

Appendix F
**Paleontological Resources
Assessment Report**

2311 N. Hollywood Way SCEA Project, City of Burbank, California

Paleontological Resources Assessment Report

Prepared for
City of Burbank
150 N. Third St., 2nd floor
Burbank, CA 91502

June 2021



2311 N. Hollywood Way SCEA Project, City of Burbank, California

Paleontological Resources Assessment Report

Prepared for:

City of Burbank
150 N. Third St., 2nd floor
Burbank, CA 91502

June 2021

Prepared by:

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Project Manager

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Project Location:

Burbank (CA) USGS 7.5-minute Topographic Quad
Township 1 North, Range 14 West, Section 9

Acreage: Approx. 10.43 acres

Assessor Parcel Number: 2463-001-019

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STATEMENT OF CONFIDENTIALITY

Paleontological resources are nonrenewable and their scientific value can be significantly impaired by disturbance. To deter fossil hunting, and other activities that can damage paleontological resources, the locations of paleontological resources are confidential and not included in this study. Public Resources Code Section 5097.5 and Section 30244 prohibit the removal of any paleontological site or feature from public lands without permission of the jurisdictional agency, define the removal of paleontological sites or features as a misdemeanor, and require reasonable mitigation of adverse impacts to paleontological resources from developments on public (state, county, city, district) lands.

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EXECUTIVE SUMMARY

2311 N. Hollywood Way SCEA Project, City of Burbank, California - Paleontological Resources Assessment Report

Environmental Science Associates (ESA) has been retained to conduct a paleontological resources assessment for the 2311 N. Hollywood Way Project, City of Burbank, California (Project) in support of a Sustainable Communities Environmental Assessment (SCEA) being prepared pursuant to the California Environmental Quality Act (CEQA). The Project would construct a mixed-use development with 151,800 square feet of office uses, 9,700 square feet of restaurant uses, and 862 residential units (including 12 live/work units and 80 Very Low Income units, or 13.2 percent of the base density) within four proposed buildings. The City of Burbank (City) is the lead agency pursuant to the CEQA.

Geologic mapping by Dibblee and Ehrenspeck indicates that the surficial sediments underlying the Project Site are Holocene-age alluvial sediments (Qa) (Dibblee & Ehrenspeck, 1991). Boring logs taken at the Project Site indicate that the top 2 feet below ground surface (bgs) is artificial fill; alluvial fan deposits were encountered beneath the fill between 3 and 30.5 feet bgs, with 30.5 feet bgs being the total depth of the boring (Geocon, 2021).

A database search from the Natural History Museum of Los Angeles County (LACM) for records of fossil localities in and around the Project Site (Bell, 2021) demonstrated that there are no fossils from within the Project area. Several fossils occur at depth from 20-100 feet bgs in older alluvium outside the Project area.

Based on the museum records search and additional information from the published literature as well as guidance from the Society for Vertebrate Paleontology (SVP), the Project is considered “low sensitivity.” This recommendation is based on the age of the alluvium (Holocene) and the predicted depth of construction.

Ground disturbing activities associated with the Project would not impact fossil resources as the units at the surface are too young to host fossils. While it is possible that deep excavations may strike older units, the evidence is that fossil bearing units are deeper than the maximum excavation. To best mitigate against unanticipated fossils, the following measures are recommended: the retention of a qualified paleontologist, paleontological resources sensitivity training, and inadvertent discovery protocols. Details of these recommendations can be found in the *Conclusions and Recommendation* section at the close of this report.

2311 N. Hollywood Way SCEA Project, City of Burbank, California

Paleontological Resources Assessment Report

Introduction

Environmental Science Associates (ESA) has been retained to conduct a paleontological resources assessment for the 2311 N. Hollywood Way Project (Project) in support of an Sustainable Communities Environmental Assessment (SCEA) being prepared pursuant to the California Environmental Quality Act (CEQA). The Project would construct a mixed-use development with 151,800 square feet of office uses, 9,700 square feet of restaurant uses, and 862 residential units (including 12 live/work units and 80 Very Low Income units, or 13.2 percent of the base density) within four proposed buildings. The City of Burbank (City) is the lead agency pursuant to the CEQA.

ESA personnel involved in the preparation of this report are as follows: Monica Strauss, M.A., RPA., Project Director; Russell Shapiro, Ph.D., Principal Investigator of paleontology and report author; Sara Dietler, B.A., project manager; and Jaclyn Anderson, GIS specialist. Resumes of key personnel are included in **Appendix A**.

