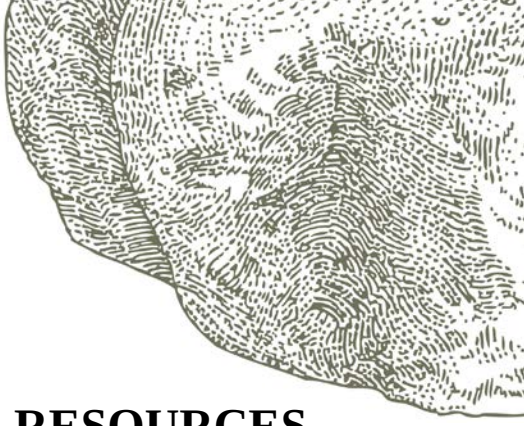
Appendix B
Cultural Resources Assessment

cogstone
PALEONTOLOGY - ARCHAEOLOGY - HISTORY



CULTURAL AND PALEONTOLOGICAL RESOURCES ASSESSMENT REPORT FOR THE 1108 WEST 141ST STREET PROJECT, CITY OF GARDENA, LOS ANGELES COUNTY, CALIFORNIA

Prepared for:
De Novo Planning Group
180 East Main Street #108
Tustin, CA 92780

Authors:
John Gust, PhD, RPA
Kim Scott, MS

Principal Investigators:
John Gust, PhD, RPA
Kim Scott, MS

Date:
August 2020

Cogstone Project Number: 5021
Type of Study: Cultural and Paleontological Resources Assessment
Cultural Sites: None within the Project Area
Paleontological Localities: None within the Project Area
USGS 7.5' Quadrangle: Inglewood, 1981
Area: 4.59 acres
Key Words: Cultural and Paleontological Resources Assessment, City of Gardena, Los Angeles County, middle to late Pleistocene older alluvium - less than five feet below the modern surface low potential for fossils, more than five feet below the modern surface moderate potential for fossils

TABLE OF CONTENTS

SUMMARY OF FINDINGS ..... **IV**

INTRODUCTION **6**

PURPOSE OF STUDY **6**
PROJECT LOCATION **7**
PROJECT DESCRIPTION **7**
PROJECT PERSONNEL **10**

REGULATORY ENVIRONMENT **11**

STATE LAWS AND REGULATIONS **11**
CALIFORNIA ENVIRONMENTAL QUALITY ACT *11*
PUBLIC RESOURCES CODE *12*
CALIFORNIA REGISTER OF HISTORICAL RESOURCES *12*
NATIVE AMERICAN HUMAN REMAINS *13*
CALIFORNIA ADMINISTRATIVE CODE, TITLE 14, SECTION 4307 ..... *13*
DEFINITION OF SIGNIFICANCE FOR PALEONTOLOGICAL RESOURCES **13**

BACKGROUND **15**

GEOLOGIC SETTING **15**
PALEONTOLOGICAL SETTING **15**
ENVIRONMENTAL SETTING **16**
PREHISTORIC SETTING **17**
PREHISTORIC CHRONOLOGY *18*
ETHNOGRAPHY **20**
HISTORIC SETTING **22**
EARLY CALIFORNIA HISTORY *22*
CITY OF GARDENA HISTORY *23*
PROJECT AREA HISTORY *24*

RECORDS SEARCHES **25**

PALEONTOLOGICAL RECORD SEARCH **25**
CALIFORNIA HISTORIC RESOURCES INFORMATION SYSTEM **28**
OTHER SOURCES CONSULTED FOR CULTURAL RESOURCES **28**
NATIVE AMERICAN CONSULTATION **29**

SURVEY ..... ERROR! BOOKMARK NOT DEFINED.

PALEONTOLOGICAL IMPACT ANALYSIS **30**

PALEONTOLOGICAL SENSITIVITY **30**

CONCLUSIONS AND RECOMMENDATIONS **31**

PALEONTOLOGY RECOMMENDATIONS **31**
CULTURAL RESOURCE RECOMMENDATIONS **31**

REFERENCES CITED **33**

APPENDIX A. QUALIFICATIONS **37**

APPENDIX B. PALEONTOLOGICAL RECORD SEARCH **42**

APPENDIX C. NATIVE AMERICAN CONSULTATION **45**

APPENDIX D. PALEONTOLOGICAL SENSITIVITY RANKING CRITERIA **52**

LIST OF FIGURES

FIGURE 1. PROJECT VICINITY MAP....6
FIGURE 2. PROJECT LOCATION MAP....8
FIGURE 3. PROJECT AERIAL MAP....9
FIGURE 4. TRIBAL BOUNDARY MAP....21
FIGURE 5. LAND GRANT MAP....23

LIST OF TABLES

TABLE 1. CULTURAL PATTERNS AND PHASES....18
TABLE 2. FOSSIL LOCALITIES FROM NEAR TO THE PROJECT AREA....26
TABLE 3. PREVIOUS CULTURAL RESOURCE STUDIES WITHIN A HALF-MILE RADIUS OF THE PROJECT AREA....28
TABLE 4. ADDITIONAL SOURCES CONSULTED....29

SUMMARY OF FINDINGS

This study was conducted to determine the potential impacts to cultural and paleontological resources during the 1108 West 141st Project, City of Gardena, Los Angeles County, California (Project). This assessment report complies with the requirements of the California Environmental Quality Act (CEQA) with the City of Gardena acting as the lead agency under CEQA.

The Project Area is 4.59 acres located at 1108 West 141st Street on Assessor Parcel Number 6115-015-023 within the City of Gardena, California. The Project involves a General Plan Amendment and zone change from High Density Residential (R-4) to General Commercial (C-3). A development scenario will be analyzed based on the allowed uses and development potential of the site. There is no specific undertaking proposed at this time. The Project Area is currently completely developed as a parking lot with some landscaped planters and trees within the parking lot. No intensive pedestrian survey was conducted.

Paleontological Resources

The Project is mapped entirely as middle to late Pleistocene older alluvium which was deposited between 500,000 and 11,700 years ago. The paleontological record search revealed no fossil localities from within the Project or within a two-mile radius. Fossil localities are known from terrestrial deposits near to the Project. Extinct late Pleistocene animal fossils of ground sloth, dire wolf, mammoth, horse, two types of pronghorn, and bison have been recovered from within ten miles of the study area.

The paleontological records search revealed that all fossils previously recovered within a ten-mile radius were a minimum of five feet deep in deposits mapped as late Pleistocene at the surface. Project sediments less than five feet below the modern surface are assigned a low potential for fossils (PFYC 2) and deeper deposits are assigned a moderate potential for fossils (PFYC 3) due to similar deposits producing fossils at that depth near to the study area.

Based upon fossils found in similar sediments nearby, paleontological monitoring is recommended for the excavations into native sediments more than five feet deep. Augering, potholing, pile driving, and similar activities regardless of depth, have a low potential to produce fossils meeting significance criteria because any fossils brought up by the auger during drilling will not have information about formation, depth or context. If unanticipated fossil discoveries are made, all work must halt within 25 feet until a qualified paleontologist can evaluate the find. Work may resume immediately outside of the 25-foot radius.

Cultural Resources

Cogstone requested a search of the California Historic Resources Information System (CHRIS) that included the entire proposed Project Area as well as a half-mile radius surrounding the Project Area on March 10, 2020. Results of the record search indicate that eight previous studies have been completed within a half-mile of the proposed Project Area. The records search also

determined that no previously recorded resources are located within the Project Area or within a half-mile radius of the Project Area.

A Sacred Lands File search requested from the Native American Heritage Commission on June 12, 2020 indicated that there are no sacred lands or resources known within the Project Area.

Based on the results of the cultural records search and sacred lands file search, the Project Area has low sensitivity for prehistoric cultural resources. Analysis of these data sources and historical United States Geological Survey (USGS) topographic quadrangle maps and United States Department of Agriculture (USDA) aerial photographs indicates that the Project Area also has low sensitivity for buried historical archaeological features such as foundations or trash pits.

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

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

INTRODUCTION

PURPOSE OF STUDY

This study was conducted to determine the potential impacts to cultural and paleontological resources during the 1108 West 141st Street Project, City of Gardena, Los Angeles County, California (Project; Figure 1). The proposed Project is located within the City of Gardena (City), which is the lead agency under the California Environmental Quality Act (CEQA).

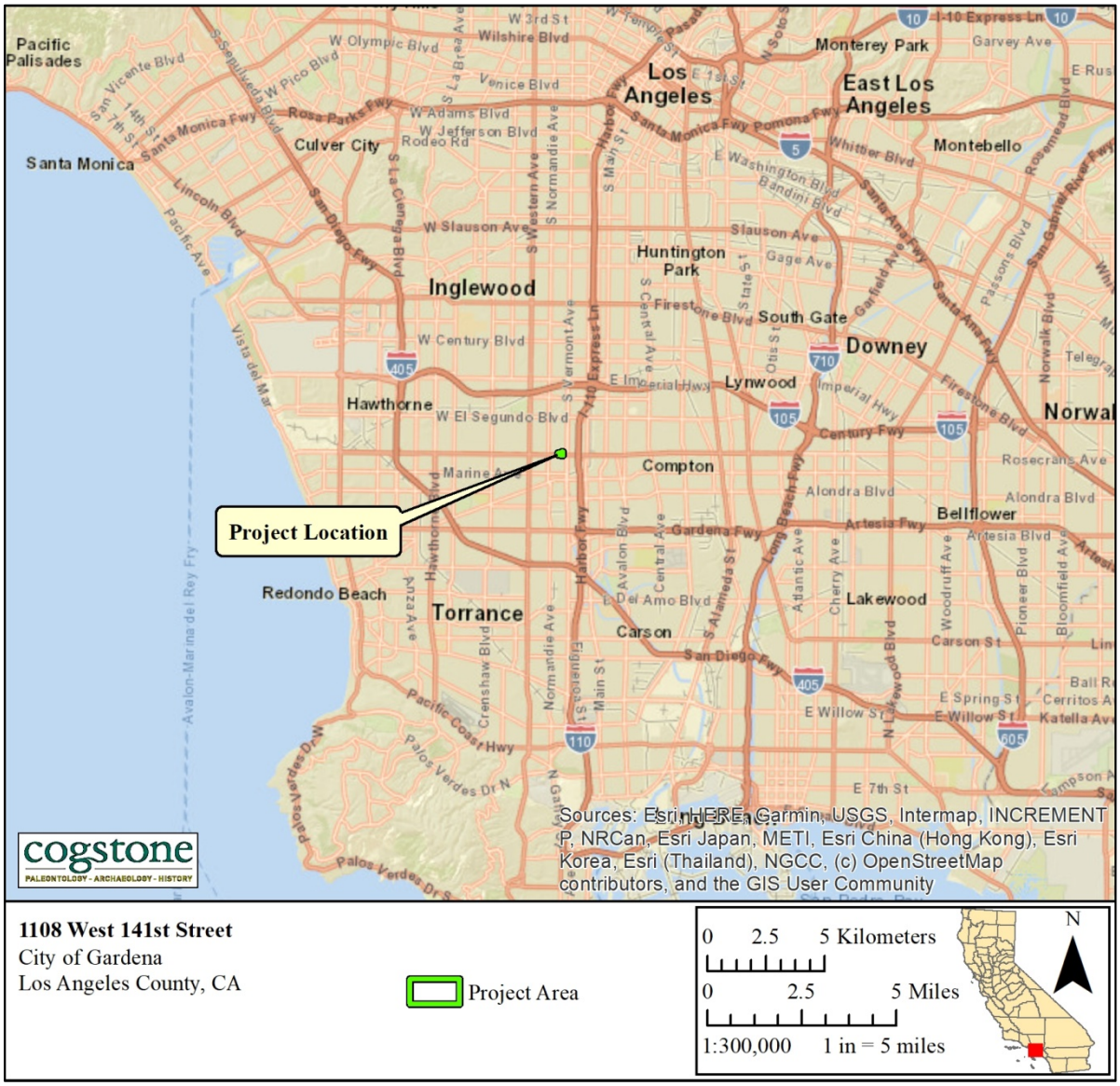


Figure 1. Project vicinity map

PROJECT LOCATION

The Project Area is 4.59 acres located at 1108 West 141st Street on Assessor Parcel Number 6115-015-023 within the City of Gardena, California. Specifically, the Project is located within Township 3 South, Range 14 West, Section 13, San Bernardino Baseline and Meridian, and on the United States Geological Survey (USGS) 7.5 minute Inglewood topographic quadrangle map (Figures 2 and 3).

