



# PALEONTOLOGICAL AND ARCHAEOLOGICAL ASSESSMENT OF THE BLOOMINGTON AFFORDABLE HOUSING PROJECT, SAN BERNARDINO COUNTY, CALIFORNIA

## Prepared for:

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***Archaeological Sites:*** none

***USGS Quadrangle:*** Gabrielino, Bloomington

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## MANAGEMENT SUMMARY

Pursuant to requirements of the National Environmental Policy Act (NEPA), the National Historic Preservation Act (NHPA) and the California Environmental Quality Act (CEQA), the objective of this study is to determine the potential adverse effects or significant impacts to significant paleontological resources, historic properties or historical resources during construction of the proposed Bloomington Affordable Housing Project. The project area, or area of potential effect (APE), encompasses approximately nine acres and is located on the north side of Valley Boulevard and west of Locust Avenue, in the Bloomington neighborhood of unincorporated San Bernardino County, California. The proposed project entails the construction of a 196-unit affordable housing apartment complex and community facilities.

A search for paleontological records was completed at the San Bernardino County Museum (SBCM; Scott, 2013, 2008; Appendix B) and in published materials (Jefferson, 1991a, 1991b). The APE and a ten-mile radius were searched for resources. No fossil localities have been previously collected from within a 1½- mile radius of the APE (Table 2).

A search for archaeological and historical records was completed at the San Bernardino Archaeological Information Center at the San Bernardino County Museum in Redlands. The search included a one mile-radius around the approximate 9-acre APE. Results of the records search indicated that no previous cultural resources investigations have been completed within the 9-acre APE boundary. Results of these cultural resources studies indicate that there are no known archaeological resources within the APE. Two historic-era structures were identified on historic-era aerial photographs and topographic maps but are no longer on the property. A total of 39 cultural resources have been documented within a one-mile radius of the APE (*See* Tables 4 and 5). Of these 39 resources, all are historical archaeological sites, three are historical trash scatters, two are California Points of Historic Interest (P-36-8542 & P-36-15135), and 36 are historic-era built resources.

The paleontological and cultural resources pedestrian survey of the APE was completed on June 4, 2013. No paleontological or archaeological materials were observed during the course of field survey.

The APE is considered low-to-moderately sensitive for containing prehistoric archaeological deposits in subsurface contexts. The potential for the APE to contain intact historical archaeological deposits is considered to be moderate to high. Therefore, it is recommended that a qualified paleontological and archaeological monitor be present during ground disturbance associated with project construction.

## INTRODUCTION

### PURPOSE OF STUDY

Cogstone Resource Management Inc. was retained to conduct an assessment to identify any archaeological or paleontological resources that could be present on the nine acres containing the Bloomington Affordable Housing Project in the unincorporated area of San Bernardino County known as Bloomington, California. This study includes cultural and paleontological record searches, Native American Sacred Lands file search, consultation with Native American tribes and individuals, and pedestrian field survey to identify the potential for encountering paleontologically sensitive soils and to identify surface manifestations of cultural resources within the project area or area of potential effect (APE).

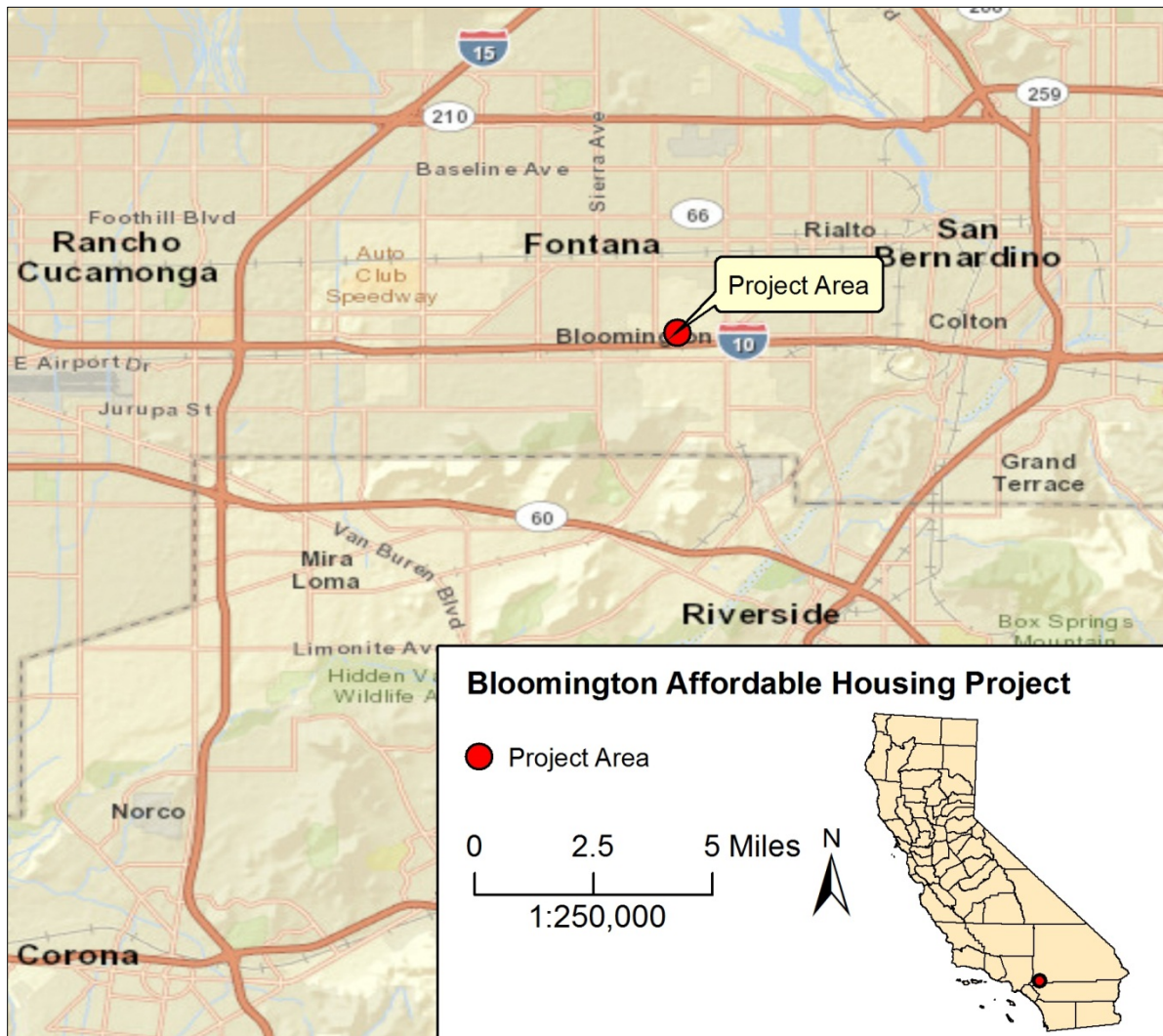


Figure 1. Project Vicinity

## **PROJECT DESCRIPTION**

The proposed project is to develop and construct a 196-unit affordable housing apartment complex and community amenities. The development shall be located on Valley Boulevard and west of Locust Avenue in the Bloomington neighborhood of unincorporated San Bernardino County, California. Specifically, the proposed project is located on the Fontana 7.5 minute quadrangle, Section 21 of Township 1 South, Range 5 West (*See* Figure 2). The project developer is Related Companies, which has previously developed several family sites to the west of the current site in the City of Fontana. The project is considered an “Intergeneration Project” which houses both families and seniors within the same community.

The project includes construction of stacked flats and two-story townhomes, a regional library, parking with gated entries, carports, community greenspace, leasing offices, and a community swimming pool (*See* Figure 3).

## **PROJECT PERSONNEL**

Cogstone Resource Management Inc. (Cogstone) conducted the cultural and paleontological resources studies for the proposed development.

Sherri Gust served as the Principal Investigator for the paleontological portion of the study and supervised all work. Gust has a M.S. in Anatomy (Evolutionary Morphology) from the University of Southern California, a B.S. in Anthropology from the University of California at Davis, and over 34 years of experience in California. She prepared the recommendations for paleontological resources.

Tria Belcourt served as the Principal Investigator for the cultural resources portion of the study and supervised all work. Belcourt wrote portions of the report, including the assessment of project effects and recommendations. Belcourt is a Registered Professional Archaeologist (RPA) with a M.A. in Anthropology from the University of Florida, a B.A. in Anthropology from the University of California at Los Angeles and over nine years of experience in California archaeology.

Kim Scott conducted the background research and wrote the paleontological background and survey sections of the report. Scott has a B. S. in Geology with an emphasis in Paleontology from the University of California at Los Angeles, a M.S. in Biology with an emphasis in Paleontology from California State University at Bakersfield, and over 18 years of experience in California paleontology and geology.

Molly Valasik prepared portions of this report, including the Native American consultation and prepared the historic maps for this report. Ms. Valasik is an RPA and holds an M.A. in Anthropology from Kent State University in Kent, Ohio and she has more than four years of experience in southern California archaeology.

Shanna Wexelblatt performed the record search and field survey, and prepared these portions of the report. Wexelblatt has a B.A., has completed all coursework in the master's program in Anthropology at California State University, Fullerton and is completing her thesis.

Short resumes of Cogstone staff are provided (*See Appendix A*).



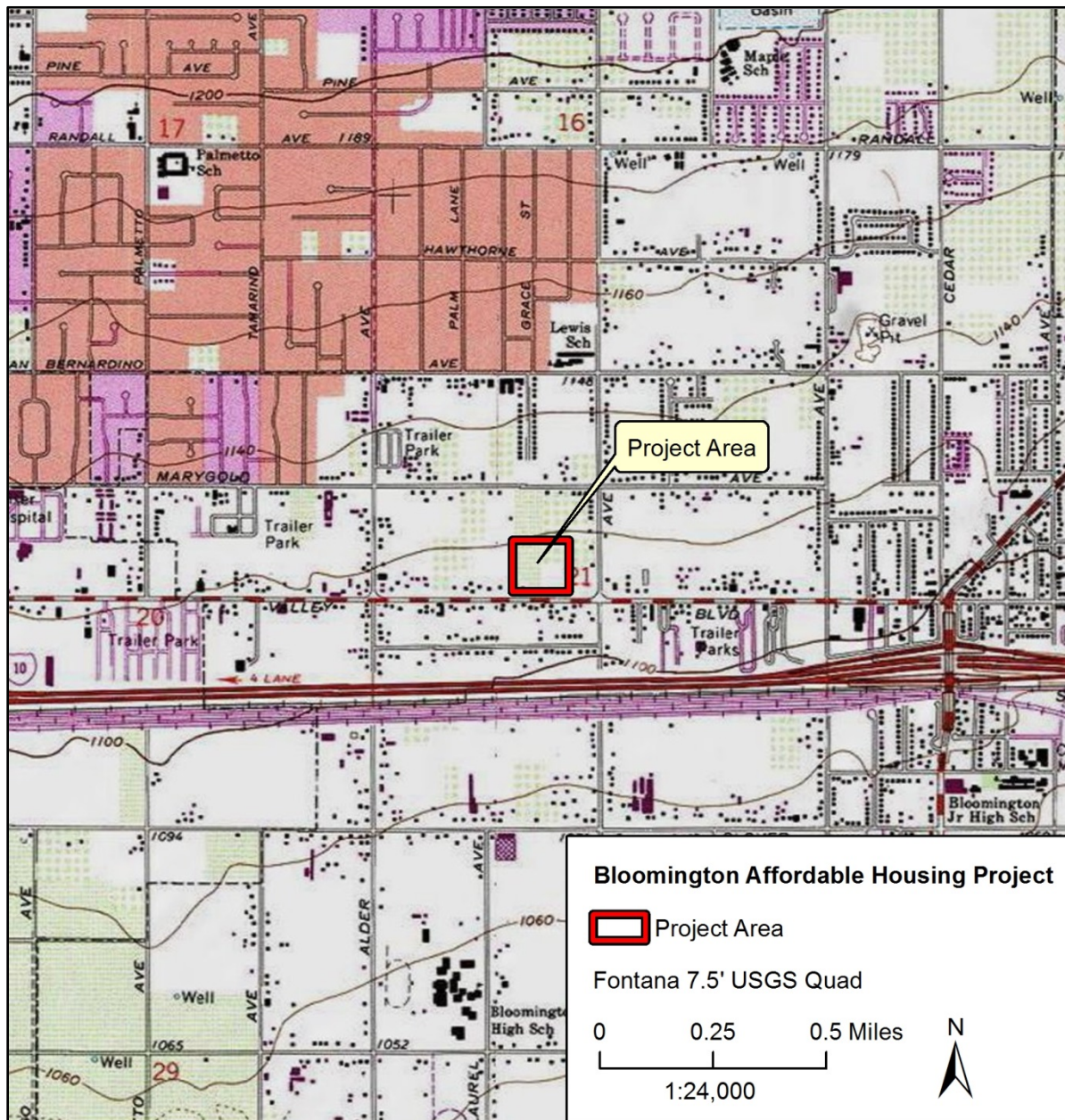
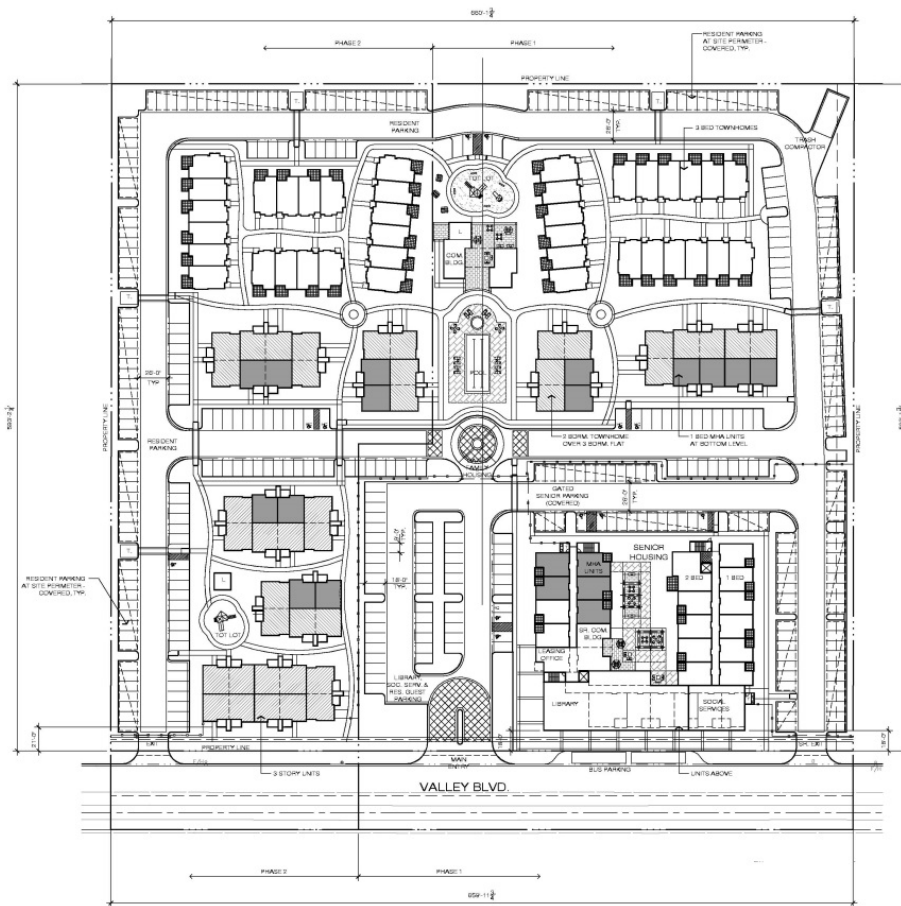