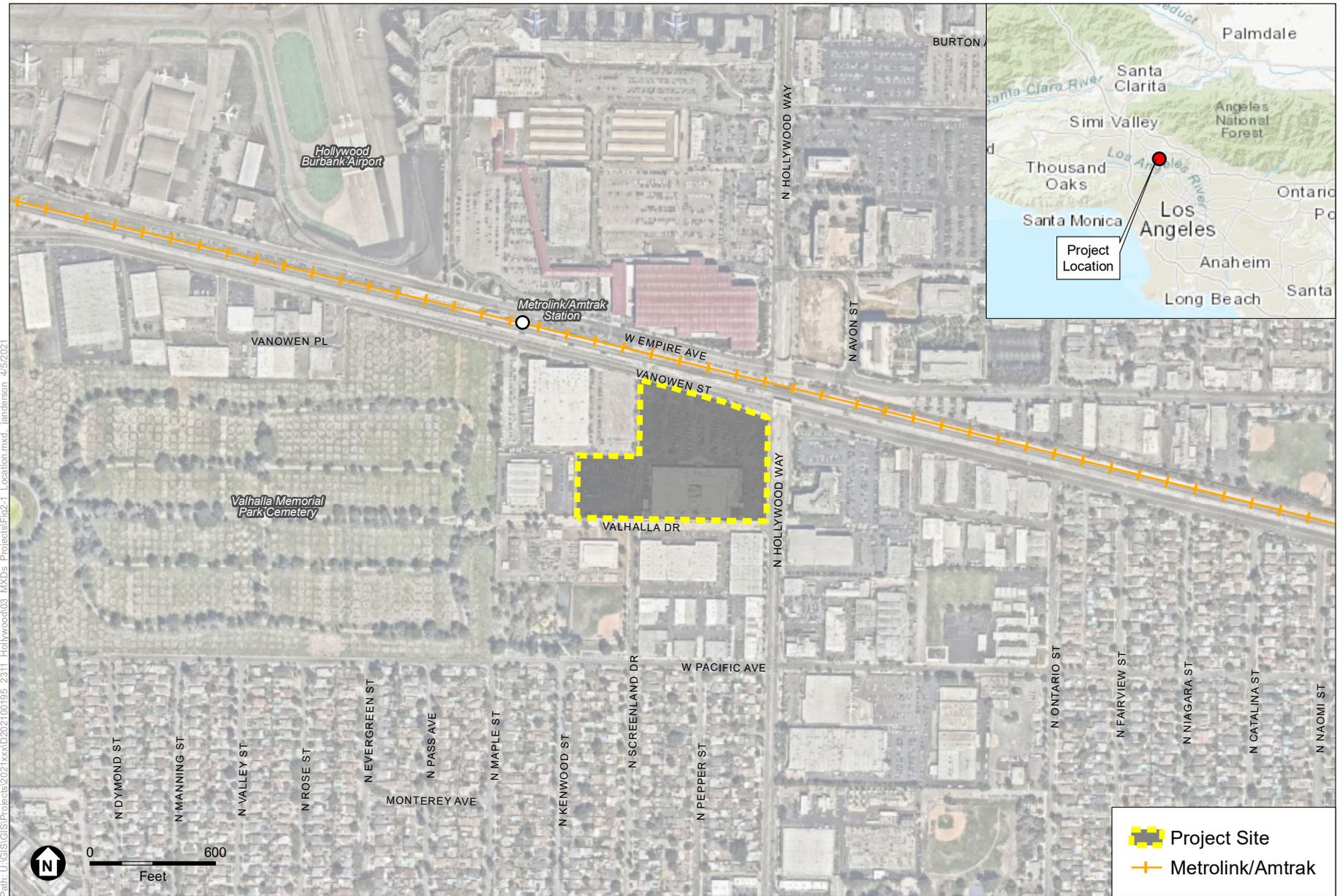
Project Location

Regionally, the Project Site is located within the Transverse Ranges geomorphic province, along the eastern border of the San Fernando Valley, approximately 2 miles to the southwest of the Verdugo Mountains in Los Angeles County (County); refer to **Figure 1**, *Regional Location Map*. Locally, the Project Site is bound by Vanowen Street to the north, N. Hollywood Way to the east, Valhalla Drive to the south, and commercial uses and Valhalla Memorial Park to the west; refer to **Figure 2**, *Local Vicinity Map*.

The San Fernando Valley is an alluvium-filled basin with sediments derived from the Santa Monica Mountains to the south, the Santa Susana Mountains to the west, the San Gabriel Mountains to the northeast, and the Verdugo Mountains to the east (Geocon, 2021).

The Project Site is currently developed with a large commercial building that was constructed in 1962 and has housed the existing Fry's Electronics Store since 1995. Two additional ancillary structures are also located on the Project Site, including an abandoned heating, ventilation, and air conditioning (HVAC) system housing and a non-operational automotive stereo installation garage. Both ancillary structures located immediately to the west of the commercial building. The commercial building and ancillary structures located on the Project Site total approximately 105,626 square feet. The Project Site also includes a loading dock, associated surface parking and walkways, and ornamental landscaping. The Project Site is currently developed with approximately 59 on-site trees. 1

1 Carlberg Associates, Tree Inventory Report, 2311 Hollywood Way, Burbank, California 91505, May 25, 2021. Provided in Appendix B of this SCEA.