PROJECT DESCRIPTION

The Project involves a General Plan Amendment and zone change from High Density Residential (R-4) to General Commercial (C 3). A development scenario will be analyzed based on the allowed uses and development potential of the site. There is no specific undertaking proposed at this time. The Project Area is currently completely developed as a parking lot with some landscaped planters and trees.

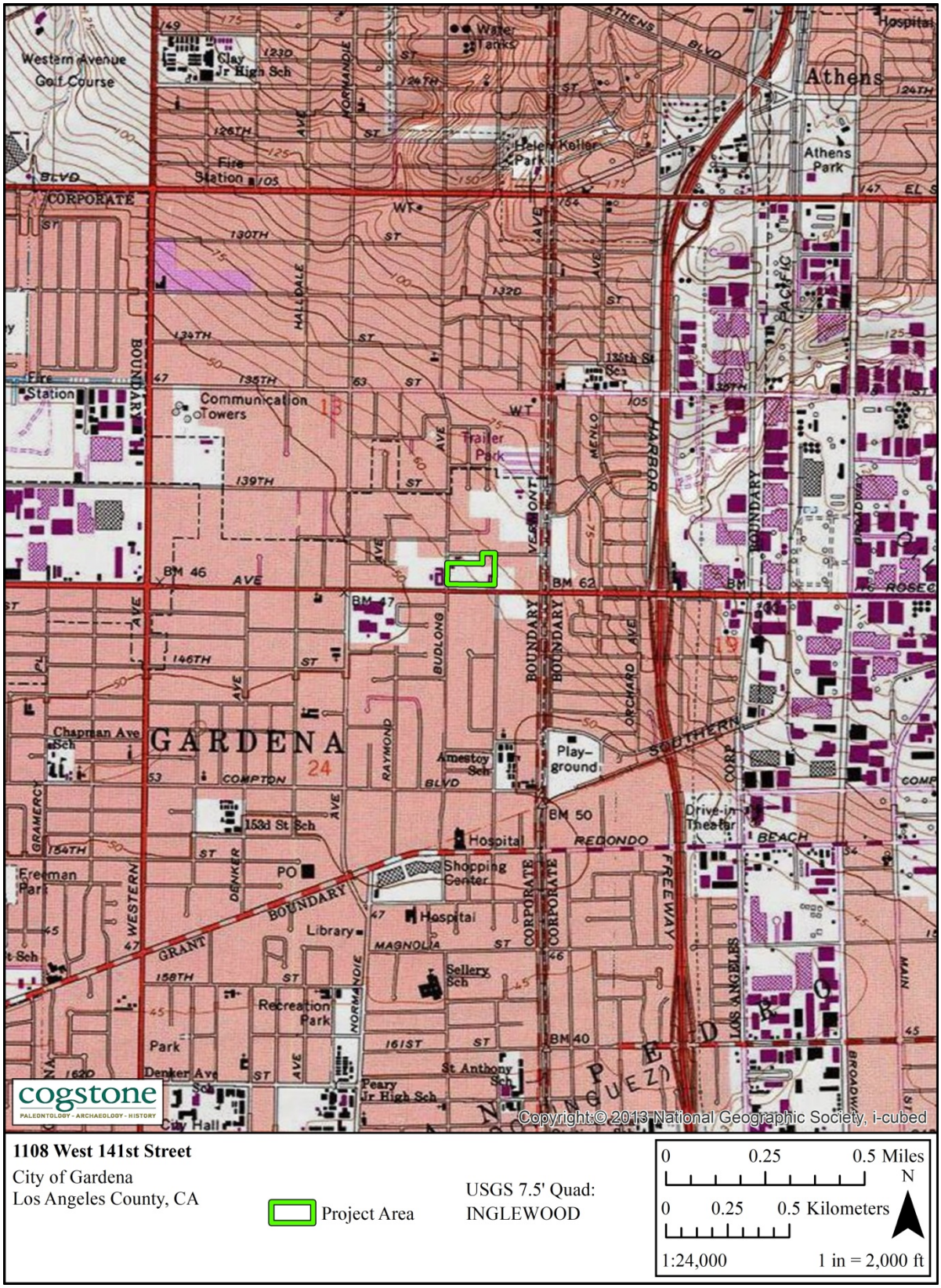


Figure 2. Project location map

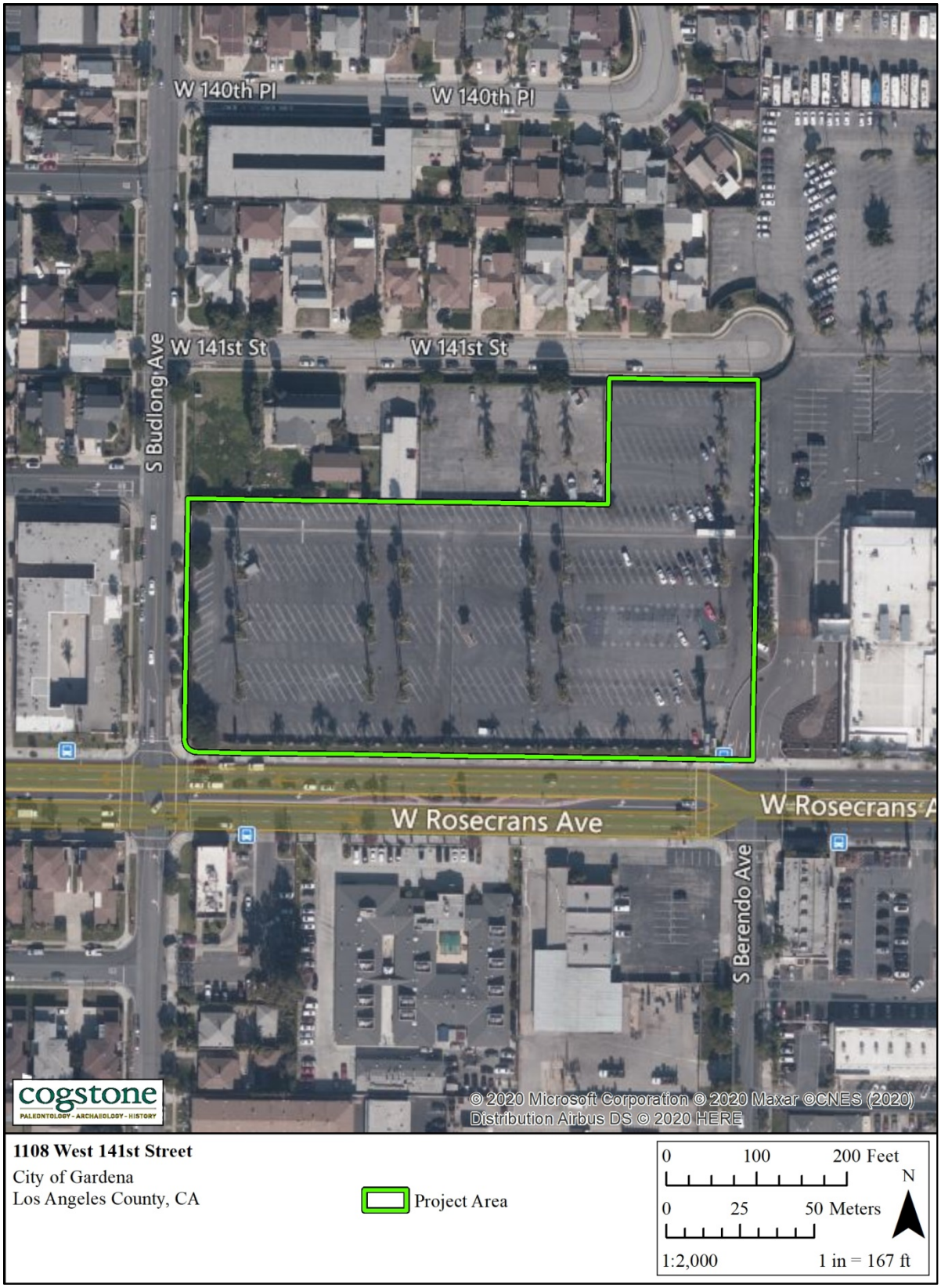


Figure 3. Project aerial map

PROJECT PERSONNEL

Cogstone Resource Management, Inc. (Cogstone) conducted the cultural and paleontological resources study. Resumes of key personnel are provided in Appendix A.

- Molly Valasik served as the Task Manager for the Project and provided QA/QC. Ms. Valasik has an MA in Anthropology from Kent State University in Ohio and over 10 years of experience in southern California archaeology.

- John Gust, RPA, served as the Principal Investigator for Archaeology, supervising all work, and co-authored this report. Dr. Gust has a PhD in Anthropology from the University of California (UC), Riverside and an MA in Geography from the University of Colorado, Colorado Springs. He has over eight years of experience in archaeology.

- Kim Scott served as the Principal Investigator for Paleontology for the Project and wrote the geological, paleontological, and environmental portions of this report. Ms. Scott has an MS in Biology with paleontology emphasis from California State University (CSU), San Bernardino and has over 25 years of experience in California paleontology and geology.

- Logan Freeberg requested the paleontological and cultural record searches and prepared the maps for the report. Mr. Freeberg has a certificate in Geographic Information Systems (GIS) from CSU Fullerton and a BA in Anthropology from UC Santa Barbara. He has more than 15 years of experience in southern California archaeology.

REGULATORY ENVIRONMENT

STATE LAWS AND REGULATIONS

CALIFORNIA ENVIRONMENTAL QUALITY ACT

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

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

If paleontological resources are identified as being within the proposed project study 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.

Tribal Cultural Resources

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

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

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

examples of mitigation measures that lead agencies may consider to avoid or minimize impacts to tribal cultural resources.

PUBLIC RESOURCES CODE

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

CALIFORNIA REGISTER OF HISTORICAL RESOURCES

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

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

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

In addition to having significance, resources must have integrity for the period of significance. The period of significance is the date or span of time within which significant events transpired,

or significant individuals made their important contributions. Integrity is the authenticity of a historical resource's physical identity as evidenced by the survival of characteristics or historic fabric that existed during the resource's period of significance.

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

NATIVE AMERICAN HUMAN REMAINS

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

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

CALIFORNIA ADMINISTRATIVE CODE, TITLE 14, SECTION 4307

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

DEFINITION OF SIGNIFICANCE FOR PALEONTOLOGICAL RESOURCES

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

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

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

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

BACKGROUND

The geologic, paleontological, and environmental sections below provide information on the environmental factors that affect archaeological and paleontological resources, while the prehistoric and historical settings provide information on the history of land use in the general Project region.

GEOLOGIC SETTING

The Project lies within the Los Angeles Basin, a sedimentary basin which includes the coastal plains of Los Angeles and Orange counties and extends west to Catalina Island, California. This region is bounded by the Santa Ana Mountains to the east, the Santa Monica Mountains to the north, and the San Joaquin Hills to the south. The Los Angeles Basin began to develop in the early Miocene, about 23 million years ago, initially in a marine setting. Through time the basin transitioned to terrestrial deposition by the middle Pleistocene, about 1 million years ago.

The Los Angeles Basin is part of the coastal section of the northernmost Peninsular Range Geomorphic Province, and is characterized by elongated northwest-trending mountain ridges separated by sediment-floored valleys. Subparallel faults branching off from the San Andreas Fault to the east create the local mountains and hills. The Peninsular Ranges Geomorphic Province is located in the southwestern corner of California and is bounded by the Transverse Ranges Geomorphic Province to the north and the Colorado Desert Geomorphic Province to the east (Wagner 2002).

The Project is mapped entirely as middle to late Pleistocene older alluvium which was deposited between 500,000 and 11,700 years ago. These fluvial and flood plain deposits consist of layered poorly sorted, moderately well-indurated, slightly dissected, gravels to clays. The sediments were deposited by streams and rivers on canyon floors and in the flat flood plains of the area (Saucedo et al. 2016).

