

Appendix E

Paleontology Report

Paleontological Resources Inventory Report

5350 Wilshire Boulevard Project, City of Los Angeles, California

FEBRUARY 2024

Prepared for:

ONNI GROUP

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Management Summary

This report presents the results of the paleontological resources inventory performed by Dudek for the 5350 Wilshire Project (Project, or Project Site), located on the south side of Wilshire Boulevard between South Cloverdale Avenue and South Detroit Street in Los Angeles (City), California. The Project includes the development of a 46-story mixed-use development with 5-story podium and 4 subterranean levels in the Wilshire Community Plan area of the City. In accordance with applicable local (City), state (California Environmental Quality Act [CEQA]) guidelines, and professional best practices (Society of Vertebrate Paleontology [SVP], 2010; Murphey et al., 2019), Dudek prepared this inventory report for the Project.

Paleontological resources have been recovered from nearby project sites and are correlative with the Rancholabrean North American Land Mammal Age (NALMA), based on the fossils known from the National Natural Landmark, the La Brea Tar Pits and Museum in Hancock Park, approximately one-half mile west of the Project Site. These localities have produced fossil plant, insect, and animal specimens, including Rancholabrean NALMA, or “Ice Age” megafaunal remains of extinct dire wolves, saber-tooth cats, horses, bison, camels, sloths, mastodons, and mammoths.

Impacts to paleontological resources would be reduced with the implementation of a mitigation measures include a monitoring program under the supervision of a qualified paleontologist meeting criteria detailed in SVP (2010).

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1 Introduction

1.1 Project Location and Description

The 5350 Wilshire Boulevard Project (Project) is located in the City of Los Angeles (City), California (Figure 1). The Project is located on the south side of Wilshire Boulevard between South Cloverdale Avenue and South Detroit Street and includes the development of a 46-story mixed-use development with 5-story podium and 4 subterranean levels in the Wilshire Community Plan area of the City. Excavation for the Project is anticipated to extend 80 feet below the ground surface (bgs). Existing commercial buildings along Wilshire Boulevard will remain after project completion (GeoPentech, 2022). In accordance with applicable local (City), state (California Environmental Quality Act [CEQA]) guidelines, and professional best practices (SVP, 2010; Murphey et al., 2019).

The Project would include a mixed-use development comprised of residential and commercial uses with associated parking on an approximately 1.36-acre site located at 5350-5376 Wilshire Boulevard, 706-716 Cloverdale Avenue, and 721-725 Detroit Street (Project Site) within the Wilshire Community Plan Area of the City of Los Angeles (City). The Project would utilize the City's Transit Oriented Communities (TOC) Guidelines to construct a podium tower (Residential Tower) comprised of up to 419 residential units, including 47 Extremely Low-Income affordable units, a 2,645 square-foot restaurant, and 47,533 square feet of open space. Existing commercial buildings, including Los Angeles Historic-Cultural Monument (HCM) #451 which is limited to the façade of the Dark Room storefront, along Wilshire Boulevard would be retained and would provide 42,092 square feet of office and restaurant uses. In total, the Project would include 44,737 square feet of commercial floor area. Additionally, 6,137 square feet of existing commercial floor area would be removed. The Project would provide up to 443 vehicle parking spaces, comprised of 377 residential parking spaces and 66 commercial parking spaces, within four levels of below grade parking and five levels of above grade parking, as well as approximately 202 short-term and long-term bicycle parking spaces. Upon completion, the Project would result in a total floor area of 420,201 square feet, an overall project FAR of 7.51:1, and a maximum building height of 46 stories at approximately 530 feet.

1.2 Paleontological Resources

Paleontological resources are the remains or traces of plants and animals that are preserved in Earth's crust, and per the SVP (2010) guidelines, are older than written history or older than approximately 5,000 years. They are limited, nonrenewable resources of scientific and educational value that are afforded protection under state laws and regulations. According to the SVP (2010):

"Significant 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.)"

This study complies with guidelines and significance criteria specified by SVP (2010) and Murphey et al. (2019). Table 1 provides definitions for high, low, undetermined, and no paleontological resource potential, or sensitivity, as set forth in and by the SVP (2010) guidelines.

Table 1 Paleontological Resource Sensitivity Criteria

Resource Sensitivity / Potential	Definition
High	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 tephra), 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.). Paleontological potential consists of both (a) the potential for yielding abundant or significant vertebrate fossils or for yielding a few significant fossils, large or small, vertebrate, invertebrate, plant, or trace fossils and (b) the importance of recovered evidence for new and significant taxonomic, phylogenetic, paleoecologic, taphonomic, biochronologic, or stratigraphic data. Rock units which contain potentially datable organic remains older than late Holocene, including deposits associated with animal nests or middens, and rock units which may contain new vertebrate deposits, traces, or trackways are also classified as having high potential.
Undetermined	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 (see “definitions” section in this document) 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.
Low	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.
No	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.