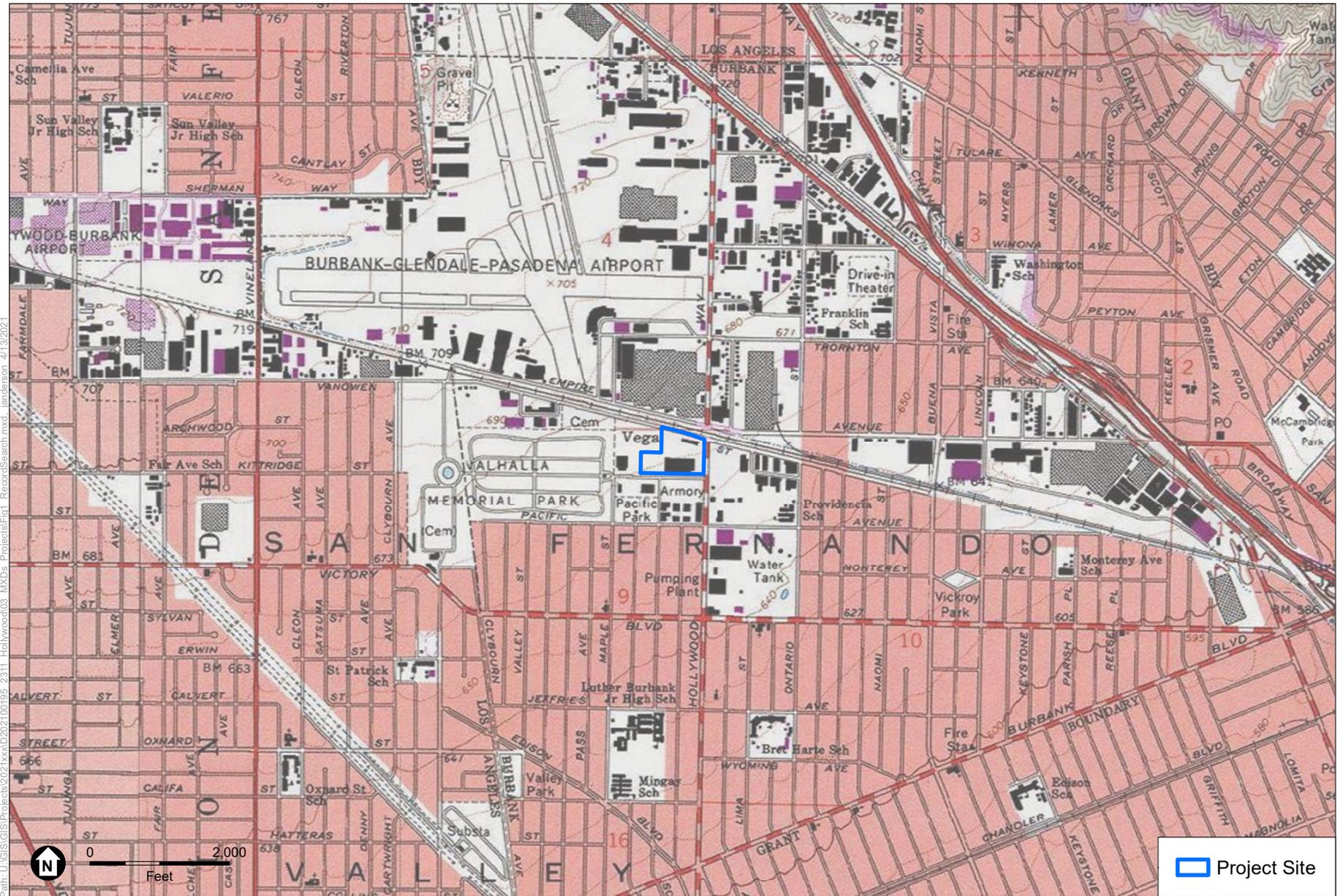


SOURCE: Mapbox; Los Angeles County, 2020.

2311 N. Hollywood Way Project

Figure 1
Regional and Site Location Map





SOURCE: USGS Burbank Topoquad; Los Angeles County, 2020.

2311 N. Hollywood Way Project

Figure 2 Local Vicinity Map
(Topo)

Project Description

The Project proposes a mixed-use development on an approximately 10.43-acre (454,286 square feet) site (Project Site) located at 2311 N. Hollywood Way within the City of Burbank (City). The Project would construct a mixed-use development with 151,800 square feet of office uses, 9,700 square feet of restaurant uses, and 862 residential units (including 12 live/work units and 80 Very Low Income units, or 13.2 percent of the base density) within four proposed buildings.

Residential Uses

Residential units would be located within two buildings in the northern (Residential Building 1) and southern (Residential Building 2) halves of the Project Site. The two residential buildings would be separated by an open space plaza (Fry's Way Plaza). Residential Building 1, located along Vanowen Street, would include 424 residential units and amenity spaces and would reach a maximum height of 75 feet and 6 inches (as measured from average grade plane to the ceiling of the highest room permitted for human occupancy per the Burbank Municipal Code). The proposed unit mix for Residential Building 1 would include 155 studio units, 202 one-bedroom units, 51 two-bedroom units, and 16 three-bedroom units.

Residential Building 2, located along Valhalla Boulevard, would include 438 residential units and amenity spaces as well as 8,200 square feet of restaurant uses. The proposed unit mix for Residential Building 2 would include 179 studio units, 162 one-bedroom units, 87 two-bedroom units, and 10 three-bedroom units.

The Project would provide a total of 334 studio units, 364 one-bedroom units (of which 1 unit would be a live/work unit), 138 two-bedroom units (of which 5 units would be live/work units), and 26 three-bedroom units (of which 6 units would be townhouses). The residential units and amenities would be built around two 5-story parking structures, one located within each residential building.

The first floor for both residential buildings would include a mix of residential units, residential lobbies fronting N. Hollywood Way (one lobby for each building) and adjacent to the Fry's Way Plaza, 5,600 square feet of amenity space across two buildings, 9,700 square feet of restaurant uses across two buildings, and parking uses. The second to fifth floors would include a mix of residential units and parking uses. The sixth floor would include a roof deck for each residential building, with the roof deck of Residential Building 1 fronting Vanowen Street and the second roof deck of Residential Building 2 fronting Valhalla Drive. Residential units and other residential amenities spaces would also be provided on the sixth floor. The seventh floor would include additional residential units.

Office Uses

The proposed office building² would be located on the southwestern portion of the Project Site. The proposed office building would be approximately 5-stories reaching a maximum of 70 feet and 11 inches in height and would include 151,800 square feet of office uses. The entrance to the proposed office building would be located at the corner of Valhalla Drive and Screenland Drive. The proposed office building would be surrounded by landscaping and a plaza connecting the separate 5-story parking structure from the office building. The proposed office building would provide several outdoor gathering areas including a 540 square foot patio on the ground floor, a 660 square foot patio on the second floor, two patios totaling 7,759 square feet on the third floor, a 2,059 square foot patio on the fourth floor, and a 9,260 square foot patio on the fifth floor. A 5-story parking structure providing parking for the office uses would be located directly adjacent to and west of the proposed office building.

Restaurant Uses

Restaurant uses would be provided within the ground floor of Residential Building 2 that would front N. Hollywood Way and as a freestanding building north of and adjacent to Residential Building 1 fronting Vanowen Street. Specifically, approximately 8,200 square feet of restaurant uses would be provided within Residential Building 2. The entrance to this commercial space would be provided at the corner of N. Hollywood Way and Valhalla Drive. The proposed freestanding 1,500-square foot restaurant building, which would reach 15 feet in height, would be located in the northwestern corner of Project Site and the entrance to this building would be located at the corner of Vanowen Street and the proposed Screenland Way.

Open Space, Landscaping, and Amenities

The Project includes the development of both common open space and private open space throughout the Project Site. The two residential buildings would be separated by the 15,000-square foot Fry's Way Plaza. Common open space provided within the two residential buildings include: three courtyards on Level 2; a residential pool deck within each residential building on Level 6; eight plazas located on the ground floor nestled between the two residential buildings facing inward towards the proposed Fry's Way; and a plaza located on the ground floor within Residential Building 2 that would face Valhalla Drive. These common open space areas would total 82,000 square feet, of which a minimum of 12,300 square feet would be landscaped. The common open spaces areas would generally include landscaping, benches, and hardscape. In addition, 43,100 square feet of private open space, in the form of balconies, would be provided throughout the residential buildings. The perimeter of the Project Site would also be landscaped with drought tolerant landscaping. In total, the Project would provide 125,100 square feet of open space.

² Under an alternative configuration, the office component would comprise four 4-story buildings with a height of approximately 60 feet and a total floor area of 84,900 square feet. This SCEA analyzes the 5-story, 151,800 square-foot configuration only as it would have relatively greater environmental impacts as compared to the smaller configuration. Therefore, all the analysis and conclusions herein would apply to both configurations.

