

PALEONTOLOGICAL ASSESSMENT FOR THE FIRST MARCH LOGISTICS PROJECT

PERRIS, RIVERSIDE COUNTY

APNs 294-180-013, -028, -029, -030, and -032 and
295-300-005 and -007

Submitted to:

City of Perris
Planning and Development
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Prepared for:

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April 22, 2021;
Revised February 23, 2023

Paleontological Database Information

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Report Date: April 22, 2021; Revised February 23, 2023

Report Title: Paleontological Assessment for the First March Logistics Project, Perris, Riverside County (APNs 295-300-005 and -007, and 294-180-013, -028, -029, -030, and -032)

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USGS Quadrangle: *Steele Peak, California (7.5 minute)*

Study Area: 26.9 acres

Key Words: Paleontological assessment; Pleistocene alluvium; high sensitivity; City of Perris.

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I. INTRODUCTION AND LOCATION

This paleontological resource assessment has been completed for the First March Logistics Project site (Assessor’s Parcel Numbers 295-300-005 and -007 and 294-180-013, -028, -029, -030, and -032), located southwest of the intersection of Van Buren and Western Way, in the northwestern city limits of the City of Perris, Riverside County, California (Figures 1 and 2). The approximately 27.56-acre project site is directly south of March Air Reserve Base/ Inland Port Airport (MARB/IPA), and is bounded on the north by the Perris city boundary and another vacant lot, to the west by the Interstate 215 freeway, to the east by a materials business and a recycling facility, and to the south by a pipeline construction company. On the U.S. Geological Survey 7.5-minute, 1:24,000-scale *Steele Peak, California* topographic quadrangle map, the project site is located in the northwest quarter of Section 36 and the northeast quarter of Section 35, Township 3 South, Range 4 West, San Bernardino Base and Meridian. The site is currently vacant.

II. REGULATORY SETTING

The California Environmental Quality Act (CEQA), which is patterned after the National Environmental Policy Act, is the overriding environmental document that sets the requirement for protecting California’s cultural and paleontological resources. The document does not establish specific rules that must be followed, but mandates that governing permitting agencies (lead agencies) set their own guidelines for the protection of nonrenewable paleontological resources under their jurisdiction.

State of California

Under the Guidelines for the Implementation of the California Environmental Quality Act (State CEQA Guidelines), as amended in December 2018 (California Code of Regulations [CCR] Title 14, Division 6, Chapter 3, Sections 15000 et seq.), procedures define the type of activities, persons, and public agencies required to comply with CEQA. Section 15063 of the State CEQA Guidelines provides a process by which a lead agency may review a project’s potential impact to the environment, whether the impacts are significant, and provide recommendations, if necessary. In the Environmental Checklist, one of the questions to answer is, “Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?” (Appendix G, Section VII, Part f). California Public Resources Code (PRC) Section 5097.5 states:

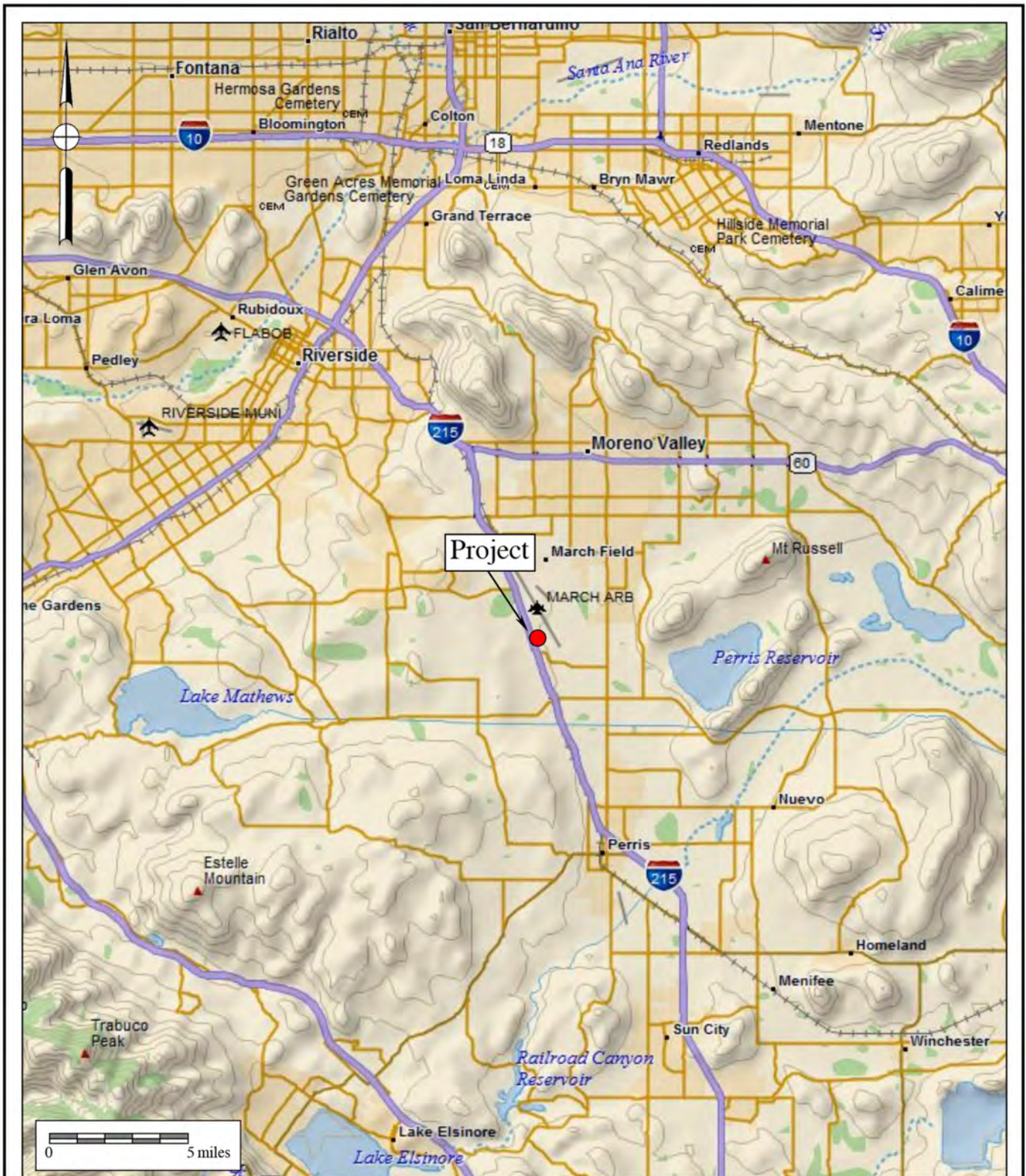


Figure 1
General Location Map
 The First March Logistics Project
 DeLorme (1:250,000)



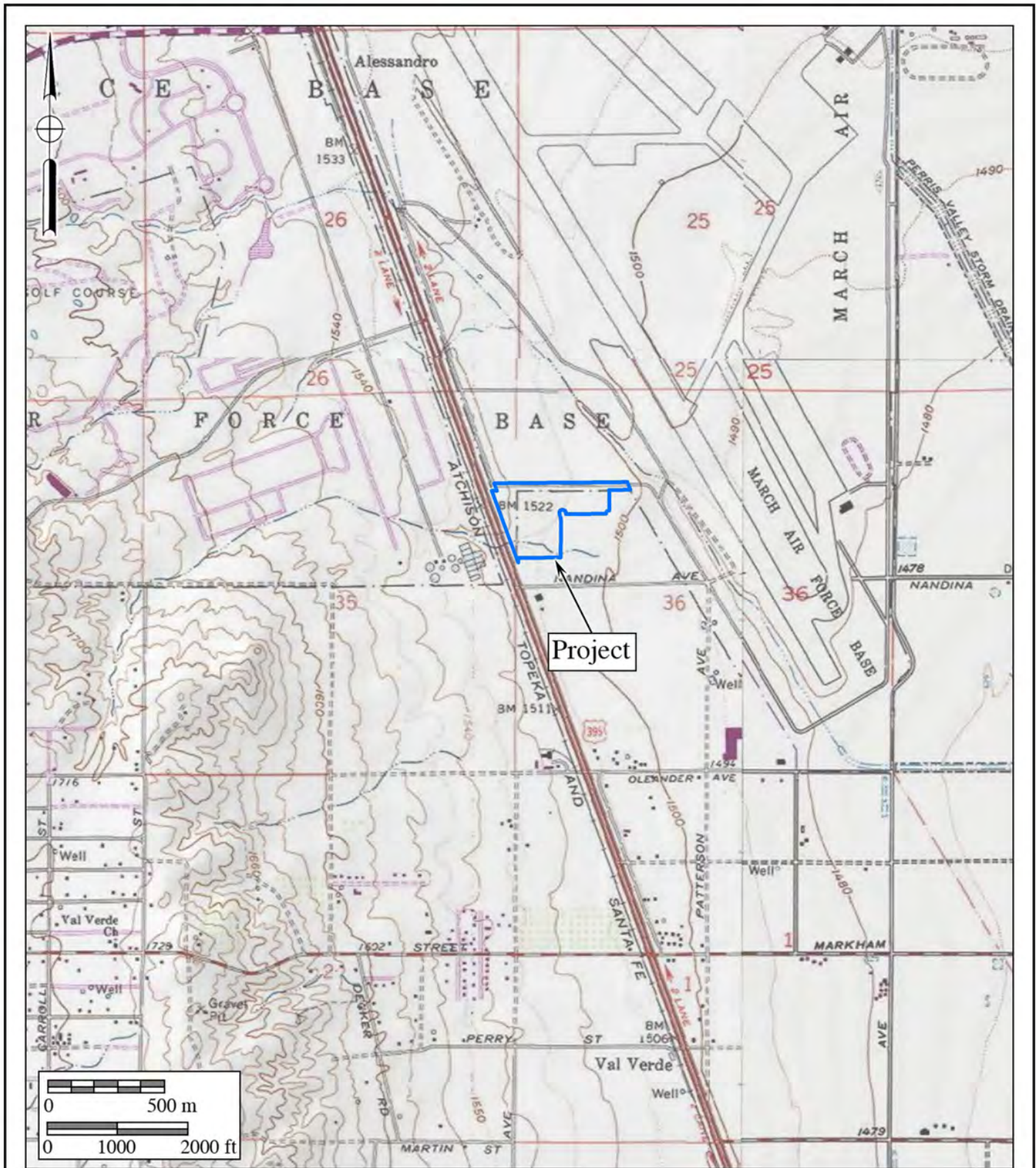


Figure 2
Project Location Map
 The First March Logistics Project

USGS Steele Peak, Perris, Sunnymead, and Riverside East Quadrangles (7.5-minute series)



- a) 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, rock art, or any other archaeological, paleontological or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over such lands. Violation of this section is a misdemeanor.
- b) 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.