PALEONTOLOGICAL SETTING

During the past 100,000 years or so, southern California's climate has shifted from the cooler and damper conditions of the last glacial period to the warmer and dryer conditions of the Holocene interglacial which began approximately 11,000 years ago. While continental ice sheets covered the interior of northern North America, southern California was ice free.

Fossils of Monterey cypress (*Hesperocyparis macrocarpa*), Monterey pine (*Pinus radiata*), and Torrey pine (*Pinus* sp. cf. *P. torreyana*) have been found in middle to late Pleistocene deposits in

the Wilshire District of Los Angeles (Scott et al. 2014). Fossils of Monterey cypress are also known from middle to late Pleistocene deposits in Costa Mesa, California, as well as from the late Pleistocene Rancho La Brea asphalt seeps of the Wilshire District of Los Angeles (Axelrod and Govean 1996; Stock and Harris 1992). Today, the most restricted conifers (Monterey cypress and Torrey pine) only inhabit locations on the coasts with cool, moist summers characterized by abundant sea fog. These locations experience a mean summer high temperature of 70ºF - 83ºF (21.1ºC - 28.3ºC). Winters are cool and damp with average precipitation of 10.59 - 32.41 inches (26.90 - 82.32 cm; Intellicast 2020; The Weather Channel 2020). Cold water upwellings due to submarine canyons adjacent to the shore near the relict populations create these conditions.

ENVIRONMENTAL SETTING

Located in Los Angeles County, the Project is situated approximately 10 miles south-southwest of downtown Los Angeles. The Los Angeles River lays 6.3 miles to the east, Compton Creek is 2.7 miles to the east, and the Pacific Ocean is 7 miles to the west of the Project.

The current Mediterranean-like climate is characterized by warm, dry summers and cool, moist winters, with rainfall predominantly falling between November and May. Mild breezes reach the area from the Pacific Ocean, located west of the Project Area.

Prior to development, the native vegetation of the Project Area consisted of California coastal sage scrub. Typical species include California sagebrush (*Artemisia californica*), coyote brush (*Baccharis pilularis* var. *consanguinea*), California buckwheat (*Eriogonum fasciculatum*), lemonade berry (*Rhus integrifolia*), poison oak (*Toxicodendron diversiloba*), purple sage (*Salvia leucophylla*), and black sage (*Salvia mellifera*; Ornduff et al. 2003). Additional common species include brittlebush (*Encelia californica*), chamise (*Adenostoma fasciculatum*), white sage (*Salvia apiana*), Our Lord's candle (*Hesperoyucca whipplei*), and prickly pear cactus (*Opuntia*; Hall 2007).

Large native land mammals of the region included mule deer (*Odocoileus hemionus*), bighorn sheep ([1]‡*Ovis canadensis*), tule elk (‡*Cervus canadensis nannodes*), pronghorn (‡*Antilocapra americana*), bison (‡*Bison bison*), bobcat (‡*Lynx rufus*), mountain lion (‡*Felis concolor*), jaguar (‡*Panthera onca*), coyote (*Canis latrans*), grey wolf (‡*Canis lupus*), black and grizzly bears (‡*Ursus americanus,* ‡*Ursus arctos*). Smaller native fauna included rabbits (‡*Lepus californicus, Sylvilagus audubonii,* ‡*Sylvilagus bachmani*), desert tortoise (‡*Gopherus agassizii*), and numerous other species (California Department of Fish and Game 2020).

[1] ‡ - indicates that the species has been extirpated from Southern California.

Today, after approximately a century of urban and suburban development, the vegetation of the area is instead typified by imported species. Grasses such as slender wild oat (*Avena barbata*), ripgut brome (*Bromus diandrus*), and giant reed (*Arundo donax*); shrubs and trees including blackwood acacia (*Acacia melanoxylon*), saltcedar (*Tamarix ramosissima*), eucalyptus (*Eucalyptus* spp.), and Brazilian pepper (*Schinus terebinthifolius*) are common (Cal-IPC 2006). In recent history, urban development has driven most animals from the area, although mule deer, bobcat, and coyotes still occur in the surrounding hills.

PREHISTORIC SETTING

Approaches to prehistoric frameworks have changed over the past half century 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 to 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).

Recently, it was recognized that generalized terminology is suppressing the identification of cultural, spatial, and temporal variation and the movement of peoples throughout space and time. 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.; Sutton and Gardner 2010:7). Faunal remains vary by location but include shellfish, land animals, marine mammals, and fish.

The Encinitas Tradition is currently redefined as comprising four geographical 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 in the greater Los Angeles Basin by the Del Rey Tradition (Sutton 2010). This tradition has been generally assigned to the Intermediate and Late Prehistoric periods. The changes that initiated the beginning of the Intermediate Period include new settlement patterns, economic foci, and artifact types that coincided with the arrival of a biologically distinctive population. The Intermediate and Late Prehistoric periods have not been well-defined. Many archaeologists have proposed, however,

that the beginning of the Intermediate marked the arrival of Takic-speaking groups (from the Mojave Desert, southern Sierra Nevada, and San Joaquin Valley) and that the Late Prehistoric Period reflected Shoshonean groups (from the Great Basin). Related cultural and biological changes occurred on the southern Channel Islands about 300 years later.

As defined by Sutton (2010), the Del Rey Tradition replaces usage of the Intermediate and Late Prehistoric 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.

PREHISTORIC CHRONOLOGY

The latest cultural revisions for the Project Area define traits for time phases of the Topanga pattern of the Encinitas Tradition applicable to coastal Los Angeles and Orange counties (Sutton and Gardner 2010; Table 1). This pattern is replaced in the Project Area by the Angeles pattern of the Del Rey Tradition later in time (Sutton 2010).

Table 1. Cultural Patterns and Phases

Phase	Dates BP	Material Culture	Other Traits
Topanga I	8,500 to 5,000	Abundant manos and metates, many core tools and scrapers, few but large points, charmstones, cogged stones, early discoidals, faunal remains rare	Shellfish and hunting important, secondary burials under metate cairns (some with long bones only), some extended inhumations, no cremations
Topanga II	5,000 to 3,500	Abundant but decreasing manos and metates, adoption of mortars and pestles, smaller points, cogged stones, late discoidals, fewer scraper planes and core tools, some stone balls and charmstones	Shellfish important, addition of acorns, reburial of long bones only, addition of flexed inhumations (some beneath metate cairns), cremations rare
Topanga III	3,500 to 1,000	Abundant but decreasing manos and metates, increasing use of mortars and pestles, wider variety of small projectile points, stone-lined ovens	Hunting and gathering important, flexed inhumations (some under rock cairns), cremations rare, possible subsistence focus on yucca/agave
Angeles IV	1,000 to 800	Cottonwood arrow points for arrows appear, Olivella cupped beads and Mytilus 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

Phase	Dates BP	Material Culture	Other Traits
Angeles VI	450 to 150	Addition of locally made pottery, metal needle-drilled Olivella beads, addition of Euro-American material culture (glass beads and metal tools)	Use of domesticated animals, flexed primary inhumations continue, some cremations

Topanga Pattern groups were relatively small and highly mobile. Sites known are temporary campsites, not villages and tend to be along the coast in wetlands, bays, coastal plains, near-coastal valleys, marine terraces, and mountains. The Topanga toolkit is dominated by manos and metates with projectile points scarce (Sutton and Gardner 2010:9).

In Topanga Phase I other typical characteristics were a few mortars and pestles, abundant core tools (scraper planes, choppers, and hammerstones), relatively few large, leaf-shaped projectile points, cogged stones, and early discoidals. Secondary inhumation under cairns was the common mortuary practice. In Orange County as many as 600 flexed burials were present at one site and dated 6,435 radiocarbon years before present (Sutton and Gardner 2010:9, 13).

In Topanga Phase II, flexed burials and secondary burial under cairns continued. Adoption of the mortar and pestle is a marker of this phase. Other typical artifacts include manos, metates, scrapers, core tools, discoidals, charmstones, cogged stones and an increase in the number of projectile points. In Orange County stabilization of sea level during this time period resulted in increased use of estuary, near shore, and local terrestrial food sources (Sutton and Gardner 2010:14-16).

In Topanga Phase III, there was continuing abundance of metates, manos, and core tools plus increasing amounts of mortars and pestles. More numerous and varied types of projectile points are observed along with the introduction of stone-line earthen ovens. Cooking features such as these were possibly used to bake yucca or agave. Both flexed and extended burials are known (Sutton and Gardner 2010:17).

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, 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 period (i.e., after A.D. 1542; Sutton 2010). 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 Euro-American tools and materials, including glass beads and metal tools such as knives and needles (used in bead manufacture). The frequency of Euro-American 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.

ETHNOGRAPHY

Early Native American peoples of the Project 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 (Bean and Smith 1978; McCawley 1996; Figure 4). 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).

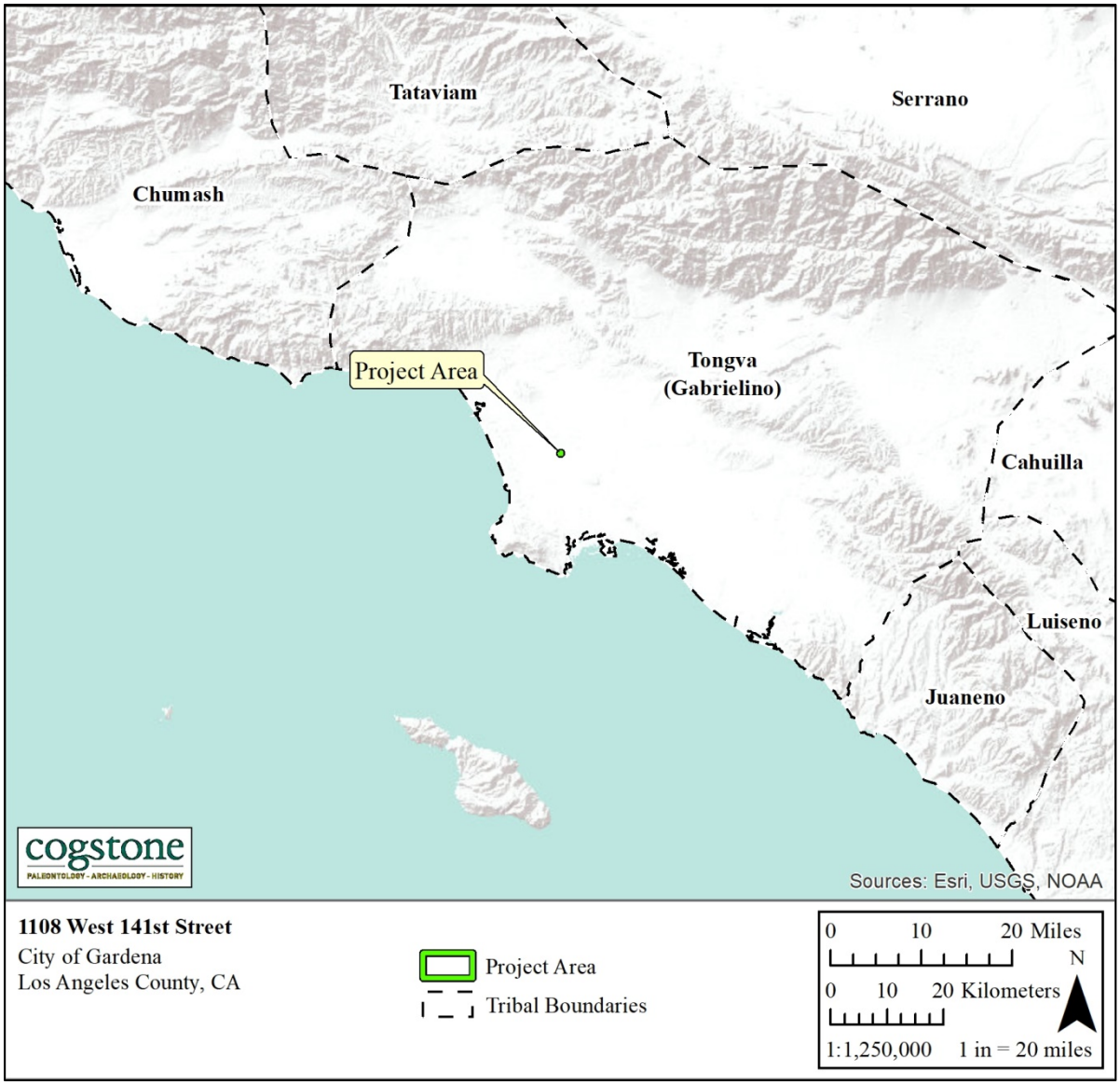


Figure 4. Tribal boundary map

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

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

HISTORIC SETTING

EARLY CALIFORNIA HISTORY

Juan Cabrillo was the first European to sail along the coast of California in 1542 and was followed in 1602 by Sebastian Vizcaino. Between 1769 and 1822 the Spanish had colonized California and established missions, presidios and pueblos (Bean and Rawls 1993).