Source: SVP 2010.

1.3 Scope of Work

This report presents the results of the paleontological resources inventory performed by Dudek for the Project Site, located in the City of Los Angeles, California (Figure 1). This report was prepared by Sarah Siren, MSc, and Michael Williams, PhD, who are both qualified as Principal Investigators for Paleontology, in accordance with the California Environmental Quality Act (CEQA) Guidelines and Society of Vertebrate Paleontology (SVP) and Murphey et al. (2019) standards (Attachment A).

1.4 Regulatory Context

The Project as currently planned is subject only to state and local regulatory conditions which are summarized here.

1.4.1 State and Local Regulations and Laws

State guidelines require that all private and public activities not specifically exempted, be evaluated against the potential for environmental damage, including effects to paleontological resources. Paleontological resources are recognized as part of the environment under these State Guidelines.

Paleontological resources are afforded consideration under CEQA. Appendix G of the State of California CEQA Guidelines (14 CCR 15000 et seq.) includes the following as one of the questions to be answered in the Environmental Checklist (Appendix G, Section VII, Part f): “Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?” California Public Resources Code Section 5097.5 specifies that any unauthorized removal of paleontological remains is a misdemeanor. Further, California Penal Code Section 622.5 sets the penalties for damage to or removal of paleontological resources. California state laws and regulations under California Public Resources Code Section 5097.5 apply to paleontological resources.

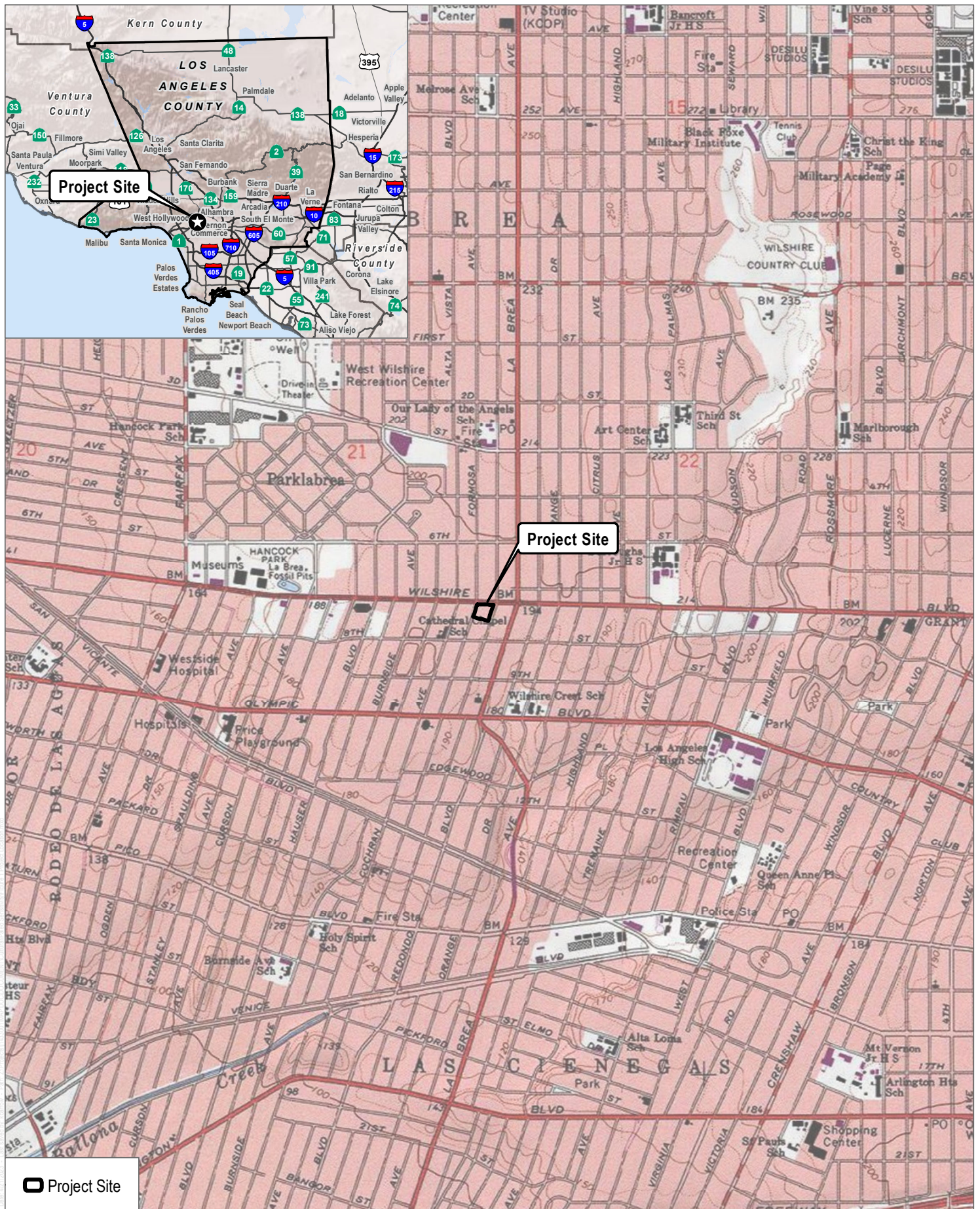
Fossils that would be considered unique under Section VII(f) of Appendix G of the CEQA Guidelines should be collected, prepared, analyzed, reported, and curated.