City of Perris

The City of Perris has allocated requirements addressing paleontological resources in the Conservation Element of the city’s General Plan (City of Perris 2008, p. 26-27; Exhibit CN-7). The Conservation Element “provides goals and policies as a framework for the management, preservation, and use of the City’s resources.” Goals, policies, and implementation measures specific to paleontological resources are as follows:

Measure IV.A.4: In Area 1 and Area 2 shown on the Paleontological Sensitivity Map [Exhibit CN-7], paleontological monitoring of all projects requiring subsurface excavations will be required once any excavation begins. In Areas 4 and 5, paleontological monitoring will be required once subsurface excavations reach 5 feet in depth, with monitoring levels reduced if appropriate, at the discretion of a certified Project Paleontologist. (City of Perris 2008, p. 47)

Based upon the Paleontological Sensitivity Map in the Conservation Element of the City’s Comprehensive General Plan (City of Perris 2008, Exhibit CN-7), the current project is located within Area 1, which requires paleontological monitoring once excavation begins.

Local Area

The site is within the boundaries of a “specific plan” drafted for the City of Perris, called the Perris Valley Commerce Center Specific Plan (PVCCSP) (City of Perris 2011a). The environmental impacts resulting from implementation of allowed development under the PVCCSP have been evaluated in the Perris Valley Commerce Center Specific Plan Final Environmental Impact Report (PVCCSP EIR) (State Clearinghouse [SCH] No. 2009081086), which was certified by the City of Perris in January 2012 (City of Perris 2011b). In the PVCCSP EIR (City of Perris 2011b), mitigation measure Cultural 1 outlines the requirements for preparation of a Phase I Cultural Resources Study, which has been completed through the preparation of this assessment. PVCCSP EIR mitigation measure MM Cultural 5, which requires a professional paleontologist to

verify implementation of the mitigation measures from the Phase I Cultural resources Study and to monitor the subsurface excavation that exceed five (5) feet in depth, would be applicable to the proposed First March Logistics Project. The City has subsequently modified PVCCSP EIR mitigation measure MM Cultural 5; the modified mitigation measure applicable to the project is presented below:

Prior to the issuance of grading permits, the project proponent/developer shall submit to and receive approval from the City, a Paleontological Resource Impact Mitigation Monitoring Program (PRIMMP). The PRIMMP shall include the provision for a qualified professional paleontologist (or his or her trained paleontological representative) to be on-site for any project-related excavations that exceed three (3) feet below the pre-grade surface. Selection of the paleontologist shall be subject to approval of the City of Perris Planning Manager and no grading activities shall occur at the project site or within the off-site project improvement areas until the paleontologist has been approved by the City.

Monitoring shall be restricted to undisturbed subsurface areas of older Quaternary alluvium. The approved paleontologist shall be prepared to quickly salvage fossils as they are unearthed to avoid construction delays. The paleontologist shall also remove samples of sediments which are likely to contain the remains of small fossil invertebrates and vertebrates. The paleontologist shall have the power to temporarily halt or divert grading equipment to allow for removal of abundant or large specimens.

Collected samples of sediments shall be washed to recover small invertebrate and vertebrate fossils. Recovered specimens shall be prepared so that they can be identified and permanently preserved. Specimens shall be identified and curated and placed into an accredited repository (such as the Western Science Center or the Riverside Metropolitan Museum) with permanent curation and retrievable storage.

A report of findings, including an itemized inventory of recovered specimens, shall be prepared upon completion of the steps outlined above. The report shall include a discussion of the significance of all recovered specimens. The report and inventory, when submitted to the City of Perris Planning Division, will signify completion of the program to mitigate impacts to paleontological resources.

III. GEOLOGY

The geology mapped underlying the project site and immediate area indicates that the site is underlain by lower Pleistocene (approximately 1.8 million to perhaps 200,000 to 300,000 year old) very old alluvial fan deposits (Qvof_a, shown in brown on Figure 3) (Morton 2001, 2003; Morton and Cox 2001; Morton and Matti 2001). These sediments are described as “...mostly well dissected, well-indurated, reddish-brown sand deposits. Commonly contains duripans and locally silcretes” (Morton 2001).

IV. PALEONTOLOGICAL RESOURCES

Definition

Paleontological resources are the remains of prehistoric life that have been preserved in geologic strata. These remains are called fossils and include bones, shells, teeth, and plant remains (including their impressions, casts, and molds) in the sedimentary matrix, as well as trace fossils such as footprints and burrows. Fossils are considered older than 5,000 years of age (Society of Vertebrate Paleontology 2010), but may include younger remains (subfossils) when viewed in the context of local extinction of the organism or habitat, for example. Fossils are considered a non-renewable resource under state and county guidelines (Section II of this report).