In 1821 Mexico won its independence from Spain and worked to lessen the wealth and power held by the missions. The Secularization Act was passed in 1833, giving the vast mission lands to the Mexican governor and downgrading the missions' status to that of parish churches. The governor then redistributed the former mission lands in the form of grants, to private owners. Ranchos in California numbered over 500 by 1846, all but approximately 30 of which resulted from land grants (Bean and Rawls 1993). The Project Area is not located within a land grant, but is closest to the San Pedro (Dominguez) land grant to the south (Figure 5).

Following the signing of the Treaty of Guadalupe Hidalgo on February 2, 1848, which ceased American/Mexican hostilities, the region transitioned to the American Period of California. In 1850, California was granted statehood and although the United States promised to honor the land grants, the process of defining rancho boundaries and proving legal ownership became time consuming and expensive. Legal debts led to bankruptcies followed by the rise in prices of beef, hide, and tallow. This combined with flooding and drought was detrimental to the cattle industry. Ranchos were divided up and sold inexpensively (Robinson 1948).

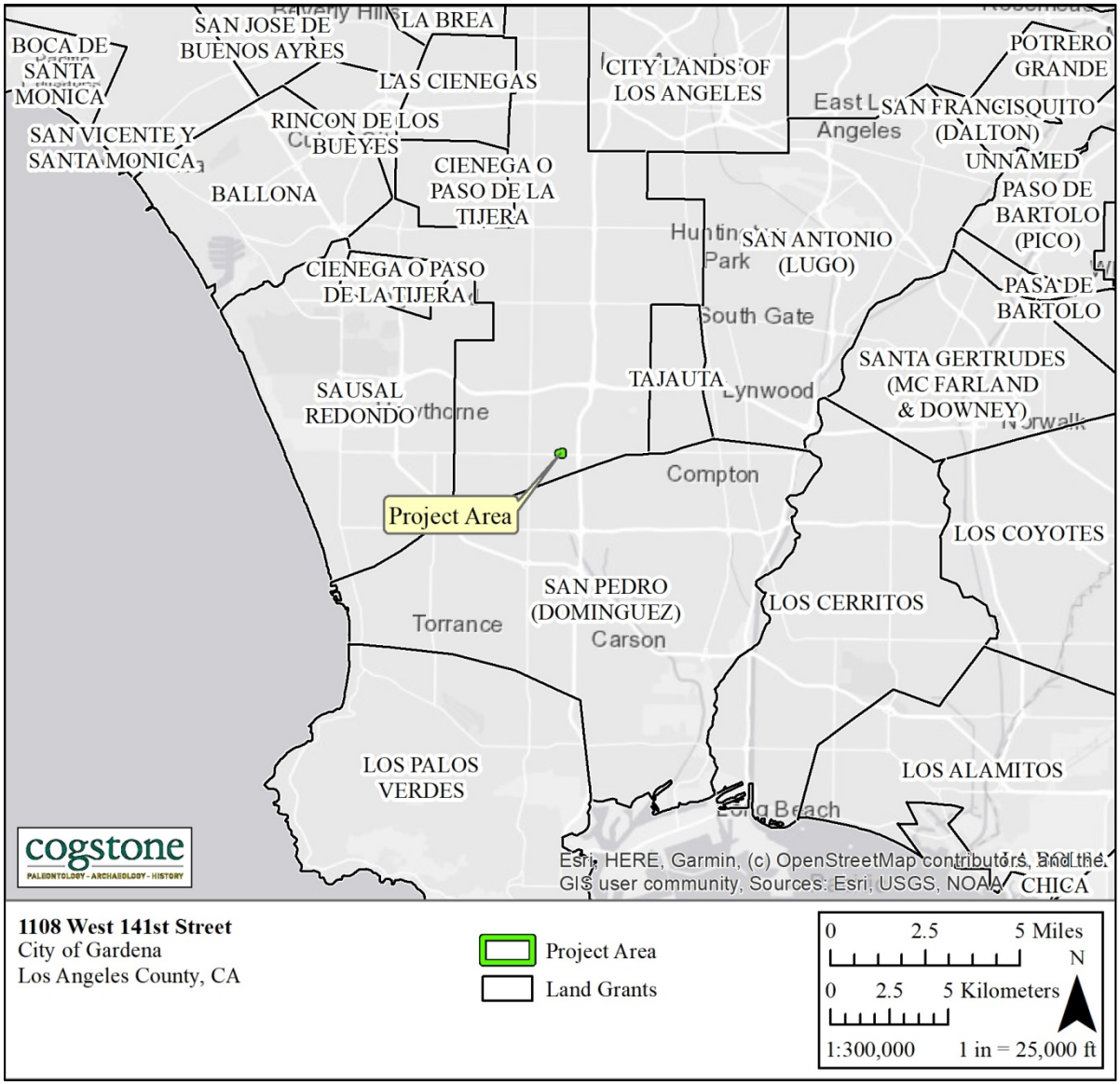


Figure 5. Land grant map

CITY OF GARDENA HISTORY

In 1784, in recognition of his years of military service, Spanish soldier Juan Jose Dominquez received thousands of acres of land upon which he established Rancho San Pedro. Part of this land grant became become Gardena Valley. In 1869, General William Starke Rosecrans purchased 16,000 acres in the Gardena Valley, which he promptly subdivided and sold off. Spencer Roane Thorpe was among the first to purchase property from Rosecrans near 161st and Figueroa Street in the Gardena Valley. Various ranchers and farmers also purchased land in the valley and by 1887 the settlement of Gardena was born (Gardena Heritage Committee 2006). It is speculated the name "Gardena" is credited to Thorpe or his daughter after the land's reputation as a "garden spot;" the valley remained one of the few areas between Los Angeles and

the west coast with a reliable source of water (fed by the Dominquez Slough) during the dry seasons. From 1886 to 1887, Gardena underwent a significant population and real-estate boom as a result of the construction of the first railroad in the Gardena Valley, which ran from Agricultural Park in Los Angeles to the town site of Rosecrans. Known as the Rosecrans Rapid Transit Railway, the railway was purchased in 1889 by the Redondo Railway Company. The Redondo Railway Company constructed approximately 20 miles of rail between Los Angeles and Redondo, which resulted in Gardena's downtown area moving from Figueroa Street to Vermont Avenue (Gardena Heritage Committee 2006).

Key to the settlement's early farming economy, many Japanese immigrants moved to Gardena to work as farmers, nurserymen, and gardeners; prominent crops included strawberries, blackberries, raspberries, tomatoes, alfalfa, and barley. Gardena's vast berry fields earned the area the title of "Berryland" and the reputation as South California's berry capital (Gardena Heritage Committee 2006).

In the early 1900s, Gardena was known as a rural "Japantown" with a large Japanese community second only to Los Angeles' Little Tokyo. First-generation Japanese (*Issei*) responsible for the development and growth of berry agriculture in the region arrived between 1902 and 1906 and referred to their settlement within Gardena as "Moneta." With the growing Issei population came the formation of the Japanese Association of Moneta (Sato 2009).

Following the onset of World War I, Gardena's berry industry fell into decline as they were replaced with the cultivation of what was considered more vital crops for the war effort. After the war, residential development gradually replaced Gardena's farmland. Despite the decline of local agriculture, Gardena's wholesale flower industry was on the rise with 22 nurseries within its city limits by 1940. In September 1930, Gardena incorporated with the neighboring settlements of Strawberry Park and Moneta to become the City of Gardena (Sato 2009).

From 1936 to 1980, Gardena operated as the only legalized gambling city in the county. Gardena's gambling monopoly was so successful it was said there were more poker tables in the city than in the entirety of the United States (Gardena Heritage Committee 2006).

PROJECT AREA HISTORY

The earliest available USGS topographic quadrangle map is the 1896 Redondo 15-minute map which shows Rosecrans Avenue in place along the southern edge of the Project Area. The USGS 1923 Watts 7.5-minute topographic quadrangle map shows streets in place along the western and northern boundaries of the Project Area and new buildings within the Project Area.

The earliest available USDA historic aerial photograph dates to 1952 and shows further building development within the Project Area. The 1963 USDA historic aerial photograph shows that building construction has continued within the Project Area. Subsequent USDA historic aerial

photographs show buildings being demolished in the northern portion by 1972, southern portion by 1994, and northeastern portion by 2003 of the Project Area. As these building are demolished the Project Area is converted to a parking lot from 1980 until 2003 when the entire Project Area is a parking lot.

RECORDS SEARCHES

PALEONTOLOGICAL RECORD SEARCH

A record search of the Project was obtained from the Natural History Museum of Los Angeles County (McLeod 2020; Appendix B). Additional records from the University of California Museum of Paleontology database (UCMP 2020), the PaleoBiology Database (PBDB 2020), and print sources were searched for fossil records.

No recorded paleontological localities producing vertebrate fossils were found within 1 mile of the Project Area. Six localities are known from Pleistocene deposits between 1.5 and 3 miles and another 15 localities were found between 3 and 10 miles from the Project. Extinct megafauna from these sites include ground sloth (†[2]*Paramylodon* sp.), mastodon (†*Mammut* sp.) mammoth (†*Mammuthus* sp.), dire wolf (†*Canis dirus*), horse (†*Equus* sp.), two types of pronghorn (†*Capromeryx* sp., †*Breameryx* sp.), camel (†Camelidae), and bison (†*Bison* sp.; Table 2). All of the fossils were a minimum of five feet deep in deposits mapped as late Pleistocene at the surface, while sediments with a Holocene component produced fossils starting at 11 feet deep.