Figure 2. Proposed Bloomington Project Area





**PROJECT SUMMARY**

TOTAL LOT AREA:	8.9 ACRES (+397,058 SF)
TOTAL PARKING:	363 SPACES
TOTAL UNITS:	196 UNITS
	SENIOR - 65 FLATS
	FAMILY - 112 UNITS
	MHA - 19 UNITS

**PHASE 1**

LOT AREA:	5.51 ACRES (+240,101 SF)
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**PROGRAM SUMMARY:**

SENIOR HOUSING	65 UNITS
FAMILY HOUSING	39 UNITS
MHA HOUSING	11 UNITS
<b>TOTAL PHASE 1 UNITS</b>	<b>115 UNITS</b>

SENIOR HOUSING COMMUNITY BLDG	1,250 SF
LEADING OFFICE	750 SF
FAMILY HOUSING COMMUNITY BLDG	2,000 SF
LIBRARY	6,000 SF
SOCIAL SERVICES	1,250 SF

**PARKING:**

LIBRARY / SOCIAL SERVICES & RESIDENT VISITORS	55 SPACES
SENIOR HOUSING	1 SPACE / UNIT = 65 SPACES
FAMILY HOUSING	2 SPACES / UNIT = 78 SPACES
FAMILY HOUSING	7 SPACES / UNIT = 11 SPACES
<b>TOTAL SPACES:</b>	<b>209 SPACES</b>

**PHASE 2**

LOT AREA:	3.39 ACRES (+150,957 SF)
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**PROGRAM SUMMARY:**

FAMILY HOUSING	73 UNITS
MHA HOUSING	8 UNITS
<b>TOTAL PHASE 2 UNITS</b>	<b>81 UNITS</b>

**PARKING:**

FAMILY HOUSING	2 SPACES / UNIT = 154 SPACES
<b>TOTAL SPACES:</b>	<b>154 SPACES</b>

Scale: 1" = 40'-0"

NORTH

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**BLOOMINGTON**  
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DATE: 05.14.2013

Figure 3. Project Master Plan

## **REGULATORY ENVIRONMENT**

The Bloomington Affordable Housing Project shall receive federal funding by the United States Department of Housing and Urban Development (HUD). Therefore, both federal and state laws and regulations governing cultural and paleontological resources apply, and are reviewed below.

### **FEDERAL LAWS AND REGULATIONS**

#### **ANTIQUITIES ACT OF 1906 (16 UNITED STATES CODE [USC] 431-433)**

The Antiquities Act of 1906 states, in part:

That any person who shall appropriate, excavate, injure or destroy any historic or prehistoric ruin or monument, or any object of antiquity, situated on lands owned or controlled by the Government of the United States, without the permission of the Secretary of the Department of the Government having jurisdiction over the lands on which said antiquities are situated, shall upon conviction, be fined in a sum of not more than five hundred dollars or be imprisoned for a period of not more than ninety days, or shall suffer both fine and imprisonment, in the discretion of the court.

Although there is no specific mention of natural or paleontological resources in the Act itself, or in the Act's uniform rules and regulations (Title 43 Part 3, Code of Federal Regulations [43 CFR 3]), "objects of antiquity" has been interpreted to include fossils by the National Park Service (NPS), the Bureau of Land Management (BLM), the Forest Service (FS), and other Federal agencies. Permits to collect fossils on lands administered by Federal agencies are authorized under this Act (see "Permit Requirements of Federal Agencies section, below). Therefore, projects involving Federal lands will require permits for both paleontological resource evaluation and mitigation efforts.

#### **ARCHAEOLOGICAL AND HISTORIC PRESERVATION ACT OF 1974 (16 U.S.C. 469 ET SEQ)**

This act, also called the Moss-Bennett Act, applies to most federal construction projects. It requires the federal agency to notify the Secretary of the Interior if a project threatens the loss or destruction of significant historic or archaeological data. FHWA's Section 106 compliance process provides substantially the same protection; consequently Moss-Bennett is not invoked on FHWA projects.

#### **HISTORIC SITES ACT OF 1935 (16 U.S.C. 461 ET SEQ)**

Under this act, Congress established a national policy to preserve for public use historic sites, buildings, and objects of national significance for the inspiration and benefit of the people of the United States. This act authorized the Historic American Building Survey (HABS), the Historic American Engineering Record (HAER), the National Survey of Historic Sites, the establishment

of National Historic Sites, and the designation of National Historic Landmarks. The act also authorized interagency, intergovernmental, and interdisciplinary efforts for the preservation of cultural resources. Implementing regulations of the act are found in 36 CFR Part 60 series.

#### **NATIONAL ENVIRONMENTAL POLICY ACT**

The National Environmental Policy Act (NEPA) directs federal agencies to use all practicable means to "Preserve important historic, cultural, and natural aspects of our national heritage..." (42 USC 4321 Section 101(b) (4)). Regulations for implementing the procedural provisions of NEPA are found in 40 CFR 1500 1508.

If the presence of a significant environmental resource is identified during the scoping process, federal agencies and their agents must take the resource into consideration when evaluating project effects. Consideration of paleontological resources may be required under NEPA when a project is proposed for development on federal land, or land under federal jurisdiction. The level of consideration depends upon the federal agency involved. [Caltrans 2003].

#### **NATIONAL HISTORIC PRESERVATION ACT OF 1966, AS AMENDED**

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

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

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

- (a) That are associated with events that have made a significant contribution to the broad patterns of our history; or
- (b) That are associated with the lives of persons significant in our past; or
- (c) That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- (d) That have yielded, or may be likely to yield, information important in prehistory or history (36 CFR 60.4).

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

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

## **STATE LAWS AND REGULATIONS**

### **CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)**

CEQA (Chapter 1, Section 21002) 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 projects and the feasible

alternatives or feasible mitigation measures which will avoid or substantially lessen such significant effects.

If paleontological resources are identified during the initial project scoping studies 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.

Cultural resources management work conducted as part of the Bloomington Project must also comply with the *CEQA Statutes and Guidelines* (California 2005), and any potential historic and prehistoric resources that might exist within the proposed Project area would have to be evaluated under these guidelines. Enacted in 1971, CEQA and the guidelines direct lead agencies to determine whether an archaeological site is a “historically significant” cultural resource. For purposes of this section, the term "historical resources" shall include the following:

- (1) A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the *California Register of Historical Resources* (CRHR) (Pub. Res. Code §5024.1, Title 14 CCR, Section 4850 et seq.).
- (2) A resource included in a local register of historical resources, as defined in Section 5020.1(k) of the Public Resources Code or identified as significant in an historical resource survey meeting the requirements Section 5024.1(g) of the Public Resources Code, shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.
- (3) Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be an historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the CRHR (Pub. Res. Code §5024.1, Title 14 CCR, Section 4852) including the following:

- (A) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
- (B) Is associated with the lives of persons important in our past;
- (C) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
- (D) Has yielded, or may be likely to yield, information important in prehistory or history.

(4) The fact that a resource is not listed in, or determined to be eligible for listing in the CRHR, not included in a local register of historical resources (pursuant to Section 5020.1(k) of the Public Resources Code), or identified in an historical resources survey (meeting the criteria in Section 5024.1(g) of the Public Resources Code) does not preclude a lead agency from determining that the resource may be an historical resource as defined in Public Resources Code §5020.1(j) or §5024.1 (CEQA 15064.5).

In addition to having significance, cultural resources must have integrity for the period of significance under consideration. 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 CRHR, if, under Criterion 4, it maintains the potential to yield significant scientific or historical information or specific data.

The term "unique archaeological resource" has the following meaning under CEQA: An archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

- (1) Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.
- (2) Has a special and particular quality such as being the oldest of its type or the best



available example of its type.

- (3) Is directly associated with a scientifically recognized important prehistoric or historical event or person [Public Resources Code §21083.2(g)].

A project with an effect that may cause a substantial adverse change in the significance of a historical resource or unique archaeological resource is a project that may have a significant effect on the environment. Effects on cultural properties that qualify as historical resources or unique archaeological resources can be considered adverse if they involve physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of a historical resource would be materially impaired.

The State of California Office of Historic Preservation (OHP) administers the California Register program. As a recipient of federal funding, the OHP meets the requirements of the NHPA with a SHPO who enforces a designation and protection process, has a qualified historic preservation review commission, maintains a system for surveys and inventories, and provides for adequate public participation in its activities. As the recipient of federal funds that require pass-through funding to local governments, the OHP administers the Certified Local Government program for the State of California. The OHP also administers the *California Register of Historical Landmarks* and *California Points of Local Historical Interest* programs.

#### California Health and Safety Code

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.

## **BACKGROUND**

### **GEOLOGICAL SETTING**

The project exists in the Transverse Range Geomorphic Province which is one of the most tectonically active regions of North America. To the north of the project, the San Andreas Fault Zone travels up Cajon Pass where it is the boundary between the Pacific Plate and the North American Plate. The Transverse Range Province is an east-west trending series of steep mountain ranges and valleys, oblique to the normal northwest trend of California mountains and valleys, hence the name “Transverse.” The province extends offshore to include the Channel Islands and eastward to include the Little San Bernardino Mountains.

The Transverse Ranges are a result of these two plates grinding past each other and “catching” along the bend in the San Andreas. The Pacific Plate is composed of numerous tectonic blocks that can move independently and rotate in response to the plates moving past each other. Intense north-south compression is squeezing the Transverse Ranges as the Pacific Plate moves north relative to the North American Plate, and as a result this is one of the most rapidly rising regions of the earth (Wagner, 2002).

### **STRATIGRAPHY**

The entire project is mapped as young alluvial fan deposits, unit 5 (Figure 4; Morton and Miller, 2006). These late Holocene (less than 5,000 years old), unconsolidated alluvial fan deposits consist of silts, sands, and conglomerates off the San Bernardino and San Gabriel Mountains. Forming a major portion of the alluvium in the San Bernardino Valley area, these sediments are too young to contain fossil resources, but they do overlie older alluvial deposits (Figure 4; Morton and Miller, 2006). The young alluvial fan deposits vary in thickness over the valley with the thickest deposits nearest to the San Gabriel and San Bernardino Mountains. Due to this, deeper excavations may impact fossiliferous Pleistocene deposits.

### **ENVIRONMENTAL SETTING**

The survey area is located in the southwestern portion of San Bernardino County at the base of the San Gabriel Mountains on the San Gabriel alluvial fan. The sediments covering the APEs are unconsolidated sand and gravels transported by streams and runoff. At the surface and immediate subsurface, the sediments are Holocene in age (10,000 years ago to the present). Deeper sediments are likely to be Pleistocene in age (1.8 million years ago to 10,000 years ago).

The APE is mostly flat with a slope of less than five degrees. It is crisscrossed by shallow washes.

The Holocene vegetation consists of desert scrub and chaparral, including grasses, sage and manzanita. The Holocene fauna of the region was similar to modern fauna and included deer, antelope, jackrabbit, rabbits, tortoises, and numerous bird species. In recent history, deer and antelope have been driven from the area due to human activity. Local farming and other surface alteration activities have disrupted the natural vegetation, allowing scrub vegetation to invade.

## **PREHISTORIC SETTING**

Approaches to prehistoric frameworks have changed over the years from being based on material attributes to radiocarbon chronologies to association with cultural traditions. Archaeologists defined a material complex consisting of an abundance of milling stones (for grinding food items) with few projectile points or vertebrate faunal remains dating from about 7-3 thousand years before the present as the “Millingstone Horizon” (Wallace 1955). Later, the “Millingstone Horizon” was redefined as a cultural tradition named the Encinitas Tradition (Warren 1968) with various regional expressions including Topanga and La Jolla. Use by archaeologists varied as some adopted a generalized Encinitas Tradition without regional variations, some continued to use “Millingstone Horizon” and some used Middle Holocene (the time period) to indicate this observed pattern (Sutton and Gardner 2010:1-2).