Fossil Records Search

A paleontological literature review and collections and records search for a nearby project in Moreno Valley (the Moreno Valley Logistics Center Project) was conducted by a vertebrate paleontologist in the Division of Geological Sciences at the San Bernardino County Museum (SBCM) in Redlands (Scott 2015, Appendix B). The Moreno Valley Logistics Center Project is located less than one mile to the northeast of the First March Logistics Project site, and is underlain by the same sedimentary deposits (Morton 2001, 2003; Morton and Matti 2001). This records search report indicated that older Pleistocene alluvial fan deposits (Qvof_a on Figure 3) have a high potential to contain significant nonrenewable paleontological resources (i.e., fossils), and were thus assigned a “high paleontological resource sensitivity” by Scott (2015). Similar sediments throughout the lowland (valley) areas of western Riverside County and the Inland Empire have been reported to yield significant fossils of extinct terrestrial mammals from the last Ice Age (see references in Scott 2015), such as mammoths, mastodons, giant ground sloths, dire wolves, short-faced bears, saber-toothed cats, large and small horses, camels, and bison. The collections and records search report (Scott 2015), however, did not identify any known fossil localities within the boundaries of the Moreno Valley Logistics Center Project site, nor within at least a one-mile radius.

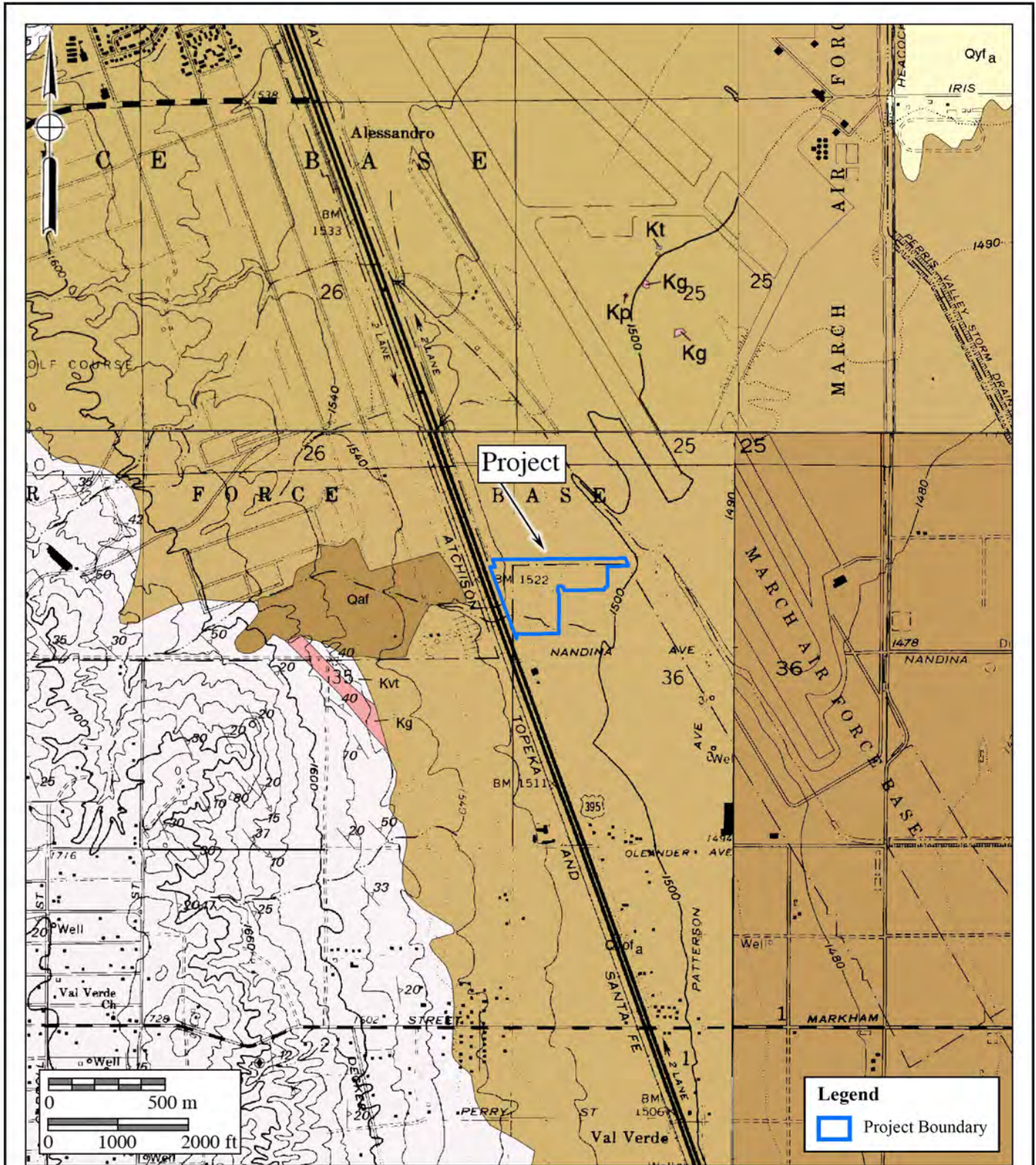


Figure 3
Geologic Map

The First March Logistics Project

Geology after Morton (2001, 2003), Morton and Cox (2001), and Morton and Matti (2001)



Another records search report was performed for a project located less than one mile to the south of the First March Logistics Project site (Quinn and Richards 2018). In the report, an attached letter from the Western Science Center indicated that Pleistocene fossils were recovered in similar very old alluvial fan sediments from a locality within 10 miles to the northeast, in Moreno Valley. The closest recorded fossil locality may be that reported by R.E. Reynolds (2004) from a location five miles northeast of the current project site. The only fossil recovered there was a limb bone of an unidentified species of bison. In the French and Menifee valleys, vertebrate fossils have been found at depths between 14 and 15 feet below the ground level (Reynolds and Reynolds 1991).