The General Plan (2001) for the City of Los Angeles also includes protections for paleontological resources within the Conservation Element policies. Section 3 of the General Plan (2001) details archaeological and, as reproduced below, paleontological resources protection:

“Pursuant to CEQA, if a land development project is within a potentially significant paleontological area, the developer is required to contact a bona fide paleontologist to arrange for assessment of the potential impact and mitigation of potential disruption of or damage to the site. If significant paleontological resources are uncovered during project execution, authorities are to be notified and the designated paleontologist may order excavations stopped, within reasonable time limits, to enable assessment, removal or protection of the resources. For Los Angeles city and county, the Los Angeles County Museum of Natural History, including the George C. Page Museum [La Brea Tar Pits and Museum], provides advice concerning paleontological resources.”

1.4.2 Report Format and Key Personnel

Following this Introduction, Chapter 2 outlines the methods used to conduct this study. Chapter 3 presents the overall geology of the Project Site. Chapter 4 presents the results of the study. Summary and management considerations are provided in Chapter 5 summarizes the study and provides an analysis of the data. Chapter 6 details the conclusions and Chapter 7 lists the references cited in this report. Appendix A includes qualifications of key personnel. Appendix B includes the confidential results of the records search conducted for the Project. Sarah A. Siren, MS, served as Principal Investigator and co-authored the report along with Michael J. Williams, PhD (Appendix A). Geological ages referenced herein are from the current international chronostratigraphic chart of Cohen et al. (2023).



SOURCE: USGS 7.5-Minute Series Hollywood Quadrangle
Township 1S; Range 14W; Section 21

DUDEK 0 1,000 2,000 Feet

FIGURE 1

Project Location

5350 Wilshire Boulevard Project

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2 Methods

This section discusses the background research methods utilized to perform this study.

2.1 Paleontological Records Search

A paleontological records search request was sent to the Natural History Museum of Los Angeles County (NHMLA) on April 17, 2023. The purpose of the records search was to determine whether there are any known fossil localities on or near the Project Site and aid in determining whether a paleontological mitigation program is warranted to avoid or minimize potential adverse effects of construction on paleontological resources.

2.2 Geological Map and Literature Review

Published geological maps (Dibblee and Ehrenspeck, 1991) and literature were reviewed to identify geological units on the Project Site and determine their paleontological sensitivity. In addition, pertinent geological and paleontological literature and the geotechnical investigation report (GeoPentech, 2022) for the Project were reviewed to further assist in determining the paleontological sensitivity of the Project Site and provide background information relevant to the Project.

3 Geology

This section discusses the geologic setting and units encountered during the paleontological resource mitigation monitoring program conducted for the Project.

3.1 Geologic Setting

The Project Site lies within the northernmost Peninsular Ranges Geomorphic Province and is underlain by Cenozoic sedimentary deposits (Walawender, 2000). The Peninsular Ranges were formed by uplift of plutonic igneous rock resulting from the subduction of the Farallon Plate underneath the North American Plate during the Mesozoic Era (approximately 125 to 90 million years old; Abbott 1999; USGS 2007).

The Project Site is underlain by late Pleistocene (approximately 129,000 to 11,700 years old) alluvial deposits overlying Pliocene and early Pleistocene Fernando Formation (approximately 3.6 to 1.8 million years ago [mya]) bedrock (Buczek et al., 2020; Cohen et al., 2023; Dibblee and Ehrenspeck, 1991; GeoPentech, 2022; Liddicoat, 2001). Based on the geotechnical investigation report (GeoPentech, 2022), such alluvial and bedrock deposits were observed below the fill to 131.5 feet, which was the maximum depth explored. A records search results letter was received from the NHMLA on April 17, 2023, indicating that these Pleistocene age alluvial deposits have a high potential to yield paleontological resources (see attached Paleontological Records Search Results Letter and Table 1).

Quaternary Alluvial Deposits

According to the geotechnical investigation report (GeoPentech, 2022), the Project Site is underlain by sedimentary deposits consisting of clays, silts, and gravels “associated with fluvial and alluvial fan depositional environments” (GeoPentech, 2022). These deposits were encountered in all three geotechnical borings, from immediately below the thin veneer of fill (generally less than one foot of asphalt and base) to between 90 and 95 feet, where weathered Fernando Formation was reported. No asphaltic sands, indicative of Rancho La Brea type deposits, were indicated in the boring log summaries (GeoPentech, 2022).

