CULTURAL AND PALEONTOLOGICAL ASSESSMENT
FOR THE DESERT TRAILS PREPARATORY
ACADEMY PROJECT, CITY OF VICTORVILLE, SAN
BERNARDINO COUNTY, CALIFORNIA

Prepared for:
PLACEWORKS
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Cogstone Project Number: 4515
Type of Study: Archaeological and Paleontological Assessment (Phase 1)
Archaeological Sites: Isolate P-36-033188, and Isolate P-36-033189
USGS Quadrangle: Baldy Mesa 7.5’
Area: 8.9 acres consisting of APNs 309-613-6707 and 309-613-6706
Key Words: Desert Trails Academy, Victorville, Survey, Mesa View Drive, Mojave Desert, Archaeological and Paleontological Assessment
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SUMMARY OF FINDINGS

The purpose of this study was to determine the presence of and potential effects on archaeological and paleontological resources within the study area for the proposed Desert Trails Preparatory Academy (Project). The Project proposes construction of a new campus for the Desert Trails Preparatory Academy charter school on an 8.9 acre, two parcel property located on the east side of Mesa View Drive at Fern Haven Street in the City of Victorville, California. This study was requested by the City of Victorville to meet their responsibilities as the lead agency under the California Environmental Quality Act (CEQA).

The project is mapped as young alluvial fan deposits which are less than 10,000 years old and date to the middle Holocene Epoch portion of the Victorville Fan. Based upon a records search requested from the Western Science Center, published records, previous Cogstone literature searches, and prior knowledge of monitoring projects in the Victorville-Hesperia area, the nearest confirmed Pleistocene fossils are recorded more than six miles to the east. Pleistocene fossil localities near to the Project have only been recovered from sediments of the ancestral Mojave River.

No fossils were observed during the survey. The sediments of the Project are assigned a low potential for paleontological resources (BLM 2007). If unanticipated fossils are unearthed during construction, work should be halted in that area until a qualified paleontologist can assess the significance of the find. Work may resume immediately a minimum of 50 feet away from the find.

Nancy De La Cruz completed an archaeological and historic records search of the California Historic Resources Inventory System (CHRIS) from the South Central Coastal Information Center (SCCIC) on April 11, 2019 that included the Project Area as well as a 0.5 mile radius. Results of the record search indicate that ten previous studies have been completed within the radius and determined that no previously recorded resources were located within the Project boundaries.

A Native American Heritage Commission (NAHC) Sacred Lands File was also requested. The results were negative (See Appendix C). AB 52 consultation will be conducted by the City of Victorville Development Department.

Teresa Terry conducted the intensive pedestrian survey on April 15, 2019. Ground visibility was moderate (50%), with native and invasive desert vegetation. Two isolated historic cans were found near the northern edge of the Project: P-36-033188, which is a solder dot evaporated/condensed milk can from the early to mid-20th century, and P-36-033189, which is a 1960’s aluminum top beer can. Both isolates were highly rusted and the milk can had been
flattened. Isolated artifacts are ineligible for listing on the California Register of Historical Resources (CRHR) and needs no further consideration.

The lack of historic development in the Project Area seen in aerals and topographic maps, and the low density of previously recorded sites in the surrounding vicinity lead to a conclusion of a low potential for buried cultural deposits. Further cultural work is not recommended at this time. In the event of an unanticipated discovery, all work must cease within 50 feet of the find until it can be evaluated by a qualified archaeologist. If human remains are uncovered during excavation, State Health and Safety Code Section 7050.5 requires that all further ground disturbance in the vicinity of the remains cease until the County Coroner has assessed them and made recommendations concerning their treatment and disposition to the person responsible for the excavation, or to his or her authorized representative, in the manner provided in Section 5097.98 of the Public Resources Code.
INTRODUCTION

PURPOSE OF STUDY

The purpose of this study was to determine the presence of and potential effects on archaeological and paleontological resources within the study area for the proposed Desert Trails Preparatory Academy Project, City of Victorville, California (Figure 1). This study was requested by the City to meet their responsibilities as the lead agency under the California Environmental Quality Act (CEQA).

Figure 1. Project vicinity map
PROJECT LOCATION AND DESCRIPTION

The Project is located on the east side of Mesa View Drive at Fern Haven Street in the City of Victorville, California one mile south of the town of Adelanto. It is situated on the United States Geological Survey (USGS) Baldy Mesa 7.5’ topographic quadrangle map in Section 28, Township 5 North and Range 5 West of the San Bernardino Base and Meridian (Figures 2 and 3). The Project involves construction of a new campus on Parcel #4 (western parcel) of the combined 8.9 acre two parcel property (APNs 309-613-6707 and 309-613-6706) for the Desert Trails Preparatory Academy charter school, including construction of a 37,800 square foot building for 330 middle school students. It will also include the construction of play fields, hard courts, landscaping, and a parking lot with vehicle access and circulation (Figure 4).
Figure 2. Project location
Figure 3. Project Area
Figure 4. Proposed site plan
PROJECT PERSONNEL

Cogstone conducted the cultural resource and paleontological assessments and research.

Desiree Martinez served as Project Manager and provided QA/QC for the project. Martinez is a Registered Professional Archaeologist (RPA) with 22 years of experience in archaeological fieldwork, research, and curation. She has M.A. in Anthropology (Archaeology) from Harvard University.

Kim Scott was the Principal Investigator for Paleontology for the project and reviewed this report. Ms. Scott holds a M.S. in Biology with Paleontology emphasis from California State University, San Bernardino and a B.S. in Geology with an emphasis in Paleontology from the University of California, Los Angeles and has over 20 years of experience in California paleontology and geology.

Eric Scott wrote the geological and paleontological sections of this report. He holds a M.A. in Biological Anthropology from the University of California, Los Angeles, and a B.A. in Physical Anthropology from California State University, Northridge. He has over 35 years of professional experience.

Teresa Terry served as the Principal Investigator of Archaeology for the Project, performed the survey, and edited the report. Ms. Terry is a Registered Professional Archaeologist with an M.A. in Anthropology (Archaeology) from California State University, Fullerton and over 14 years of experience in California archaeology.

Emily Barton wrote the cultural resources section of the report. She has a B.A. in Anthropology from Sonoma State University and has over 8 years of experience in California archaeology.

Nancy De La Cruz performed the records search. She is a California State University, Long Beach intern in the department’s Archaeology program.

Additional information on the experience and qualifications of Cogstone personnel are provided in Appendix A.
REGULATORY ENVIRONMENT

CALIFORNIA ENVIRONMENTAL QUALITY ACT

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

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

TRIBAL CULTURAL RESOURCES

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

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

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

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

CALIFORNIA REGISTER OF HISTORICAL RESOURCES

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

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

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

In addition to having significance, resources must have integrity for the period of significance. The period of significance is the date or span of time within which significant events transpired, or significant individuals made their important contributions. Integrity is the authenticity of a
historical resource’s physical identity as evidenced by the survival of characteristics or historic fabric that existed during the resource’s period of significance.

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

**NATIVE AMERICAN HUMAN REMAINS**

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

**CALIFORNIA ADMINISTRATIVE CODE, TITLE 14, SECTION 4307**

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

GEOLOGICAL SETTING

The proposed Project is located in one of the most tectonically active regions of North America. South of the Project Area in Cajon Pass is the San Andreas Fault Zone (SAFZ) which forms the boundary between the Pacific Plate and the North American Plate. This section of the SAFZ, spanning from south of Indio to western Kern County, bends relative to the rest of the SAFZ. Because of this the Pacific Plate which is moving towards the northwest relative to the North American Plate “catches” on the bend. The intense north-south compression in this area has created the Transverse Range Geomorphic Province; a series of east-west trending steep mountain ranges and valleys spanning from the Channel Islands to the Little San Bernardino Mountains. These mountains are obliquely oriented to the typical northwest trend of California mountains and valleys, hence the name “Transverse.” The impact of the Pacific Plate and the North American Plate has also uplifted the High Desert portion of the Mojave Desert Geomorphic Province where this Project is located. The force of the compression has made this area one of the most rapidly rising regions of the earth and the proposed Project Area is essentially at the junction of these two Geomorphic Provinces.