Field Reconnaissance

The pedestrian survey of the subject property was performed by BFSA staff on April 14, 2021. Aerial photographs, maps, and a compass permitted orientation and location of project boundaries. Where possible, narrow transect paths were employed to ensure maximum lot coverage. All exposed ground was inspected for paleontological resources. A survey form, field notes, and photographs documented the survey work undertaken.

At the time of the survey, the proposed warehouse site was characterized as a flat, previously cleared parcel. Ground visibility was good and only hindered by sparse pockets of vegetation mainly consisting of non-native weeds and grasses. At the time of the survey, it was noted that a seasonal drainage in the southwest corner of the property had been realigned and enhanced to direct water between culverts located at Natwar Lane and Interstate 215. Other noted disturbances to the property included previous disking, access roads, modern garbage, and areas of dumped soil and gravel. No fossils were discovered on the property during the field survey. This is not surprising, since fossils are not usually found on the surface of flat-lying alluvial plains.

V. PALEONTOLOGICAL SENSITIVITY

Overview

The degree of paleontological sensitivity of any particular area is based on a number of factors, including the documented presence of fossiliferous resources on a site or in nearby areas, the presence of documented fossils within a particular geologic formation or lithostratigraphic unit, and whether or not the original depositional environment of the sediments is one that might have been conducive to the accumulation of organic remains that might have become fossilized over time. Holocene alluvium is generally considered to be geologically too young to contain significant nonrenewable paleontological resources (i.e., fossils) and is thus typically assigned a low paleontological sensitivity. Pleistocene (more than 11,700 year old), alluvial and alluvial fan deposits in the Inland Empire, however, often yield important Ice Age terrestrial vertebrate fossils, such as extinct mammoths, mastodons, giant ground sloths, extinct species of horse, bison, and camel, saber-toothed cats, and others (Scott 2015, attached). These Pleistocene sediments are thus accorded a High paleontological resource sensitivity.

Professional Standard

The Society of Vertebrate Paleontology drafted guidelines outlining procedures that include:

[E]valuating the potential for impacts of a proposed action on paleontological resources and for mitigating those impacts. Impact mitigation includes pre-project survey and salvage, monitoring and screen washing during excavation to salvage fossils, conservation and inventory, and final reports and specimen curation. The objective of these procedures is to offer standard methods for assessing potential impacts to fossils and mitigating these impacts. (Society of Vertebrate Paleontology 2010)

The guidelines include four categories of paleontological sensitivity for geologic units (formations) that might be impacted by a proposed project, as listed below:

- *High Potential*: Rock units from which vertebrate or significant invertebrate, plant, or trace fossils have been recovered.
- *Undetermined Potential*: Rock units for which little information is available concerning their paleontological content, geologic age, and depositional environment, and that further study is needed to determine the potential of the rock unit.
- *Low Potential*: Rock units that are poorly represented by fossil specimens in institutional collections or based upon a general scientific consensus that only preserve fossils in rare circumstances.
- *No Potential*: Rock units that have no potential to contain significant paleontological resources, such as high-grade metamorphic rocks and plutonic igneous rocks.

Riverside County Paleontological Sensitivity Assessment

A paleontological sensitivity map generated by the Riverside County Land Information System in November 2020 (Figure 4; after County of Riverside Land Information System 2020) ranks the entire project as having a High Paleontological Sensitivity (High B), which is:

[E]quivalent to High A, but is based on the occurrence of fossils at a specified depth below the surface. The category High B indicates that fossils are likely to be encountered at or below four feet of depth, and may be impacted during excavation by construction activities.