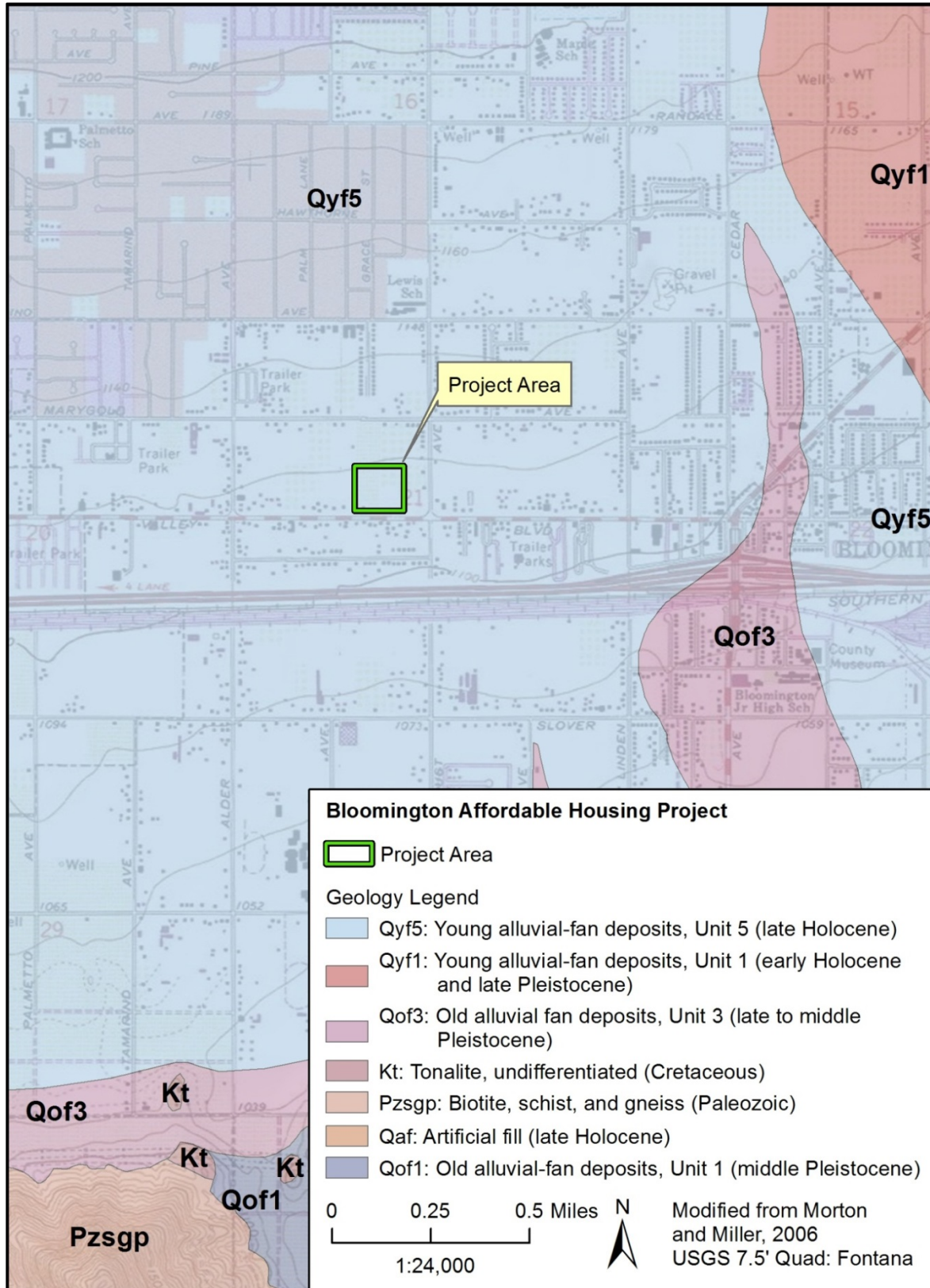


Figure 4. Geology of project area

Recently, the fact that generalized terminology is suppressing the identification of cultural, spatial and temporal variation and the movement of peoples throughout space and time was noted. These factors are critical to understanding adaptation and change (Sutton and Gardner 2010:1-2).

The Encinitas Tradition characteristics are abundant metates and manos, crudely made core and flake tools, bone tools, shell ornaments, very few projectile points with subsistence focusing on collecting (plants, shellfish, etc.). Faunal remains vary by location but include shellfish, land animals, marine mammals and fish. [Sutton and Gardner 2010:7]

The Encinitas Tradition has been redefined to have four patterns (Sutton and Gardner 2010: 8-25). These are (1) Topanga in coastal Los Angeles and Orange counties, (2) La Jolla in coastal San Diego County, (3) Greven Knoll in inland San Bernardino, Riverside, Orange and Los Angeles counties, and (4) Pauma in inland San Diego County.

About 3,500 years before present the Encinitas Tradition was replaced by a new archaeological entity, the Del Rey Tradition, in the greater Los Angeles Basin. This new entity has been generally assigned to the Intermediate and Late time periods. The changes that initiated the beginning of the Intermediate Period included new settlement patterns, economic foci and artifact types that coincided with the arrival of a new, biologically distinctive population. The Intermediate and Late periods have not been well-defined. However, many have proposed that the beginning of the Intermediate marked the arrival of Takic groups (from the Mojave Desert, southern Sierra Nevada and San Joaquin Valley) and that the Late Period reflected Shoshonean groups (from the Great Basin). Related cultural and biological changes occurred on the southern Channel Islands about 300 years later. [Sutton 2010].

The Del Rey Tradition replaces the Intermediate and Late designations for both the southern California mainland and the southern Channel Islands. Within the Del Rey Tradition are two regional patterns named Angeles and Island. The Del Rey Tradition represents the arrival, divergence, and development of the Gabrielino in southern California. [Sutton 2010]

## **PREHISTORIC CULTURES**

The latest cultural revisions for the APE define traits for time phases of the Greven Knoll pattern of the Encinitas Tradition applicable to inland San Bernardino, Riverside, Los Angeles and Orange counties (Sutton and Gardner 2010; Table 3). This pattern is replaced in the APE by the Angeles pattern of the Del Rey Tradition later in time (Sutton 2010; Table 3).

Greven Knoll sites tend to be in valleys such as the APE. These inland peoples did not switch from manos/metates to pestles/mortars like coastal peoples (c. 5,000 years before present); this may reflect their closer relationship with desert groups who did not exploit acorns. The Greven Knoll toolkit is dominated by manos and metates throughout its 7,500 year extent. In Phase I other typical characteristics were pinto dart points for atlatls or spears, charmstones, cogged stones, absence of shell artifacts and flexed position burials (Table 1). In Phase II, Elko dart points for atlatls or spears and core tools are observed along with increased indications of gathering. In Phase III, stone tools including scraper planes, choppers, hammerstones are added to the tool kit, yucca and seeds are staple foods, animal bones are heavily processed (broken and crushed to extract marrow) and burials have cairns above (Table 1). In addition, the Greven Knoll populations are biologically Yuman (based on skeletal remains) while the later Angeles populations are biologically Shoshonean (Sutton and Gardner 2010; Sutton 2010).

The Angeles pattern generally is restricted to the mainland and appears to have been less technologically conservative and more ecologically diverse, with a largely terrestrial focus and greater emphases on hunting and nearshore fishing. [Sutton 2010].

The Angeles IV phase is marked by new material items including Cottonwood points for arrows, Olivella cupped beads and Mytilus shell disks, birdstones (zoomorphic effigies with magico-religious properties) and trade items from the Southwest including pottery. It appears that populations increased and that there was a change in the settlement pattern to fewer but larger permanent villages. Presence and utility of steatite vessels may have impeded the diffusion of pottery into the Los Angeles Basin. The settlement pattern altered to one of fewer and larger permanent villages. Smaller special-purpose sites continued to be used. [Sutton 2010]

Angeles V components contain more and larger steatite artifacts, including larger vessels, more elaborate effigies, and comals. Settlement locations shifted from woodland to open grasslands. The exploitation of marine resources seems to have declined and use of small seeds increased. Many Gabrielino inhumations contained grave goods while cremations did not. [Sutton 2010]

The Angeles VI phase reflects the ethnographic mainland Gabrielino of the post-contact (i.e., post-A.D. 1542) period. One of the first changes in Gabrielino culture after contact was undoubtedly population loss due to disease, coupled with resulting social and political disruption. Angeles VI material culture is essentially Angeles V augmented by a number of Euroamerican tools and materials, including glass beads and metal tools such as knives and needles (used in bead manufacture). The frequency of Euroamerican material culture increased through time until it constituted the vast majority of materials used. Locally produced brownware pottery appears along with metal needle-drilled Olivella disk beads. The ethnographic mainland Gabrielino subsistence system was based primarily on terrestrial hunting and gathering, although nearshore fish and shellfish played important roles. Sea mammals, especially whales (likely from beached carcasses), were prized. In addition, a number of European plant and animal



domesticates were obtained and exploited. Ethnographically, the mainland Gabrielino practiced interment and some cremation. [Sutton 2010]

**Table 1. Cultural Patterns and Phases**

Phase	Dates BP	Material Culture	Other Traits
Greven Knoll I	8,500 to 4,000	Abundant manos and metates, Pinto dart points for atlatls or spears, charmstones, cogged stones and discoidals rare, no mortars or pestles, general absence of shell artifacts	No shellfish, hunting important, flexed inhumations, cremations rare
Greven Knoll II	4,000 to 3,000	Abundant manos and metates, Elko dart points for atlatls or spears, core tools, late discoidals, few mortars and pestles, general absence of shell artifacts	No shellfish, hunting and gathering important, flexed inhumations, cremations rare
Greven Knoll III (formerly Sayles complex)	3,000 to 1,000	Abundant manos and metates, Elko dart points for atlatls or spears, scraper planes, choppers, hammerstones, late discoidals, few mortars and pestles, general absence of shell artifacts	No shellfish, yucca and seeds as staples, hunting important but bones processed, flexed inhumations under cairns, cremations rare
Angles IV	1,000 to 800	Cottonwood arrow points for arrows appear, <i>Olivella</i> cupped beads and <i>Mytilus</i> shell disks appear, some imported pottery appears, possible appearance of ceramic pipes	Changes in settlement pattern to fewer but larger permanent villages, flexed primary inhumations, cremations uncommon
Angeles V	800 to 450	Artifact abundance and size increases, steatite trade from islands increases, larger and more elaborate effigies	Development of mainland dialect of Gabrielino, settlement in open grasslands, exploitation of marine resources declined and use of small seeds increased, flexed primary inhumations, cremations uncommon
Angeles VI	450 to 150	Addition of locally made pottery, metal needle-drilled <i>Olivella</i> beads, addition of Euroamerican material culture (glass beads and metal tools)	Use of domesticated animals, flexed primary inhumations continue, some cremations

## ETHNOGRAPHY

Early Native American peoples of the area are poorly understood. They were replaced about 1,000 years ago by the Gabrielino (Tongva) who were semi-sedentary hunters and gatherers. The Gabrielino speak a language that is part of the Takic language family. Their territory encompassed a vast area stretching from Topanga Canyon in the northwest, to the base of Mount Wilson in the north, to San Bernardino in the east, Aliso Creek in the southeast and the Southern Channel Islands, in all an area of more than 2,500 square miles (Figure 5; Bean and Smith 1978; McCawley 1996). At European contact, the tribe consisted of more than 5,000 people living in various settlements throughout the area. Some of the villages could be quite large, housing up to 150 people.

The Gabrielino are considered to have been one of the wealthiest tribes and to have greatly influenced tribes they traded with (Kroeber 1976:621). Houses were domed, circular structures thatched with tule or similar materials (Bean and Smith 1978:542). The best known artifacts were made of steatite and were highly prized. Many common everyday items were decorated with inlaid shell or carvings reflecting an elaborately developed artisanship (Bean and Smith 1978:542).

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

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

The area was not home to any known major villages. However, smaller villages and seasonal camps may have been present.



Figure 5. Native American traditional tribal territories

## HISTORICAL SETTING

In 1769, Spanish settlers began to enter and colonize Alta California. These initial settlers introduced the missions, presidios, pueblos and ranchos. The project area consisted of lands under the control of the Mission San Gabriel between 1771 and 1933 and were likely used to graze cattle. After the Mexican government took control of California and secularized the



missions, many lands were given to Mexican citizens to settle. This project area, however, was not part of any Mexican land grant (Figure 6).

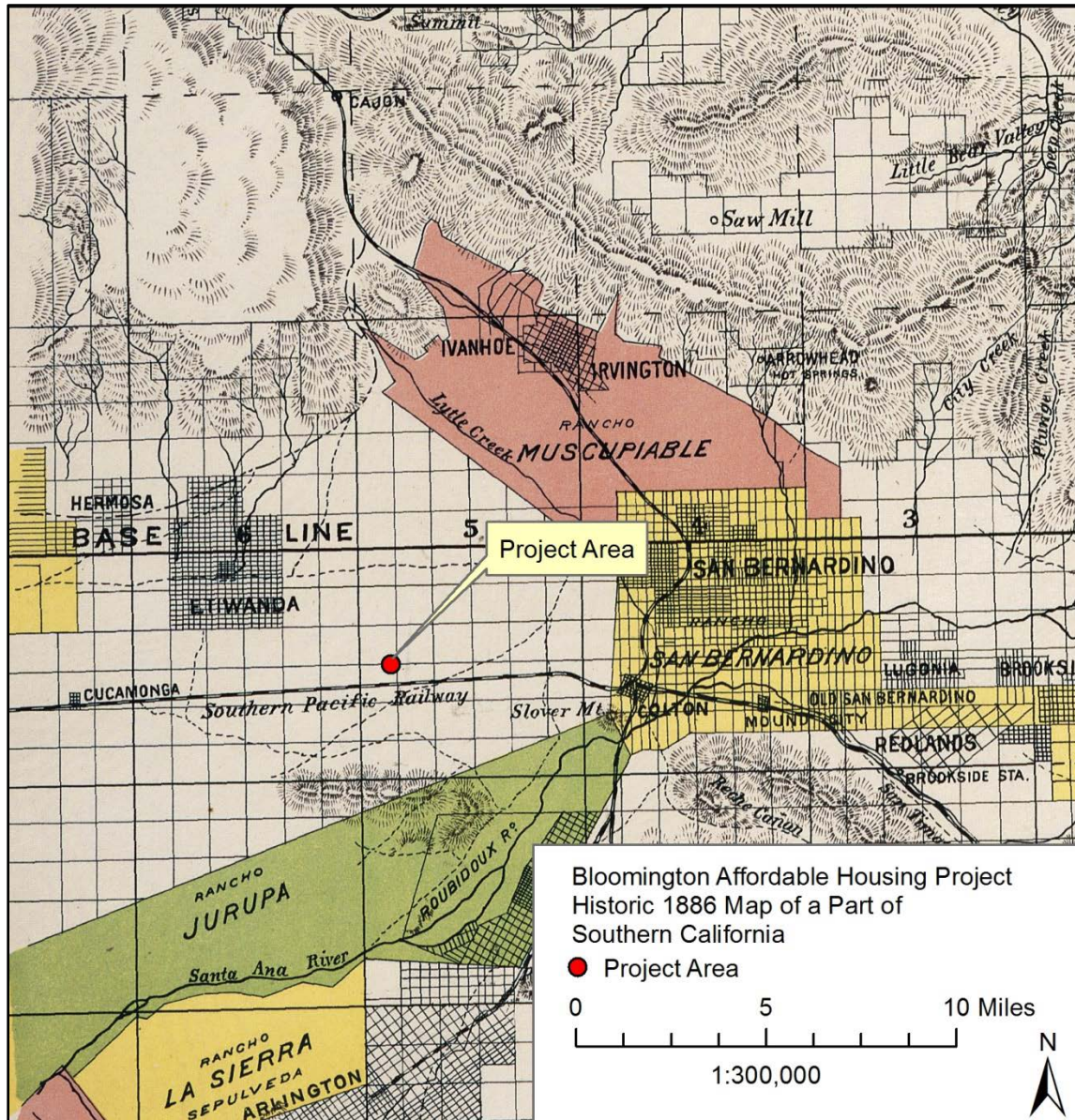


Figure 6. Historic 1886 map of project area

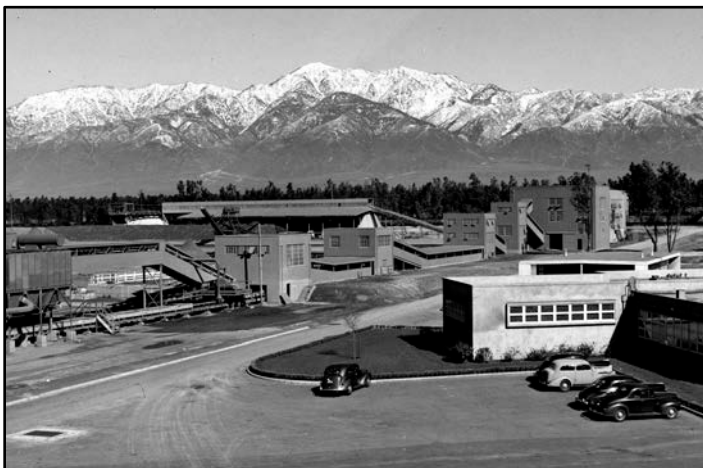
Soon after American control was established (1848), gold was discovered in California. There was a tremendous influx of Americans and Europeans. The Homestead Act opened many areas, including the project area, to settlement.