The Project is situated upon sediments of the Victorville Fan, an informally-named broad bajada shed off the northern flanks of the Transverse Ranges south of Hesperia. Sediments of this alluvial fan derive from the San Gabriel Mountains, and were deposited during the Pleistocene and Holocene Epochs (Morton and Miller 2006).

Pleistocene sediments present at the surface and in the subsurface in the Victorville region were laid down by two separate depositional regimes: the Victorville Fan and the ancestral Mojave River (Cox and others 2003, Scott and others 2004). Vertebrate fossils have been previously reported from this region (Jefferson 1989, Reynolds 1989, Scott and others 2004), and many of these remains were initially presumed to derive from “distal equivalents” of the Victorville Fan (Jefferson 1989, Reynolds 1989, Reynolds and Reynolds 1994). However, more recent studies of sediments in the Victorville area (Cox and others 2003, Scott and others 2004) have determined that two distinct sedimentary lithologies are present in this region: sediments of the Victorville Fan, and alluvium deposited by the Pleistocene Mojave River. Of these, only one unit is demonstrably fossiliferous, and paleontological resources from the Victorville region are derived almost exclusively from exposures of the Mojave River sediments, rather than from the Victorville Fan. Exposures of the Victorville Fan are therefore interpreted to be less fossiliferous than previously reported.
YOUNG ALLUVIAL FAN DEPOSITS, UNIT 3 (MIDDLE HOLOCENE)
Sediments mapped at the surface of the Project Area consist of young alluvial fan deposits which are less than 10,000 years old and date to the middle Holocene Epoch (Morton and Miller 2006). These sediments consist of relatively uniform, medium brown silts and sands containing sparse granule and pebble lenses and scattered, matrix-supported, pebble-sized clasts.

ENVIRONMENTAL SETTING
The city of Victorville has an elevation of 2,875 ft., classifying the hot arid climate as high desert. Victorville is within the limits of the Mojave Desert with summer high temperatures over 110 degrees Fahrenheit and winter low records to below freezing. Average yearly rainfall is only about 4 inches. Joshua trees are found at this elevation along with Mojave yucca, bladder sage, desert sage, boxthorn, wild buckwheat, and creosote bush. Local wildlife includes the North American bobcat, mountain lion, coyotes, desert tortoise, jackrabbit, Mojave green rattlesnake, tarantula, California quail, and many more (City of Victorville 2019; MojaveDesert.net 2019).

PREHISTORIC SETTING
This section is excerpted and summarized from recent work by Sutton, Basgall, Gardner and Allen (2007). It synthesizes known information on the Mojave Desert and defines a simplified nomenclature for Mojave Desert cultural complexes.

NATURAL ENVIRONMENT DURING PREHISTORIC TIMES
The Mojave Desert is characterized by broad swaths of relatively unproductive habitat punctuated by resource patches of uncertain value unlike the rest of the Great Basin which shows strong vertical zonation in plant communities, more regular water sources, and greater uniformity in spatial and temporal distribution of subsistence resources. As such, particular subregions can vary significantly across not only seasons but between years and longer intervals. Modern climatic data suggest that period of reduced rainfall in one sector of the desert may have been balanced by enhanced conditions in another area.

During the late Pleistocene (ca. 18 to 8 thousand years cal B.C.), conditions in the Mojave Desert were generally cool and wet. During the early Holocene (ca. 8 to 6 thousand year cal B.C.), conditions were somewhat cooler and moister than today. The middle Holocene (ca. 6 to 3 thousand years cal B.C.) witnessed a much warmer and drier climate than modern times. The climate became moderately cooler and wetter again during the late Holocene (ca. 3 thousand cal B.C. to present), punctuated with periods of drought.

Woodrat middens from the north-central and southern Mojave are broadly consistent with these hydrologic records, suggesting that creosote biotic communities first became established ca. 4900 cal B.C. or soon thereafter. These paleoclimatic data suggest that patterns of enhanced
precipitation may have persisted later than previously believed and that the warm period during the middle Holocene may have had a profound effect on the distribution of water and biotic resources.

Short and long term trends in environmental productivity must have had strong influences on the mode and tempo of occupation strategies affecting local and regional land use patterns. To the extent that prehistoric populations could monitor the location and magnitude of storm tracks or precipitation levels, they must have been able to predict which habitats and resources would produce the highest net foraging returns. It is possible that large tracts of the desert were effectively abandoned or rarely visited during particular periods of time. In some cases, these climatic changes are thought to have been coincident with major technological or subsistence adjustments.

**MOJAVE DESERT CULTURAL SYSTEMS DURING THE PLEISTOCENE**

The only cultural complex dating to the Pleistocene that has been confidently identified in the Mojave Desert is Clovis (ca. 10 to 8 thousand cal B.C.; Table 1). It is marked by characteristic fluted projectile points of the same name. Fluted points appear more often in the north and west than in other sectors of the Mojave with concentrations in the drainage basins of Pleistocene China and Thompson Lakes. These are areas of substantial external stream runoff that would have been well watered into the early Holocene. The nature of Paleo-Indian cultural systems remains poorly defined but they were probably highly mobile, living in small, temporary camps near then permanent water sources.

**MOJAVE DESERT CULTURAL SYSTEMS DURING THE EARLY HOLOCENE**

The only coherent pattern during this time is the Lake Mojave complex dating between 8-6 thousand years cal B.C. (Table 1). This complex is characterized by projectile points of the Great Basin Stemmed series (Lake Mojave and Silverlake) and abundant bifaces, as well as steep-edged unifaces, crescents, occasional cobble-core tools, and ground stone implements. Flaked stone artifacts in the Lake Mojave assemblages include tools that are consistent with long-term use and transport. Non-local materials are common suggesting extensive annual foraging ranges; marine shell beads likewise imply wide spheres of interaction. Small numbers of ground stone implements occur regularly within these components, although wear on these tools is often light and suggests there was little reliance on vegetal resources.

Extensive residential accumulations are known in addition to workshops and small camps. The large sites appear to be functionally the same as smaller ones and represent locations of recurrent use rather than different settlement types. Thus the Lake Mojave pattern appears to reflect a forager-like strategy organized around relatively small social units. Available settlement data indicate it was not extensive lakeside marshes that attracted human occupation, but rich resource patches in a host of environmental situations. Bones from archaeological sites reflect reliance on smaller taxa such as jackrabbits, rabbits, rodents, and some reptiles. This focus on smaller taxa
seems inconsistent with the abundance of heavy projectile points, bifaces and formalized scrapers that appear geared toward large game.

**MOJAVE DESERT CULTURAL SYSTEMS DURING THE MIDDLE HOLOCENE**

This time period is more complex than previously envisioned with multiple culturally and technologically distinct populations inhabiting and exploiting the Mojave Desert. The primary cultural complex heretofore associated with the middle Holocene is called Pinto. Data from a number of sites in the central and northern Mojave Desert indicate a temporal overlap between Lake Mojave and Pinto complexes with Pinto slightly later in time. Nevertheless, the two complexes appear to be distinct, with statistically different hydration ranges and consistently different site distributions.

The Pinto complex has the most widespread expression of any of the early cultural complexes (Table 1). There appears to be a broad continuity in the flaked stone technologies of the Lake Mojave and Pinto complexes, both of which are characterized by extensive use of toolstones other than obsidian and cryptocrystalline silica and by the regular use of bifacial and unifacial core/tool forms. The signature stemmed, indented-base Pinto series projectile points show high levels of blade reworking and appear to have been used tips for thrusting spears rather than as darts. Reduced toolstone diversity implies a reduction in foraging range although continuing presence of marine shell indicates regular interaction with coastal groups.