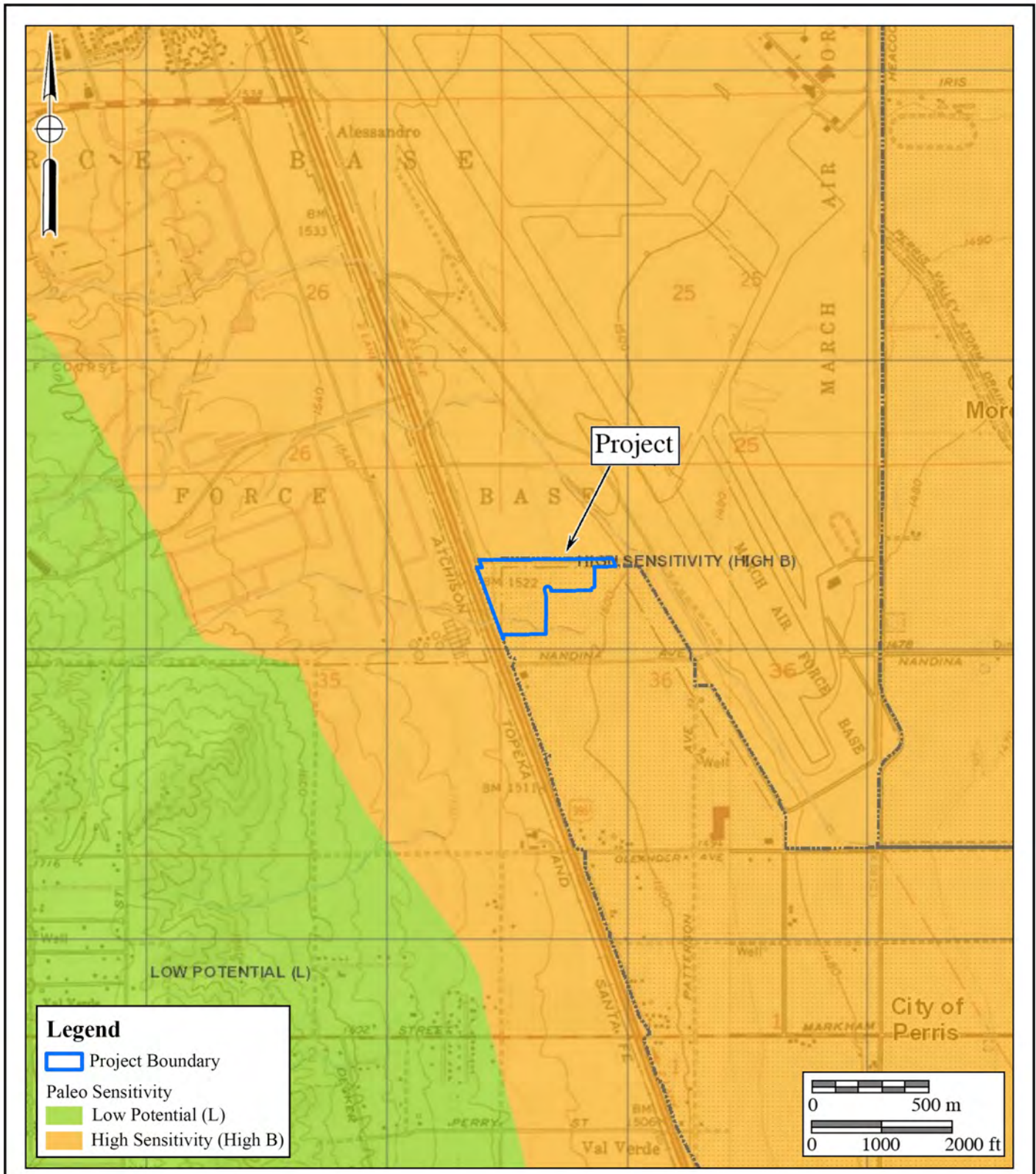


Figure 4
Riverside County Paleontological Sensitivity Map

The First March Logistics Project

After Riverside County Land Information System (2021)



The category “High B” indicates that potential fossils are likely to be encountered at or below four feet of depth and may be impacted during excavation by construction activities. Alluvial valley sediments and very old alluvial fan sediments with a High Potential/Sensitivity (High B) to yield nonrenewable paleontological resources (i.e., fossils) are shown in amber tint on Figure 4.

City of Perris Paleontological Sensitivity Assessment

Based on the Paleontological Sensitivity Map in the Conservation Element of the City’s Comprehensive General Plan (City of Perris 2008, Exhibit CN-7), the First March Logistics Project is located within Area 1, which is assigned a high paleontological sensitivity, based on the presence of the Pleistocene older valley deposits mapped at the surface. Sites located within Area 1 are required to have paleontological monitoring to commence once any excavation begins (City of Perris 2005, Goal IV.A.4). However, because the project is located within the area covered by the PVCCSP, it is subject to the mitigation measure guidelines specified within the PVCCSP EIR (City of Perris 2011a, 2011b). PVCCSP EIR mitigation measure MM Cultural 5 (City of Perris 2011b) restricts the monitoring of paleontological resources to excavations exceeding five feet deep in subsurface areas of undisturbed older alluvium. The specific guidelines of PVCCSP EIR mitigation measure MM Cultural 5, as subsequently modified by the City, are presented in Section II of this study.

VI. RECOMMENDATIONS

The existence of potentially fossiliferous Pleistocene, very old alluvial fan deposits mapped across the project (Qvof_a on Figure 3); the known occurrence of terrestrial vertebrate fossils at shallow depths from Pleistocene older alluvial fan sediments across the Inland Empire of western Riverside County; and the High paleontological sensitivity typically assigned to Pleistocene very old alluvial fan sediments for yielding paleontological resources all support the recommendation that paleontological monitoring be required during mass grading, trenching, and excavation activities in undisturbed Pleistocene older alluvial fan sediments in order to mitigate any adverse impacts (loss or destruction) to potential nonrenewable paleontological resources. As required by the PVCCSP EIR, a PRIMMP is required to be prepared for submittal and approval prior to issuance of the grading permit. When implemented with the provisions of CEQA, Scott (2015, attached), the City of Perris (2008), and those of the guidelines of the Society of Vertebrate Paleontology (2010), this PRIMMP would mitigate any adverse impacts (loss or destruction) to potential nonrenewable paleontological resources (fossils), if present, to less than significant level.