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

Table 2. Fossil localities from near to the Project Area

† = the taxon is extinct, although there may be living relatives in same genus or family

Common Name	Taxon	Depth below original surface	Formation mapped at surface	Age/ dates	Locality	Location	Reference
mammoth	†*Mammuthus* sp.	15 to 20 feet	older alluvium (Qoa)	late Pleistocene	LACM 1344, 3266, 3365	South Los Angeles: near I-110 and Athens on the Hill	McLeod 2020
squirrel	Sciuridae						
horse	†*Equus* sp.						
pronghorn	†*Breameryx* sp.						
western pond turtle	*Actinemys* sp.	unknown but shallow	older alluvium (Qoa)	late Pleistocene	LACM 1295, 4206	South Los Angeles: near I-110 between 112th and 113th Streets and along Imperial Hwy. near Main St.	McLeod 2019, 2020
puffin	*Mancalla* sp.						
turkey	*Parapavo* sp.						
ground sloth	†*Paramylodon* sp.						
mammoth	†*Mammuthus* sp.						
dire wolf	†*Canis dirus*						
rabbit	*Sylvilagus* sp.						
squirrel	Sciuridae						
deer mouse	*Microtus* sp.						
pocket gopher	*Thomomys* sp.						
horse	†*Equus* sp.						
elk	‡*Cervus* sp.						
diminutive pronghorn	†*Capromeryx* sp.						
bison	†*Bison* sp.						
mammoth	†*Mammuthus sp.*	unknown	older alluvium (Qoa)	Pleistocene	LACM 1021	Long Beach: south of I-405; near the Spring St. or Cherry Ave. intersection	Jefferson 1991, McLeod 2017a
bird	*Aves*						
mammoth	†*Mammuthus* sp.	10 feet	older alluvium (Qoa)	Pleistocene	LACM 1919	Dominguez Hills: west of Wilmington Ave., south of 223rd St.	McLeod 2017b
sea lion	*Zalophus* sp.	less than 48 feet	young alluvium (Qya2) over older marine (Qom)	Pleistocene	LACM 1144	Long Beach: south of Anaheim St.; near the Loma Vista Dr. or Crystal Court intersection	McLeod 2017b
camel	†Camelidae						
bison	†*Bison* sp.						
bison	†*Bison* sp.	5 feet	older alluvium (Qoa)	Pleistocene	LACM 1163	Wilmington: west of SR 103, near Anaheim St. or Henry Ford Ave.	McLeod 2017b, 2020
mammoth	†*Mammuthus* sp.	30 feet	younger alluvium (Qya2)	Pleistocene	LACM 1165	Carson: Alameda St. or Sepulveda Blvd.	Jefferson 1991
mammoth	†*Mammuthus* sp.	unknown	older alluvium (Qoa)	Pleistocene	LACM 1932	Long Beach: near the Spring St. or Cherry Ave. intersection	Jefferson 1991, McLeod 2017b

Common Name	Taxon	Depth below original surface	Formation mapped at surface	Age/ dates	Locality	Location	Reference
hare	*Lepus* sp.	13-16 feet deep	older alluvium (Qoa)	Pleistocene	LACM 1180, LACM 4942	Los Angeles: Manchester and Airport Blvds.	McLeod 2000
mastodon	†*Mammut* sp.						
mammoth	†*Mammuthus* sp.						
horse	†*Equus* sp.						
bison	†*Bison* sp.						
elephant relative	†Proboscidea	30 feet	older alluvium (Qoa)	Pleistocene	LACM 3319	Long Beach: east of Wilmington Ave., north of Artesia Blvd.	Jefferson 1991, McLeod 2000
bison	†*Bison* sp.	unknown					
mammoth	†*Mammuthus* sp.	5 feet	older alluvium (Qoa)	Pleistocene	LACM 3382	Compton: west of the I-710, east of Wilmington Ave., north of Artesia Blvd.	Jefferson 1991, McLeod 2000
mammoth	†*Mammuthus* sp.	19 feet	older marine (Qom)	Pleistocene	LACM 3660	Lakewood: south of Carson St.; along Cover St. between Pixie Ave. or Paramount Blvd.	McLeod 2017b
camel	†Camelidae	24 feet	younger alluvial fan (Qya)	Pleistocene	LACM 4129	Carson: Alameda or 223rd streets	McLeod 2017b
indeterminate vertebrates	Vertebrata	unknown	older marine (Qom)	Pleistocene	LACM 6802	Lakewood: near Bixby Rd. between Atlantic Ave. or Orange Ave.	McLeod 2017b
three-spine stickleback	*Gasterosteus aculeatus*	11 to 34 feet	young alluvium (Qya2)	Holocene or late Pleistocene	LACM 7701, 7702	Bell Gardens: near the intersection of Atlantic Ave. and I-710 north of the Los Angeles River	McLeod 2019
salamander	*Batrachoseps* sp.						
lizard	Lacertilia						
constrictor snake	Colubridae						
rabbit	*Sylvilagus* sp.						
pocket mouse	*Microtus* sp.						
harvest mouse	*Reithrodontomys* sp.						
pocket gopher	*Thomomys* sp.						
horse	†*Equus sp.*	unknown	older alluvium (Qoa)	Pleistocene	UCMP V65109	Long Beach: Signal Hill	UCMP 2020

CALIFORNIA HISTORIC RESOURCES INFORMATION SYSTEM

Cogstone requested a search of the California Historic Resources Information System (CHRIS) that included the entire proposed Project Area as well as a half-mile radius surrounding the Project Area on March 10, 2020. Results of the record search indicate that eight previous studies have been completed within a half-mile of the proposed Project Area. None of these studies were completed within the Project Area(Table 3).

Table 3. Previous Cultural Resource Studies within a Half-Mile Radius of the Project Area

Report No. (LA-)	Author(s)	Title	Year
06027	Duke, Curt	Cultural Resource Assessment AT&T Wireless Services Facility No. 05189a Los Angeles County, California	2002
06036	Duke, Curt	Cultural Resource Assessment AT&T Wireless Services Facility No. 05051a Los Angeles County, California	2002
07416	Billat, Lorna	Jarvis/CA-8280b 606 W 140th Street, Los Angeles, Ca, Los Angeles County	2004
09225	Bonner, Wayne H.	Cultural Resources Records Search and Site Visit Results for Sprint Nextel Candidate LA60XR341D (Vincent Bell Memorial Park), 7408 South Halldale Avenue, Gardena, Los Angeles County, California	2007
10318	Bonner, Wayne H.	Cultural Resources Records Search and Site Visit Results for T-Mobile USA Candidate LA33689B (Sea Rock Inn), 14032 South Vermont Avenue, Gardena, Los Angeles County, California	2009
11095	Fulton, Phil	Cultural Resource Assessment, Verizon Wireless Services Blackbird Facility, City of Long Beach, Los Angeles County, California	2009
11097	Bonner, Wayne H.	Cultural Resources Records Search and Site Visit Results for Clearwire Candidate CALOS6529/ CA8280, 606 West 140th Street, Gardena, Los Angeles County, California, EBI Job No. 61097197	2010
11150	Maxwell, Pamela	West Basin Municipal Water District Harbor/ South Bay Water Recycling Project	2003

The records search also determined that no previously recorded cultural resources are located within the Project Area or within a half-mile radius of the Project Area.

OTHER SOURCES CONSULTED FOR CULTURAL RESOURCES

In addition to the SCCIC records search, a variety of sources were consulted in June 2020 to obtain information regarding the cultural context of the Project Area (Table 4). Sources included the National Register of Historic Places (NRHP), the California Register of Historic Resources (CRHR), California Historical Resources Inventory (CHRI), California Historical Landmarks (CHL), California Points of Historical Interest (CPHI), and Bureau of Land Management (BLM) General Land Office (GLO) records. Specific information about the Project Area, obtained from historic-era maps and aerial photographs, is presented in the Project Area History section.

Table 4. Additional Sources Consulted

Source	Results
National Register of Historic Places (NRHP)	Negative
Historic USGS Topographic Maps	The USGS 1896 Redondo 15-minute topographic quadrangle map shows Rosecrans Avenue along the southern edge of the Project Area (PA). The USGS 1923 Watts 7.5-minute topographic quadrangle map shows streets in place along the western and northern boundaries of the PA and buildings within the PA. There are no notable changes in the PA until the USGS 1964 Inglewood 7.5-minute topographic quadrangle map, which shows a church building slightly north of the PA. The USGS 1981 Inglewood 7.5-minute topographic quadrangle map shows additional building continuing north of the PA.
Historic US Department of Agriculture (USDA) Aerial Photographs	The earliest available USDA historic aerial photograph dates to 1952 and shows building development within the PA. The 1963 USDA historic aerial photograph shows additional development within the PA. The 1972 historic aerial photograph shows that the buildings within most of the northern portion of the PA have been demolished. The 1980 historic aerial photograph shows parking lot development within the PA. The 1994 historic aerial photograph shows that buildings within the southern portion of the PA have been demolished. The 2003 historic aerial photograph shows that the building within the northeast part of the PA has also been demolished and only a parking lot remains.
California Register of Historic Resources (CRHR)	Negative
California Historical Resource Inventory (CHRI)	Negative
California Historical Landmarks (CHL)	Negative
California Point of Historical Interest (CPHI)	Negative
Caltrans Historic Bridge Inventory (2016)	Negative
Bureau of Land Management (BLM) General Land Office Records	Positive: The heirs of John J. Tomlinson obtained a land patent in 1874

NATIVE AMERICAN CONSULTATION

A Sacred Lands File (SLF) search requested from the Native American Heritage Commission (NAHC) on June 12, 2020. The NAHC responded on June 26, 2020, with a negative SLF search (Appendix C). The NAHC recommended that six representatives from local Native American tribal organizations be contacted for further information regarding the Project vicinity. The City of Gardena is conducting tribal consultations to meet the requirements of Assembly Bill 52.

PALEONTOLOGICAL IMPACT ANALYSIS

PALEONTOLOGICAL SENSITIVITY

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

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

All alluvial deposits may increase or decrease in fossiliferous potential depending on how coarse the sediments are. Sediments that are close to their basement rock source are typically coarse; those farther from the basement rock source are finer. The chance of fossils being preserved greatly increases once the average size of the sediment particles is reduced to 5 mm or less in diameter. Moreover, fossil preservation also greatly increases with rapid burial in flood-plains, rivers, lakes, oceans, etc. Remains left on the ground surface become weathered by the sun or consumed by scavengers and bacterial activity, usually within 20 years or less. So the sands, silts, and clays of flood-plains, rivers, lakes, and oceans are the most likely sediments to contain fossils.

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

The Project is mapped entirely as middle to late Pleistocene older alluvium. A records search revealed that all of the fossils previously recovered within a 10-mile radius were a minimum of five feet deep in deposits mapped as late Pleistocene at the surface. Sediments with a Holocene component such as those of the study area produced fossils starting at five feet deep. As such, the project sediments less than five feet below the modern surface are assigned a low potential for fossils (PFYC 2) due to the lack of fossils in these deposits. Sediments more than five feet

below the modern surface are assigned a moderate potential for fossils (PFYC 3) due to similar deposits producing fossils at that depth near to the study area.

CONCLUSIONS AND RECOMMENDATIONS

PALEONTOLOGY RECOMMENDATIONS

The Project is mapped entirely as middle to late Pleistocene older alluvium. The record search revealed no fossil localities from within the Project or immediate vicinity, however localities are known from the same sediments as found within the study area near to the Project.

Middle to late Pleistocene older alluvium sediments less than five feet below the modern surface are assigned a low potential for fossils (PFYC 2) due to the lack of fossils in these deposits. More than five feet below the modern surface these sediments are assigned a moderate potential for fossils (PFYC 3) due to similar deposits producing fossils at that depth near to the study area.

MBased on fossils found in similar sediments nearby, paleontological monitoring is recommended for the excavations more than five feet deep into native sediments. Augering, potholing, pile driving, and similar activities regardless of depth, have a low potential to produce fossils meeting significance criteria because any fossils brought up by the auger during drilling will not have information about formation, depth or context. The only instance in which such fossils will meet significance criteria is if the fossil is a species new to the region.

If unanticipated fossil discoveries are made, all work must halt within 25 feet until a qualified paleontologist can evaluate the find. Work may resume immediately outside of the 25-foot radius.

CULTURAL RESOURCE RECOMMENDATIONS

The CHRIS and SLF searches conducted in support of the Project indicate that no archaeological or tribal resources have been previously recorded within the Project Area. The entire Project Area is hardscaped with no open ground surface. As such, an intensive pedestrian survey was not conducted. The negative record search findings along with a review of historic USDA aerial photographs indicate that the potential for subsurface prehistoric or historic resource deposits is low. In addition, the archaeological sensitivity is considered low due to construction and later demolition of buildings within the Project Area during the 1980s and 1990s. No further archaeological work is recommended for the Project.

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

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

REFERENCES CITED

Axelrod, D. I., and F. Govean
1996 An Early Pleistocene Closed-Cone Pine Forest at Costa Mesa, Southern California. *International Journal of Plant Science* 157(3):323–329.

Bean, W., and J. J. Rawls
1993 *California: An Interpretive History*. 4th Edition. McGraw Hill, New York.

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

BLM (Bureau of Land Management)
2020 General Land Office Records https://glorecords.blm.gov/search/default.aspx?searchTabIndex=0&searchByTypeIndex=0, accessed June 18, 2020.
2016 *Potential Fossil Yield Classification* (*PFYC)* System. https://www.blm.gov/policy/im-2016-124, accessed June 2020.

Cal-IPC
2006 California Invasive Plant Inventory, Cal-IPC Publication 2006-02. Berkeley, CA: The California Invasive Plant Council. https://www.cal-ipc.org/docs/ip/inventory/pdf/Inventory2006.pdf, accessed June 2020.