The most important distinction between the Lake Mojave and Pinto assemblages relates to the prevalence of ground stone implements. Milling tools are moderately abundant in nearly all known Pinto deposits and sometimes occur in high frequency. Revised dating indicates intensive levels of plant processing began by ca. 7 thousand years cal B.C. This coincides with emergence of similar economies along the coast.

Sites of the Pinto complex occur in a diverse range of topographic and environmental zones. Larger sites, which appear to correlate with well-watered locations, contain substantial middens and a breadth of cultural debris not present at smaller sites. These data are consistent with residential bases that were occupied for prolonged periods by moderate to large numbers of people. Such groups probably consisted of multiple families, inferring a collector-like settlement strategy with centralized site complexes in favorable locations to stage logistical forays into surrounding resource patches. Judging by high frequencies of milling tools at many of these bases, access to plant resources must have been a key determinant for site placement. Patterns of animal exploitation remain similar to those of the Lake Mojave complex, although deer frequencies drop and reliance on small fauna increases slightly.
Table 1. Mojave desert cultural complexes and associations

<table>
<thead>
<tr>
<th>Temporal Period</th>
<th>Cultural Complex</th>
<th>Approximate Dating</th>
<th>Previously Known As</th>
<th>Marker Artifacts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pleistocene</td>
<td>Pre-Clovis</td>
<td>Pre-10,000 cal B.C.</td>
<td>Early Man, Early Humans, Pre-Projectile Point</td>
<td>Unclear</td>
</tr>
<tr>
<td></td>
<td>(hypothetical)</td>
<td>10,000-8000 cal B.C.</td>
<td>Clovis, Early Systems, Big Game Hunting Tradition, Malpais</td>
<td>Fluted points (Clovis)</td>
</tr>
<tr>
<td>Paleo-Indian</td>
<td>Lake Mojave</td>
<td>8000-6000 cal B.C.</td>
<td>Western Pluvial Lakes Tradition, Western Lithic Co-tradition, Western Stemmed Tradition, Playa Complex, Lake Mojave Complex, Early Archaic, Death Valley 1, Period 1</td>
<td>Stemmed points (e.g., Lake Mojave, Silver Lake)</td>
</tr>
<tr>
<td>Early Holocene</td>
<td>Pinto</td>
<td>7000-3000 cal B.C.</td>
<td>Little Lake, Amargosa I, Period II, Death Valley II</td>
<td>Pinto Series points</td>
</tr>
<tr>
<td>Middle Holocene</td>
<td>Deadman Lake</td>
<td>N/A</td>
<td>N/A</td>
<td>Contracting stemmed and leaf-shaped points</td>
</tr>
<tr>
<td>Late Holocene</td>
<td>Gypsum</td>
<td>2000 cal B.C. - cal A.D. 200</td>
<td>Newberry, Elko, Amargosa II, Period II, Death Valley II</td>
<td>Gypsum and Elko Series points</td>
</tr>
<tr>
<td></td>
<td>Rose Spring</td>
<td>cal A.D. 200-1100</td>
<td>Saratoga Springs 1, Period III, Phase II, Late Rose Spring, Haiwee, Death Valley III, Period III, Saratoga, Armargosa I, Armargosa III</td>
<td>Rose Spring and Eastgate Series points</td>
</tr>
<tr>
<td></td>
<td>Late Prehistoric</td>
<td>cal A.D. 1100 – Contact</td>
<td>Yuman, Hakataya, Patayan, period IV, Prehistoric Shoshonean Protohistoric Shoshonean, Marana, Cottonwood</td>
<td>Desert Series points, ceramics</td>
</tr>
</tbody>
</table>

Table adapted from Sutton, Basgall, Gardner and Allen (2007)

The Deadman Lake complex appears to have been a separate cultural complex within the middle Holocene. In contrast to the Pinto Complex which was widespread, the Deadman Lake complex has thus far been recognized only at Twentynine Palms in the southeastern Mojave Desert. It may represent close cultural connections to the Southwest Archaic that become increasingly weak to the north and west. Deadman Lake assemblages are characterized by small to medium sized contracting-stemmed or lozenge-shaped points, extensive concentrations of battered cobbles and core tools, abundant bifaces, simple flake tools, and milling implements (Table 1).

Toolstones used demonstrate considerable quantities of materials including igneous rock and obsidian. Simple shell beads present originated from both the Pacific coast and the Sea of Cortez. Processing of plant foods appears to have involved extensive crushing or pulping activities. Animal exploitation is dominated by small animals like those of Pinto complex sites.
**MOJAVE DESERT CULTURAL SYSTEMS DURING THE LATE HOLOCENE**

The earliest late Holocene complex is called Gypsum and is defined by the presence of a range of corner-notched (Elko), concave base (Humboldt), and well-shouldered contracting-stemmed (Gypsum) point forms (Table 1). It dates roughly between 2000 years cal B.C. and cal A.D. 200. The most confounding aspect of the Gypsum complex is its evident scarcity in the southern and eastern reaches of the desert.

The Gypsum complex emerged during a time when conditions were somewhat wetter and cooler than during the middle Holocene. During the early part of this complex, it is thought that settlement and subsistence were centered near streams. At the same time, it appears that there were increases in trade and social complexity. Gypsum sites are more numerous than those of preceding occupations and are found over a more diverse array of locations. Artifact assemblages include evidence of ritual activities including quartz crystals, paint and rock art, as well as numerous bifaces. Exploitation of deer, rabbits, and rodents is evident.

The Rose Springs complex is marked by regional appearance of the bow and arrow beginning about cal A.D. 200. Common artifacts include Eastgate and Rose Springs series projectile points, stone knives, drills, pipes, bone awls, various milling implements, marine shell ornaments, and large quantities of obsidian. Rose Springs sites are commonly found near springs, washes, and sometimes lakeshores. Evidence of architecture includes wickiups, pit houses, and other types of structures suggesting intensive occupations. Populations in the desert appear to have reached their peak during this time. Most of the obsidian found has been sourced to the Coso Volcanic Field demonstrating either travel to the southern Owens Valley or trade with peoples living in that vicinity. Animal exploitation was dominated by use of rabbits and rodents. As lakes began to desiccate, settlement patterns seem to have shifted from association with permanent water sources to more ephemeral ones.

After about cal A.D. 1100, the environment continued to deteriorate, populations appear to have declined, new technologies were introduced and a number of separate cultural complexes emerged that are believed to represent the prehistoric aspects of known ethnographic groups. Late Prehistoric occupation sites represent a variety of types including a few major villages with associated cemeteries, special purpose sites and seasonal sites. Artifact assemblages consist of Desert series projectile points, buffware and brownware ceramics, shell and steatite beads, slate pendants, incised stones, and a variety of milling tools. Obsidian use dropped off and chert use increased.

**ETHNOGRAPHY**

By the Late Prehistoric period, the Mojave Desert was home to a tribe known as the Vanyume or Desert Serrano. The Vanyume were affiliated with the Kitanemuk and [Mountain] Serrano. Boundaries between these affiliate clans, if they existed, are poorly understood (Earle 1990).
As with most desert tribes, settlements were near sources of water. The prehistoric residents were gatherers and hunters. Plant and animal resources in the desert were utilized for food and materials. Seasonal travel to exploit particular resources such as nuts in the foothills was common. Willow frames with tule hatching were used for houses and ramadas. Houses were used mostly for sleeping with most activities taking place outdoors under the ramada. Village sweathouses were typical. Religion and technology paralleled that of the closely-related Cahuilla (Bean and Smith 1978).

Some modern Vanyume are affiliated with the San Fernando Band of Mission Indians (O’Rourke 2005) while others live on the Morongo or San Manuel Reservations.