VII. CERTIFICATION

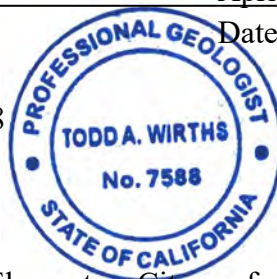
I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this paleontological report, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief, and have been compiled in accordance with CEQA criteria.



April 22, 2021

Todd A. Wirths
Senior Paleontologist
California Professional Geologist No. 7588

Date



VIII. REFERENCES CITED

City of Perris. 2008. Conservation Element, City of Perris General Plan http://www.cityofperris.org/city-hall/general-plan/Conservation_Element_01-08-09.pdf.

City of Perris. 2011a. Perris Valley Commerce Center Specific Plan Draft EIR. <http://www.cityofperris.org/city-hall/specific-plans/PVCC/PVCC-DEIR%2007-20-11.pdf>.

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Morton, D.M., and Matti, J.C. 2001. Geologic Map of the Sunnymead 7.5' quadrangle, Riverside County, California: U. S. Geological Survey Open-File Report 01-450, scale 1:24,000.

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- Society of Vertebrate Paleontology. 2010. Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources; by the SVP Impact Mitigation Guidelines Revision Committee: http://vertpaleo.org/Membership/Member-Ethics/SVP_Impact_Mitigation_Guidelines.aspx.

APPENDIX A

Qualifications of Key Personnel

Todd A. Wirths, MS, PG No. 7588

Senior Paleontologist

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Education

Master of Science, Geological Sciences, San Diego State University, California	1995
Bachelor of Arts, Earth Sciences, University of California, Santa Cruz	1992

Professional Certifications

California Professional Geologist #7588, 2003
Riverside County Approved Paleontologist
San Diego County Qualified Paleontologist
Orange County Certified Paleontologist
OSHA HAZWOPER 40-hour trained; current 8-hour annual refresher

Professional Memberships

Board member, San Diego Geological Society
San Diego Association of Geologists; past President (2012) and Vice President (2011)
South Coast Geological Society
Southern California Paleontological Society

Experience

Mr. Wirths has more than a dozen years of professional experience as a senior-level paleontologist throughout southern California. He is also a certified California Professional Geologist. At BFSa, Mr. Wirths conducts on-site paleontological monitoring, trains and supervises junior staff, and performs all research and reporting duties for locations throughout Los Angeles, Ventura, San Bernardino, Riverside, Orange, San Diego, and Imperial Counties. Mr. Wirths was formerly a senior project manager conducting environmental investigations and remediation projects for petroleum hydrocarbon-impacted sites across southern California.

Selected Recent Reports

- 2019 *Paleontological Assessment for the 10575 Foothill Boulevard Project, City of Rancho Cucamonga, San Bernardino County, California.* Prepared for T&B Planning, Inc. Report on file at Brian F. Smith and Associates, Inc., Poway, California.
- 2019 *Paleontological Assessment for the MorningStar Marguerite Project, Mission Viejo, Orange County, California.* Prepared for T&B Planning. Report on file at Brian F. Smith and Associates, Inc., Poway, California.

- 2019 *Paleontological Monitoring Report for the Nimitz Crossing Project, City of San Diego.* Prepared for Voltaire 24, LP. Report on file at Brian F. Smith and Associates, Inc., Poway, California.
- 2019 *Paleontological Resource Impact Mitigation Program (PRIMP) for the Jack Rabbit Trail Logistics Center Project, City of Beaumont, Riverside County, California.* Prepared for JRT BP 1, LLC. Report on file at Brian F. Smith and Associates, Inc., Poway, California.
- 2020 *Paleontological Monitoring Report for the Oceanside Beachfront Resort Project, Oceanside, San California.* Prepared for S.D. Malkin Properties. Report on file at Brian F. Smith and Associates, Inc., Poway, California.
- 2020 *Paleontological Resource Impact Mitigation Program for the Nakase Project, Lake Forest, Orange County, San California.* Prepared for Glenn Lukos Associates, Inc. Report on file at Brian F. Smith and Associates, Inc., Poway, California.
- 2020 *Paleontological Resource Impact Mitigation Program for the Sunset Crossroads Project, Banning, Riverside County.* Prepared for NP Banning Industrial, LLC. Report on file at Brian F. Smith and Associates, Inc., Poway, California.
- 2020 *Paleontological Assessment for the Ortega Plaza Project, Lake Elsinore, Riverside County.* Prepared for Empire Design Group. Report on file at Brian F. Smith and Associates, Inc., Poway, California.
- 2020 *Paleontological Resource Record Search Update for the Green River Ranch III Project, Green River Ranch Specific Plan SP00-001, City of Corona, California.* Prepared for Western Realco. Report on file at Brian F. Smith and Associates, Inc., Poway, California.
- 2020 *Paleontological Assessment for the Cypress/Slover Industrial Center Project, City of Fontana, San Bernardino County, California.* Prepared for T&B Planning, Inc. Report on file at Brian F. Smith and Associates, Inc., Poway, California.
- 2020 *Paleontological Monitoring Report for the Imperial Landfill Expansion Project (Phase VI, Segment C-2), Imperial County, California.* Prepared for Republic Services, Inc. Report on file at Brian F. Smith and Associates, Inc., Poway, California.
- 2021 *Paleontological Assessment for the Manitou Court Logistics Center Project, City of Jurupa Valley, Riverside County, California.* Prepared for Link Industrial. Report on file at Brian F. Smith and Associates, Inc., Poway, California.
- 2021 *Paleontological Resource Impact Mitigation Program for the Del Oro (Tract 36852) Project, Menifee, Riverside County.* Prepared for D.R. Horton. Report on file at Brian F. Smith and Associates, Inc., Poway, California.
- 2021 *Paleontological Assessment for the Alessandro Corporate Center Project (Planning Case PR-2020-000519), City of Riverside, Riverside County, California.* Prepared for OZI Alessandro, LLC. Report on file at Brian F. Smith and Associates, Inc., Poway, California.
- 2021 *Paleontological Monitoring Report for the Boardwalk Project, La Jolla, City of San Diego.* Prepared for Project Management Advisors, Inc. Report on file at Brian F. Smith and Associates, Inc., Poway, California.