Fernando Formation

The Pliocene and Pleistocene, marine Fernando Formation includes two members, which some geologists have elevated to formations: the lower Repetto Sandstone and the upper Pico Sandstone (Dibblee and Ehrenspeck, 1991; Stadum, 2020; Yerkes et al., 1965). However, more recent publications have replaced what is referred to as the “Fernando Formation” by the Pico Formation (Buczek et al., 2020; Campbell et al., 2014). The Pico Formation overlies the Repetto Formation at depth (Campbell et al., 2014).

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4 Results

Results of the museum records search and paleontological resource sensitivity determinations are summarized in the following paragraphs (Figure 2).

4.1 Records Search Results

According to the paleontological records search conducted at the NHMLA (2023), no paleontological localities are documented within the Project Site boundaries. However, localities are documented elsewhere in the City of Los Angeles from the same geological units that occur beneath portions of the Project Site, and the majority of these localities are located nearby. These sedimentary deposits have the potential to yield vertebrate fossils, as discussed below (Figure 2).

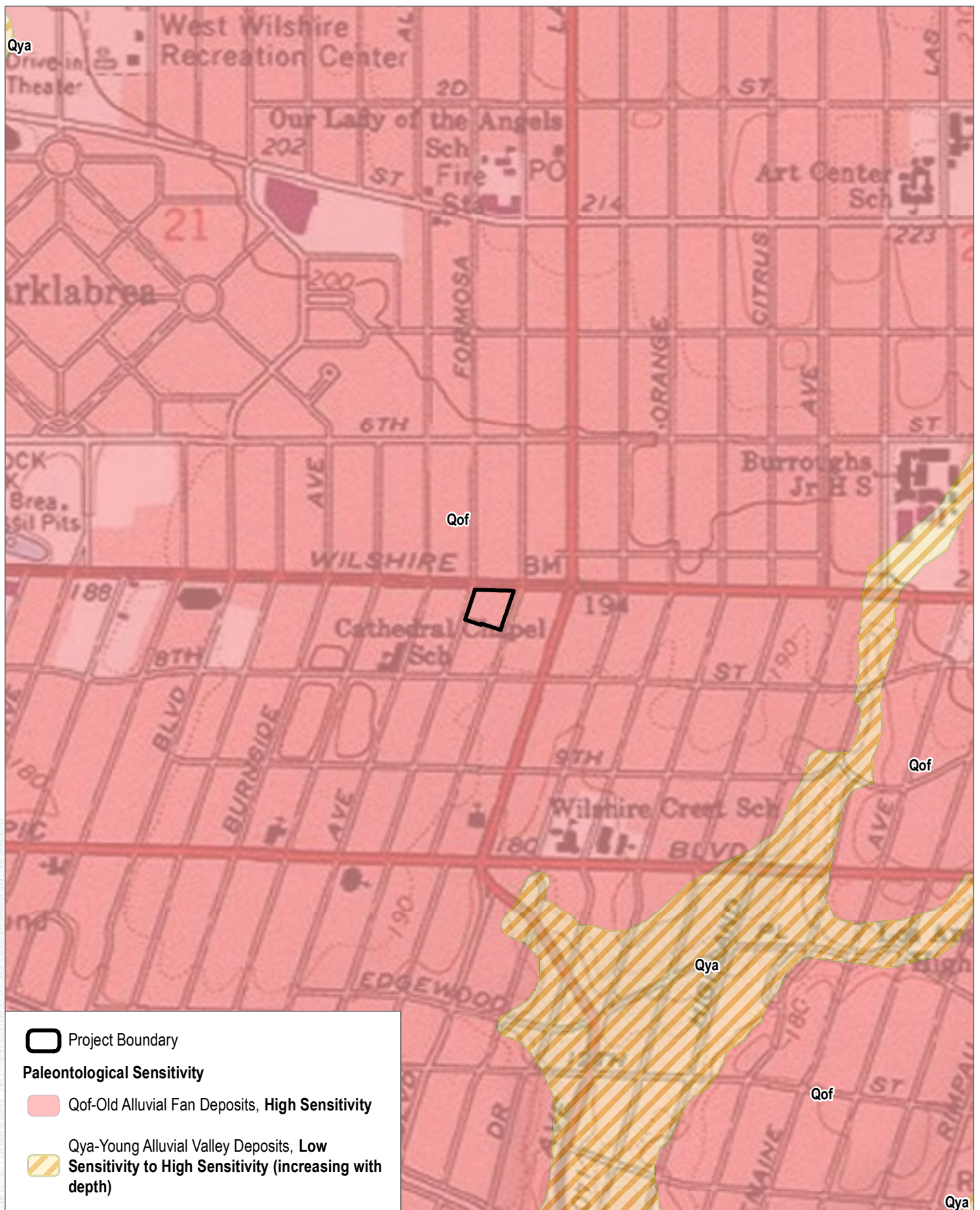
Numerous localities are known from the Rancho La Brea asphalt deposits located in Hancock Park, a National Natural Landmark that has yielded millions of Pleistocene fossil plant, insect, and animal specimens, and is possibly the densest accumulation of vertebrate fossils in the world (NHMLA, 2023). The vertebrate paleofauna includes over 200 species, including extinct forms of bison, camel, horse, mammoth, mastodon, ground sloths, dire wolf, lion, condor, eagle, turkey, and others. Many holotypes, or specimens for which a new species is named, are known from the Rancho La Brea deposits, including the holotype of *Smilodon californicus* (now known as *Smilodon fatalis*) a saber-tooth cat that has become the California State fossil. Human remains have also been recovered from the site (Jefferson, 2001).