HISTORIC SETTING

SPANISH PERIOD (1796-1821)
The Spanish Period is characterized by the exploration and settlement of Europeans. The first known European explorer to enter present day San Bernardino County was Pedro Fages who in 1772 traveled through the Cajon Pass and into the Mojave Desert to pursue deserting soldiers. Fages most likely followed the Mojave Trail, a Native American trail predating European incursion into the area. The trail followed the Mojave River from Soda Lake to the San Bernardino Mountains, and then down the Cajon Pass into the coastal region (Landis 2009). The earliest known contact in the Project Area occurred in 1776 when Francisco Garcés visited Native American villages along the upper Mojave River. Garcés also traveled the Mojave Trail to visit the Mission San Gabriel (Kyle 1990). As the Spanish developed commerce between their outposts in Santa Fe and coastal Los Angeles, they developed a series of trails known collectively as the Old Spanish Trail, which also followed along the Mojave River (Landis 2009). This trail was used to trade goods from Santa Fe and Mexican horses and mules from Los Angeles (Latta 1932). Eventually a cut-off beginning at the narrows (present site of Victorville) followed the Oro Grande wash and led directly to the Cajon Pass (Henderson 2011). The trail was also used by the Spanish to raid the deserts after an attack on San Gabriel by the Mojave Indians in 1810, leading to a decrease in the Native population of the desert (Thompson 2007).

MEXICAN PERIOD (1821-1848)
The Mexican Period is characterized by inland settlement on large land grants (ranchos) and by the opening of Alta California to exploration by Americans. Jedediah Strong Smith, a New Yorker, crossed the Mojave River in 1826 and called it the “Inconstant River” because of its sporadic and partially underground flow (Pierson 1970). His travels took him by an Indian village named Otangallavil, which was located near Hesperia (Pierson 1970). In 1844, General Fremont, in search for the Old Spanish Trail, recorded the Mojave River as the “Mohave River” (Pierson 1970). The route through the Cajon Pass was then utilized and improved by the Mormon Battalion in 1847 to 1848 while posted to guard the Cajon Pass during the Mexican-
American War (California State Military Museum 2017). The Mormons then used the route to return to Salt Lake City.

**AMERICAN PERIOD (AFTER 1848)**

The American Period is characterized by an increase in population of Americans and Europeans. In 1848, gold was discovered at Sutter’s Mill near Coloma on the south fork of the American River thereby beginning the California’s gold rush. Meanwhile, the road improved by the Mormons into Southern California was utilized to set up a Mormon colony in San Bernardino in 1851, which led to the route being heavily used for supplies and immigrant travel and settlement from Salt Lake into the Inland Empire of Southern California (Masters 2015).

**PROJECT AREA HISTORY**

Situated at the confluence of the Mojave River and the old trails crossing the Mojave Desert, the area became a popular resting area along the trail. Formerly a Native village site, a ranch sprang up along the Mojave River where the present city of Victorville is as early as 1860. Many of the settlers along the river were former members of the Mormon colony at San Bernardino, but remained after the Mormon church cut ties with the colony in 1857 (Beldon 1960). Aaron Lane established the first way station along the Mojave River in 1858 at Lane’s Crossing of the trail and the Mojave River (Thompson 1995). The California Southern Railroad came through the area in 1885, and built at station named for Jacob Nash Victor who was a superintendent of the rail line. This original train station was located one mile northwest of the Mojave River and in 1886 the town plan was official. The close proximity to water led to a boom of agricultural development in the early years. At the turn of the 20th century cement manufacturing became its leading industry when deposits of granite and limestone were found. The name of Victorville came into being when the local US postal office changed it out of confusion with the city of Victor, Colorado. The City of Victorville was incorporated on September 21, 1962. Victorville’s Seventh Street and D Street are part of the Historic US Route 66, which was established in 1926 as the interstate system that connected Chicago, Illinois with Los Angeles, California. In 1941 the Victorville Army Air Field was constructed just 6 miles north of the Project Area. It was renamed as George Air Force Base shortly thereafter. The base was deactivated in 1992 and annexed to the city in 1993. The facility is now operated by a private company as the Southern California Logistics Center (City of Victorville 2019).

The Project Area is roughly 7 miles southwest from the City’s center and one mile south of the town of Adelanto. According to historical topographic maps, U.S. Route 395, roughly 2,000 ft. to the east of the Project, shows up in 1942. In 1980, dirt roads appear around our Project Area, most of which become paved starting in 2002 with the residential track to the north. By the 2009 historical aerial, the residential tracks that surround the north, south, and western edges of the Project Area are as they presently stand.
RECORDS SEARCH

PALEONTOLOGICAL RECORD SEARCH

A search for paleontological records was completed by the Western Science Center (Radford 2019: Appendix B), and previously requested records searches. Additional records from the University of California Museum of Paleontology database (UCMP 2019), the PaleoBiology Database (PBDB 2019), and print sources (Jefferson 1989, 1991a, 1991b) were searched for fossil records.

No fossils are known from within the Project boundaries or immediate vicinity. Based upon published records (Jefferson 1989, Reynolds 1989, Reynolds and Reynolds 1994, Scott et al 2004), database searches, previous Cogstone literature searches, and prior knowledge of monitoring projects in the area (Eric and Kim Scott), the nearest confirmed Pleistocene fossils are recorded more than six miles to the east. Fossils of ground sloth, mammoth, camel, short faced bear have been recovered from the ancestral Mojave River and not from the Victorville Fan. The distance of these localities from the proposed study area suggests that fossil-bearing sediments laid down by the ancestral Mojave River are not present in the study area.

CALIFORNIA HISTORIC RESOURCES INVENTORY SYSTEM

Cogstone archaeologist Nancy De La Cruz conducted a search of the California Historic Resources Inventory System (CHRIS) from the South Central Coastal Coast Information Center (SCCIC) on the campus of California State University, Fullerton on April 11, 2019 that included the entire proposed Project Area as well as a 0.5 mile radius. Results of the record search indicate that 10 previous studies have been completed within 0.5 miles of the proposed Project Area (Table 2).

The records search also determined no previously recorded resources are located within the Project Area. In addition, 5 cultural resources are located within 0.5 miles of the Project Area (Table 3). These include 1 prehistoric isolate and 4 historic archaeological resources.

Table 2. Previous cultural resource studies

<table>
<thead>
<tr>
<th>Report No.</th>
<th>Author(s)</th>
<th>Title</th>
<th>Year</th>
<th>Distance from PA (in miles)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SB-03020</td>
<td>Sturm, Brad, D. Mclean, K. Becker, And J. Rosenthal</td>
<td>(Draft) Adelanto-Lugo Transmission Project Cultural Resources Assessment</td>
<td>1993</td>
<td>0.25-0.5</td>
</tr>
</tbody>
</table>
Table 3. Cultural resource sites

<table>
<thead>
<tr>
<th>Primary No. (P-36)</th>
<th>Trinomial (CA-SBR)</th>
<th>Resource Type</th>
<th>Description</th>
<th>Date Recorded</th>
<th>Distance from PA (in miles)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10504 H</td>
<td>10504H</td>
<td>Historic Structure</td>
<td>Historic fence line</td>
<td>1999, 2004</td>
<td>0.25-0.5</td>
</tr>
<tr>
<td>12058 H</td>
<td>12058H</td>
<td>Historic Site</td>
<td>Early to mid-20th century refuse deposit</td>
<td>2005</td>
<td>0.5 - 1</td>
</tr>
<tr>
<td>20314 H</td>
<td>20314H</td>
<td>Historic Isolate</td>
<td>Metal fuel can made into a bucket</td>
<td>2004</td>
<td>0.25-0.5</td>
</tr>
<tr>
<td>20316 H</td>
<td>20316H</td>
<td>Historic Isolates</td>
<td>2 metal cans</td>
<td>2004</td>
<td>0.5</td>
</tr>
<tr>
<td>64401 H</td>
<td>64401H</td>
<td>Prehistoric Isolate</td>
<td>Fine-grained basalt core-reduction flake</td>
<td>2001</td>
<td>0.25</td>
</tr>
</tbody>
</table>

Cogstone
OTHER SOURCES

In addition to the SCCIC records search a variety of sources were consulted in April 2019 to obtain information regarding the cultural context of the Project Area (Table 4). Sources included the National Register of Historic Places (NRHP), the California Register of Historic Resources (CRHR), California Historical Resources Inventory (CHRI), California Historical Landmarks (CHL), and California Points of Historical Interest (CPHI). Specific information about the Project Area, obtained from historic-era maps and aerial photographs, is presented in the Project Area History section.

