mountain Club, Yucca Valley, California	1980	Yucca Valley South
SBCMA	1061042	Cultural Resources Assessment: Yucca Valley, Tentative Tract No. 11661	1980	Yucca Valley South
Smith, Gerald A.; Lerch, Michael K.	1061112	Cultural Resources Assessment of Tentative Tract No., 11917, Yucca Valley, California	1981	Yucca Valley South
Lerch, Michael K.	1061215	Cultural Resources Assessment of A.P. #601-071-11, Yucca Valley, San Bernardino County, California	1981	Yucca Valley North
Hammond, Stephen R.	1061241	Archaeological Survey Report: Proposed Drainage Improvement Project Along West Side of Route 247	1982	Yucca Valley North
Lerch, Michael K.	1061257	Cultural Resources Mitigation of CA SBR 4851, A.P. #601-071-11, Yucca Valley, San Bernardino County, California	1982	Yucca Valley North
Sutton, Mark	1061273	Cultural Assessment for High Desert Water District Water Tank, Yucca Valley	1982	Yucca Valley North
Lerch, Michael K.	1061390	Cultural Resources Assessment of Tentative Map 12410, Yucca Valley, San Bernardino County, California	1983	Yucca Valley South
Greene, Linda W.	1061408	Historic Resource Study: A History of Land Use in Joshua Tree National Monument	1983	Overview
Smith, Gerald A.; Simpson, Ruth D.; Lerch, Michael K.	1062002	Cultural Resources Assessment of Tract No. 10343, Rialto, California	1981	Overview
Mortland, Carol A.	1062158	Archaeological Impact Evaluation: Southern California Edison Proposed Generating Station in Upper Johnson Valley and Associated Transmission, Gas and Fuel	1974	Yucca Valley North

Author	Doc. No.	Title	Date	USGS Quad
		Routes		
Brown, Joan C.	1062478	Cultural Resources Reconnaissance of Twenty-Seven Acres Located in Yucca Valley, San Bernardino County, California	1991	Yucca Valley North
Sutton, Paula A.	1062523	Negative Archaeological Survey Report: Highway Project Route 247, Post Mile 5.4 to 6.2	1990	Yucca Valley North
Lerch, Michael K.	1062776	Class III Cultural Resources Inventory of the Hi-Desert Water District Supplemental Water Delivery and Management Plan, Yucca Valley, San Bernardino County, CA	1993	Yucca Valley North, Yucca Valley South
Love, Bruce	1063113	2 Parcels on SR-62	1995	Yucca Valley South
Hammond, Stephen; Love, Bruce	1063442	SR 62 – Park & Ride	1999	Yucca Valley South
Bonner, Wayne	1063908	Phase I Archaeological Field Survey for Cingular Wireless Site CM 457-02 Located at 4451 Old Woman Springs Road, Yucca Valley, San Bernardino County, CA	2002	Yucca Valley North
Love, Bruce Tang, Bai Hogan, Michael	1063909	Avalon Ave at SR-62	2000	Yucca Valley North
Buysse, Johnna L.; Smith, Brian F.	1063910	A Cultural Resources Impact Survey for the high Desert Water Recharge Site 6, Yucca Valley, CA	2001	Yucca Valley North
Mason, Roger D.	1063913	Cultural Resources Record Search & Literature Review for an AT&T Telecommunications Facility C589, Morongo Valley, in the City of Yucca Valley, San Bernardino County, CA	2001	Yucca Valley South
McKenna, Jeanette A.	1063915	Road Improvements to SR-62 Between La Honda and Dumosa Ave – In Two Segments	2003	Yucca Valley South
Tibbett, Casey	1064198	Identification & Evaluation of Historic Properties: Warren Valley Basin Groundwater Recharge Project, Town of Yucca Valley, San Bernardino County, CA	2004	Yucca Valley North, Yucca Valley South
Bean, Lowell; Brakke-Vane, Sylvia	1064477	The Native American Ethnography & Ethnohistory of Joshua Tree National Park: An Overview	2002	Overview
Warren, Claude N.; Schneider, Joan S.	1066289	Phase II: An Archaeological Inventory of Joshua Tree National Park: Description and Analyses of the Results of a Stratified Random Sample Inventory Conducted 1991-1992	2000	Overview