Parking and Circulation

A total of 1,619 vehicular parking spaces would be provided within three parking structures and a small surface parking area. Each residential parking structure would have a small portion of subterranean parking located under each of the residential parking structures. Each subterranean portion would contain approximately 26 vehicular parking spaces.

The proposed 5-story office parking structure, located directly adjacent to and west of the proposed office building would include a total of 455 vehicular parking spaces.

Residential Building 1 would include the construction of a 5-story parking structure with a 26 vehicular space subterranean level that would include a total of 543 vehicular parking spaces. Three ingress/egress driveways would be provided: one driveway along Screenland Way, one driveway along Vanowen Street, and one driveway along N. Hollywood Way. Residential Building 2 would also include the construction of a 5-story parking structure with a 26 vehicular space subterranean level that would include a total of 589 vehicular parking spaces. Two ingress/egress driveways would be provided: one driveway along Valhalla Drive and one driveway from N. Hollywood Way. The Project would also include a surface parking area containing a total of three parking spaces located at the corner of Screenland Way and Vanowen Street, adjacent to the freestanding commercial building.

The Project would provide 7 short-term bicycle parking spaces and 20 long-term bicycle parking spaces for the residential uses and 12 long-term bicycle parking spaces for the office uses.

Construction

Construction of the Project would commence as early as July 2022. Construction would be completed as early as December 2025. Construction of the Project would require excavation to a maximum depth of 9 feet below grade for footings and foundation. Earthwork would require a net export of 22,000 cubic yards (cy) of soil. Construction staging would be entirely internal to the Project Site. Construction trucks would exit the I-5 and travel south on N. Hollywood Way and enter the Project Site via Valhalla Drive.

Regulatory Framework

Paleontological resources are limited, nonrenewable resources of scientific, cultural, and educational value that are afforded protection under state laws and regulations. The following section summarizes the applicable state laws and regulations, as well as professional standards provided by the Society of Vertebrate Paleontology (SVP, 2010).

State Regulations

California Environmental Quality Act

The CEQA Guidelines (Title 14, Chapter 3 of the California Code of Regulations, Section 15000 *et seq.*), are prescribed by the Secretary of Resources to be followed by state and local agencies in California in their implementation of the CEQA. Appendix G of the CEQA Guidelines includes

an Environmental Checklist Form with questions that may be used by public agencies in their assessment of impacts on the environment. The question within Appendix G that relates to paleontological resources states: “Will the proposed project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?” The City of Burbank uses this question as its threshold of significance for determining whether impacts of paleontological resources are significant. CEQA protects paleontological resources by requiring an assessment of a project’s potential paleontological impacts.

Public Resources Code Section 5097.5 and Section 30244

Other state requirements for paleontological resource management are included in PRC Section 5097.5 and Section 30244. These statutes prohibit the removal of any paleontological site or feature from public lands without permission of the jurisdictional agency, define the removal of paleontological sites or features as a misdemeanor, and require reasonable mitigation of adverse impacts to paleontological resources from developments on public (state, county, city, district) lands.

Society for Vertebrate Paleontology

The SVP has established standard guidelines (SVP, 2010) that outline professional protocols and practices for conducting paleontological resource assessments and surveys, monitoring and mitigation, data and fossil recovery, sampling procedures, and specimen preparation, identification, analysis, and curation. Most practicing professional vertebrate paleontologists adhere closely to the SVP’s assessment, mitigation, and monitoring requirements as specifically provided in its standard guidelines. Most state regulatory agencies with paleontological resource-specific Laws, Ordinances, Regulations, and Standards (LORS) accept and use the professional standards set forth by the SVP.

As defined by the SVP (2010:11), significant nonrenewable paleontological resources are:

Fossils and fossiliferous deposits, here defined as consisting of identifiable vertebrate fossils, large or small, uncommon invertebrate, plant, and trace fossils, and other data that provide taphonomic, taxonomic, phylogenetic, paleoecologic, stratigraphic, and/or biochronologic information. Paleontological resources are considered to be older than recorded human history and/or older than middle Holocene (i. e., older than about 5,000 radiocarbon years)..

Based on the significance definitions of the SVP (2010), all identifiable vertebrate fossils are considered to have significant scientific value. This position is adhered to because vertebrate fossils are relatively uncommon, and only rarely will a fossil locality yield a statistically significant number of specimens of the same genus. Therefore, every vertebrate fossil found has the potential to provide significant new information on the taxon it represents, its paleoenvironment, and/or its distribution. Furthermore, all geologic units in which vertebrate fossils have previously been found are considered to have high sensitivity. Identifiable plant and invertebrate fossils are considered significant if found in association with vertebrate fossils or if defined as significant by project paleontologists, specialists, or local government agencies.

A geologic unit known to contain significant fossils is considered to be “sensitive” to adverse impacts if there is a high probability that earth-moving or ground-disturbing activities in that rock unit will either directly or indirectly disturb or destroy fossil remains. Paleontological sites indicate that the containing sedimentary rock unit or formation is fossiliferous. The limits of the entire rock formation, both areal and stratigraphic, therefore define the scope of the paleontological potential in each case (SVP, 2010).

Fossils are contained within surficial sediments or bedrock, and are therefore not observable or detectable unless exposed by erosion or human activity. Therefore, without natural erosion or human-caused exposure, paleontologists cannot know either the quality or quantity of fossils. As a result, even in the absence of surface fossils, it is necessary to assess the sensitivity of rock units based on their known potential to produce significant fossils elsewhere within the same geologic unit (both within and outside of the study area), a similar geologic unit, or based on whether the unit in question was deposited in a type of environment that is known to be favorable for fossil preservation. Monitoring by experienced paleontologists greatly increases the probability that fossils will be discovered during ground-disturbing activities and that, if the fossils are significant, that successful mitigation and salvage efforts may be undertaken.