Table 4. Additional Sources Consulted

<table>
<thead>
<tr>
<th>Source</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>National Register of Historic Places (NRHP; 1979-2002 &amp; supplements)</td>
<td>Negative</td>
</tr>
<tr>
<td>Historic USGS Topographic Maps</td>
<td>The earliest available topographic map is the United States Geological Survey (U.S.G.S) Southern California #1 Map, December 1901 edition, which shows the Project Area as undeveloped. It was not until the 1956 U.S.G.S. Baldy Mesa 7.5' Topographic Map that U.S. 395 first appears. Neighborhood dirt roads begin to appear on the 1980 U.S.G.S. Baldy Mesa 7.5' Topographic Map, although actual development does not show until the 2002 Baldy Mesa 7.5' Topographic map.</td>
</tr>
<tr>
<td>Historic US Department of Agriculture Aerial Photographs</td>
<td>The earliest available aerial is from 1952, no development is seen in the Project vicinity until dirt roads show up in 1994 and residential tracks appear surrounding the Project Area from the 2002, 2005, and 2009. There have been no changes from the 2010 aerial to present day.</td>
</tr>
<tr>
<td>California Register of Historical Resources (CRHR; 1992-2014)</td>
<td>Negative</td>
</tr>
<tr>
<td>California Historical Resources Inventory (CHRI; 1976-2014)</td>
<td>Negative</td>
</tr>
<tr>
<td>California Historical Landmarks (CHL; 1995 &amp; supplements to 2014)</td>
<td>Negative</td>
</tr>
<tr>
<td>California Points of Historical Interest (CPHI; 1992 to 2014)</td>
<td>Negative</td>
</tr>
<tr>
<td>Caltrans Historic Bridge Inventory (2016)</td>
<td>Negative</td>
</tr>
<tr>
<td>Bureau of Land Management (BLM) General Land Office Records</td>
<td>160 acres that includes the Project Area was bought by Samuel G. Burkhead, Junior in 1911 (No. 185479)</td>
</tr>
</tbody>
</table>
NATIVE AMERICAN CONSULTATION

On April 3, 2019, a Native American Heritage Commission (NAHC) Sacred Lands File search was requested. On April 15, 2019, the NAHC responded that no sacred lands located within the Project Area. Results are located in Appendix C. AB 52 Consultation will be conducted by the City of Victorville Development Department.

SURVEY

METHODS

The survey stage is important in a Project’s environmental assessment phase to verify the exact location of each identified cultural or paleontological resource, the condition or integrity of the resource, and the proximity of the resource to areas of cultural or paleontological resource sensitivity. All undeveloped ground surface areas within the Project Area were examined for fossils or sediments that are favorable for the preservation of fossils, artifacts (e.g., flaked stone tools, tool-making debris, stone milling tools or fire-affected rock), soil discoloration that might indicate the presence of a cultural midden, soil depressions, and features indicative of the former presence of structures or buildings (e.g., postholes, foundations), or historic-era debris (e.g., metal, glass, ceramics). Existing ground disturbances (e.g., cutbanks, ditches, animal burrows, etc.) were visually inspected. Photographs of the Project Area, ground surface visibility, and items of interest, were taken with a digital camera.

Cogstone Archaeologist, Teresa Terry, completed an intensive-level pedestrian survey of the entire Project Area on April 15, 2019. The area surveyed consisted of parcel #s APN 3096-361-07 and APN 3096-361-06. The survey was performed by walking 15 meter transects down the length of the Project Area.

RESULTS

Ground visibility was moderate, at roughly 50 percent (Figure 5). The Project is a level lot of undeveloped land with native and invasive vegetation including: creosote, ephedra, wild rhubarb, and stork bill. Two isolated historic cans were found near the northern edge of the Project Area: P-36-033188 is a flattened solder dot evaporated/condensed milk can from the early to mid-20th century, and P-36-033189 is a 1960’s aluminum top beer can (Figures 6 and 7). Modern household debris including children’s toys, and concrete was evident in piles around the Project Area. The toys were mostly modern and some dated back as early as the 1980’s: a “Cabbage Patch” doll, “Beanie Baby” stuffed animals, balls, “Barbie” dolls, etc. No other cultural resources were found within the Project Area. Department of Parks and Recreation Series 523 forms for the isolates are located in Appendix D.
Native sediments consist of light colored sandy alluvium with numerus small pebbles and cobbles. Finer sands and silts were typically not seen at the surface due to deflation processes (Figure 5). Some concentrated areas of small rock were likely dumped onsite. No fossils were observed during the survey.

Figure 5. Overview of Project Area, view to the west.
Figure 6. P-36-033188 Solder dot historic milk can

Figure 7. P-36-033189 Aluminum top historic beer can
STUDY FINDINGS AND RECOMMENDATIONS

PALEONTOLOGICAL RESOURCES

Sediments mapped at the surface of the Project Area consist of young alluvial fan deposits which are less than 10,000 years old and date to the middle Holocene Epoch. Based on the Project geology, the results of the paleontological literature review, records search, and prior monitoring in this portion of Victorville, no fossils have been recovered from near to the Project in the past. Additionally, no fossils were observed during the survey.

The sediments of the Project Area are assigned a low potential for paleontological resources (BLM 2007). No program to mitigate adverse impacts to nonrenewable paleontologic resources is recommended at this time. If unanticipated fossils are unearthed during construction, work should be halted in that area until a qualified paleontologist can assess the significance of the find. Work may resume immediately a minimum of 50 feet away from the find.

CULTURAL RESOURCES

As part of the present cultural resources assessment for the Project, Cogstone reviewed existing literature and historic maps for information. A CHRIS records search was also completed at the SCCIC, and a Sacred Lands File search was completed by the NAHC. Finally, an intensive pedestrian survey of the entire 8.9 acre Project Area was performed on April 15, 2019.

During the pedestrian survey of the Project Area, two isolated historic cans, P-36-033188 and P-36-033189, were found near the northern edge. P-36-033188 is a flattened solder dot evaporated/condensed milk can from the early to mid-20th century, and P-36-033189 is a 1960’s aluminum top beer can. Both isolates were highly rusted but complete. The isolated artifacts were found outside of an interpretable archaeological context, which consists of groups of contemporary and associated artifacts, ecofacts, features, and/or sites. Without this context, isolates typically lack the potential to yield information important in prehistory or history according to California Register of Historic Resources (CRHR) criterion (Criterion 4) under which archaeological resources are most often found to be significant. As such, the remains identified during this study are not significant and are ineligible for listing on the CRHR and need no further consideration.

The lack of historic development in the Project Area seen in aerals and topographic maps, and the low density of previously recorded sites in the surrounding vicinity lead to a conclusion of a low potential for buried cultural deposits. No further cultural work is recommended.
In the event of an unanticipated discovery, all work must be suspended within 50 feet of the find until a qualified archaeologist evaluates it. In the unlikely event that human remains are encountered during Project development, all work must cease near the find immediately.