Bloomington was originally developed as part of the land holdings of the Semi-Tropic Land and Water Company which was formed in 1887. In 1907, the Riverside Portland Cement Company built a large plant near Crestmore (South Bloomington) and to provide transportation for employees built a standard gauge railroad to Riverside. On May 20, 1911 the line was opened to Bloomington. The original community, known as Crestmore, is generally located between Locust Avenue and Larch Avenue, south of Jurupa Avenue, extending to the County line. The Pacific-Electric Crestmore Line (Riverside-Rialto) provided local service for many years. The Semi-Tropic Land and Water Company (now known as West Valley Water District) laid out the town sites of Bloomington, Rialto, Fontana, and Sansevaire. The town site for Bloomington, after being surveyed in April, 1888, was bounded on the north by Valley Boulevard, on the south by Slover Avenue, on the east by Larch Avenue, and on the west by Linden Avenue.

Initially, the area was settled by homesteaders and farmers, and quickly became a diversified agricultural area with citrus, grain, grapes, poultry, and swine being the leading commodities.

The area faced a transition in 1942 when nearby Fontana was selected as the site for the Kaiser Steel Mill (*See Figure 7*). The mill was originally built in WWII to supply steel for Kaiser's wartime shipyards, which produced hundreds of ships on the west coast in just a few years. Fontana was incorporated June 25, 1952 with a population of 13,695 and became Southern California's leading producer of steel and related products. The steel industry dominated the area's economy once the mill was built. In the late 1970s, Kaiser Steel began to cut down on production and manpower and the steel mill closed in 1984. The plate steel and rolling mill plant was acquired by California Steel Company, which continues to produce steel products to this day.

Presently, large parts of the community are still rural and many residents continue to keep and raise animals.



**Figure 7. Historic Kaiser Steel Mill in 1944**

## LITERATURE REVIEW AND RECORD SEARCHES

### PALEONTOLOGICAL IDENTIFICATION RESULTS

A search for paleontological records was completed at the San Bernardino County Museum (SBCM; Scott, 2013, 2008; Appendix B) and in published materials (Jefferson, 1991a, 1991b). The project area and a ten-mile radius were searched for resources. No fossil localities have been previously collected from within a 1½- mile radius of the project area (Table 2).

Extinct animals recovered from the three localities near the project area in Quaternary older alluvium (which underlies the young alluvial fan deposits at the surface, include saber-toothed cat, mammoth, mastodon, bison, and camel. Other localities in similar sediments in San Bernardino and Riverside counties have also produced ground sloths, dire wolves, and horses (Scott, 2013).

**Table 2. Fossils recovered near the Project Study Area**

Common Name	Taxon	Locality	Formation; Depth below surface
mammoth	Mammuthus	SBCM 5.1.8; 1.5 miles south of Haven and I-10	Quaternary older alluvium; 20 feet
mastodon, bison, camel	<i>Mammut, Bison, Camelidae</i>	SBCM 5.1.14 – SBCM 5.1.21; near intersection of Valley and I-10	Quaternary older alluvium; as little as 5 feet
saber-toothed cat	<i>Smilodon</i>	SBCM 5.1.11; 3 miles southwest of the project	Quaternary older alluvium; unknown



## ARCHAEOLOGICAL AND HISTORICAL RECORDS SEARCH

### SOURCES CONSULTED

A search for archaeological and historical records was completed by Shanna Wexelblatt at the San Bernardino Archaeological Information Center at the San Bernardino County Museum in Redlands on May 21<sup>st</sup>, 2013. The search included a one mile-radius around the approximate 9-acre APE.

A variety of additional sources were consulted to obtain data regarding the study area; these are listed below in Table 3.

**Table 3. Additional Sources Consulted for the Bloomington Project**

Source	Results
National Register of Historic Places (1979-2002 & supplements)	Negative
Historical United States Geological Survey topographic maps (USGS 2012)	Positive, two historic-era structures appear on topographic maps in 19
Historical United States Department of Agriculture aerial photos	Positive, two historic-era structures appear on earliest historic aerial photograph from 1938
California Register of Historical Resources (1992-2010)	Negative
California Inventory of Historic Resources (1976-2010)	Negative
California Historical Landmarks (1995 & supplements to 2010)	Negative
California Points of Historical Interest (1992 to 2010)	Positive, P-36-8542 & P-36-15135
California Department of Transportation Historic Bridge Inventory (Caltrans 2007)	Positive; See Table 6 and Appendix C
Local Historical Register Listings	Negative
Bureau of Land Management General Land Office Records	Positive; See Table 5

### RECORDS SEARCH RESULTS

Results of the records search indicated that 21 cultural resources investigations have been completed previously within a one-mile radius of the APE (*See Appendix C*). No previous cultural resources investigations have been completed within the 9-acre Project boundaries.

Results of these cultural resources studies indicate that there are no known archaeological cultural resources recorded within the APE. Based on review of historic-era aerial and topographic maps, two historic-era structures were once on the property. One of these structures

was demolished sometime prior to 2005, and the other structure no longer remains on the property. A total of 39 cultural resources have been documented within a one-mile radius of the APE (See Tables 4 and 5). Of these 39 resources, all are historical archaeological sites, three are historical trash scatters, two are California Points of Historic Interest (P-36-8542 & P-36-15135), and 36 are historic-era built resources.

The first record of ownership of the project area was found in the Bureau of Land Management General Land Office Records (Table 6). In 1870 the owner of the property was listed as Sarah Brandon. At that time, the Brandon property consisted of 1,280 acres and encompassed all of Sections 20 and 21 of Township 1 South and Range 5 West. Early topographic maps depict the area as consisting entirely of orchards (See Figure 9).

**Table 4. Types of Cultural Resources within One-Mile Radius of the APE**

Cultural Resource Type	Quantity
Prehistoric Archaeological Sites	0
Prehistoric Isolated Artifacts	0
Historical Archaeological Sites	39
Historical Isolated Artifacts	0
Multicomponent Sites	0
Historical Built Environment Resources (structures)	36

**Table 5. Previously Recorded Resources within One-Mile Radius of the APE**

(All resources in this table are in the Fontana USGS 7.5' Topo Quad and located within a one mile radius of the APE)

Primary Number (P-36-)	Trinomial (CA-SBR-)	Site Type	Address	Year
8543	8543	Historic Trash Scatter		1996
8544	8544	Historic Trash Scatter		1996
11567	11567	Historic Farm w/foundations and landscaping		2002
<b>Historic Built Resources</b>				
8542	8542	CA Point of Historic Interest: Bloomington Garage	18732 Valley Boulevard	1990
8551		Historic Residence	18750 Valley Boulevard	1997
14467		Historic Kaiser Medical Building	9961 Sierra Avenue	2008
15135		CA Point of Historic Interest: San Bernardino County Museum	18860 Orange Avenue, Bloomington, California 92316	1969
20000		Historic Multifamily Residence	17363 San Bernardino Avenue	2002

<b>Primary Number (P-36-)</b>	<b>Trinomial (CA-SBR-)</b>	<b>Site Type</b>	<b>Address</b>	<b>Year</b>
20317		Historic Residence	18575 Slover Avenue	2003
20318		Historic Residence	18583 Slover Avenue	2003
20319		Historic Residence	18593 Slover Avenue	2003
20320		Historic Residence	18605 Slover Avenue	2003
20321		Historic Residence	18619 Slover Avenue	2003
20322		Historic Residence	18639 Slover Avenue	2003
20323		Historic Multifamily Residence & Farm Stand	10510 Cedar Avenue, 18667 & 18653 Slover Avenue	2003
20324		Historic Residence	18560 Slover Avenue	2003
20325		Historic Residence	10485 Orchard Street	2003
20326		Historic Residence	18598 Slover Avenue	2003
20327		Historic Residence	18600 Slover Avenue	2003
20328		Historic Residence	18630 Slover Avenue	2003
20329		Historic Residence	10470 Cedar Avenue	2003
20330		Historic Residence	10450 Cedar Avenue	2003
20331		Historic Educational Building	10435 Cedar Avenue	2003
20332		Historic Commercial & Government Buildings	10076 & 10074 Cedar Avenue	2003
20333		Historic Residence	10056 Cedar Avenue	2003
20334		Historic Residence	10044 Cedar Avenue	2003
20335		Historic Residence	18821 Lynwood Street	2003
20336		Historic Residence	10169 Church Street	2003
20568		Historic Residence	18338 Valley Boulevard	2007
20569		Historic Residence	18338 Valley Boulevard	2007
20570		Historic Commercial Building	18412 Valley Boulevard	2007
20571		Historic Commercial & Residential Buildings	18412 Valley Boulevard	2007
20572		Historic Commercial Building	18434 Valley Boulevard	2007
20573		Historic Commercial Building	18434 Valley Boulevard	2007

Primary Number (P-36-)	Trinomial (CA-SBR-)	Site Type	Address	Year
21605		Historic Residence	18908 Slover Ave	2008
21606		Historic Residence	10400 Orchard Street	2008
21607		Historic Educational Building	10435 Cedar Avenue	2008
21608		Historic Residence	18687 Commercial Street	2008
23576		Historic Commercial Building	9693 Alder Avenue	2011

**Table 6. Bureau of Land Management General Land Office Records**

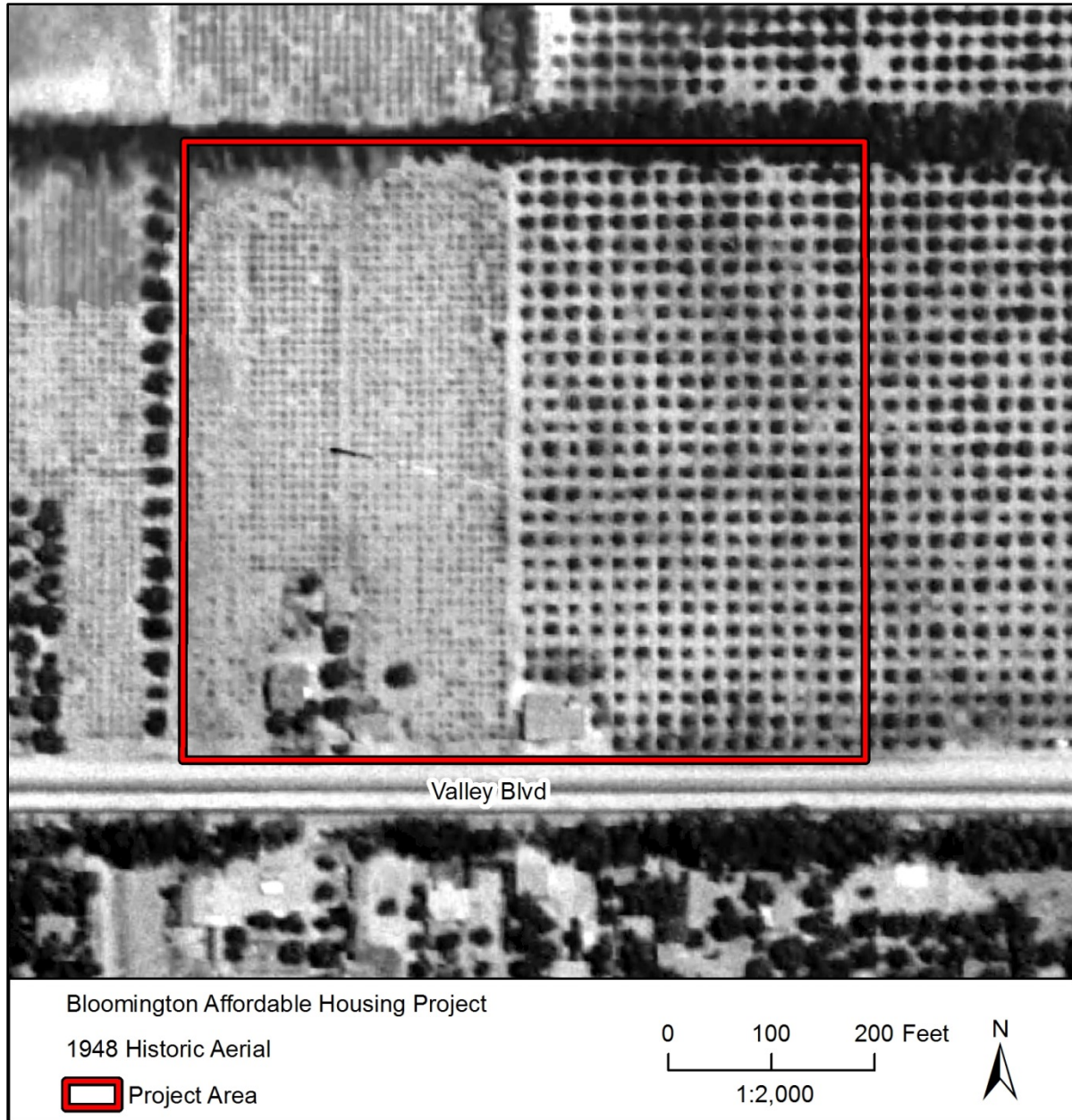
Accession No.	Name	Year	Acres	T/R/S	1/4 1/4
CACAAA 084023	Sarah Brandon	1870	1280	1S/5W/20-21	all
CACAAA 084523 18	Federal Farm Mortgage Corp	1957	5	1S/5W/21	SW1/4 SW1/4

**Table 7. California Department of Transportation Historic Bridge Inventory (Caltrans 2007)**

Bridge No.	Name	Year	NRHP Eligible
54 0035	Cedar Avenue OC	1967	5. Bridge not eligible for NRHP
54C0103	Cedar Avenue OH	1966/1972	5. Bridge not eligible for NRHP

**REVIEW OF HISTORIC-ERA AERIAL PHOTOGRAPHY AND MAPS**

Historic aerials from 1948 indicate that the APE was developed with two residential structures with orchards (Figure 8). The 1953 historic topographic map of Fontana also shows these two structures (Figure 9). Imagery from 1959 and 1980 document these structures but by 2005, the next available image, the western structure is demolished (Figure 10). The eastern structure no longer exists on the property.