Paleontological Sensitivity

Paleontological sensitivity is defined as the potential for a geologic unit to produce scientifically significant fossils. This is determined by rock type, past history of the geologic unit in producing significant fossils, and fossil localities recorded from that unit. Paleontological sensitivity is derived from the known fossil data collected from the entire geologic unit, not just from a specific survey. In its “Standard Guidelines for the Assessment and Mitigation of Adverse Impacts to Non-renewable Paleontologic Resources,” the SVP (2010:1-2) defines four categories of paleontological sensitivity (potential) for rock units: high, low, undetermined, and no potential:

- **High Potential.** Rock units from which vertebrate or significant invertebrate, plant, or trace fossils have been recovered are considered to have a high potential for containing additional significant paleontological resources. Rocks units classified as having high potential for producing paleontological resources include, but are not limited to, sedimentary formations and some volcanoclastic formations (e. g., ashes or tephras), and some low-grade metamorphic rocks which contain significant paleontological resources anywhere within their geographical extent, and sedimentary rock units temporally or lithologically suitable for the preservation of fossils (e. g., middle Holocene and older, fine-grained fluvial sandstones, argillaceous and carbonate-rich paleosols, cross-bedded point bar sandstones, fine-grained marine sandstones, etc.).
- **Low Potential.** Reports in the paleontological literature or field surveys by a qualified professional paleontologist may allow determination that some rock units have low potential for yielding significant fossils. Such rock units will be poorly represented by fossil specimens in institutional collections, or based on general scientific consensus only preserve fossils in rare circumstances and the presence of fossils is the exception not the rule, e. g. basalt flows or Recent colluvium. Rock units with low potential typically will not require impact mitigation measures to protect fossils.

- **Undetermined Potential.** Rock units for which little information is available concerning their paleontological content, geologic age, and depositional environment are considered to have undetermined potential. Further study is necessary to determine if these rock units have high or low potential to contain significant paleontological resources. A field survey by a qualified professional paleontologist to specifically determine the paleontological resource potential of these rock units is required before a paleontological resource impact mitigation program can be developed. In cases where no subsurface data are available, paleontological potential can sometimes be determined by strategically located excavations into subsurface stratigraphy.
- **No Potential.** Some rock units have no potential to contain significant paleontological resources, for instance high-grade metamorphic rocks (such as gneisses and schists) and plutonic igneous rocks (such as granites and diorites). Rock units with no potential require no protection nor impact mitigation measures relative to paleontological resources.

For geologic units with high potential, full-time monitoring is generally recommended during any Project-related ground disturbance. For geologic units with low potential, protection or salvage efforts will not generally be required. For geologic units with undetermined potential, field surveys by a qualified vertebrate paleontologist should be conducted to specifically determine the paleontologic potential of the rock units present within the study area.

Paleontological Resources Significance Criteria

Numerous paleontological studies have developed criteria for the assessment of significance for fossil discoveries (e.g. Eisentraut and Cooper, 2002; Murphey and Daitch, 2007; Scott and Springer, 2003, etc.). In general, these studies assess fossils as 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; or
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.

In summary, significant paleontological resources are determined to be fossils or assemblages of fossils that are unique, unusual, rare, uncommon, or diagnostically important (Eisentraut and Cooper, 2002; Murphey and Daitch, 2007; Scott and Springer, 2003). 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).

Methods and Results

The Project Site was the subject of thorough background research and analysis to assess its paleontological sensitivity. The research included a paleontological records search conducted by the Natural History Museum of Los Angeles County (LACM), as well as geologic map and literature reviews conducted by ESA Principal Paleontologist, Russell Shapiro, Ph.D.

Geologic Setting

The greater Los Angeles area comprises a set of tectonically-bound basins, filled with very thick sequences of marine and terrestrial sediment (Yerkes et al., 1965). The Project is located in the “Northwestern Block”. The uplifted mountain ranges surround these basins are composed of bedrock of various ages and supply the sediment to the valleys below. The rates of erosion and deposition are linked to tectonic uplift as well as climate patterns.

The Project is situated in the northeast San Fernando Valley, adjacent to the south slope of the Verdugo Mountains. The bedrock of the Verdugo Mountains is composed of crystalline igneous and localized metamorphic units (Dibblee and Ehrenspeck, 1991). The valley south of the mountains is dominated by young alluvium with alluvial fans along the mountain front.

Geologic Map and Literature Review

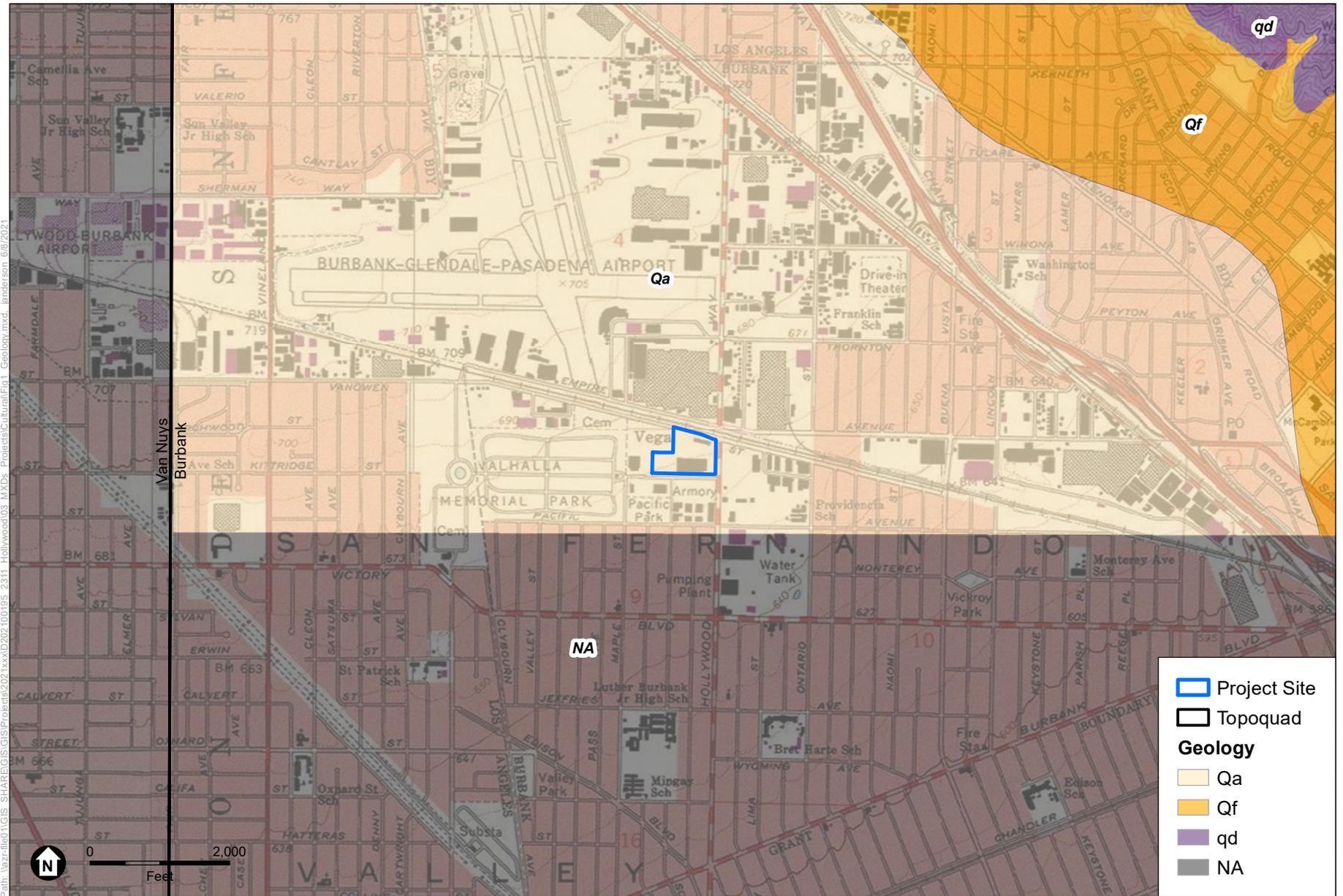
The Project area is mapped on the Dibblee and Ehrenspeck (1991) 1:24,000 geological map (Table 1 and Figure 3). The entire Project is underlain by Quaternary alluvium, composed of mixed sedimentary rocks of clay, sand and gravels. Based on the geotechnical report, the alluvium is overlain by artificial fill to a depth of two feet and the alluvium is consistent to the depth of the deepest augers at approximately 30 feet below ground surface. Between the auger constraints and the distance to exposed bedrock, it is unlikely that excavations at the depths proposed—up to 9 feet below ground surface—will encounter other geological units.