In accordance with California Health and Safety Code Section 7050.5, the County Coroner must be notified if potentially human bone is discovered. The Coroner will then determine within two working days of being notified if the remains are subject to his or her authority. If the Coroner recognizes the remains to be Native American, he or she shall contact the Native American Heritage Commission (NAHC) by phone within 24 hours, in accordance with Public Resources Code Section 5097.98. The NAHC will then designate a Most Likely Descendant (MLD) with respect to the human remains. The MLD then has the opportunity to recommend to the property owner or the person responsible for the excavation work means for treating or disposing, with appropriate dignity, the human remains and associated grave goods. Work may not resume in the vicinity of the find until all requirements of the health and safety code have been met.
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1970  

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2019  
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UCMP
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EDUCATION
1999  M.A., Anthropology (Archaeology), Harvard University, Cambridge
1995  B.A., Anthropology, University of Pennsylvania, Philadelphia

SUMMARY QUALIFICATIONS
Ms. Martinez is a Registered Professional Archaeologist with 22 years of experience in archaeological fieldwork, research, and curation. She meets national standards in archaeology set by the Secretary of Interior’s Standards and Guidelines for Archaeology and Historic Preservation and is accepted as a Principal Investigator for both prehistoric and historical archaeology by the California State Office of Historic Preservation’s Information Centers. Her experience also includes compliance with CEQA, NEPA, Section 106 of NHPA, NAGPRA, SB 18 and other cultural resource laws. Ms. Martinez also has extensive experience consulting with Native American leaders and community members in a variety of contexts.

SELECTED PROJECTS
Needles Highway Shoulder Grading Project, County of San Bernardino Public Works, Needles, CA. Cogstone conducted cultural resources monitoring during shoulder grading of 11.4 miles on both sides of the Needles Highway between the town of Needles and the California State border. Project Manager. 2018-2019

Barstow and Apple Valley Yards Project, County of San Bernardino Public Works, Barstow and Apple Valley, CA. Project consisted shoulder grading of 22.93 miles along 7 roads. Managed record search, intensive-level pedestrian archaeological survey and technical report. Project Manager. 2018

SR 138 Crowder Canyon Realignment Data Recovery, Caltrans District 8, Hesperia, San Bernardino County, CA. The project involved realignment of a ~2-mile segment of SR 138 including construction of three bridges, one lane in each direction, drainage construction and demolition of the existing segment. Cogstone participated in data recovery at two archaeological sites. All work was performed in compliance with the Caltrans SER and NEPA, CEQA, and Section 106 of NHPA. Tasks included Native American coordination, manual and mechanical excavation, backfilling, and controlled destruction. Sub to Applied Earthworks. Project Manager. 2016-2018

High Desert Corridor/ SR-138 Widening Project, Caltrans District 7 On-Call (07A3145)/LA Metro, Los Angeles and San Bernardino Counties, CA. This project proposed by Caltrans and Metro involved construction of a new, approximately 63-mile long, east-west freeway/expressway and rail line between SR-14 in Los Angeles County and SR-18 in San Bernardino County. Phase II/III testing and data recovery conducted at the three sites. Compliance with Section 106 of the NHPA and CEQA required. Analyzed lithic material. Sub to Parsons Transportation Group. Archaeologist. 2015-2016

Longboat Solar Photovoltaic, EDF Renewable Energy, Barstow and Lenwood, San Bernardino County, CA. The project was construction of a new solar facility. Managed the cultural resources assessment including Phase I and Extended Phase I studies to support MND for this ~235-acre site. Managed archaeological monitoring, Native American coordination, Phase II testing, and was co-author of the treatment plan and compliance report. Sub to Environmental Intelligence. Project Manager/Principal Investigator. 2015-2017
EDUCATION
2013  M.S., Biology with paleontology emphasis, California State University San Bernardino
2000  B.S., Geology with paleontology emphasis, University of California, Los Angeles

SUMMARY QUALIFICATIONS
Scott has more than 23 years of experience in California paleontology. She is a qualified geologist and paleontologist with extensive survey, monitoring and fossil salvage experience. In addition, she has special skills in fossil preparation (cleaning and stabilization) and preparation of stratigraphic sections and other documentation for fossil localities. Scott serves as company safety officer and is the author of the company safety and paleontology manuals.

SELECTED PROJECTS
Fire Station 172, Rancho Cucamonga Fire Protection District, Rancho Cucamonga. Principal Investigator and report author. Fire station will be relocated approximately one mile from the current location. Prepared a Paleontological Resources Assessment. Principal Investigator. 2018

South Norco, Riverside County Flood Control and Water Conservation District, Norco. Principal Investigator and report author. The channel will be widened and portions will be realigned. Prepared a Paleontological Resources Impact Mitigation Program. Principal Investigator. 2018

Wildomar Master Drainage Plan, Riverside County Flood Control and Water Conservation District, Wildomar. Principal Investigator and report author. A detention basin will be constructed, the channel will be widened, and portions will be realigned. Prepared a Paleontological Resources Assessment. Principal Investigator. 2017

Palm Avenue Grade Separation, Caltrans District 8, San Bernardino County. Field Director. Directed the assessment of paleontological resources for proposed grade separation of the Burlington Northern Santa Fe (BNSF) Railroad tracks at Palm Avenue and Route 66. Co-authored a combined Paleontological Identification/Evaluation Report. 2013

Dola Ditch, County of San Bernardino Department of Public Works, near Amboy. The project would include replacing a bridge over a wash along Route 66. Prepared a Paleontological Resources Impact Mitigation Program, supervised monitoring efforts, and prepared a Paleontological Resources Monitoring Report. Principal Investigator and report author. 2016-2017

Lanzit Ditch, County of San Bernardino Department of Public Works, near Amboy. Principal Investigator and report author. The project would include replacing a bridge over a wash along Route 66. Prepared a Paleontological Resources Impact Mitigation Program, supervised monitoring efforts, and prepared a Paleontological Resources Monitoring Report. Principal Investigator. 2016-2017

Murrieta Hospital Commons, Murrieta, Riverside County. Principal Investigator and report author. The project would include building a Holiday Inn Express hotel, three restaurants, and retail stores. Prepared a Paleontological Resources Impact Mitigation Program. Principal Investigator. 2016

Dos Lagos, Corona, Riverside County. Principal Investigator and report author. The project would include three construction areas where retail, office, and industrial buildings are planned. Prepared a Paleontological Resources Technical Report. Principal Investigator. 2016
SUMMARY QUALIFICATIONS

Ms. Terry is a Registered Professional Archaeologist with 14 years of experience in cultural resources management. She meets national standards in prehistoric and historic archaeology set by the Secretary of Interior’s Standards and Guidelines for Archaeology and Historic Preservation. She has supervised large monitoring projects in the Southern California area, and served as a crew chief and assistant project director on a variety of archaeological field projects in California and the greater U.S. Southwest as well as written or contributed to archaeological assessments and project reports. She is experienced in advanced techniques in modern artifact analysis, curation, and archival methods, and has completed several curation projects.

SELECTED PROJECTS

Needles Highway Shoulder Grading Project, County of San Bernardino Public Works, Needles, CA.
Conducted cultural resources monitoring during shoulder grading of 11.4 miles on both sides of the Needles Highway between the town of Needles and the California State border. Principal Investigator. 2018-2019.