Approximately 0.4-mile west of the Project Site, LACM (Los Angeles County Museum) VP (Vertebrate Paleontology) locality 1724 was discovered at a depth of 8 feet bgs in Pleistocene age asphaltic sands. This locality yielded pond turtle (*Clemmys marmorata*), bird (*Aves*), racoon (*Procyonidae*), saber-tooth cat (*Smilodon fatalis*), dire wolf (*Canis dirus*), coyote (*Canis latrans*), pronghorn antelope (*Capromeryx minor*), and bison (*Bison*). Approximately 0.1-mile further west, an asphalt impregnated gravelly, medium-grained sandstone at LACM VP locality 5481 produced mammoth (*Mammuthus*), tapir (*Tapirus*), horse (*Equus*), camelid (cf. *Hemiauchenia*), and bison (*Bison*) fossils at approximately 28 feet bgs. A mastodon (*Mammut*) was recovered at 17 feet bgs, approximately 0.5-mile east of the Project Site (LACM VP 1198). Approximately 0.4-mile south-southeast of the Project site, a bovid (*Preptoceras sinclairi*) specimen was recovered from 6 feet bgs from locality LACM VP 1814 from asphaltic sands. Another locality, LACM VP 5599, produced a camel specimen (*Camelops*), which was recovered from Pleistocene age deposits approximately 0.5 miles southeast of the Project Site. Localities LACM VP 7515-7518 approximately one-mile northwest of the Project Site included fossil specimens of ground sloth (*Glossotherium*) and horse (*Equus occidentalis*) at an unstated depth.

4.2 Review of Paleontological Sensitivity

No paleontological resources were identified within the Project Site as a result of the museum records search or desktop geological review. However, intact paleontological resources may be present below the surficial layers of fill as indicated by the nearby fossil localities listed in the paleontological records search. Given the high potential (SVP, 2010) for the Pleistocene and Pliocene age sedimentary deposits to yield scientifically significant paleontological resources, and due to the proximity of previously discovered paleontological resources in these

same aged deposits, a mitigation program is recommended for excavations to previously undisturbed, sedimentary deposits within the Project site (Figure 2).



SOURCE: USGS 1997

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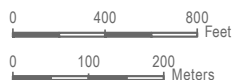


FIGURE 2

Paleontological Sensitivity Map

5350 Wilshire Boulevard Project

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5 Summary and Management Considerations

Although no vertebrate fossils are documented within the Project Site, previously undisturbed Pleistocene and Pliocene age sedimentary deposits would be considered highly sensitive (SVP, 2010) and conducive to preserve such remains. Planned construction excavation is anticipated to extend to approximately 80 feet below the ground surface. Paleontological monitoring is required during construction excavation within previously undisturbed, Pleistocene and Pliocene age sedimentary deposits (e.g., Pleistocene alluvial deposits and Fernando Formation). No monitoring is required during excavation within artificial fill, as these deposits do not contain paleontological resources in their original stratigraphic context and thus have a low sensitivity.

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6 Conclusions

Given the presence of geological units with high paleontological resource sensitivity on the surface of the Project Site and at depth, a paleontological resources mitigation program is recommended for excavation within high sensitivity geological units (e.g., Pleistocene alluvial deposits and Fernando Formation) and should be implemented in accordance with the City's conditions or mitigation measures for paleontological resources. These geological units with high paleontological resource sensitivity are documented below a thin layer of fill (less than one-foot bgs) to the maximum proposed excavation depth of 80 feet bgs. Excavation within lower sensitivity units (e.g., artificial fill) does not require mitigation. The program should follow guidelines outlined by the Society of Vertebrate Paleontology (SVP, 2010):

Mitigation Measure GEO-1: Prior to the start of any ground-disturbing activities, a Qualified Professional Paleontologist who meets the SVP (2010) standards shall attend a preconstruction meeting and provide all construction personnel with paleontological sensitivity training via a Worker Environmental Awareness Program (WEAP). This training program will provide information regarding the potential to encounter paleontological resources during rough grading and other significant ground-disturbing activities in Pleistocene age alluvial deposits and the Fernando Formation as well as the need to protect such resources. The training will inform construction personnel of the location(s) and boundaries of any areas with a high paleontological resource potential. Instruction will be provided as to the appropriate procedures and notifications to be undergone should paleontological resources be discovered during Project construction. The training will also emphasize that unauthorized collections or disturbances of protected fossils on or off the Project area are prohibited and may result in criminal penalties and fines. The Qualified Professional Paleontologist or qualified Paleontological Resource Monitor may attend tailgate meetings to brief the construction crew on paleontological monitoring protocols.