TABLE 1 SUMMARY OF GEOLOGIC UNITS WITHIN AND IMMEDIATELY ADJACENT TO PROJECT

Geologic Unit	Map Unit Symbol	Age	Description	Depth	Paleo Sensitivity
Holocene-age Alluvium	Qa	Holocene (1,000-10,000 years ago);	Alluvial gravel, sand, and clay of valley areas.	Minimum 30'	Low

SOURCE: Dibblee and Ehrenspeck, 1991

Quaternary Alluvium (Qa): The youngest unit in the area is the alluvium filling the valley floors. Dibblee and Ehrenspeck (1991) do not provide much information but alluvium in the greater Los Angeles area tends to be coarse gravel to sandstone and variable thickness. In many areas, the younger alluvium may overly substantial deposits of older alluvium. However, based on the regional geology of the Project area and the information from the geotechnical reports, it is unlikely that older alluvium exists within the projected excavation depths.



SOURCE: USGS Burbank Topoquad; Los Angeles County, 2020.

2311 N. Hollywood Way Project

Figure 3
Geology

Paleontological Record

Museum Searches

On May 28, 2021, ESA received a database search from the LACM for records of fossil localities in and around the Project Site (Bell, 2021). The purpose of the museum records search was to: (1) determine whether any previously recorded fossil localities occur in the Project Site; (2) assess the potential for disturbance of these localities during construction; and (3) evaluate the paleontological sensitivity within the Project Site and vicinity. The search yielded no fossil sites within the Project boundaries. Several localities near the Project area are yielded fossils from alluvium, but alluvium older than the unit predicted in the Project. Furthermore, the depth to fossils were substantial, the shallowest at 11 feet bgs and the remainder between 20 and 100 feet bgs. The LACM records search results are included in **Appendix B**.

Literature Review

The Pleistocene deposits of the greater Los Angeles area host many significant vertebrate fossils. However, the Project should not disturb Pleistocene alluvium, only Holocene. The Holocene is considered too young to host significant fossils (SVP, 2010).

Paleontological Sensitivity Analysis

The literature and geologic mapping review, as well as the LACM records search results, were used to assign paleontological sensitivity to the geologic units at surface and underlying the Project Site, following the guidelines of the SVP (2010):

Qa: This Holocene alluvium comprising the Project Site likely dates to the Holocene from a period of 1,000-10,000 years ago. Fossil specimens have not been identified within nearby Holocene-age sediments. The Qa is likely less than 5,000 years old, therefore it is considered to not contain fossils, if the age is correct. Therefore, this unit is assigned a **Low Potential** to contain paleontological resources.

Conclusions and Recommendations

It is not likely that excavation for the 2311 North Hollywood Way Project will impact paleontological resources. Because subsurface geology is, by its nature, unknown there may be a potential for the discovery of unanticipated resources if older Pleistocene alluvium is impacted. To reduce the potential impacts, the following mitigation measures are recommended, based on the SVP (2010) procedural guidelines:

GEO-2 Prior to any Project ground disturbance activities, a qualified paleontologist shall be retained by the Applicant to prepare a Worker's Environmental Awareness Program (WEAP) and train all construction personnel prior to the start of any construction activities. The WEAP training shall include, at a minimum, the following information:

- Review of local and State laws and regulations pertaining to paleontological resources;
- Types of fossils that could be encountered during ground disturbing activity;

- Photos of example fossils that could occur on site for reference; and
- Instructions on the procedures to be implemented should unanticipated fossils be encountered during construction, including stopping work in the vicinity of the find and contacting a qualified professional paleontologist.

GEO-3 In the event an unanticipated fossil discovery is made during ground disturbing activities, construction activities shall halt in the immediate vicinity of the fossil, and the qualified professional paleontologist retained by the Applicant shall be notified to evaluate the discovery, determine its significance, and evaluate whether additional mitigation or treatment is warranted. Work in the area of the discovery shall resume once the find is properly documented and authorization is given by the qualified paleontologist to resume construction work. Any significant paleontological resources found shall be prepared, identified, analyzed, and permanently curated in an approved regional museum repository.