Barstow and Apple Valley Yards Project, County of San Bernardino Public Works, Barstow and Apple Valley, CA. Project consisted shoulder grading of 22.93 miles along 7 roads. Managed record search, performed intensive-level pedestrian archaeological survey and wrote a separate report for each road. Principal Investigator. 2018

Pipeline Avenue and Others ADA Ramps, Milling, and Overlay Project, County of San Bernardino Public Works, Chino, CA. Project consisted of the installation of 88 new ADA ramp and the re-construction and/or repair of ramps. Managed record search, performed intensive-level pedestrian archaeological survey and wrote report. Principal Investigator. 2018

Altdorf Road and Other Roads Project, County of San Bernardino Public Works, CA. Project consisted of the chip seal of 5.81 miles of roads. Managed record search, performed intensive-level pedestrian archaeological survey and wrote report. Principal Investigator. 2017

Bear Springs Road and Other Roads Project, County of San Bernardino Public Works, CA. Project consisted of the chip seal of 19.79 miles of roads. Managed record search, performed intensive-level pedestrian archaeological survey and wrote report. Principal Investigator. 2017

Marshall Boulevard and Others (Various) Road Maintenance Project, County of San Bernardino Public Works, CA. Project consisted of the chip seal of 10.93 miles of roads. Managed record search, performed intensive-level pedestrian archaeological survey and wrote report. Principal Investigator. 2017

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

SUMMARY QUALIFICATIONS
Mr. Scott is a paleontological resource management specialist with over thirty years’ professional experience in the recovery, preparation, curation, and preservation of nonrenewable paleontological resources. He is emeritus Curator of Paleontology, San Bernardino County Museum (2015–present) and an adjunct instructor, Department of Biology, California State University, San Bernardino (2005–present). He coordinates, supervises and provides support for field, laboratory, curatorial and technical writing activities for numerous paleontological resource assessment and impact mitigation programs. Mr. Scott is also a highly-trained specialist in the identification of fossil mammals, and is familiar with the skeletal anatomy of land vertebrates dating from the Miocene Epoch to the Pleistocene and Holocene Epochs. He is also proficient in documenting and interpreting taphonomic processes and their effects upon fossil assemblages. He has authored numerous technical resource management reports, and in addition has published several paleontology research articles in professional scientific journals.

SELECTED PROJECTS

**Purple Line Extension (Westside Subway), Metro/FTA, Los Angeles.** Program Manager and Principal Paleontologist. The project involves extension of the subway from Wilshire/Western to the VA Facility in Westwood for 9 miles. Currently providing monitoring and all other cultural and paleontological services for Section One of the project. 2016–present.

**Highway 111 Street Improvement Project, City of Indio, Riverside County, CA.** In compliance with mitigation measures, Cogstone provided paleontological resources monitoring during the excavation and grading of a ~1.7 mile stretch of highway on a full-time basis for sediments five feet or more below the original ground surface. This project received Federal funding and this report has been produced in compliance with the National Environmental Policy Act (NEPA). Sub to ECORP Consulting. Project Manager & Report Author. 2018

**Camino de la Cumbre Project, City of Sherman Oaks, Los Angeles County, CA.** The purpose of this Paleontological Resources Assessment is to determine the potential for impacting fossil resources during excavations of the Camino de la Cumbre residential development project. Managed survey and prepared Paleontological Resources Assessment Report. Sub to Ridge, Inc. Qualified Principal Paleontologist & Author. 2018

**Charcot Avenue Extension Over I-880 Project, Caltrans District 4, City of San Jose, Santa Clara County, CA.** Cogstone produced a Paleontological Identification Report (PIR) to assess the potential for impacting fossil resources during the proposed construction of a two-lane extension. Cogstone consulted published literature and records for fossil localities within a one mile radius of the project. Sub to David J. Powers. Qualified Principal Paleontologist & Author. 2018

**Ava Hollywood Mixed Use High-Rise Project, City of Los Angeles, Los Angeles County, CA.** This project was conducted in compliance with the Mitigation Measure as defined by the Los Angeles Department of City Planning. Cogstone provided paleontological monitoring during the excavation and grading for a seven story building with two levels of underground parking on a full-time basis for sediments five feet or more below the original ground surface. Project Manager & Author. 2018

**Victorville Fleet Service Center Project, City of Victorville, San Bernardino County, CA.** Cogstone was retained by the County of San Bernardino Department of Public Works to provide paleontological monitoring and mitigation during excavation conducted in conjunction with construction of the 4.8 acre project. Managed monitoring and authored the Paleontological Resources Monitoring Compliance Report. Author. 2018
EMILY BARTON
Archaeologist

EDUCATION
2010  B.A. Anthropology, Minor Paleontology, Sonoma State University

SUMMARY QUALIFICATIONS
Ms. Barton is an archaeologist with seven years of experience in surveys, osteological analysis, excavation and burial recovery, in situ burial analysis and inventory records, burial drawings, illustration, environmental preservation, artifact and bone identification, site and artifact photography, basic lithic analysis, wet screening, recordkeeping, artifact processing, monitoring, archaeological cataloging, dealing with problem collections, and databases. She is a member of the Society of California Archaeology.

SELECTED PROJECTS

El Dorado Hills 52 South Segment Development Project, El Dorado Hills, El Dorado County, California. The project involved an assessment for the future development of numerous retail and commercial buildings and associated parking, landscaping, lighting, utility infrastructure, and driveways. Conducted the intensive pedestrian survey of the project area and updated the current condition of resources located within the project area boundary. Sub to Foothill Associates. Archaeologist. 2018

4180 Duluth Avenue Facilities Project, PG&E, City of Rocklin, Placer County, California. The project involved the excavation for a PG&E regional operations center at 4180 Duluth Avenue and consisted of a partial demolition and new construction of a 4,078 square foot warehouse. Conducted paleontological monitoring. Sub to ECORP Consulting, Inc. Paleontological Monitor. 2017

Lifehouse Church Entitlements Project, City of Rocklin, Placer County, California. The project proposes to subdivide a ten-acre property into two parcels of approximately the same size with the eastern half being developed into a larger church complex and the western half being developed for commercial or residential uses. Conducted the intensive pedestrian survey of the project area. Archaeologist. 2018

Upper Berryessa Flood Channel Improvements Project, City of Milpitas, Santa Clara County, California. The project consisted of numerous flood channel improvements along Berryessa Creek within an approximately 2.1 mile alignment on behalf of the U.S. Army Corps of Engineers in association with the Santa Clara Valley Water District. Conducted burial recovery for a total of nine in-situ burials and conducted archaeological monitoring of ground disturbing activities within the site. Contributed to portions of the Burial Recovery and Archaeological Monitoring Compliance Report. Archaeologist. 2017

Bryte Park Phase II Construction Project, City of West Sacramento, Yolo County, California. The project involved improvements to the existing Bryte Park facility including the construction of a covered concrete picnic area, restroom, drinking fountain, parking lot, lighting facilities, sidewalks, two basketball courts, the installation of sewer and electrical connections, and landscaping. Conducted Phase II testing, recorded six isolated finds, and contributed to the final report. Archaeologist. 2017

Metropole Vault Replacements, Southern California Edison, Avalon, Catalina Island, Los Angeles County, CA. The project involved archaeological monitoring and coordinating Native American monitoring during ground disturbing activities of a 30,000 s.f. APE for replacement of two underground electrical vaults. The site is located within the boundaries of a Tongva tribal village. Barton participated in the recovery of remains discovered on-site; and analysis of human remains and faunal. Archaeologist. 2014-2015
APPENDIX B. PALEONTOLOGICAL RECORD SEARCH
Cogstone
Megan Wilson
1518 W. Taft Avenue
Orange, CA 92865

Dear Ms. Wilson,

This letter presents the results of a record search conducted for the Desert Trails Academy Project (Cogstone # 4515) in Victorville, San Bernardino County, California. The project site consists of 4.3 acres located east of Mesa View Drive at Fern Haven Street on in Section 28, Township 5 North, Range 5 West of the Baldy Mesa USGS 7.5 minute quadrangle.

The geologic units underlying this project are mapped entirely as alluvial deposits dating from the early Holocene to modern period (Morton & Miller, 2006). While early Holocene alluvial units are typically considered to be of high paleontological sensitivity, the modern sediment is not. The Western Science Center does not have localities within the project area or within a 1 mile radius.

Should excavation activity associated with development of the project area impact deeper early Holocene alluvial units that are paleontologically sensitive, it would be the recommendation of the Western Science Center that a paleontological resource mitigation program be put in place to monitor, salvage, and curate any recovered fossils associated with the study area.