Author	Doc. No.	Title	Date	USGS Quad
Tang, Bai; Hogan, Michael	1066284	Historical/Archaeological Resources Survey Report: Yucca Valley Water System Infrastructure Improvements, Town of Yucca Valley, San Bernardino County, California	2000	Yucca Valley North, Yucca Valley South, Joshua Tree North, Joshua Tree South
Hinton, Sarah	1066252	Archaeological Clearance Survey Form	2003	Yucca Valley South
Tang, Bai Hogan, Michael	1065969	Identification and Evaluation of Historic Properties: Hi-Desert Water District Wastewater Treatment Plant, Town of Yucca Valley, San Bernardino County, California	2008	Yucca Valley North, Joshua Tree North, Joshua Tree South
Tang, Bai Hogan, Michael	1065968	Historical/Archaeological Resources Survey Report: Hi-Desert Water District Wastewater Treatment Plant, Town of Yucca Valley, San Bernardino County, California	2007	Yucca Valley North, Joshua Tree North
McKenna, Jeanette A.	1065965	RE: Record Search for the Proposed Yucca Valley County Day School, San Bernardino County, CA (Yucca Valley South 7.5' USGS Quadrangle; McKenna et al. Job 07.1283	2007	Yucca Valley South
Tsunoda Koji	1065963	Archaeological Survey Report for Southern California Edison Company Deteriorated Pole Replacement Program for Pole #A13721281E on Private land (WO#4750-0081, JO#2144) and Pole #A13721477E on Public Land Managed by San Bernardino County Flood Control (WO#4750-0081, JO#2145), on the Devers-High Desert Terawind-Yucca 115KV Circuit, San Bernardino County, California	2008	Yucca Valley South
Michael Brandman Associates	1065846	Cultural Resource Records Search Results and Site Visit for T-Mobile Telecommunications Facility Candidate IE24110A (Dunn), 7248 Joshua Lane, Yucca Valley, San Bernardino County, California	2007	Yucca Valley South
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
Michael Brandman Associates	1065844	Letter Report: Cultural and Paleontological Resource Monitoring at the Home Depot Project, Town of Yucca Valley, San Bernardino County, California. Mitigation Measure CR-1 and CR-2 Satisfied	2007	Yucca Valley North

Author	Doc. No.	Title	Date	USGS Quad
Tang, Bai; Hogan, Michael Wetherbee, Mathew; Ballester, Daniel	1065407	Historical/Archaeological Resources Survey Report: Mountain Vista at Western Hills Ranch, Town of Yucca Valley, San Bernardino, California	2005	Yucca Valley South
Tejada, Barbara S.	1064654	Archaeological Survey Report for the State Route 247 at Buena Vista Drive, Yucca Valley, San Bernardino County, California	2005	Yucca Valley North
Deur, Douglas	1066332	Joshua Tree National Park Traditional Use Study: The Rock Art of Joshua Tree National Park	2006	Overview
McKenna, Jeanette A.	1066388	A Phase I Cultural Resources Investigation of Two Pipeline Alignments for the San Bernardino County Special Districts Department, CSA 70, Zone W-4, Pioneertown and Landers, San Bernardino Co, California	2008	Yucca Valley North
McKenna, Jeanette A.	106390	A Phase I Cultural Resources Investigation for the Proposed Yucca Valley Community Day School Site in Yucca Valley, San Bernardino County, California	2008	Yucca Valley South
Northwest Economic Associates	1066498	Ethnographic Overview of the Northern San Bernardino Forest – Part A: The North	2004	Overview
Parr, Robert E.	1066823	Cultural Resource Assessment for the Replacement of Deteriorated Power Pole #240717S on the Southern California Edison Company Onaga 12 KV Circuit, Yucca Valley, San Bernardino County, California	2010	Joshua Tree North
Brock, James	1066846	Phase I Cultural Resources Assessment for a Proposed 39.4-Acre School Site, North Side of Buena Vista Avenue Between Indio Avenue and Yucca Mesa Road, Town of Yucca Valley, California (APNs 0598-084-16, -17, -18, -19, & -30)	2011	Yucca Valley North, Joshua Tree North
Bonner, Wayne H.	1066848	Cultural Resource Records Search and Site Visit Results for T-Mobile USA Candidate IE24275A (St. Mary's) 7495 Church Street, Yucca Valley, San Bernardino County, California (EBI Job No. 61104238)	2010	Yucca Valley South
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

Author	Doc. No.	Title	Date	USGS Quad
CRM Tech	1066927	Identification and Evaluation of Historic Properties, Yucca Valley Wastewater System Infrastructure Improvements, Town of Yucca Valley, San Bernardino County, California	2011	Yucca Valley North, Yucca Valley South, Joshua Tree North, Joshua Tree South

APPENDIX F: 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) 653-6261
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.