References

- Bell, A. 2021. Paleontological resources for the Paleontological resources for the 2311 N. Hollywood Way Project (D202100195.00) Project. Prepared for Environmental Science Associates by the Natural History Museum of Los Angeles County.
- Dibblee, T.W., and H. E. Ehrenspeck, ed. 1991. Geologic map of the Sunland and (north ½) Burbank quadrangles, Los Angeles County, California. Dibblee Geological Foundation Map DF-32, Scale 1:24,000.
- Eisentraut, P. and J. Cooper. 2002. Development of a model curation program for Orange County's archaeological and paleogeological collections. Prepared by California State University, Fullerton and submitted to the County of Orange Public Facilities and Resources Department/Harbors, Parks and Beaches (PFRD/HPB).
- Geocon West, Inc. (Geocon), 2021. Updated Geotechnical Investigation. Proposed Mixed-Use Development 2311 North Hollywood Way, Burbank, California, PM 269-99-100 Lot 1. Project No. W1233-06-01. May 7, 2021.
- Murphey, P.C., and D. Daitch. 2007. Paleontological Overview of Shale and Tar Sands Areas in Colorado, Utah and Wyoming. Technical Report, Bureau of Land Management. Washington, D.C.
- Scott, E. and K. Springer. 2003. CEQA and Fossil Preservation in California. The Environmental Monitor.
- 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. Ridgecrest: Maturango Museum Publication 15: 65-70.
- Society of Vertebrate Paleontology (SVP). 2010. Standard procedures for the assessment and mitigation of adverse impacts to paleontological resources.
- Yerkes, R. F., T. H. McCulloh, J. E. Schollhamer, and J. G. Vedder. 1965. Geology of the Los Angeles Basin – an introduction. Geological Survey Professional Paper 420-A.

APPENDIX A

Personnel



Russell S. Shapiro, PhD

Principal Investigator

EDUCATION

Ph.D., Geological Sciences, University of California, Santa Barbara, 1998
 B.S., Geology, Humboldt State University, 1992

25 YEARS EXPERIENCE

CERTIFICATIONS/ REGISTRATION

U.S. Fish and Wildlife Cultural Resources Use Permit
 U.S. Forest Service Cultural Resources Use Permit
 Bureau of Land Management Cultural Resources Use Permit
 Wilderness and Remote First Aid (Red Cross Certified)

PROFESSIONAL AFFILIATIONS

Geobiology Society; Treasurer
 Society for Sedimentary Geology (SEPM); Vice-President
 Society for Vertebrate Paleontology

As a Principal Investigator, Dr. Shapiro has been involved in review of paleontological resource reports and evaluating proposed mitigation plans. Dr. Shapiro researches and prepares environmental impact reports regarding cultural resources (fossils), conducts field (geological and paleontological) surveys, and oversees ground disturbance at construction sites for Environmental Quality compliance (CEQA, NEPA, and the Paleontological Resources Preservation Act). As a Qualified Paleontologist, Dr. Shapiro has also reviewed resource planning documents for several counties in California and was the lead on the Bureau of Land Management's assessment of fossil resources of Northern California.

In his academic role as Professor of Geology, Dr. Shapiro teaches several paleontology courses including "Applied Paleontology" which is a modified "Cultural Resources" course, focusing on budgeting, CEQA and NEPA regulations, field surveys, GIS projections, fossil recovery, and curation. He also teaches in the annual Field Camp courses and manages the rock preparation lab and maintains the microscopes.

Relevant Experience

ReneSola Gentry Solar Project, Paleontological Resource Assessment Report, Lincoln, California. *Principal Investigator, Mapping.* Literature, geological map, and museum review for fossil resources. Field mapping of entire property. Final product included a mitigation and monitoring plan.

Paleontological Sensitivity Analysis Report, Elk Grove, California; Pacific Gas and Electric. *Principal Investigator.* Literature, geological map, and air photo archival report on the potential fossil yield for a proposed pipeline. Recommendations based on searches of museum collections of relevant geological formations. Deliverables consisted of a sensitivity report and appendix of known fossil occurrences by taxa and location.

Mojave Solar Project Cultural Services; San Bernardino County, California; CH2M Hill. *Principal Investigator.* Reviewed technical report; advised on scientific analyses.

El Camino Real Bridge Replacement Environmental Services; San Luis Obispo County, California, Quincy Engineering. *Principal Investigator.* Reviewed technical report for CEQA/NEPA documentation, technical studies, and permitting, for the replacement of the El Camino Real bridge over Santa Margarita Creek in Atascadero.

San Bernardino County General Plan Update: Paleontological Resources Technical Report. *Primary Reviewer.* External reviewer for general plan update. Involved assessing all geological formations in San Bernardino County and museum records of significant fossils.

Recent Significant Excavations

Miocene Vertebrates of the Sheldon Wildlife National Refuge. Oversaw operations to conduct significant collection of Miocene-age fossils from volcanic sediments for the U.S. Fish and Wildlife Service. Duties included field collection and high-resolution GPS mapping, fossil preparation and identification, curation at the Gateway Science Museum.

Eocene Horses from Black Butte Lake Reservoir. Field jacketing and preparation of fossil horse skull material from the reservoir under the direction of the U.S. Army Corps of Engineers. Fossils were prepared, identified, and returned to the Army Corps for public display.

Pleistocene Camelid from Nevada. This project grew out of a paleontological resource assessment field survey. During the survey, a semi-articulated rear leg of a late Pleistocene camelid was collected and prepared. A manuscript was published in 2016.

Publications and Presentations

Shapiro, R. S., 2016, Camelid record of Mesquite Lake, California: impact of earliest Holocene climate change in Reynolds, R. E., ed., *Going LOCO investigations along the Lower Colorado River*, 2016 Desert Symposium Field Guide and Proceedings, p 41-47.

Shapiro, R. S. and Konhauser, K. O., 2014, Hematite-coated microfossils: Ecological fingerprint or taphonomic oddity of the Paleoproterozoic? *Geobiology*, v. 13, p. 209-224.

Shapiro, R. S. and Spangler, E., 2009, Bacterial fossil record in whale falls: relation of taphonomy and paleoecology to depositional environment: *Palaeogeography, Palaeoclimatology, Palaeoecology*, v. 274, p. 196-203.