California Department of Fish and Game
2020 California Listing of Managed Species. https://wildlife.ca.gov/Conservation/Mammals, accessed June 2020.

Gardena Heritage Committee
2006 *Images of America: Gardena*. Arcadia Publishing, Charleston.

Hall, C. A. Jr.
2007 Western Transverse Ranges. In *Introduction to the Geology of Southern California and Its Native Plants*, pp. 233-279. University of California Press, Berkeley.

Intellicast
2020 https://www.wunderground.com/intellicast, accessed June 2020.

Jefferson, G. T.
1991 *A Catalogue of Late Quaternary Vertebrates from California-- Part Two, Mammals:* Natural History Museum of Los Angeles County Technical Report No. 7.

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

McCawley, William
1996 *First Angelinos: the Gabrielino Indians of Los Angeles*. Malki Museum Press/Ballena Press, Banning, CA.

McLeod, S. (Natural History Museum of Los Angeles County)
2017a Vertebrate Paleontology Records Check for paleontological resources for the proposed 2300 Redondo Ave Project, Cogstone Project # 4139, in the City of Long Beach, Long Beach, Los Angeles County, California, project area. On file at Cogstone, Orange.
2017b Vertebrate Paleontology Records Check for paleontological resources for the proposed MUST Facility Project, Cogstone Project # 3993, in the City of Long Beach, Long Beach, Los Angeles County, California, project area. On file at Cogstone, Orange.
2019 Vertebrate Paleontology Records Check for paleontological resources for the proposed Bell Gardens Reservoir Project, Cogstone Project # 4877, in the City of Bell Gardens, Los Angeles County, project area. On file at Cogstone, Orange.
2020 Vertebrate Paleontology Records Check for Paleontological Resources for the proposed 1108 West 141st Project, Cogstone Project # 5021, in the City of Gardena, Los Angeles County, project area. See Appendix B.

NETROnline
1952 *Historic Aerials*. https://www.historicaerials.com/viewer, accessed June 18, 2020.
1963 *Historic Aerials*. https://www.historicaerials.com/viewer, accessed June 18, 2020.
1972 *Historic Aerials*. https://www.historicaerials.com/viewer, accessed June 18, 2020.
1980 *Historic Aerials*. https://www.historicaerials.com/viewer, accessed June 18, 2020.
1994 *Historic Aerials*. https://www.historicaerials.com/viewer, accessed June 18, 2020.
2003 *Historic Aerials*. https://www.historicaerials.com/viewer, accessed June 18, 2020.

Ornduff, R., P. M. Faber, and T. Keeler-Wolf
2003 *Introduction to California Plant Life, Revised Edition.* California Natural History Guides, Volume 69. University of California Press, Berkeley.

PBDB
2020 Records Search of the Paleobiology Database. Accessed June 2020.

Robinson, W. W.
1948 *Land in California: The Story of Mission Lands, Ranchos, Squatters, Mining Claims, Railroad Grants, Land Scrip, Homesteads.* University of California Press, Berkeley

Sato, Dale Ann
2009 *Images of America: Japanese Americans of the South Bay*. Arcadia Publishing, Charleston.

Saucedo, G. J., H. G. Greene, M. P. Kennedy, and S. P. Bezore
2016 Geologic Map of the Long Beach 30' x 60' Quadrangle, California: California Geological Survey Regional Geologic Map Series Map No. 5, version 2.0; map scale 1:100,000; accessed June 2020. ftp://ftp.consrv.ca.gov/pub/dmg/rgmp/Prelim_geo_pdf/Long_Beach_100k_v2.0_Map.pdf

Scott, K., C. Richards, and S. Gust
2014 *Paleontological Monitoring Compliance Report for the Metro Purple Line Extension Shaft Project Los Angeles, Los Angeles County, California*. On file with Cogstone, Orange, California.

Scott, E., and K. Springer
2003 CEQA and Fossil Preservation in Southern California. *The Environmental Monitor*, Winter: 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 *The Human Journey and Ancient Life in California's Deserts: Proceedings from the 2001 Millennium Conference*, edited by M. W. Allen and J. Reed, pp. 65-70. Maturango Museum Publication No. 15, Ridgecrest, California.

Stock, C., and J. Harris, J.
1992 Rancho La Brea: a Record of Pleistocene Life in California. *Natural History Museum of Los Angeles County Science Series* 37.

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. *Pacific Coast Archaeological Society Quarterly* 42(4):1-64.

The Weather Channel
2020 The Weather Channel. http://www.weather.com/, accessed June 2020.

UCMP
2020 Records search of the University of California, Berkeley paleontology database. Accessed online June 2020.

USGS Historical Topographic Map Explorer
1896 *Redondo*. U.S. Geological Survey, 1:62,500. Topographic Quadrangle Map, Reston, VA, 1896.
1924 *Watts*. U.S. Geological Survey, 1:24,000. Topographic Quadrangle Map, Reston, VA, 1930.

1964 *Inglewood*. U.S. Geological Survey, 1:24,000. Topographic Quadrangle Map, Reston, VA, 1957.
1972 *Inglewood*. U.S. Geological Survey, 1:24,000. Topographic Quadrangle Map, Reston, VA, 1957.

Wagner, D. L.
2002 California Geomorphic Provinces. California Geological Survey note 36. https://www.contracosta.ca.gov/DocumentCenter/View/34134/CGS-2002-California-Geomorphic-ProvincesNote-36-PDF, accessed June 2020.

Wallace, William J.
1955 A Suggested Chronology for Southern California Coastal Archaeology. *Southwestern Journal of Anthropology* 11:214-230.

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

APPENDIX A. QUALIFICATIONS

cogstone
PALEONTOLOGY - ARCHAEOLOGY - HISTORY

MOLLY VALASIK
Task Manager

EDUCATION

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

SUMMARY QUALIFICATIONS

Ms. Valasik is a Registered Professional Archaeologist (RPA) with more than 10 years of experience. She is a skilled professional who is well-versed in the compliance procedures of CEQA and Section 106 of the NHPA and regularly prepares cultural resources assessment reports for many federal, state, and local agencies throughout California. Ms. Valasik has managed a variety of projects at Cogstone in the water, transportation, energy, development, and federal sectors. She meets the qualifications required by the Secretary of the Interior's *Standards and Guidelines for Archaeology and Historic Preservation*. She is accepted as a principal investigator for prehistoric archaeology by the State Office of Historic Preservation's Information Centers.

SELECTED EXPERIENCE

Brea 265 Specific Plan, City of Brea, Orange County, CA. The objective of this study was to review and summarize available information regarding known paleontological, archaeological, and historical resources within the boundaries of the proposed Specific Plan. This study provided environmental documentation as required by CEQA. A Paleontological Resource Impact Mitigation Program and full-time monitoring was recommended. Due to the high sensitivity for subsurface archaeological resources, a cultural resources mitigation plan and monitoring was also recommended. Sub to PlaceWorks. Project Manager and Principal Investigator for Archaeology. 2018-2019

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

River Street Marketplace, City of San Juan Capistrano, Orange County, CA. Cogstone conducted record searches, literature studies, and intensive archaeological and paleontological surveys to determine the potential effects to cultural and paleontological resources resulting from the construction of 64,900 square feet of proposed commercial and office space, along with associated improvements. The proposed project consisted of five buildings and was located on a 5.6-acre property occupied by the Ito Nursery which has been in operation since 1970. Sub to PlaceWorks. Principal Investigator for Archaeology. 2018

Whittier Boulevard/Three Intersection Improvements, City of Whittier, Los Angeles County, CA. Cogstone conducted intensive-level cultural resources surveys and prepared technical studies for improvements proposed for three intersections at Colima Road, Santa Fe Springs Road and Painter Avenue in a disturbed urban environment. Managed records search, Sacred Lands search, NAHC consultation, and APE mapping. Sub to Michael Baker. Principal Investigator for Archaeology. 2016-2018

Irvine General Plan Update - Phase II, City of Irvine, Orange County, CA. Cogstone conducted a study to review and summarize available information regarding known paleontological, archaeological, and historical resources within the boundaries of the City of Irvine to support the Phase II update of the City's General Plan. A general analysis of impacts of future projects within the City of Irvine that may adversely affect paleontological, archaeological, or historic resources was provided along with mitigation recommendations. Sub to Placeworks. Principal Investigator for Archaeology. 2018-2019

cogstone
PALEONTOLOGY - ARCHAEOLOGY - HISTORY

JOHN GUST
Principal Investigator for Archaeology

EDUCATION

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

SUMMARY QUALIFICATIONS

Dr. Gust is a Registered Professional Archaeologist (RPA) with over 8 years of experience in field archaeology. He meets the qualifications required by the Secretary of the Interior's *Standards and Guidelines for Archaeology and Historic Preservation* and his field expertise includes pedestrian surveys, excavation monitoring, resource recording, and historic artifact analysis. Dr. Gust has managed cultural assessments for over 20 cellular tower projects and multiple assessments for construction of commercial and residential structures. He has also managed cultural resources monitoring projects for both public and private sector clients. Dr. Gust is a member of the Society for California Archaeology, Society for American Archaeology, and the American Anthropological Association.

SELECTED EXPERIENCE

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

Euclid Fueling Station Project, City of Santa Ana, Orange County, CA. Cogstone conducted a cultural resources assessment to determine the potential impacts to cultural and paleontological resources during the construction of a convenience store, associated parking, gas station, and underground fuel storage tank. The assessment was conducted to meet the requirements of CEQA with the City of Santa Ana acting as lead agency. Cogstone conducted record searches, a Sacred Lands File Search, an intensive pedestrian survey, gave mitigation recommendations, and produced a report. Sub to Sagecrest Planning + Environmental. Principal Investigator for Archaeology. 2019

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

Heathercliff Malibu Development Project, City of Malibu, Los Angeles County, CA. Cogstone conducted a study to determine the potential impacts to cultural resources resulting from the construction of a single residence bounded by Heathercliff Road to the southeast and the Pacific Coast Highway to the northwest. This study included all information required by the City of Malibu Archaeology Guidelines. Cogstone conducted a record search, Sacred Lands File Search, pedestrian survey, and produced an assessment. Sub to ACS Construction. Principal Investigator for Archaeology and Report Author. 2019

cogstone
PALEONTOLOGY - ARCHAEOLOGY - HISTORY

KIM SCOTT
Principal Investigator for Paleontology

EDUCATION

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

SUMMARY QUALIFICATIONS

Ms. Scott has over 25 years of experience in California as a paleontologist and sedimentary geologist. She has worked extensively in the field surveying, monitoring, and salvaging fossils on over 100 projects. In addition, she has special skills in fossil preparation (cleaning and stabilization) and in the preparation of stratigraphic sections and other documentation for fossil localities. She has written over 100 assessments and monitoring compliance reports to all agency requirements. Ms. Scott serves as company safety officer and is the author of the company safety and paleontology manuals. She is a Member of the Society of Vertebrate Paleontology and the Geological Society of America.

SELECTED PROJECTS

Irvine General Plan Update - Phase II, City of Irvine, Orange County, CA. Cogstone conducted a study to review and summarize available information regarding known paleontological, archaeological, and historical resources within the boundaries of the City of Irvine to support the Phase II update of the City's General Plan. A general analysis of impacts of future projects within the City of Irvine that may adversely affect paleontological, archaeological, or historic resources was provided along with mitigation recommendations. Sub to Placeworks. Principal Paleontologist. 2018-2019

City of La Verne General Plan, Los Angeles County, CA. Principal Paleontologist. The Project was for an update to the City's General Plan, a 5,446-acre area. Provided a Paleontological and Cultural Assessment Report for the City. Sub to De Novo Planning Group. 2018.

Interstate 405 Paleontological Resources Mitigation Plan, Los Angeles and Orange Counties, CA. Principal Paleontologist. Improvements to a 6-miles of Interstate 405 (I-405) between State Route 73 and Interstate 605. Provided a Paleontological Mitigation and Monitoring Plan. Sub to OC 405 Partners. 2018.