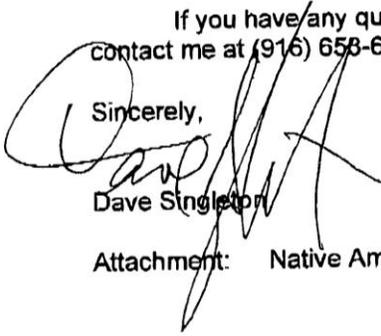
To be effective, consultation on specific projects must be the result of an ongoing relationship between Native American tribes and lead agencies, project proponents and their contractors, in the opinion of the NAHC. An excellent way to reinforce the relationship between a project and local tribes is 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 the 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 7050.6 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 G: NATIVE AMERICAN OUTREACH



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,

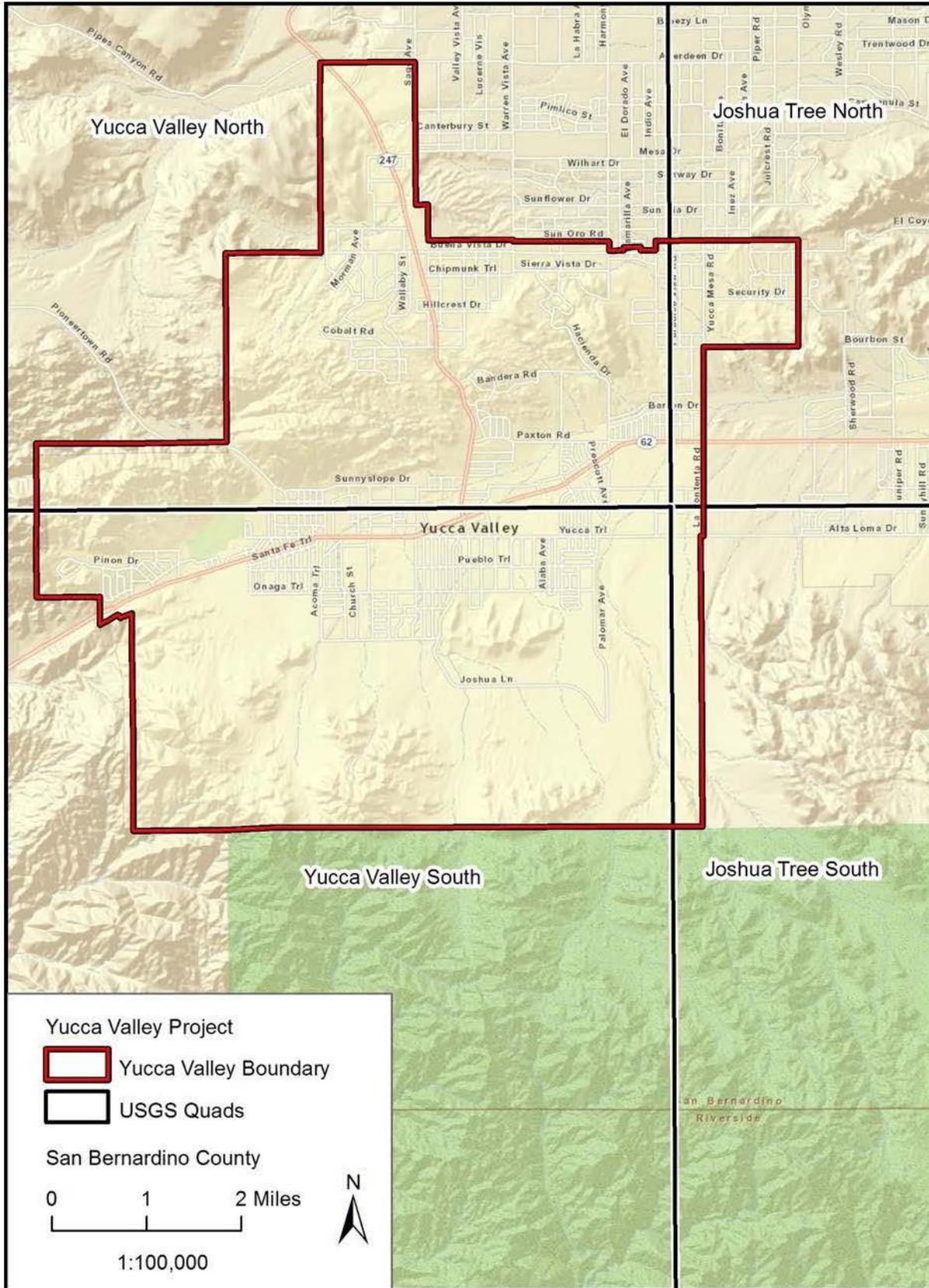
Amy Glover
Lab Supervisor
Cogstone Resource Management Inc.

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



APPENDIX H: NATIVE AMERICAN CONTACT LOG

<u>Native American Group/Individual</u>	<u>Date(s) of First Contact Attempt</u>	<u>Date(s) of Replies Rec'd</u>	<u>Date(s) of 2nd Contact Attempt</u>	<u>Date(s) of 3rd Contact Attempt</u>	<u>Comments</u>
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.

<u>Native American Group/Individual</u>	<u>Date(s) of First Contact Attempt</u>	<u>Date(s) of Replies Rec'd</u>	<u>Date(s) of 2nd Contact Attempt</u>	<u>Date(s) of 3rd Contact Attempt</u>	<u>Comments</u>
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.
Morongos 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.
Morongos 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.