Shapiro, R. S., Fricke, H., and Fox, K., 2009, Dinosaur-bearing oncoids from ephemeral lakes of the Lower Cretaceous Cedar Mountain Formation, Utah: *PALAIOS*, v. 24, p. 51-58.

Shapiro, R. S., and Rowland, S. M., 2002, Fossil collecting in southern Nevada in Rowland, S. M. and Orndorff, R. L., eds., *Geology of the Southern Nevada Region: National Association of Geoscience Teachers, Far Western Section Spring Field Conference Guidebook*, p. 96-99.

Shapiro, R. S., 1998, Paleogene-Early Neogene macrofossils of southwestern Santa Cruz Island in Weigand, P. W., ed., *Contributions to the Geology of the Northern Channel Islands, Southern California: Pacific Section, American Association of Petroleum Geologists*, MP-45, p. 123-132.



Sara Dietler

Senior Archaeologist

EDUCATION

BA. Anthropology,
San Diego State
University

24 YEARS OF EXPERIENCE

CERTIFICATIONS/ REGISTRATION

California BLM Permit,
Principal Investigator,
Statewide

Nevada BLM Permit,
Paleontology, Field
Agent, Statewide

PROFESSIONAL AFFILIATIONS

Society for American
Archaeology (SAA)

Society for California
Archaeology (SCA)

Sara is a senior archaeology and paleontology lead with more than 20 years of experience in cultural resources management in Southern California. As a senior project manager, she manages and prepares technical studies to report the findings of archaeological and paleontological surveys to assess a project's potential impacts. She applies her expertise for project-specific as well as on-call contracts for cities, counties, utilities, transportation, and other agencies throughout the state of California.

Sara is well versed in preparing documentation and providing consultation in compliance with the National Historic Preservation Act (NHPA), National Environmental Policy Act (NEPA), California Environmental Quality Act (CEQA), and the Society of Vertebrate Paleontology guidelines and requirements. Cross-trained in paleontological monitoring, Sara regularly monitors and supervises fossil salvage for public agencies and private developers. She has extensive experience providing oversight for long-term compliance monitoring projects throughout Southern California for archaeological, Native American, and paleontological monitoring projects and provides streamlined management for these disciplines.

Relevant Experience

Southern California Edison On-Call Master Services Agreement for Natural and Cultural Resources Services, Avalon, CA. *Cultural Resources Task Manager.* Sara provided project management and senior archaeological support for an on-call Master Services Agreement with Southern California Edison for cultural and natural resources consulting services. This contract included numerous surveys and monitoring projects for pole replacements and small- to mid-size reconductoring projects, substation maintenance, and construction projects. Sara served as project manager for more than 25 projects under this contract and served as the go-to person for all water, gas, and power projects occurring in the city of Avalon on Santa Catalina Island. Sara was responsible for oversight of archaeological and paleontological monitors and served as report author and report manager.

EDR, Coachella Flats Wind Energy Repower Environmental Surveys, Coachella, CA. *Senior Cultural Resources Task Leader.* Sara served as Senior Cultural and Paleontological manager providing management and oversight for the surveys and reporting. She conducted coordination with the client and the U.S. Bureau of Land Management. Sara provided cultural resources, paleontological resources, and biological resources services in support of an Environmental Impact Report for the project.

Pacific Gas & Electric (PG&E) North American Electric Reliability Corporation Support; Multiple Counties, CA. *Senior Cultural Resources Specialist.* Sara

provided recommendations on archaeological, historic, and paleontological sensitivity based on desktop research via Geographic Information Systems, Google Earth, historic maps and aerials, and the National Geological Map database to determine sensitivity of cultural resources within the right-of-way for eight different transmission line projects. She supported PG&E Land and Environmental Management and PG&E Electric Transmission with cultural, and paleontological resource sensitivity assessments and other compliance efforts.

Pacific Gas & Electric (PG&E) Vallejo Substation B Reconductoring Projects Cultural Resources Support, Vallejo, CA. *Senior Project Manager.* Sara provided oversight of archaeological and historic evaluation of the property. The project consisted of an evaluation of a PG&E substation for potential historical register listing and conducted a cultural resources sensitivity desktop review.

LADWP, Elysian/USC Water Recycling Project Initial Study/ Environmental Assessment, Los Angeles, CA. *Project Manager.* Sara worked on the Initial Study/Mitigated Negative Declaration and an Environmental Assessment/Finding of No Significant Impact to construct recycled water pipelines for irrigation and other industrial uses serving Los Angeles Department of Water and Power customers in downtown Los Angeles, including Elysian Park. The U.S. Environmental Protection Agency is the federal lead agency. Sara prepared two technical reports and a treatment plan for archaeological, historic, and paleontological resources identified during the phase I assessment.

Recurrent Energy, Kern County Solar Energy Projects, Kern County, CA. *Project Manager/Senior Archaeologist.* Sara provided cultural resources, paleontological resources, and Native American monitoring services for five separate solar photovoltaic projects for Recurrent Energy. The five projects include a total of 626 acres of previously undeveloped land in the eastern portion of the county. Sara served as project manager for all five projects and Senior Archaeologist providing client coordination and oversight of paleontological monitoring and reporting.

Advanced Water Treatment Facility Project Groundwater Reliability Improvement Project, Pico Rivera, CA. *Project Manager.* ESA is providing environmental compliance monitoring for the Water Replenishment District to ensure compliance with the conditions contained in the Mitigation and Monitoring Reporting Programs associated with three environmental documents, including the Final Environmental Impact Report (EIR), a Mitigated Negative Declaration, and a Supplemental EIR, pertaining to three infrastructure components associated with the project. ESA provides general compliance monitoring at varying rates of frequency depending on the nature of the activities and is sometimes on-site for 4-hour spot checks and other times for full 24-hour rotations. The project is located near a residential neighborhood and adjacent the San Gabriel River. Issues of concern include noise, vibration, night lighting, biological resources, cultural resources, and air quality. Sara provides quality assurance and oversight of the field monitoring, and day-to-day response to issues. She oversees archaeological and Native American monitoring for ground disturbance and coordinates all sub-consultants for the project. She also provides daily, weekly, and quarterly reporting on project compliance to support permitting and agency oversight.

APPENDIX B

LACM Records Search (Confidential)