Park Place Extension Project, City of El Segundo, Los Angeles County, CA. Principal Paleontologist. The City proposed to extend Park Place from Allied Way to Nash Street with a railroad grade separation to implement a critical Project improving traffic and circulation in the Project Area. Provided a combined Paleontological Identification and Evaluation Report (PIR/PER). Sub to Michael Baker International. 2017

Lakeview Senior Housing Development, City of Anaheim, Orange County, CA. Project included the development of 149 senior apartment units: 139 market-rate units and 10 affordable units. Paleontological Assessment Report. Under contract to Placeworks. Principal Paleontologist and report author. 2017

State Route 57 Northbound Widening Project, Caltrans District 12/ Orange County Transportation Authority (OCTA), City of Anaheim, Orange County, CA. Caltrans widened State Route 57 between Orangewood and Katella Avenues. Paleontological Identification Report (PM 11.5/12.5; EA 0M9700). Under contract to WSP. Principal Paleontologist and report author. 2017

Interstate 605 and Katella Interchange Improvement Project, Caltrans District 12/ Orange County Transportation Authority (OCTA), City of Anaheim, Orange County, CA. Caltrans updated the southbound onramp to the interchange at Katella Avenue. Combined Paleontological Identification and Evaluation Report (PM 1.1/1.6; EA 0K8700). Under contract to Michael Baker International. Principal Paleontologist and report author. 2017

cogstone
PALEONTOLOGY - ARCHAEOLOGY - HISTORY

LOGAN FREEBERG
GIS Supervisor

EDUCATION

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

SUMMARY QUALIFICATIONS

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

SELECTED PROJECTS

Euclid Fueling Station Project, City of Santa Ana, Riverside County, CA. Cogstone conducted a cultural resources assessment to determine the potential impacts to cultural and paleontological resources during the construction of a convenience store, associated parking, gas station, and underground fuel storage tank. The assessment was conducted to meet the requirements of CEQA with the City of Santa Ana acting as lead agency. Cogstone conducted record searches, a Sacred Lands File Search, an intensive pedestrian survey, gave mitigation recommendations, and produced a report. Sub to Sagecrest Planning + Environmental. GIS Supervisor. 2019

Laguna Creek Trail and Bruceville Road Project, Caltrans District 3, City of Elk Grove, Sacramento County, CA. The City of Elk Grove, in cooperation with Caltrans, proposed multiple trail extensions and gap closures in effort to provide connecting links that would ultimately provide trail users with access to a vast system of trails, with connections to parks, schools, community centers, commercial retail and office areas, and transit facilities. Cogstone conducted pedestrian surveys, records search, and prepared an Archaeological Survey Report (ASR) and a Historic Property Survey Report (HPSR). Sub to Helix Environmental. GIS Technician. 2019

Roosevelt Park Regional Stormwater Capture Project, unincorporated area of Florence-Firestone, Los Angeles County, CA. Conducted cultural and paleontological monitoring during all ground disturbing activities in native sediments. This project included the construction of three diversion structures and pipelines. Sub to Environmental Advisors. GIS Technician. 2019

Goddard School Project, City of Chino Hills, San Bernardino County, CA. Cogstone produced a paleontological resources mitigation and monitoring program for a proposed 59,129 square foot development consisting of a one-story, 10,587-square foot pre-school/daycare with nine classrooms, fenced play yards and play structures, and a parking lot with 40 stalls. Cogstone put forward mitigation measures that included monitoring for all ground-breaking activities, paleontological resource awareness training for construction personnel, and the completion of a final mitigation report. GIS Technician. 2019

Euclid Fueling Station Project, City of Santa Ana, Orange County, CA. This study was conducted to determine the potential impacts to archaeological and paleontological resources during construction activities for a proposed 7-Eleven gas station and convenience store. The proposed project entailed the construction of the convenience store, associated parking, gas station, and underground fuel storage tank. Planned vertical impacts included approximately three to four feet of fill removal over at least some of the site, a trench approximately eight feet deep for utilities, and approximately 12 feet for the new fuel storage tanks. Sub to Sagecrest Environmental. GIS Technician. 2019

Fresno West Area Specific Plan, City of Fresno, Fresno County, CA. The objective of this study was to review and summarize available information regarding known paleontological, archaeological, and historical resources within the boundaries of the City of Fresno's West Area Specific Plan. Cogstone's services included record searches, mapping, and extensive background research. Sub to De Novo Planning. GIS Technician. 2019

APPENDIX B. PALEONTOLOGICAL RECORD SEARCH

Natural History Museum
of Los Angeles County
900 Exposition Boulevard
Los Angeles, CA 90007

tel 213.763.DINO
www.nhm.org

Vertebrate Paleontology Section
Telephone: (213) 763-3325

e-mail: smcleod@nhm.org

26 June 2020

Cogstone Resource Management, Inc.
1518 West Taft Avenue
Orange, CA 92865-4157

Attn: Logan Freeberg, GIS Technician

re: Vertebrate Paleontology Records Check for paleontological resources for the proposed 1108 West 141st Street Project, Cogstone Project # 5021, in the City of Gardena, Los Angeles County, project area

Dear Logan:

I have conducted a thorough search of our paleontology collection records for the locality and specimen data for the proposed 1108 West 141st Street Project, Cogstone Project # 5021, in the City of Gardena, Los Angeles County, project area as outlined on the portion of the Inglewood USGS topographic quadrangle map that you sent to me via e-mail on 12 June 2020. We do not have any vertebrate fossil localities that lie directly within the proposed project area, but we do have vertebrate fossil localities nearby from the same sedimentary deposits that occur in the proposed project area, either at the surface or at depth.

The entire proposed project area has surficial deposits consisting of older Quaternary Alluvium, derived as alluvial fan deposits from the Rosecrans Hills to the north and east. In this vicinity these types of deposits typically do not contain significant vertebrate fossils in the uppermost layers, but in older sedimentary deposits at depth they may well contain significant fossil vertebrate remains. Our closest vertebrate fossil localities from these older Quaternary deposits include LACM 1295, 1344, 3266, 3365, and 4206, all situated northeast of the proposed project area around the Harbor Freeway (I-110) in the Athens vicinity from north of Imperial Highway to near El Segundo Boulevard. These localities produced a typical late Pleistocene fauna including fossil specimens of pond turtle, *Clemmys*, puffin, *Mancalla*, turkey, *Parapavo*,

ground sloth, *Paramylodon*, mammoth, *Mammuthus*, dire wolf, *Canis dirus*, rabbit, *Sylvilagus*, squirrel, Sciuridae, deer mouse, *Microtus*, pocket gopher, *Thomomys*, horse, *Equus*, deer, *Cervus*, pronghorn antelope, *Capromeryx*, and bison, *Bison*, at depths as shallow as fifteen feet below the surface.

Any excavations that occur in the older Quaternary deposits exposed within the proposed project area may well encounter significant fossil vertebrate remains, even at a moderate depth. Any substantial excavations in the proposed project area, therefore, should be monitored closely to quickly and professionally collect any vertebrate fossil remains without impeding development. Also, sediment samples should be collected and processed to determine the small fossil potential in the proposed project area. Any fossils collected during mitigation activities should be placed in an accredited scientific institution for the benefit of current and future generations.

This records search covers only the vertebrate paleontology records of the Natural History Museum of Los Angeles County. It is not intended to be a thorough paleontological survey of the proposed project area covering other institutional records, a literature survey, or any potential on-site survey.

Sincerely,

Samuel A. McLeod

Samuel A. McLeod, Ph.D.
Vertebrate Paleontology

enclosure: invoice

APPENDIX C. NATIVE AMERICAN CONSULTATION

Local Government Tribal Consultation List Request

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

Type of List Requested

☑ **CEQA Tribal Consultation List (AB 52)** – *Per Public Resources Code § 21080.3.1, subs. (b), (d), (e) and 21080.3.2*

☑ **General Plan (SB 18)** - *Per Government Code § 65352.3.*

Local Action Type:

☐ General Plan ☐ General Plan Element ☑ General Plan Amendment

☐ Specific Plan ☐ Specific Plan Amendment ☐ Pre-planning Outreach Activity

Required Information

Project Title: 1108 W. 141st Street

Local Government/Lead Agency: City of Gardena

Contact Person: John Signo

Street Address: 1700 W. 162nd Street

City: Gardena **Zip:** 90247

Phone: 310 217-9593 **Fax:**

Email: jsigno@cityofgardena.org

Specific Area Subject to Proposed Action

County: Los Angeles **City/Community:** Gardena

Project Description:

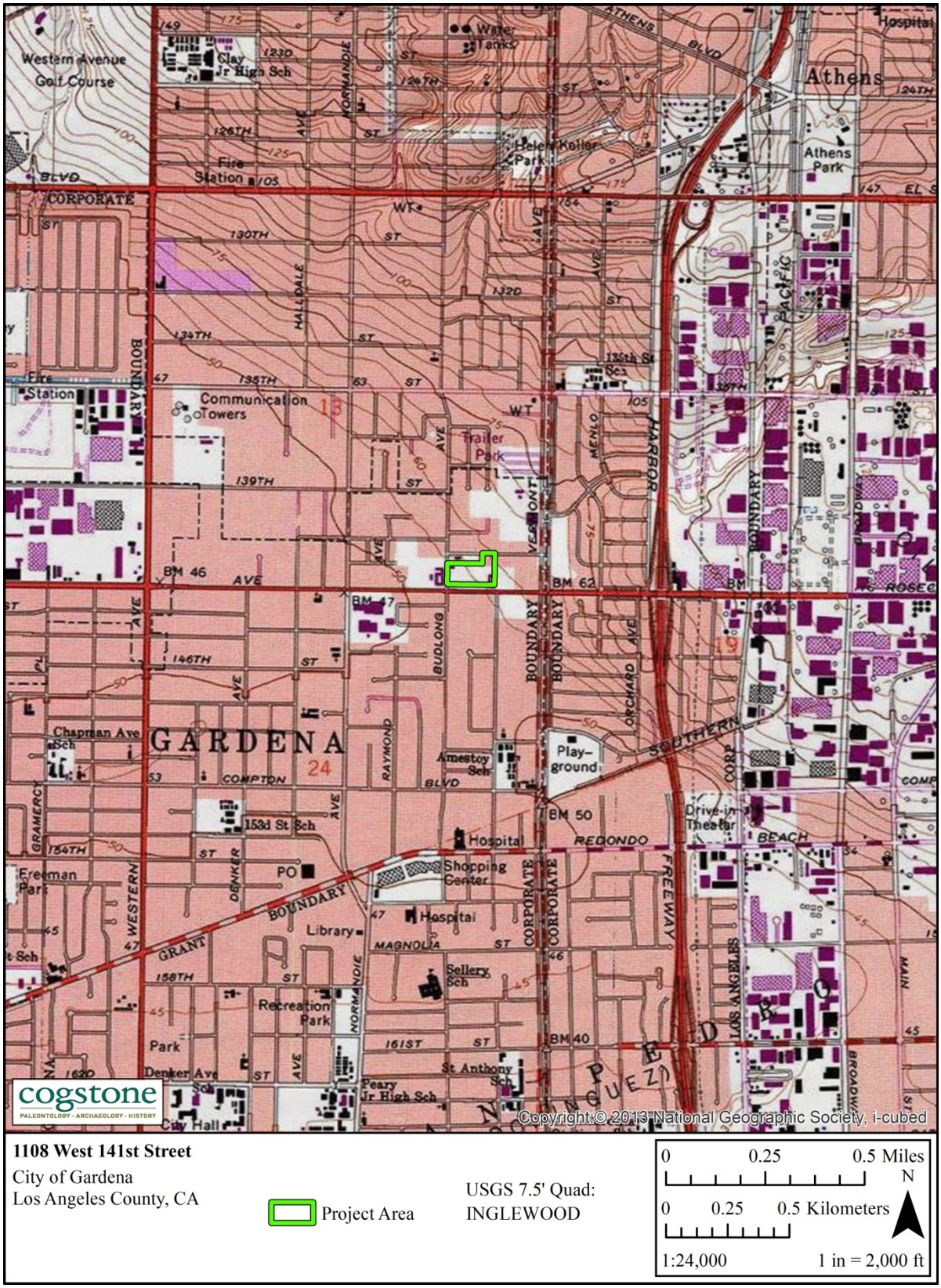
The Project involves a General Plan Amendment and zone change from High Density Residential (R-4) to General Commercial (C-3). A development scenario will be analyzed based on the allowed uses and development potential of the site. There is no specific project being proposed at this time. The Project area is currently completely developed as a parking lot with some landscaped planters and trees within the parking lot.