**Figure 8. 1948 Historic Aerial of Bloomington Project Area**

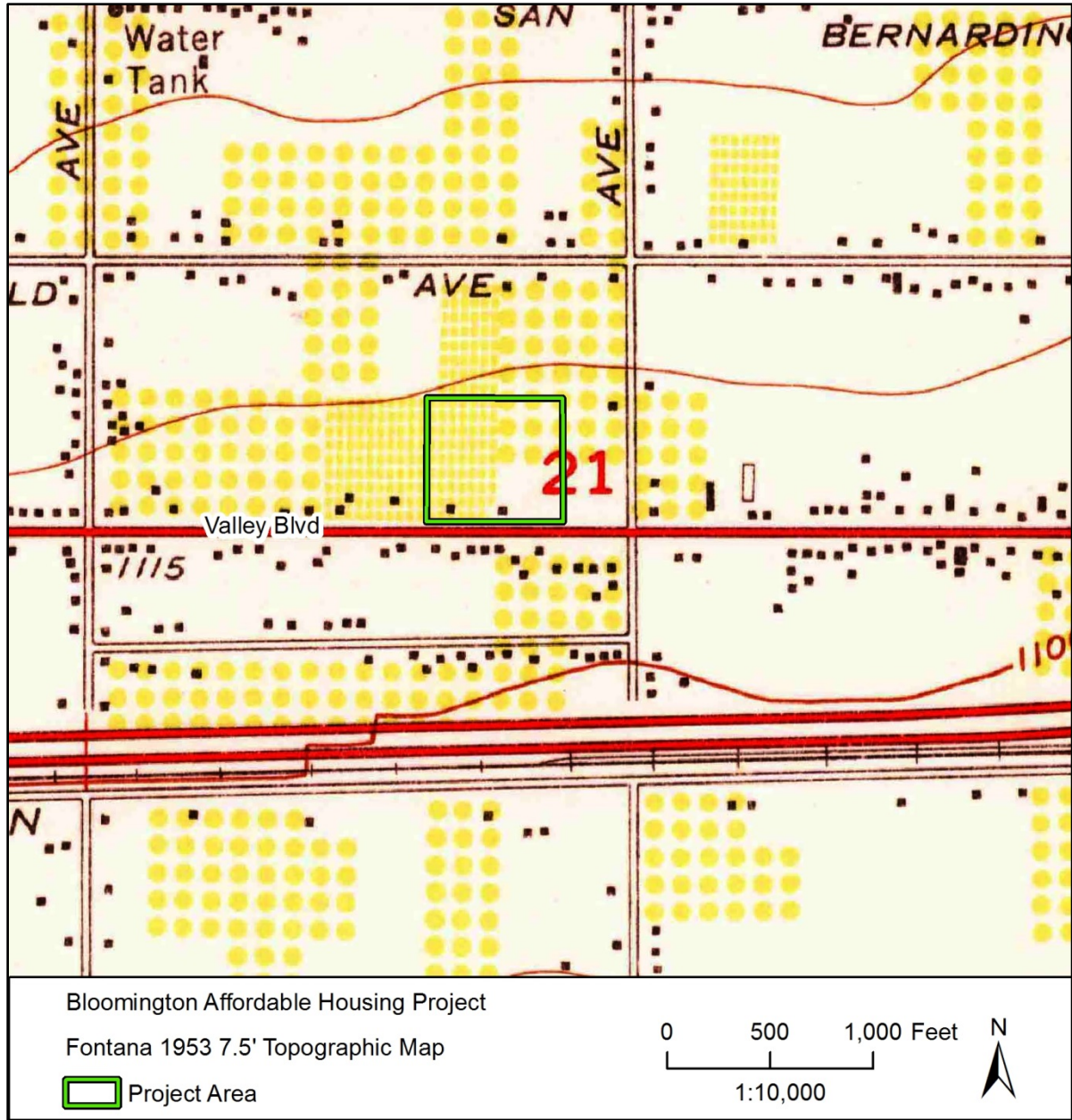
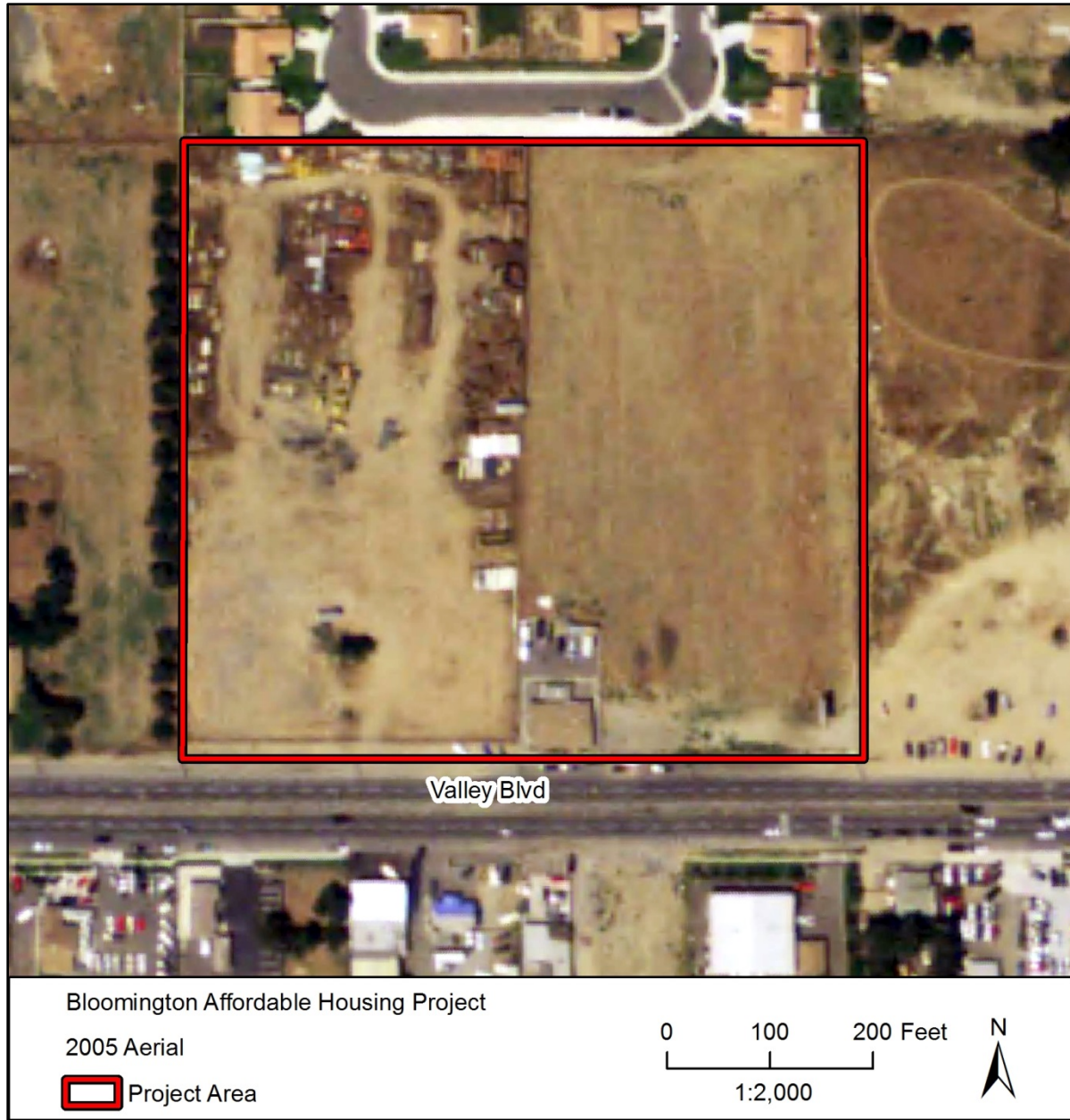


Figure 9. 1953 Historic Topographic Map of Bloomington Project Area





**Figure 10. 2005 Aerial Photograph of Bloomington Project Area**

## NATIVE AMERICAN CONSULTATION

A sacred lands record search was requested from the Native American Heritage Commission (NAHC) on May 17, 2013. On May 22, the NAHC responded stating there were no known sacred lands within or immediately adjacent to the APE. However, the NAHC requested that nine Native American tribes or individuals be contacted for further information regarding potential sacred sites or traditional cultural properties within close proximity to the APE.

Native American consultation efforts are ongoing. Letters containing maps and project information were sent to these nine Native American contacts on May 22, 2013 requesting information on any known cultural heritage sites (Table 8). An example of the letter can be found in Appendix D. No responses from the first contact attempt have been received to date (June 12, 2013). A second attempt at consultation will occur on June 24, 2013 and again on July 1, 2013. Any responses received from the consultation efforts will result in an update to this section of the report and will be included in Appendix D.

**Table 8. Native American Groups or Individuals Contacted**

<b>Native American Group/Individual</b>	<b>Date(s) of First Contact Attempt</b>
Pechanga Band of Mission Indians Paul Macarro, Cultural Resources Manager	May 23rd, 2013, Letter Sent
Ramona Band of Cahuilla Mission Indians Joseph Hamilton, Chairman	May 23rd, 2013, Letter Sent
San Manuel Band of Mission Indians Carla Rodriguez, Chairwoman	May 23rd, 2013, Letter Sent
Gabrieleno/Tongva San Gabriel Band of Mission Indians Anthony Morales, Chairperson	May 23rd, 2013, Letter Sent
Gabrielino Tongva Nation Sam Dunlap, Chairperson	May 23rd, 2013, Letter Sent
Morongo Band of Mission Indians Robert Martin, Chairperson	May 23rd, 2013, Letter Sent
Serrano Nation of Mission Indians Goldie Walker, Chairwoman	May 23rd, 2013, Letter Sent
Morongo Band of Mission Indians Tribal Elder Ernest H. Siva	May 23rd, 2013, Letter Sent
Soboba Band of Luiseno Indians Joseph Ontiveros, Cultural Resources Department	May 23rd, 2013, Letter Sent



## FIELD SURVEY METHODS AND RESULTS

### PALEONTOLOGICAL FIELD RECONNAISSANCE

Kim Scott conducted the paleontological reconnaissance of the project area on June 4, 2013. The survey consisted of a pedestrian inspection of open ground surface areas. The project location and some detailed features were photographed to document the condition of the proposed APE.

Ground visibility ranged from 0 to 70% due to due to vegetation cover and presence of large machinery and vehicles parked at the project location. The sediments identified as native (excluding imported sediments) included silt to pebble sized clasts that were moderately rounded from transport (Figure 11). No cuts or washes were present to explore the underlying sediments. No fossils were observed during the survey, and only the young alluvial fan deposits, unit 5 were observed.



**Figure 11. Sediments of the Project Area**

## **CULTURAL RESOURCES FIELD SURVEY**

The cultural resources survey stage is important in a project's environmental assessment phase to verify the exact location of each identified cultural resource, the condition or integrity of the resource, and the proximity of the resource to areas of other areas of cultural resources sensitivity.

Shanna Wexelblatt, Cogstone Staff Archaeologist, completed an intensive-level pedestrian survey of the APE on June 4, 2013. Survey coverage was variable due to vegetation cover and presence of large machinery and vehicles at the project location. The survey consisted of walking parallel transects, spaced at approximately 10-meter intervals within the APE while closely inspecting the ground surface. The entire property is highly disturbed. Ground surface visibility was very good over 80% of the APE, and variable in the remaining 20% of the APE, due to vegetation cover and presence of large machinery and vehicles parked at the project location (Figure 12). Vegetation consists of tall grasses.



**Figure 12. Project Survey Area (view South)**

## PROJECT EFFECTS ASSESSMENT

Paleontological resources are considered to be significant if they provide new data on fossil animals, distribution, evolution or other scientifically important information. The surface sediments of the project have no potential to yield paleontological resources. Quaternary older alluvium is present at variable depth below the surface but typically more than five feet below the surface. Excavations more than five feet deep may potentially Pleistocene fossils.

The potential for encountering significant prehistoric archaeological resources is likewise low to moderate. No prehistoric resources have been previously recorded within the APE or within a one-mile radius. Based on the results of the literature search, the APE is considered to have a moderate to high potential for harboring buried historic-era resources.

### PALEONTOLOGICAL RESOURCES RECOMMENDATIONS

If, and only if, construction-related excavations, trenching or other forms of ground disturbance exceed five feet below the surface is there potential to encounter any fossils. There is no basis to conclude that significant fossils will be impacted by this project. We recommend the following: If unanticipated paleontological resources are encountered during ground disturbing activities, all work must halt within 50 ft. until the discovery can be evaluated by a qualified paleontologist.

The County of San Bernardino (Development Code §82.20.040) defines a qualified 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) All paleontological work will be supervised by a qualified paleontologist.
- (b) 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.

(c) 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 paleontologist, 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.

(d) 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.