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

Sincerely,

[Signature]

Darla Radford
Collections Manager
APPENDIX C. NATIVE AMERICAN CONSULTATION
| **COGSTONE SACRED LANDS FILE SEARCH REQUEST** |  |
| **DATE:** | April 3, 2019 |
| **COGSTONE PROJECT NUMBER:** | 4515 |
| **COGSTONE PROJECT NAME:** | Desert Trails Academy |
| **PROJECT DESCRIPTION:** | This Project proposes the construction of a new campus for the Desert Trails Preparatory Academy Charter School consisting of a 37,800 square foot building for 330 middle school students on the east side of Mesa View Drive at Fern Haven Street in the City of Victorville. |
| **USGS 7.5' QUAD:** | Baldy Mesa |
| **COUNTY:** | San Bernardino |
| **TOWNSHIP/RANGE/SECTION:** | T: 5N; R: 5W; Section 28; SBBM |
| **ACRES:** | 8.9 acres |
| **TYPE OF SEARCH:** | Sacred Lands File |
| **1:24000 map attached** | √ |

Thank you.

Megan Wilson  
1518 W. Taft Ave.  
Orange, CA 92865  
(714) 974-8303 fax  
mwilson@cogstone.com

Please Email to:
April 15, 2019

Megan Wilson
Cogstone

VIA Email to: mwilson@cogstone.com

RE: Desert Trails Academy Project, San Bernardino County

Dear Ms. Wilson:

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were negative. However, the absence of specific site information in the SLF does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Attached is a list of Native American tribes who may also have knowledge of cultural resources in the project area. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated; if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call or email to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from tribes, please notify the NAHC. With your assistance, we can assure that our lists contain current information. If you have any questions or need additional information, please contact me at my email address: steven.quinn@nahc.ca.gov.

Sincerely,

Steven Quinn
Associate Governmental Program Analyst

Attachment
Native American Heritage Commission
Native American Contact List
San Bernardino County
4/15/2019

Morongo Band of Mission Indians
Denisa Torres, Cultural Resources Manager
12700 Pumarra Road
Banning, CA, 92220
Phone: (951) 849 - 8807
Fax: (951) 922-8146
dtorres@morongo-nsn.gov

Morongo Band of Mission Indians
Robert Martin, Chairperson
12700 Pumarra Road
Banning, CA, 92220
Phone: (951) 849 - 8807
Fax: (951) 922-8146
dtorres@morongo-nsn.gov

San Fernando Band of Mission Indians
Donna Yocum, Chairperson
P.O. Box 221838
Newhall, CA, 91322
Phone: (503) 539 - 0933
Fax: (503) 574-3308
ddyocum@comcast.net

San Manuel Band of Mission Indians
Lee Clauss, Director of Cultural Resources
26569 Community Center Drive
Highland, CA, 92346
Phone: (909) 864 - 8933
Fax: (909) 864-3370
Iclauss@sanmanuel-nsn.gov

Serrano Nation of Mission Indians
Goldie Walker, Chairperson
P.O. Box 343
Patton, CA, 92369
Phone: (909) 528 - 9027

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

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed Desert Trails Academy Project, San Bernardino County.
APPENDIX D. DEPARTMENT OF PARKS AND RECREATION SERIES
523 FORMS
*Resource Name or #: 2019_04_15_TJT_01

P1. Other Identifier:

*P2. Location: ☒ Not for Publication ☐ Unrestricted
   *a. County: San Bernardino  
   *b. USGS 7 1/2' Quad: Baldy Mesa  
   Date: 2018  
   T 5 : R 5 : 30 of Sec 28 : S.B.B.M.  
   c. Address: Olivera Road, City: Victorville  
   Zip: 92392  
   d. UTM: Zone 11N, 462647.00 mE/3816580.00 mN  
   e. Other Locational Data: Parcel # 3096-361-07, on the north side of parcel east of Mesa View Drive.

*P3a. Description:

Resource consists of a single steel, solder dot, lap seamed, condensed or evaporated milk hole-in-top can. The can has been flattened, but approximate size is about 4 inches long by 3 inches wide. The solder dot is on a raised circle in the top of the can, which dates the can to between 1915 and 1985. The can is located between creosote bushes in an open field about 30 feet from the south side of a dirt road (Olivera Road) and about 425 feet east of Mesa View Drive.

*P3b. Resource Attributes: AH4

*P4. Resources Present: ☐ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☒ Other (Isolates, etc.)

P5b. Description of Photo: View down, 04/15/2019, Accession #2019_04_15_TJT_15

*P6. Date constructed/  
   Age and Source:  
   ☒ Historic ☐ Prehistoric  
   ☐ Both  
   1915 - 1985

*P7. Owner and Address:  
   Desert Trails Preparatory Academy, 14530 Bellflower Street, Adelanto, CA 92301

*P8. Recorded by:  
   Teresa Terry  
   Cogstone, 1518 Taft Avenue, Orange, California, 92865

*P9. Date Recorded:  
   04/15/2019

*P10. Survey Type:  
   Intensive Pedestrian


*Attachments: ☐ NONE ☒ Location Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record ☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record ☐ Photograph Record ☐ Other (List): Cogstone
Map Name: Adelanto / Baldy Mesa USGS 7.5 Topographic Map

Scale: 1:2000 feet

Date of map: 5/22/2019
**State of California The Resources Agency**

**DEPARTMENT OF PARKS AND RECREATION**

**PRIMAR Y RECORD**

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**Other Listings**

**Review Code**

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**Page 1 of 2**

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**Resource Name or #:** 2019_04_15_TJT_02

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**P1. Other Identifier:**

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**P2. Location:** Not for Publication

- **County:** San Bernardino
- **USGS 7.5' Quad:** Baldy Mesa
- **Date:** 2018
- **T:** 5; **R:** 5; **of Sec:** 28; **S.B.B.M.**
- **Address:** Olivera Road
- **City:** Victorville
- **Zip:** 92392
- **UTM:** Zone 11N, 462600.00 mE/3816579.00 mN
- **Other Locational Data:** Parcel # 3096-361-07, on the north side of parcel east of Mesa View Drive.

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**P3a. Description:**

Resource consists of a single steel sided, aluminum top pull-tab beer can. The can has been slightly flattened, but approximate size is about 5 inches long by 3 inches wide. The can dates to the 1960s.

The can is located between creosote bushes in an open field about 30 feet from the south side of a dirt road (Olivera Road) and about 275 feet east of Mesa View Drive.

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**P3b. Resource Attributes:** AH4

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**P4. Resources Present:**

- Building
- Structure
- Object
- Site
- District
- Element of District
- Other (Isolates, etc.)

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**P5b. Description of Photo:** View down, 04/15/2019, Accession #2019_04_15_TJT_16

---

**P5a. Photograph or Drawing**

---

**P6. Date constructed/ Age and Source:**

- Historic
- Prehistoric
- Both
- 1960’s

---

**P7. Owner and Address:**

Desert Trails Preparatory Academy, 14530 Bellflower Street, Adelanto, CA 92301

---

**P8. Recorded by:**

Teresa Terry
Cogstone, 1518 Taft Avenue, Orange, California, 92865

---

**P9. Date Recorded:**

04/15/2019

---

**P10. Survey Type:**

Intensive Pedestrian

---

**P11. Report Citation:** Barton, Emily, et al. 2019. Cultural and Paleontological Assessment for the Desert Trails Preparatory Academy Project, City of Victorville, San Bernardino County, California.

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**Attachments:**

- NONE
- Location Map
- Continuation Sheet
- Building, Structure, and Object Record
- Archaeological Record
- District Record
- Linear Feature Record
- Milling Station Record
- Rock Art Record
- Artifact Record
- Photograph Record
- Other (List): 

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Cogstone 45
**Map Name:** Adelanto / Baldy Mesa USGS 7.5 Topographic Map

**Scale:** 1:2000 feet

**Date of map:** 5/22/2019