As defined by SVP (2010), a Qualified Professional Paleontologist (also Principal Investigator, Project Paleontologist) is described as:

“a practicing scientist who is recognized in the paleontological community as a professional and can demonstrate familiarity and proficiency with paleontology in a stratigraphic context. A paleontological Principal Investigator shall have the equivalent of the following qualifications:

1. A graduate degree in paleontology or geology, and/or a publication record in peer reviewed journals; and demonstrated competence in field techniques, preparation, identification, curation, and reporting in the state or geologic province in which the project occurs. An advanced degree is less important than demonstrated competence and regional experience.
2. At least two full years professional experience as assistant to a Project Paleontologist with administration and project management experience; supported by a list of projects and referral contacts.

3. Proficiency in recognizing fossils in the field and determining their significance.
4. Expertise in local geology, stratigraphy, and biostratigraphy.
5. Experience collecting vertebrate fossils in the field.”

Mitigation Measure GEO-2: The Qualified Professional Paleontologist shall develop a site-specific Paleontological Resource Mitigation and Treatment Plan. The Paleontological Resource Mitigation and Treatment Plan shall specify the levels and types of mitigation efforts based on the types and depths of ground disturbance activities and the geologic and paleontological sensitivity of the Project Site. The Paleontological Resource Mitigation and Treatment Plan shall also include a description of the professional qualifications required of key staff, communication protocols during construction, fossil recovery protocols, sampling protocols for microfossils, laboratory procedures, reporting requirements, and curation provisions for any collected fossil specimens.

The Project Paleontologist shall supervise a qualified Paleontological Resource Monitor who shall monitor all ground disturbance activities within Pleistocene age sedimentary deposits and Pliocene age sedimentary deposits , if encountered, in order to identify potential paleontological remains. In the event of a paleontological resource discovery, the monitor has the authority to divert and/or re-direct ground-disturbing activities in the area and rope off a protective barrier of at least 50 feet to evaluate the unanticipated find. If significantly disturbed deposits or younger deposits too recent to contain paleontological resources are encountered during construction, the Project Paleontologist may reduce or curtail monitoring in those affected areas, after consultation with the Applicant and the Los Angeles Department of City Planning’s Office of Historic Resources.

As defined by SVP (2010), a Qualified Paleontological Resource Monitor has the following qualifications (or their equivalent):

1. BS or BA degree in geology or paleontology and one year experience monitoring in the state or geologic province of the specific project. An associate degree and/or demonstrated experience showing ability to recognize fossils in a biostratigraphic context and recover vertebrate fossils in the field may be substituted for a degree. An undergraduate degree in geology or paleontology is preferable, but is less important than documented experience performing paleontological monitoring, or
2. AS or AA in geology, paleontology, or biology and demonstrated two years experience collecting and salvaging fossil materials in the state or geologic province of the specific project, or
3. Enrollment in upper division classes pursuing a degree in the fields of geology or paleontology and two years of monitoring experience in the state or geologic province of the specific project.

4. Monitors must demonstrate proficiency in recognizing various types of fossils, in collection methods, and in other paleontological field techniques.

Mitigation Measure GEO-3: A post-construction Paleontological Monitoring Report shall be prepared detailing all aspects of the paleontological monitoring conducted for the Project and include the biostratigraphy, paleoecologic, and taphonomic significance of any paleontological resources discovered during construction. The report shall also include field notes, geological maps, stratigraphic sections(s), and a list of identified specimens.

The paleontological resources must be prepared, identified, curated, and donated to a repository, such as the Natural History Museum of Los Angeles County or the La Brea Tar Pits and Museum.

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Appendix A

Qualifications

Sarah Siren, PG, GISP

SENIOR PALEONTOLOGIST

Sarah Siren is a senior paleontologist with 24 years' experience as a paleontological resources consultant. Ms. Siren has served as paleontologist for numerous projects throughout California, with extensive experience in Imperial, Orange, Riverside, Los Angeles, San Bernardino, and San Diego Counties. These projects involved multiple agencies, public and private sector clients, a variety of resources, and multidisciplinary staff supervision. She specializes in California Environmental Quality Act (CEQA) and Bureau of Land Management (BLM) compliance standards. She taught at Saddleback Community College in Mission Viejo, California as an associate geology professor, and worked as a curatorial assistant with the Natural History Museum of Los Angeles County and, more recently, as a field manager with the San Diego Natural History Museum.