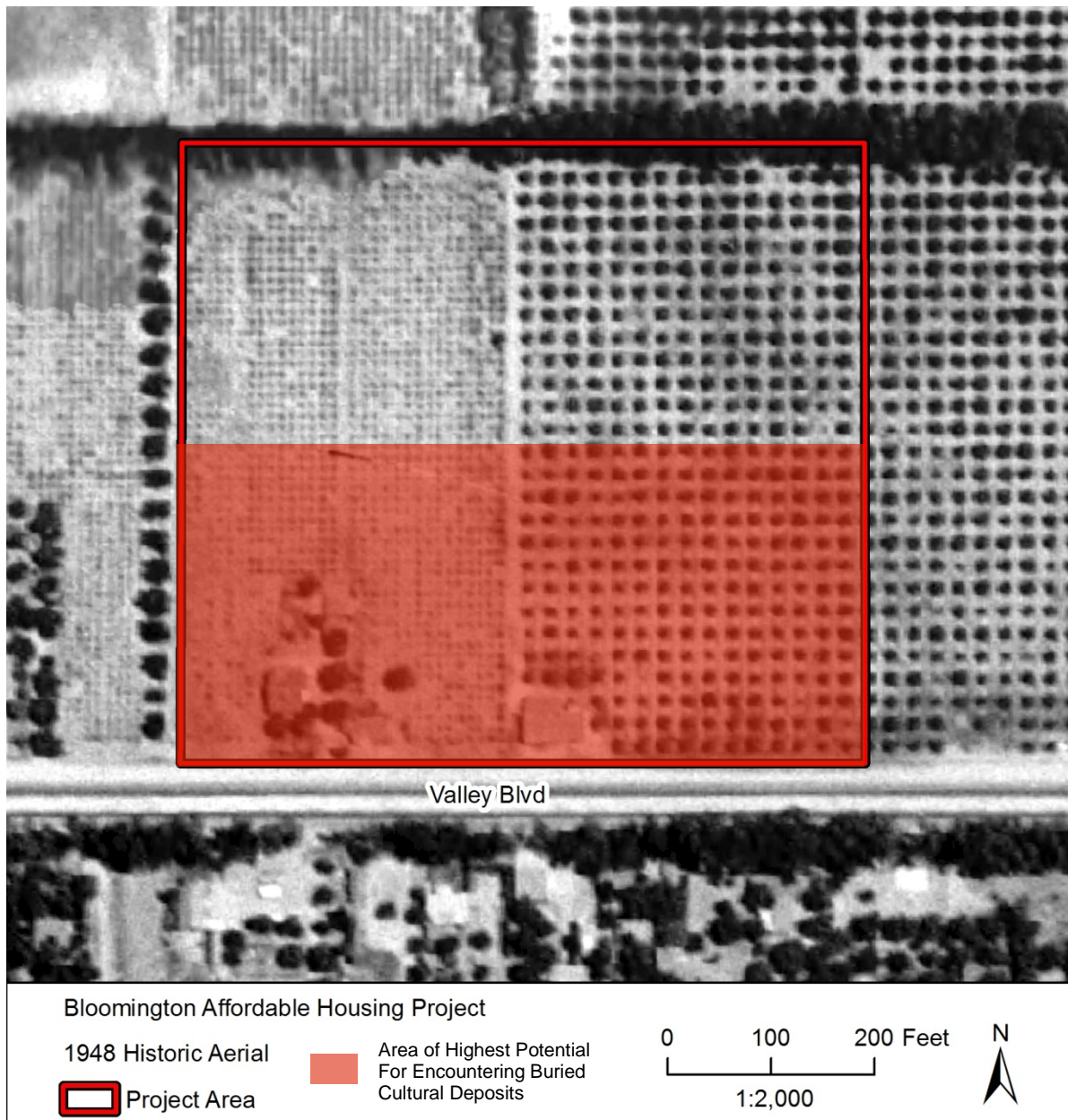
(e) Identification and curation of specimens. Qualified paleontologic personnel shall identify and curate specimens into the collections of the SBCM Division of Geological Sciences, an established, accredited museum repository with permanent retrievable paleontologic storage. These procedures are also 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.

(f) Report of findings. Qualified paleontologic personnel shall prepare a report of findings with an appended itemized list 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 SBCM, will signify completion of the program to mitigate impacts to paleontologic resources.



## CULTURAL RESOURCES RECOMMENDATIONS

The APE is considered to have a low to moderate sensitivity for the discovery of prehistoric, resources. However, due to the known historic-era structures within the APE, there is a moderate to high potential for encountering historic-era buried (i.e. privies, trash pits, or structural remains) or undocumented surface archaeological materials during construction, especially in the southern half of the APE where the historic structures once stood (*see* Figure 13).



**Figure 13. Area of Highest Potential for Encountering Buried Cultural Resources**

## **CONSTRUCTION PHASE**

Grading, excavation and other surface and subsurface excavation in defined areas of the proposed project have the potential to impact significant cultural resources. A Cultural Resources Monitoring Plan (CRMP) should be prepared by a qualified archaeologist and should include the following elements:

- Preconstruction cultural resources sensitivity training for earthmoving personnel to include documentation of training (sign in sheets, hardhat stickers).
- A signed repository agreement.
- Field and laboratory methods for recovered artifacts (must be consistent with repository requirements).
- Production of a Cultural Resources Monitoring Report upon completion of project earthmoving

Construction monitoring is recommended for ground-disturbing activities within native soils/sediments, especially in the southern half of the APE. The cultural resources monitor should meet the Secretary of the Interior's Standards for archaeologists (NPS 1983).

In the event that cultural resources are exposed during project implementation, the monitor/archaeologist must be empowered to temporarily halt construction activities in the immediate vicinity of the discovery while it is evaluated for significance. Construction activities could continue in other areas. If cultural resources are discovered while the monitor/archaeologist is not present, work in the immediate area must be halted and the monitor/archaeologist notified immediately to evaluate the resource(s) encountered. If any cultural resources discovery proves to be significant, additional work, such as data recovery excavation, may be warranted. Prehistoric or ethnohistoric materials within the APE might include flaked stone tools, tool-making debris, stone milling tools, pottery, culturally modified animal bone, fire-affected rock, or soil darkened by cultural activities (midden). Historic materials might include building remains; metal, glass, or ceramic artifacts; or debris.

## **HUMAN REMAINS**

Although unlikely, the discovery of human remains is always a possibility. In the event that human remains are encountered during project development, all work must cease in the vicinity of the find immediately. 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. Work may not resume in the vicinity of the find until all requirements of the health and safety code have been met.

## REFERENCES CITED

Bean, L.J. and C.R. Smith

1978 "Gabrielino." In *Handbook of North American Indians*, Volume 8. *California*, volume edited by Robert F. Heizer, pp. 538-549 (W. T. Sturtevant, general editor). The Smithsonian Institution, Washington, D.C.

BLM GLO (Bureau of Land Management Government Land Office)

2008 Land Grant Records Search Tool. Available online at <http://www.glorerecords.blm.gov/PatentSearch/Default.asp>, last accessed May21, 2013.

2007 Historic Bridge Inventory. Available online at

<http://www.dot.ca.gov/hq/structur/strmaint/historic.htm>, last accessed May 21, 2013.

California Department of Transportation District 8 (Caltrans)

2003 Paleontology, Online Environmental Handbook, vol. 1, chapter 8.

Jefferson, G. T.

1991a A Catalogue of late Quaternary Vertebrates from California: Part one, nonmarine lower vertebrate and avian taxa. *Natural History Museum of Los Angeles, Technical Report #5*.

1991b A Catalogue of late Quaternary Vertebrates from California: Part two, Mammals. *Natural History Museum of Los Angeles, Technical Report #7*.

Kroeber, A.L.

1976 *Handbook of Indians of California*. Reprint of 1925 original edition, Dover Publications, New York.

McCawley, W.

1996 *The First Angelinos: The Gabrielino Indians of Los Angeles*. Malki Museum Press/Ballena Press, Banning, California.

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

2006 Preliminary digital geologic map of the San Bernardino and Santa Ana 30' x 60' quadrangles, Southern California, version 1.0: *U.S. Geological Survey Open-File Report 06-1217*; scale 1:100,000.

Scott, E.

2008 Paleontology literature and records review, Interstate 10 High Occupancy Vehicle Lane Project, Haven Avenue to Ford Street, San Bernardino County, California. Submitted to Applied EarthWorks, Inc., November 2008.

Scott, E.

2013 Paleontology literature and records review, Bloomington affordable housing project, Community of Bloomington, San Bernardino County, California. Submitted to Cogstone, May 2013.

Sutton, M.

2010 The Del Rey Tradition and its Place in the Prehistory of Southern California. *Pacific Coast Archaeological Society Quarterly* 44(2):1-54

Sutton, M. and J. Gardner

2010 Reconceptualizing the Encinitas Tradition of Southern California. *PacificCoast Archaeological Society Quarterly* 42(4):1-64

Wagner, D. L.

2002 California Geomorphic Provinces. California Geologic Survey Note 36. Website:

[http://www.consrv.ca.gov/cgs/information/publications/cgs\\_notes/note\\_36/note\\_36.pdf](http://www.consrv.ca.gov/cgs/information/publications/cgs_notes/note_36/note_36.pdf)

Wallace, William J.

1955 A Suggested Chronology for Southern California Coastal Archaeology. *Southwestern Journal of Anthropology* 11(3):214-230

Warren, Claude N.

1968 Cultural Tradition and Ecological Adaptation on the Southern California Coast. In *Archaic Prehistory in the Western United States*, edited by C. Irwin-Willaims, pp. 1-14. *Eastern New Mexico University Contributions in Anthropology* 1(3).

## **APPENDIX A: QUALIFICATIONS**



**TRIA MARIE BELCOURT, RPA**  
Archaeologist

## EDUCATION

2008 M.A., Anthropology, University of Florida, Gainesville  
 2006 B.A., Anthropology, University of California, Los Angeles

## SUMMARY QUALIFICATIONS

Ms. Belcourt is a Registered Professional Archaeologist with over eight years of professional experience in Southern California, Nevada and Great Basin including six years as a Cultural Resources Project Manager. She is recognized as a CEQA/NEPA cultural resources specialist and a subject matter expert in the field of archaeology, anthropology, architectural history and paleontology. She is proficient in survey, testing, and excavation. Her areas of academic expertise include pre-Columbian archaeology, ceramic analysis, and the historical archaeology of the southeastern United States. She also has special training in the use of ESRI ArcGIS and Leica Imagine Remote Sensing software. Ms. Belcourt has been published by the University of California, Los Angeles Press and presented her papers at the annual Southeastern Archaeology Conference and the Southwest Anthropology Association Conference, among others. Belcourt also has extensive experience as a project manager. She has experience managing cultural resources tasks, conducting surveys and monitoring in SCE projects areas including the Mojave Desert and coastal California.

## SELECTED PROJECTS

**Eldorado-Ivanpah Transmission Line (EITP), Southern California Edison, Eldorado, NV to Ivanpah, CA.** Lead In-house Consultant Archaeologist at Southern California Edison. Provided regulatory oversight and project management regarding cultural and paleontological resource management for EITP. Developed environmental compliance training to inform and guide construction activities and major capital project teams. Developed and implemented internal cultural resource management programs based on the mitigation measures in the Final Environmental Impact Report/Environmental Impact Statement (FEIR/EIS) for EITP. Identified potential impacts to cultural resources, developed archaeological mitigation recommendations, and provided alternative conclusions to project teams. Coordinated with BLM archaeologists on discovery and management of previously unknown cultural resources discovered during construction. Provided environmental analyses and clearance documentation on over 20 project modifications during construction without delay to project. Developed the cultural resources geodatabase for EITP and coordinated regularly with the project GIS team. 2012-2013

**Silver State South Substation, Southern California Edison, Clark County, NV.** Lead In-house Consultant Archaeologist at Southern California Edison. Provided regulatory oversight and project management regarding cultural and paleontological resource management during project licensing and scoping. Identified potential impacts to cultural and paleontological resources, developing appropriate mitigation measures in preparation for and projecting alternative conclusions. 2012-2013.

**Tehachapi Renewable Transmission Project, Southern California Edison, Segments 1-3 and Segments 6-11, Kern, Los Angeles and Orange County, CA.** Supervised archaeological field surveys, coordinated archaeological and paleontological monitoring, prepared non-compliance forms and worked with multiple stakeholders to resolve non-compliance issues. Created archaeological site maps, project area maps and access route maps. (2009). Oversight and scheduling for all cultural work, review all documents prepared for segments in Angeles National Forest. SCE Project Cultural Resources Manager and Cogstone contingent worker at Southern California Edison. 2009; 2012-2012

**Fort Irwin National Training Center, United States Army, Fort Irwin, San Bernardino County, CA.** Principal Investigator for Cultural Resources Division, Directorate of Public Works, NTC/Fort Irwin. Directed all cultural resource assessments under NEPA and Section 106 of NHPA, including technical reporting of field surveys, formal NRHP evaluation of 50+ archaeological sites, preparation of SHPO consultation letters, and Native American consultation letters. Developed public outreach program for cultural resources program at NTC and led outreach events. Authored installation guidance documents, including the 2010 Integrated Cultural Resource Management Plan (ICRMP), and the Ft. Irwin/NTC GIS Standard Mapping Procedures. 2009-2010



**SHERRI GUST**  
Project Manager & Principal Investigator

#### EDUCATION

1979            1994            M. S., Anatomy (Evolutionary Morphology), University of Southern California, Los Angeles  
1980            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.