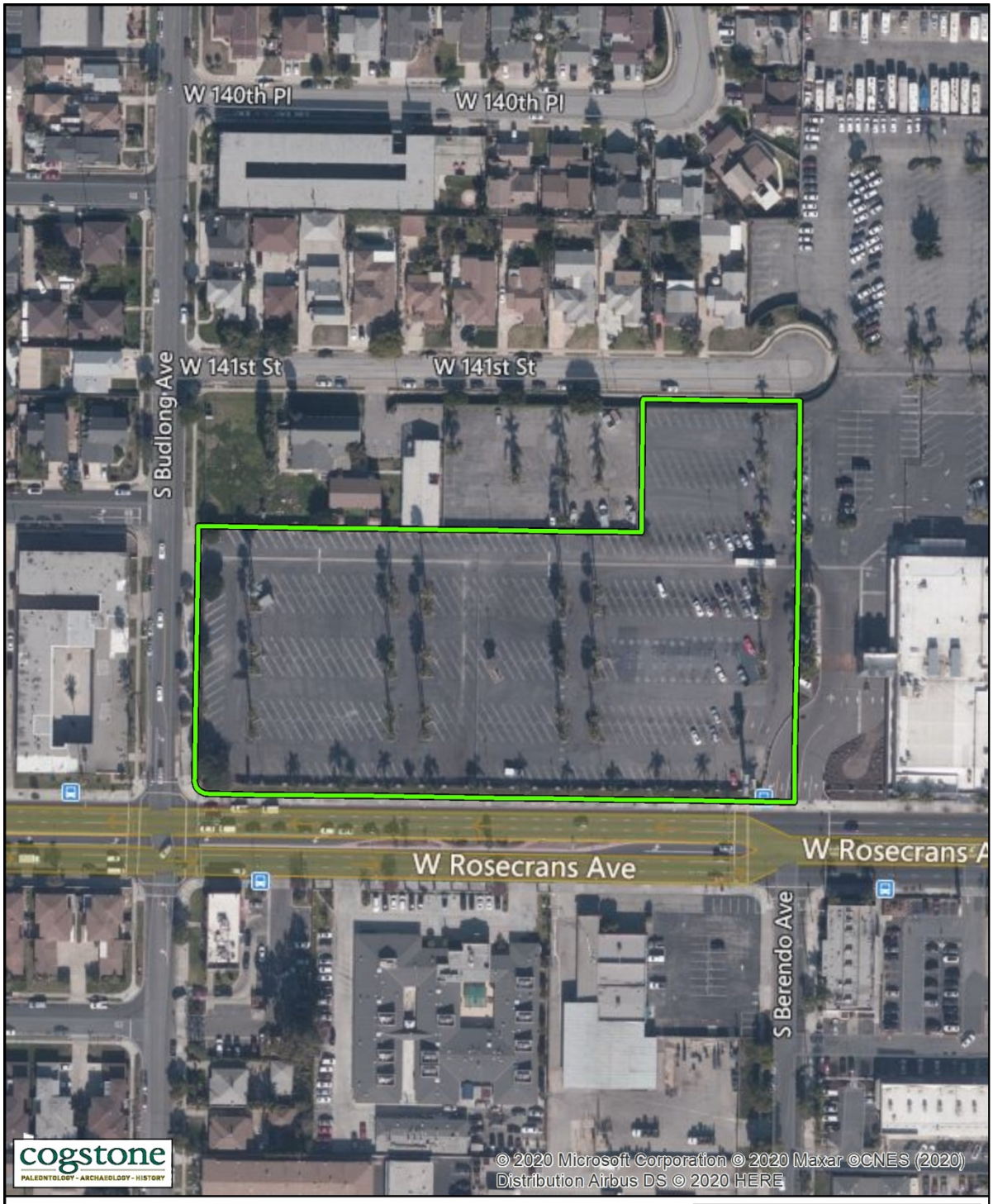
Additional Request

☑ **Sacred Lands File Search** - ***Required Information:***

USGS Quadrangle Name(s): Inglewood

Township: 3S **Range:** 14W **Section(s):** 13


Western Avenue Golf Course
Clay Jr High Sch
Water Tanks
Hospital
Athens
Athens Park
Helen Keller Park
Fire Station
CORPORATE
Communication Towers
Trailer Park
BM 46
BM 47
BM 62
BM 50
BM 40
GARDENA
Chapman Ave Sch
153d St Sch
Hospital
Shopping Center
Library
Freeman Park
Recreation Park
Park
Denker Ave Sch
Peary Jr High Sch
City Hall
Amestoy Sch
Play-ground
Drive-in Theater
Sellery Sch
St Anthony Sch
HALLDALE AVE
NORMANDIE AVE
BOUNDARY
HARBOR FREEWAY
SOUTHERN PACIFIC
ATHENS BLVD
MANHATTAN BEACH BLVD
REDONDO BEACH BLVD
COMPTON BLVD
MAGNOLIA ST
GRANT
130TH ST
135TH ST
139TH ST
146TH ST
154TH ST
158TH ST
161ST ST
cogstone
PALEONTOLOGY - ARCHAEOLOGY - HISTORY
Copyright © 2013 National Geographic Society, i-cubed
1108 West 141st Street
City of Gardena
Los Angeles County, CA
Project Area
USGS 7.5' Quad:
INGLEWOOD
0 0.25 0.5 Miles
N
0 0.25 0.5 Kilometers
1:24,000
1 in = 2,000 ft


W 140th Pl
W 140th Pl
S Budlong Ave
W 141st St
W 141st St
W Rosecrans Ave
W Rosecrans A
S Berendo Ave
cogstone
PALEONTOLOGY - ARCHAEOLOGY - HISTORY
© 2020 Microsoft Corporation © 2020 Maxar ©CNES (2020)
Distribution Airbus DS © 2020 HERE
1108 West 141st Street
City of Gardena
Los Angeles County, CA
Project Area
0 100 200 Feet
N
0 25 50 Meters
1:2,000
1 in = 167 ft

STATE OF CALIFORNIA Gavin Newsom, Governor

NATIVE AMERICAN HERITAGE COMMISSION

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

June 26, 2020

John Signo
City of Gardena

Via Email to: jsigno@cityofgardena.org

Re: Native American Consultation, Pursuant to Senate Bill 18 (SB18), Government Codes §65352.3 and §65352.4, as well as Assembly Bill 52 (AB52), Public Resources Codes §21080.1, §21080.3.1 and §21080.3.2, 1108 W. 141st Street Project, Los Angeles County

Dear Mr. Signo:

Attached is a consultation list of tribes with traditional lands or cultural places located within the boundaries of the above referenced counties or projects.

Government Codes §65352.3 and §65352.4 require local governments to consult with California Native American tribes identified by the Native American Heritage Commission (NAHC) for the purpose of avoiding, protecting, and/or mitigating impacts to cultural places when creating or amending General Plans, Specific Plans and Community Plans.

Public Resources Codes §21080.3.1 and §21080.3.2 requires public agencies to consult with California Native American tribes identified by the Native American Heritage Commission (NAHC) for the purpose of avoiding, protecting, and/or mitigating impacts to tribal cultural resources as defined, for California Environmental Quality Act (CEQA) projects.

The law does not preclude local governments and agencies from initiating consultation with the tribes that are culturally and traditionally affiliated within your jurisdiction. The NAHC believes that this is the best practice to ensure that tribes are consulted commensurate with the intent of the law.

Best practice for the AB52 process and in accordance with Public Resources Code §21080.3.1(d), is to do the following:

Within 14 days of determining that an application for a project is complete or a decision by a public agency to undertake a project, the lead agency shall provide formal notification to the designated contact of, or a tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, which shall be accomplished by means of at least one written notification that includes a brief description of the proposed project and its location, the lead agency contact information, and a notification that the California Native American tribe has 30 days to request consultation pursuant to this section.

The NAHC also recommends, but does not require that lead agencies include in their notification letters, information regarding any cultural resources assessment that has been completed on the area of potential affect (APE), such as:

1. The results of any record search that may have been conducted at an Information Center of the California Historical Resources Information System (CHRIS), including, but not limited to:

   - A listing of any and all known cultural resources have already been recorded on or adjacent to the APE, such as known archaeological sites;
   - Copies of any and all cultural resource records and study reports that may have been provided by the Information Center as part of the records search response;
   - Whether the records search indicates a low, moderate or high probability that unrecorded cultural resources are located in the APE; and
   - If a survey is recommended by the Information Center to determine whether previously unrecorded cultural resources are present.

2. The results of any archaeological inventory survey that was conducted, including:

   - Any report that may contain site forms, site significance, and suggested mitigation measures.

     All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for public disclosure in accordance with Government Code Section 6254.10.

3. The result of the Sacred Lands File (SFL) check conducted through the Native American Heritage Commission was negative.

4. Any ethnographic studies conducted for any area including all or part of the potential APE; and

5. Any geotechnical reports regarding all or part of the potential APE.

Lead agencies should be aware that records maintained by the NAHC and CHRIS is not exhaustive, and a negative response to these searches does not preclude the existence of a tribal cultural resource. A tribe may be the only source of information regarding the existence of a tribal cultural resource.

This information will aid tribes in determining whether to request formal consultation. In the event, that they do, having the information beforehand well help to facilitate the consultation process.

If you receive notification of change of addresses and phone numbers from tribes, please notify the NAHC. With your assistance we can assure that our consultation list remains current.

If you have any questions, please contact me at my email address: steven.quinn@nahc.ca.gov.

Sincerely,

Steven Quinn
Cultural Resources Analyst

Attachment

Native American Heritage Commission
Tribal Consultation List
Los Angeles County
6/26/2020

Gabrieleno Band of Mission Indians - Kizh Nation
Andrew Salas, Chairperson
P.O. Box 393 — Gabrieleno
Covina, CA, 91723
Phone: (626) 926 - 4131
admin@gabrielenoindians.org

Gabrieleno/Tongva San Gabriel Band of Mission Indians
Anthony Morales, Chairperson
P.O. Box 693 — Gabrieleno
San Gabriel, CA, 91778
Phone: (626) 483 - 3564
Fax: (626) 286-1262
GTTribalcouncil@aol.com

Gabrielino /Tongva Nation
Sandonne Goad, Chairperson
106 1/2 Judge John Aiso St., #231 — Gabrielino
Los Angeles, CA, 90012
Phone: (951) 807 - 0479
sgoad@gabrielino-tongva.com

Gabrielino Tongva Indians of California Tribal Council
Robert Dorame, Chairperson
P.O. Box 490 — Gabrielino
Bellflower, CA, 90707
Phone: (562) 761 - 6417
Fax: (562) 761-6417
gtongva@gmail.com

Gabrielino-Tongva Tribe
Charles Alvarez,
23454 Vanowen Street — Gabrielino
West Hills, CA, 91307
Phone: (310) 403 - 6048
roadkingcharles@aol.com

Soboba Band of Luiseno Indians
Scott Cozart, Chairperson
P. O. Box 487 — Cahuilla
San Jacinto, CA, 92583 — Luiseno
Phone: (951) 654 - 2765
Fax: (951) 654-4198
jontiveros@soboba-nsn.gov

This list is current only as of the date of this document and is based on the information available to the Commission on the date it was produced. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is applicable only for consultation with Native American tribes under Government Code Sections 65352.3, 65352.4 et seq. and Public Resources Code Sections 21080.3.1 for the proposed 1108 W. 141st Street Project, Los Angeles County.

PROJ-2020-003631 — 06/26/2020 09:48 AM — 1 of 1

APPENDIX D. PALEONTOLOGICAL SENSITIVITY RANKING CRITERIA

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