Ms. Siren has conducted studies at both the Smithsonian Institution and Badlands National Park, and supervised as lead research scientist for various field activities, curation projects, and laboratory preparations. Her diverse experience includes recovering, identifying, mapping, and preparing fossils. Ms. Siren is able to effectively manage projects and complete deliverables from assessments to final technical reports in a timely manner.

Project Experience

Water/Wastewater

Holly Hills Storm Drain Project, Los Angeles Department of Public Works, Los Angeles County, California. As project manager and paleontologist, responsible for providing on-call paleontological monitoring. The scope of services included providing on-site monitoring and collection of archaeological or paleontological resources found. Evaluated and prepared salvaged fossils in compliance with CEQA guidelines. Wrote quarterly reports on the findings.

Los Angeles Department of Power and Water (LADWP) Path 46 Transmission Line Project, Environmental Science Associates (ESA). San Bernardino County, California, and Clark County, Nevada. As project manager and principal investigator, reviewed the final survey report for submittal to the client. Co-authored annual report for submittal to the BLM.

North City Pure Water Conveyance Project, City of San Diego, California. Served as project manager and principal investigator on this public works project. Responsible for managing cultural and paleontological resources studies for a new underground pipeline with improvements to existing infrastructure.



Education

*South Dakota School of Mines and Technology
MS, Paleontology, 2002*

*George Washington University
BS, Geology, 1999
BA, French Language*

Certifications

*Professional Geologist
(PG), CA ,No. 9831*

*Certified GIS Professional
(GISP), No. 58370*

*OSHA 40-hour
HAZWOPER*

*Qualified Paleontologist,
City of San Diego and
Counties of Kern, Los
Angeles, Orange,
Riverside, San Diego, and
San Luis Obispo*

Professional Affiliations

*Natural History Museum
of Los Angeles County*

*Society of Vertebrate
Paleontology*

Cultural Resources Support for Master Stormwater System Maintenance Program (MSWSMP), County of San Bernardino, California. As project manager and principal investigator for paleontology, responsible for the review and edit of the paleontological resources assessment of approximately 500 flood control facilities within San Bernardino County. The scope of services included providing a mitigation monitoring plan should monitoring and collection of paleontological resources be necessary.

Little Lake Line B Town Drain System Construction Project, Riverside County Flood Control and Water Conservation District, California. Served as project manager and principal investigator on this public works project. Responsible for managing cultural and paleontological resources monitoring for a new underground pipeline.

Tehachapi Renewable Transmission Project (TRTP), Pacific Legacy, Counties of Kern, Los Angeles, and San Bernardino County, California. As project manager and principal investigator, evaluated paleontological resource discoveries during construction for this multiyear Southern California Edison (SCE) project. Excavation activities within the Miocene-age Puente Formation in Los Angeles and San Bernardino counties had the potential to yield scientifically significant fossils during construction on this large-scale project.

Development

Sports and Academic Resources Complex Project, Kimmelman Foundation City of Carson, California. Provided paleontological resources assessment for this development project.

Kaiser Los Angeles Specialty Medical Center Expansion Project, Kaiser Permanente, City of Los Angeles, California. Prepared an environmental impact report (EIR) section based on records search and geological mapping within the Master Plan Project Area for this project located in Los Angeles, California.

Terranea, Lowe Destination Development, City of Rancho Palos Verdes, California. As project manager, provided comprehensive archaeological and paleontological consultation services for this planned resort property located on the Palos Verdes Peninsula. This project site was known to be both archaeologically and paleontologically sensitive and yielded fossils and artifacts. Responsible for overseeing the cultural and paleontological resource management and co-authored the final report.

Tejon Mountain Village, Tejon Mountain Village, LLC, County of Kern, California. Responsible for paleontological resources monitoring during geotechnical drilling within a portion of this 28,000-acre master planned community.

Patton State Hospital Project, California Department of General Services, County of San Bernardino, California. As project manager and principal investigator, supervised the cultural and paleontological resources mitigation program during construction improvements to the facility in accordance with the mitigation measures and treatment plan for the project.

Winchester 1800 Project, City of Temecula, California. Project manager and principal investigator responsible for a paleontological resources survey and report prepared for this development located in the City of Temecula. Also provided editorial comments on the cultural resources report for the same project.

Mira Loma Commerce Center, County of Riverside, California. Project manager and principal investigator, responsible for cultural and paleontological resources monitoring during the construction of two commercial buildings on 31 acres and completion of a final technical report.