#### SELECTED PROJECTS

- Ft. Irwin east of Goldstone**, Fort Irwin. Cultural resources inventory of 58 sq. km in four survey blocks. Co-authored overview of literature, research design and field evaluation guidelines. Principal Investigator/Project manager. 2012-2013
- Agua Caliente Tribal Monitor Training**, Palm Springs. Cogstone's team prepared and presented 40 hours of tribal monitor training which included a full day of shadowing an archaeologist monitoring a working project and a full day of survey. Project manager. 2012
- Exposition Light Rail Phase 2**, Culver City to Santa Monica. Prepared Cultural Resources Management Plan, Santa Monica Air Line Railroad Data Recovery Plan and Paleontological Resources Management Plan for 7 linear miles of new rail facilities including stations. Supervised monitoring and data recovery programs. Principal Archaeologist and Paleontologist and Project Manager. 2012-2014 (est.)
- Camrosa Water District Master Plan Update**, Ventura County. Supervised archaeological and paleontological record searches, background research, Native American consultation, evaluation of potential impact, sensitivity mapping and mitigation measures for 19,300 acre district for Impact Sciences. Principal Archaeologist and Paleontologist and Project Manager. 2011-2012
- 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
- 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



**KIM SCOTT**  
Field & Laboratory Director for Paleontology

## EDUCATION

2000                    B.S., Geology with Paleontology Emphasis, University of California, Los Angeles

## Summary Qualifications

Scott has more than 16 years of experience in California paleontological resource management. She serves as Cogstone's Field and Laboratory Director. Scott is a qualified geologist and field 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

**Arboleda Drive Freeway Project, Caltrans District 10, Merced.** Field / Lab Director and Report Contributor. Alternated 2 week rotations performing direction of fossil recovery and field preparation of fossils for 5 mile segment of State Route 99 south of Merced. Some 128 localities and 1667 fossils recovered in five months of excavation for detention basins. Prepared fossils in lab. Contributed to final report. Subconsultant to URS. 2012

**SR 41 Widening, Caltrans District 6, Kettleman City.** Field / Lab Director and Report Contributor. Supervised monitoring for widening and rehabilitating of an 8.5 mile segment of Highway 41 from Utica Avenue to Quail Avenue through Kettleman City. Supervised preparation of about 800 vertebrate, invertebrate and plant fossils recovered. Prepared stratigraphic columns. Contributed to preparation of Paleontological Monitoring Report. Subcontractor to URS Corporation. 2012

**Savage Way Rehabilitation, Caltrans District 10, San Joaquin and Calaveras counties.** Field Director and Report Contributor. Conducted field assessment of sediments present and supervised paleontological monitoring during construction of a 3.25 mile segment of State Route 26 from Wimer/Ospital Road to Savage Way. No fossils were observed or recovered. Contributed to Paleontological Monitoring Report. Subcontractor to URS Corporation. 2012-2013

**Geospatial Paleontology Database, Caltrans District 6, 9, and 10.** Paleontology Researcher. Conducted paleontological research for 15 counties in central and eastern California. Delivered detailed information about potential fossil yield, geological units, prior fossils and other information at cursor click. Subconsultant to URS. 2011-2012

**Eldorado-Ivanpah SCE Transmission Line, CA & NV.** Field Director and Report Contributor. Directed paleontological survey and contributed to Paleontological Resources Management Plan for 71 miles of electrical lines and associated telecommunications from Eldorado, NV to Ivanpah, CA across both BLM and private lands. Currently supervising monitoring of the project. Prime contractor. 2010-2013

**Mojave Water Agency Ground Water Replenishment Project, Hesperia.** Field Director and Report Contributor. Supervised and performed field sediments checks and monitoring during project construction. For the MWA with the Bureau of Reclamation as the federal lead agency (American Recovery Act). Contributed to mitigation compliance report submitted. Subconsultant to RBF. 2010-2012

**Ranchero Road-BNSF Grade Separation, Hesperia.** Field Director and Report Author. Supervised paleontological resources monitoring for the duration of all ground disturbing activities in native sediments greater than five feet deep for project that involved construction of an underpass for Ranchero Road beneath the BNSF Railroad line to connect the two halves of Ranchero Road. Lead author of final Paleontological Resources Monitoring Report. Caltrans District 8 local assistance project. Subcontract to Parsons Transportation Group. 2011-2013





**SHANNA WEXELBLATT**  
Archaeologist & Cross-Trained Paleontologist

#### EDUCATION

- 2012 M.A., Anthropology, California State University, Fullerton  
 2010 B.A., Philosophy, California State University, Fullerton

#### SUMMARY QUALIFICATIONS

Shanna Wexelblatt is a qualified archaeologist with academic and field archaeology experience in survey, monitoring, excavation, and laboratory analysis. Wexelblatt has also received training in lithics and archaeofaunal analysis. She is a member of the Archaeological Conservancy, Archaeological Institute of America, Society for American Archaeology and the Society for California Archaeology. She is GIS proficient and assists with digitizing and mapping with the use of advanced Trimble software. She has two years of experience as a dual monitor for Cogstone.

#### SELECTED PROJECTS

**Fort Irwin Project, San Bernardino County.** GIS & Archaeology Field/Lab Technician. Managed artifact and site information returning from the survey crew; prepared DPR forms, GIS maps, and progress report sections; and assisted with the intensive 14,367 acre archaeological field survey on the Fort Irwin Training Center in the Mojave Desert in northwestern San Bernardino County. 2012-2013

**Platinum Stadium Apartments Project, Orange County.** Archaeology Lab Technician. Performed a cultural resources records search and prepared the subsequent Archaeological Records Search report for a proposed apartment complex located on 14.5 acres in the City of Anaheim. 2012

**Imperial Channel Project, Orange County.** Archaeology Lab Technician. Conducted a search for archaeological and historic records at the South Central Coastal Information Center and co-authored an Archaeological Literature Study that identified cultural resources in the vicinity of the proposed improvements to a 2 acre area of the Imperial Channel in Fullerton. 2012

**Malibu Bluffs, Los Angeles County.** GIS & Archaeology Lab Technician. Performed an archaeological records search, prepared GIS maps, and wrote portions of a prehistoric and historic resources assessment report for a 7-acre hydrogeologic monitoring well replacement project in Malibu. 2012

**Lake Matthews Deteriorated Power Pole Project, Riverside County.** Archaeology Field/Lab Technician. Performed a cultural resources records search and field survey, prepared GIS maps, and authored sections of the Archaeological Survey Report for a proposed power pole replacement project located in the City of Perris. 2012

**Gene Autry Way (West) Project, Orange County.** Paleontology Field Technician. Conducted paleontological resources monitoring during the expansion of Gene Autry Way in the City of Anaheim. 2011-2012

**Borrego Wash Maintenance Project, Orange County.** Paleontology and Archaeology Field Technician. Conducted an archaeological and paleontological field survey and prepared the archaeological site records as part of a combined archaeological and paleontological resources assessment for a 43-acre project involving restoring entrance access and repairing trail and road washouts within Whiting Ranch Wilderness Park in the City of Lake Forest. 2011-2012

**Camrosa Integrated Facilities Master Plan Project, Ventura County.** GIS Technician. Prepared GIS maps for a technical study in support of an environmental impact report (EIR) for the 19,300-acre Camrosa Water District in the Camarillo and Thousand Oaks area. 2011-2012



**MOLLY VALASIK**  
Registered Professional Archaeologist

## EDUCATION

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

## SUMMARY QUALIFICATIONS

Valasik is a Registered Professional Archaeologist with six years of professional field and academic research experience. She has completed more than 80 hours of paleontological cross training. Valasik meets the California Office of Historic Preservation and Secretary of the Interior Standards as a principal investigator.

## SELECTED PROJECTS

- Office/Warehouse Project, West of Perris.** Principal Investigator. Prepared archaeological Phase I assessment including record search, Native American consultation, survey, impact analysis and recommendations for new office and warehouse complex. 2013
- Trabuco Road at Monroe Avenue Project, Irvine.** Principal Investigator. Prepared archaeological literature study including record search, Native American consultation, analysis and recommendations for a traffic signal improvement project. 2013
- Santiago Canyon Bridges Project, south Orange County.** Principal Investigator. Prepared archaeological Phase I assessment including record search, Native American consultation, survey, impact analysis and recommendations for nine bridge rehabilitation projects. 2013
- 13<sup>th</sup> Street Bridge Replacement Project, Ramona.** Principal Investigator. Prepared archaeological Phase I assessment including record search, survey, impact analysis and recommendations for bridge replacement. 2013
- Rose Creek Bike Trail, San Diego.** Principal Investigator. Prepared archaeological Phase I assessment including record search, Native American consultation, survey, impact analysis and recommendations for new bike trail along creek. 2013
- Gopher Canyon Restoration Project, Chatsworth.** Principal Investigator. Prepared archaeological Phase I assessment including record search, survey, impact analysis and recommendations for stream restoration project. 2013
- Sun Ranch, San Juan Capistrano.** Principal Investigator. Directed archaeological and Native American monitoring of a City water system improvement project over several months. Prepared final monitoring compliance report. 2012

## **APPENDIX B: PALEONTOLOGY RECORDS SEARCH**

28 May 2013

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

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re: **PALEONTOLOGY LITERATURE AND RECORDS REVIEW, BLOOMINGTON  
AFFORDABLE HOUSING PROJECT, COMMUNITY OF BLOOMINGTON, SAN  
BERNARDINO COUNTY, CALIFORNIA**

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Dear Ms. Gust,

The Division of Geological Sciences of the San Bernardino County Museum (SBCM) has completed a literature review and records search for the above-referenced development in the Community of Bloomington, San Bernardino County. The proposed project property is located in the northwestern quadrant of section 21, Township 1 South, Range 5 West, San Bernardino Base and Meridian, as seen on the Fontana, California 7.5' United States Geological Survey topographic quadrangle map (1967 edition, photorevised 1980).

Previous geologic mapping (Bortugno and Spittler, 1986; Morton, 2003) indicates that the study area is situated entirely upon Holocene fan alluvium derived from Lytle Creek (= **Qyfl**). This Holocene alluvium has low potential to contain significant nonrenewable paleontologic resources, and so is assigned low paleontologic sensitivity. However, this alluvium forms a thin sedimentary veneer overlying older Pleistocene alluvium in the subsurface; this subsurface Pleistocene alluvium has high potential to contain fossil resources, and so is assigned high paleontologic sensitivity. Pleistocene alluvium elsewhere in San Bernardino and Riverside Counties and the Inland Empire has been repeatedly demonstrated to have high paleontologic sensitivity (Jefferson, 1991; Reynolds and Reynolds, 1991; Anderson and others, 2002; Springer and others, 2009, 2010; Scott, 2010). Fossils recovered from these Pleistocene sediments represent extinct taxa including mammoths, mastodons, ground sloths, dire wolves, sabre-toothed cats, large and small horses, large and small camels, and bison (Jefferson, 1991; Reynolds and Reynolds, 1991; Anderson and others, 2002; Springer and others, 2009, 2010; Scott, 2010).

For this review, I conducted a search of the Regional Paleontologic Locality Inventory (RPLI) at the SBCM. The results of this search indicate that no previously-recorded paleontologic resource localities are present within the boundaries of the proposed development property, nor from within one mile in any direction. The nearest locality that has yielded fossils from Pleistocene older

alluvium is SBCM 5.1.11, located in Fontana and situated approximately three miles west-southwest of the proposed study area. This locality yielded fossil remains of the extinct sabre-toothed cat, *Smilodon*.

### **Recommendations**

The results of the literature review and the check of the RPLI at the SBCM demonstrate that excavation in conjunction with development may have high potential to adversely impact significant nonrenewable paleontologic resources present at depth within the boundaries of the proposed project site. A qualified vertebrate paleontologist must therefore be retained to develop a program to mitigate impacts to such resources, including full curation of recovered significant resources (see Scott and others, 2004). This mitigation program should 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.

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

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

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

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

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

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

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

(d) Identification and curation of specimens. Qualified paleontologic personnel shall identify and curate specimens into the collections of the Division of Geological Sciences, San Bernardino County Museum, an established, accredited museum repository with permanent retrievable paleontologic storage. These procedures are also essential steps in effective paleontologic mitigation and CEQA compliance. The paleontologist must have a written repository agreement in hand prior to the initiation of mitigation activities. Mitigation of adverse impacts to significant paleontologic resources is not considered complete until curation into an established museum repository has been fully completed and documented.

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

## References

- Anderson, R.S., M.J. Power, S.J. Smith, K.B. Springer and E. Scott, 2002. Paleocology of a Middle Wisconsin deposit from southern California. *Quaternary Research* 58(3): 310-317.
- Bortugno, E.J. and T. E. Spittler, 1986. Geologic map of California, San Bernardino sheet, scale 1:250,000. California Division of Mines and Geology Regional Geologic Map Series, Map 3A.
- Jefferson, G.T., 1991. A catalogue of late Quaternary vertebrates from California: Part Two, mammals. Natural History Museum of Los Angeles County Technical Reports, No. 7.
- Morton, D.M., 2003. Preliminary geologic map of the Fontana 7.5' quadrangle, San Bernardino and Riverside Counties, California, version 1.0. United States Geological Survey Open-File Report 03-418. Digital preparation by K.R. Bovard.
- Reynolds, S.F.B. and R.L. Reynolds, 1991. The Pleistocene beneath our feet: near-surface Pleistocene fossils in inland southern California basins. *In* M.O. Woodburne, S.F.B. Reynolds, and D.P. Whistler (eds.), *Inland Southern California: the last 70 million years*. Redlands: San Bernardino County Museum Special Publication 38(3&4), p. 41-43.
- Scott, E., 2010. Extinctions, scenarios, and assumptions: changes in latest Pleistocene large herbivore abundance and distribution in western North America. *In* E. Scott and G. McDonald (eds.), *Faunal dynamics and extinction in the Quaternary: Papers honoring Ernest L. Lundelius, Jr.* *Quaternary International* 217: 225-239.



## Literature / records search, Paleontology, Cogstone: Bloomington

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- Scott, E. and K. Springer, 2003. CEQA and fossil preservation in southern California. *The Environmental Monitor*, Fall 2003, p. 4-10, 17.
- Scott, E., K. Springer and J.C. Sagebiel, 2004. Vertebrate paleontology in the Mojave Desert: the continuing importance of "follow-through" in preserving paleontologic resources. *In* M.W. Allen and J. Reed (eds.) *The human journey and ancient life in California's deserts: Proceedings from the 2001 Millennium Conference*. Ridgecrest: Maturango Museum Publication No. 15, p. 65-70.
- Springer, K., E. Scott, J.C. Sagebiel, and L.K. Murray, 2009. The Diamond Valley Lake local fauna: late Pleistocene vertebrates from inland southern California. *In* L.B. Albright III (ed.), *Papers on geology, vertebrate paleontology, and biostratigraphy in honor of Michael O. Woodburne*. *Museum of Northern Arizona Bulletin* 65:217-235.
- Springer, K., E. Scott, J.C. Sagebiel, and L.K. Murray, 2010. Late Pleistocene large mammal faunal dynamics from inland southern California: the Diamond Valley Lake local fauna. *In* E. Scott and G. McDonald (eds.), *Faunal dynamics and extinction in the Quaternary: papers honoring Ernest L. Lundelius, Jr.* *Quaternary International* 217: 256-265.

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

Sincerely,

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

**APPENDIX C: CULTURAL RESOURCE INVESTIGATIONS WITHIN A ONE-MILE RADIUS OF THE APE**

Author	Report No.	Title	Year	Quad	Distance from Project
Hearn, Joseph E.	1060439	Archaeological-Historical Resources Assessment of Bloomington Park and Recreation District, Lands at Two Locations: Jurupa Avenue, West of Linden; Walley Boulevard, West of Linden Avenue to Elm Street	1976	Fontana	within 1 mile
Chario, Kathleen C. & Marie G. Cottrell	1061443	Archaeological Resources Assessment Conducted for the Southern Pacific Business Park City of Fontana, San Bernardino County California	1984	Fontana	within 1 mile
Farnsworth, Paul	1062195	Cultural Resource and Historic Structures Surveys of the Linden Avenue Development Bloomington, San Bernardino County, California	1989	Fontana	within 1 mile
Van Horn, David M.	1062391	A Phase I Cultural Resources Study of the 4.6-Acre Kaiser Parking Facility in Fontana, San Bernardino County	1991	Fontana	within 1 mile
Alexandrowicz, J. Stephan	1063099	Historic Preservation Investigations at the Northeast Corner of Valley Boulevard and Cedar Avenue, Bloomington, County of San Bernardino, California: The Identification Program	1996	Fontana	within 1 mile
Love, Bruce & Bai "Tom" Tang	1063176	Cultural Resources Evaluation Report	1997	Fontana	within 1 mile
McDonald, Meg and John D. Goodman II	1063506	Archaeological Inspection of Guzzlers 6304 and 6312 Mountain Ranger District, San Bernardino National Forest, California	2001	Fontana	within 1 mile
Mason, Roger & Brant A. Brechbiel	1063600	Cultural Resources Records Search and Literature Review for a Pacific Bell Mobile Services Telecommunications Facility: CM 015-13 Bloomington, San Bernardino County, California	1998	Fontana	within 1 mile
Love, Bruce	1063603	Installation of Reclaimed Water Pipelines	1998	Fontana	within 1 mile
WSA	1063919	Report on Cultural Resources Mitigation and Monitoring Activities, Fluor Global Services San Bernardino Level (3) Fiber Optics Installation	2001	Fontana	within 1 mile
Thai, Erika	1064372	Installation of WTS Facility for Nextel	2004	Fontana	within 1 mile
Mirro, Michael	1065006	Cultural Resources Survey of Approximately 17 Acres within the Strawberry Flats Project Area for the Natural Resources Conservation Service	2005	Fontana	within 1 mile
McCormick, Steven & Sherri Gust	1065086	Archaeological Resource Survey and Assessment Report for the Valley Boulevard Project (APN 0252-091-04, 08, 25, 39) San Bernardino County, California	2006	Fontana	within 1 mile
Tang, Bai "Tom" & Michael Hogan	1065460	Historical/Archaeological Resources Survey Report Assessor's Parcel Nos. 0252-091-16 and 0252-101-21 to 23 in the Community of Bloomington, San Bernardino County, California	2007	Fontana	within 1 mile
Bonner, Wayne	1065497	Cultural Resource Records Search and Site Visit Results for T-Mobile Telecommunications Facility Candidate IE04877 (Ranch Self Storage), 17780 Valley Boulevard, Bloomington, San Bernardino County, California	2006	Fontana	within 1 mile
McKenna,	1065972	A Cultural Resources Investigation for the Proposed	2008	Fontana	within 1 mile

Jeanette A.		Slover Avenue Improvements from West of Laurel Avenue to Maple Avenue in the Community for Bloomington, San Bernardino County, California			
Gregory, Carrie J.	1066099	Historical Assessment and Technical Report for the Kaiser Fontana Medical Center Hospital Replacement Project, Fontana, San Bernardino County, California	2008	Fontana	within 1 mile
Jones & Stokes	1066516	Cultural Resources Inventory Report for Williams Communications, Inc. Proposed Fiber Optic Cable System Installation Project, Los Angeles to Riverside, Los Angeles and Riverside Counties	1999	Fontana	within 1 mile
McKenna, Jeanette A.	1066532	A Supplemental and Comprehensive Cultural Resources Investigation for the Proposed Slover Avenue Improvements Project Between Tamarind Avenue and Cedar Avenue in Bloomington, San Bernardino County, California	2009	Fontana	within 1 mile
Johnson, Brent	1066965	Direct APE Historic Architectural Assessment for MetroPCS California, LLC	2011	Fontana	within 1 mile
Ghabhlain, Sinead Ni	1067055	Sierra and Slover Cultural Resources Survey	2002	Fontana	within 1 mile

**APPENDIX D: NATIVE AMERICAN HERITAGE COMMISSION**

STATE OF CALIFORNIA

Edmund G. Brown, Jr. Governor

**NATIVE AMERICAN HERITAGE COMMISSION**

1660 Harbor Boulevard, Suite 100  
West Sacramento, CA 95891  
(916) 373-3715  
Fax (916) 373-5471  
www.nahc.ca.gov  
e-mail: ds\_nahc@pacbell.net

May 22, 2013

Ms. Sherri Gust, RPA, Principal

**Cogstone Resource Management, Inc.**

1518 West Taft Avenue  
Orange, CA 92865

Sent by FAX to: (714) 974-8303  
No. of Pages: 3

Re: Request for Sacred Lands File Search and Native American Contacts list for the  
**"Bloomington Project (No. 2680);"** located in the Bloomington area;; San  
Bernardino County, California

Dear Ms. Gust:

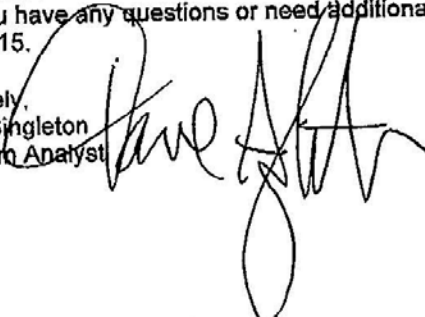
A record search of the NAHC Sacred Lands File failed to indicate the presence of Native American traditional cultural place(s) in the project site location submitted, based on the USGS coordinates, the Area of Potential Effect (APE). Note also that the NAHC SLF Inventory is not exhaustive; therefore, the absence of archaeological or Native American sacred places does not preclude their existence. Other data sources for Native American sacred places/sites should also be contacted. A Native American tribe of individual may be the only sources of presence of traditional cultural places or sites.

In the 1985 Appellate Court decision (170 Cal App 3<sup>rd</sup> 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 to Native American burial sites.

Attached is a list of Native American tribes, individuals/organization who may have knowledge of cultural resources in or near the project area. As part of the consultation process, the NAHC recommends that local governments and project developers contact the tribal governments and individuals to determine if any cultural places might be impacted by the proposed action. If a response is not received in two weeks of notification the NAHC requests that a follow telephone call be made to ensure that the project information has been received.

If you have any questions or need additional information, please contact me at (916) 373-3715.

Sincerely,  
Dave Singleton  
Program Analyst





**Native American Contacts  
San Bernardino County  
May 22 , 2013**

Pechanga Band of Mission Indians  
Paul Macarro, Cultural Resources Manager  
P.O. Box 1477 Luiseno  
Temecula , CA 92593  
**(951) 770-8100**  
pmacarro@pechanga-nsn.  
gov  
(951) 506-9491 Fax

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

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

Gabrieleno/Tongva San Gabriel Band of Mission  
Anthony Morales, Chairperson  
PO Box 693 Gabrielino Tongva  
San Gabriel , CA 91778  
GTTribalcouncil@aol.com  
(626) 286-1632  
(626) 286-1758 - Home  
(626) 286-1262 -FAX

Gabrielino Tongva Nation  
Sam Dunlap, Cultural Resources Director  
P.O. Box 86908 Gabrielino Tongva  
Los Angeles , CA 90086  
samdunlap@earthlink.net

(909) 262-9351 - cell

Morongo Band of Mission Indians  
Robert Martin, Chairperson  
12700 Pumarra Road Cahuilla  
Banning , CA 92220 Serrano  
(951) 849-8807  
(951) 755-5200  
(951) 922-8146 Fax

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

(909) 528-9027 or  
(909) 528-9032

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

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

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

This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed Bloomington Project; located in San Bernardino County, California for which a Sacred Lands file search and Native American Contacts list were requested.

**Native American Contacts  
San Bernardino County  
May 22, 2013**

**SOBOBA BAND OF LUISENO INDIANS**  
Joseph Ontiveros, Cultural Resource Department  
P.O. BOX 487 Luiseno  
San Jacinto, CA 92581  
jontiveros@soboba-nsn.gov  
(951) 663-5279  
(951) 654-5544, ext 4137

**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 only applicable for contacting local Native Americans with regard to cultural resources for the proposed Bloomington Project; located in San Bernardino County, California for which a Sacred Lands file search and Native American Contacts list were requested.**



May 23, 2013

To whom it may concern,

A project is proposed for the construction of an affordable housing development along Valley Boulevard in the unincorporated area of Bloomington, San Bernardino County, CA. A map of the project location and all other information are provided.

The Native American Heritage Commission was contacted on May 17, 2013 to perform a search of the Sacred Lands file. The NAHC does not have record of Native American sacred sites in the 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.

A record search at the San Bernardino Archaeological Information Center was conducted by Cogstone on May 21, 2013. Results indicate that no prehistoric sites have been recorded within a 1-mile radius of the project area. Three historic archaeological resources consisting of 2 historic trash scatters and 1 historic foundation have been recorded within a 1-mile radius.

We would appreciate hearing any comments, issues and/or concerns relating to cultural resources within the project area. All information provided regarding cultural and historic sites or other areas of concern will be confidential. You can email or fax your response if you like ([mvalasik@cogstone.com](mailto:mvalasik@cogstone.com) or number below). Thank you for your assistance.

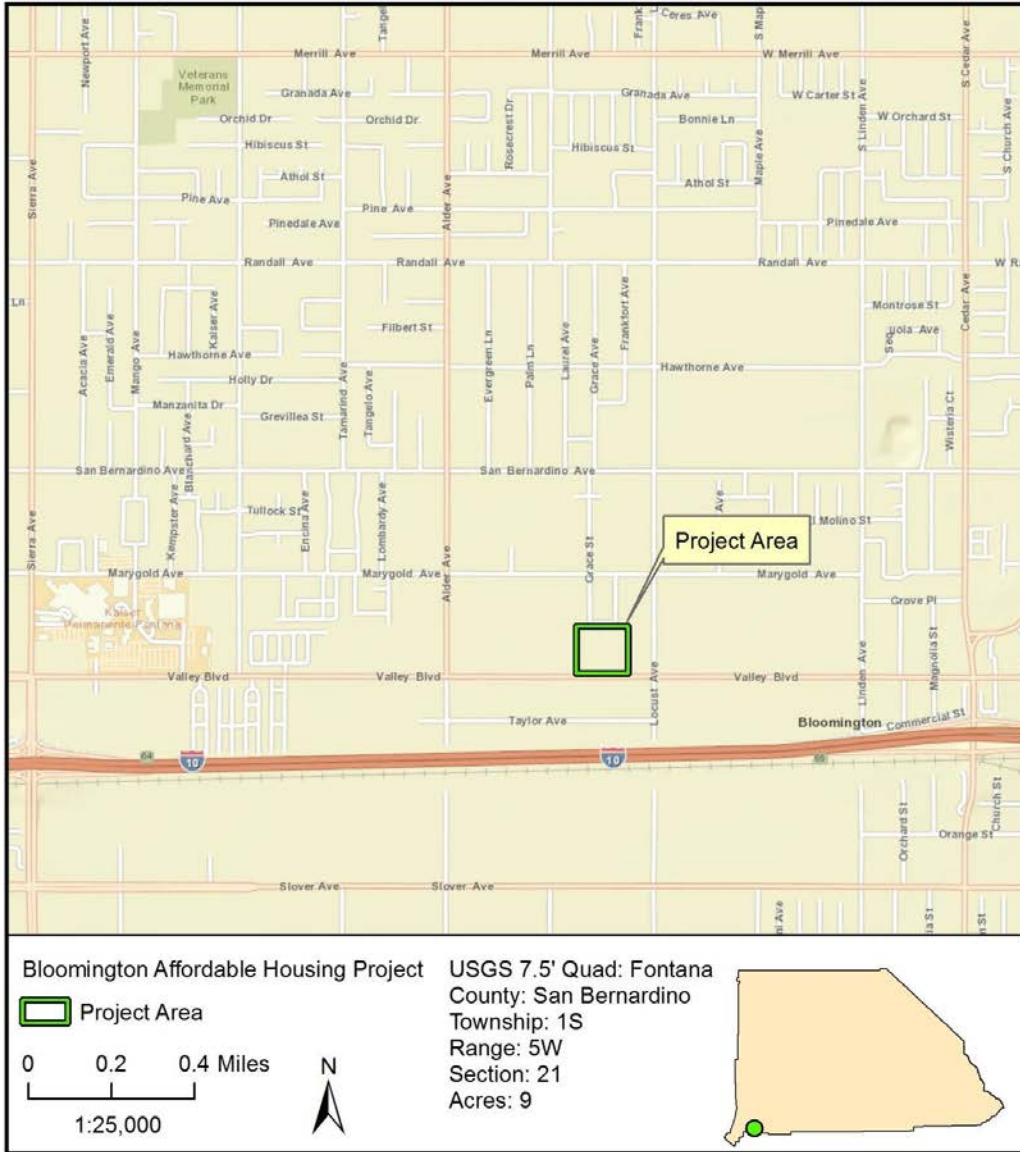
Sincerely,

Molly Valasik  
Archaeology Supervisor

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](http://cogstone.com)



**Native American Contact Log for the Bloomington Affordable Housing Project**

<b>Native American Group/Individual</b>	<b>Date(s) of First Contact Attempt</b>	<b>Date(s) of 2nd Contact Attempt</b>	<b>Date(s) of 3rd Contact Attempt</b>	<b>Date(s) of Replies Rec'd</b>	<b>Comments</b>
Pechanga Band of Mission Indians Paul Macarro, Cultural Resources Manager	May 23rd, 2013, Letter Sent				
Ramona Band of Cahuilla Mission Indians Joseph Hamilton, Chairman	May 23rd, 2013, Letter Sent				
San Manuel Band of Mission Indians Carla Rodriquez, Chairwoman	May 23rd, 2013, Letter Sent				
Gabrieleno/Tongva San Gabriel Band of Mission Indians Anthony Morales, Chairperson	May 23rd, 2013, Letter Sent				
Gabrielino Tongva Nation Sam Dunlap, Chairperson	May 23rd, 2013, Letter Sent				
Morongo Band of Mission Indians Robert Martin, Chairperson	May 23rd, 2013, Letter Sent				
Serrano Nation of Mission Indians Goldie Walker, Chairwoman	May 23rd, 2013, Letter Sent				

Morongo Band of Mission Indians Tribal Elder Ernest H. Siva	May 23rd, 2013, Letter Sent				
Soboba Band of Luiseno Indians Joseph Ontiveros, Cultural Resources Department	May 23rd, 2013, Letter Sent				