Michael Williams, PhD

SENIOR PALEONTOLOGIST

Michael Williams is a paleontologist and crossed-trained archaeological field technician with 18 years' experience with fieldwork, fossil vertebrate specimen processing, and writing of reports for the U.S. Army Corps of Engineers (ACOE) and private and public entities. Dr. Williams has project experience in all aspects of paleontological mitigation, including Phase I preconstruction surveys and report preparation and writing paleontological mitigation plans, initial studies (ISs)/mitigated negative declarations, and environmental impact reports (EIRs). He also has experience attending pre-grade meetings; preparing and presenting on-site Worker Environmental Awareness Programs (WEAPs); monitoring for paleontological resources and supervising paleontological monitoring; coordinating spot checks and monitoring with construction superintendents and foremen; collecting and processing sediments for vertebrate microfossils, writing final monitoring reports; and accessioning fossils to the Natural History Museum of Los Angeles County, San Bernardino County Museum and the Cooper Center in Orange County. Dr. Williams has California Department of Transportation (Caltrans), Bureau of Land Management (BLM) and private company paleontological mitigation experience in San Diego, Imperial, Orange, Los Angeles, Riverside, San Bernardino, Ventura, Kern, Inyo, Fresno, San Francisco, and Alameda counties. In addition, he has worked as a cross-trained archaeological surveyor and monitor on several field projects.



Education

*Louisiana State University
PhD, Geology and
Geophysics, 2009
BS, Zoology, 2002*

Certifications

*Qualified Paleontologist;
Orange, Riverside, and
San Diego Counties
BLM California
Paleontological Resource
Use Permit*

Professional Affiliations

*Society of Vertebrate
Paleontology*

Project Experience

TAF No. 3: Paleontological and Biological Monitoring for the Stormwater Collection System Project, Sanitation Districts of Los Angeles County, Puente Hills, California. As senior paleontologist, prepared and administered the Workers Environmental Awareness Training for paleontology, drafted the Paleontological Resources Impact Mitigation Plan, coordinated and conducted paleontological monitoring, and wrote the final paleontological monitoring report.

TAF No.5 Gardena Pumping Plant Upgrades Project, Sanitation Districts of Los Angeles County. As senior paleontologist, requested the paleontological records search from the Natural History Museum of Los Angeles County and wrote the paleontological resources section of the Mitigated Negative Declaration.

TAF No.8 San Jose Creek Interceptor Sewer Rehabilitation Phase 2 Project, Sanitation Districts of Los Angeles County, San Gabriel, California. As senior paleontologist, requested the paleontological records search from the Natural History Museum of Los Angeles County and wrote the paleontological resources section of the Mitigated Negative Declaration.

Interlake Tunnel and Spillway Modification Project, Horizon Water and Environment LLC, San Luis Obispo County, California. Conducted the paleontological resources survey, assisted in the archaeological resources survey and drafted the paleontological resources section of the EIR.

Sewer Master Plan, Rincon del Diablo Municipal Water District, Escondido, California. Drafted paleontological resources section of EIR.

Palm Springs Wastewater Treatment Plant Expansion, W.M. Lyles Co. Southern District, California. Conducted paleontological resources monitoring.

Zone E Recycled Water System Expansion Archaeological and Native American Monitoring, Santa Margarita Water District, Orange County, California. Co-managed the project and provided archaeological monitoring.

Capital Project Funding and Environmental Clearance Assistance, San Elijo Joint Powers Authority, San Diego County, California. Co-wrote the geological context section.

Machado Lake Pipeline Project, City of Los Angeles, California. Served as paleontological field lead. Monitored and supervised monitoring for archaeological and paleontological resources and co-wrote the final monitoring report.

Van Norman Reservoir Well Drilling Project, City of Los Angeles, California. Served as paleontological field lead. Monitored and supervised monitoring for archaeological and paleontological resources and co-wrote the final monitoring report.

City Truck Line South-Unit 4, City of Los Angeles, California. Served as paleontological field lead. Monitored and supervised monitoring for paleontological resources.

Dairy Fork Wetlands, City of Aliso Viejo, California. Conducted archaeological resources monitoring.

As-Needed Environmental Services, City of San Diego, California. Conducted paleontological monitoring and wrote the final paleontological monitoring report.

San Diego Association of Governments (SANDAG) Continuing Services Agreement, AECOM Technical Services, California. Assisted with review of monitoring field logs.

As-Needed Environmental Services, Department of General Services, Southern California. Co-wrote the paleontological resources final monitoring report.

Public Utilities Department As-Needed Environmental Services, City of San Diego, California. Edited the paleontological resources table for the EIR/Environmental Impact Statement (EIS).

SANDAG General On-Call Environmental Compliance, California. Co-wrote the final paleontological resources monitoring report.

As-Needed Projects, Habitat Restoration Sciences Inc., San Diego County, California. Provided archaeological monitoring.

San Jacinto Wildlife Area EIR, California Wildlife Foundation, Riverside County, California. Reviewed the paleontological resources section of the EIR.

Specialty Medical Office Building, Kaiser Foundation Health Plan Inc., Irwindale, California. Served as paleontological field lead. Co-wrote the Paleontological Resources Impact Mitigation Program, performed spot-check monitoring, supervision of paleontological monitors, and co-wrote the final paleontological monitoring report.

Appendix B

Confidential Records Search Results

NHMLA search results are confidential
and on file with
the Department of City Planning.