APPENDIX B

Paleontological Records Search



Museum

Leonard X. Hernandez
Interim Museum Director

12 March 2015

Brian F. Smith and Associates
attn: George L. Kennedy, Ph.D., Senior Paleontologist
14010 Poway Road, Suite A
Poway, CA 92064

re: **PALEONTOLOGY LITERATURE AND RECORDS REVIEW, MORENO VALLEY LOGISTICS CENTER, CITY OF MORENO VALLEY, RIVERSIDE COUNTY, CALIFORNIA**

Dear Dr. Kennedy,

The Division of Geological Sciences of the San Bernardino County Museum (SBCM) has completed a literature review and records search for the above-named project in the City of Moreno Valley, Riverside County, California. Specifically, the proposed study area is located in the southwestern quadrant of section 30, Township 3 South, Range 3 West, San Bernardino Base and Meridian, as seen on the Perris, California and the Sunnymead, California 7.5' United States Geological Survey topographic quadrangle maps (1967 editions, photorevised 1973 and 1980, respectively).

Previous mapping of the proposed property (Rogers, 1965; Morton and Matti, 2001; Morton, 2003) indicates that the study area is situated entirely upon surface exposures of early Pleistocene alluvial fan deposits (= unit **Qvof_a**). These Pleistocene fan deposits may have high paleontologic sensitivity, depending upon their lithology. Pleistocene alluvium elsewhere throughout Riverside County and the Inland Empire has repeatedly been reported to yield significant fossils of extinct animals from the Ice Age (Jefferson, 1991; Reynolds, 1991; Anderson and others, 2002; Scott and Cox, 2008; Springer and others, 2009, 2010; Scott, 2010). Fossils recovered from these Pleistocene sediments represent extinct taxa including mammoths, mastodons, ground sloths, dire wolves, sabre-toothed cats, large and small horses, large and small camels, and bison (Jefferson, 1991; Reynolds, 1991; Scott and Cox, 2008; Springer and others, 2009, 2010; Scott, 2010), as well as plant macro- and microfossils (Anderson and others, 2002). If not previously disturbed by development, and depending upon the lithology exhibited, these sediments have high potential to contain significant nonrenewable paleontologic resources.

For this review, I conducted a search of the Regional Paleontologic Locality Inventory (RPLI) at the SBCM. The results of this search indicate that no previously-recorded fossil resource

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Citel Executive Officer

localities from Pleistocene older alluvium are present within the boundaries of the proposed development property, nor from at least within one mile in any direction.

Recommendations

The results of the literature review and the search of the RPLI at the SBCM demonstrate that the proposed study area is situated upon Pleistocene older alluvial deposits that, if not previously disturbed by development and depending upon their lithology, have high potential to contain paleontologic resources. Excavation in this older alluvium therefore has high potential to impact paleontologic resources. A qualified vertebrate paleontologist must develop a program to mitigate impacts to nonrenewable paleontologic resources. This mitigation program must be consistent with the provisions of the California Environmental Quality Act (Scott and Springer, 2003), as well as with regulations currently implemented by the County of Riverside. This program should include, but not be limited to:

1. Monitoring of excavation in areas identified as likely to contain paleontologic resources by a qualified paleontologic monitor. Areas requiring monitoring include all previously-undisturbed Pleistocene older alluvial sediments present, at the surface or at depth, within the boundaries of the property. Paleontologic monitors should be equipped to salvage fossils as they are unearthed, to avoid construction delays, and to remove samples of sediments that are likely to contain the remains of small fossil invertebrates and vertebrates. Monitors must be empowered to temporarily halt or divert equipment to allow removal of abundant or large specimens. Monitoring may be reduced or eliminated if the potentially-fossiliferous units described herein are determined upon exposure and examination by qualified paleontologic personnel to have low potential to contain fossil resources.
2. Preparation of recovered specimens to a point of identification and permanent preservation, including washing of sediments to recover small invertebrates and vertebrates. Preparation and stabilization of all recovered fossils are essential in order to fully mitigate adverse impacts to the resources (Scott and others, 2004).
3. Identification and curation of specimens into an established, accredited museum repository with permanent retrievable paleontologic storage. These procedures are also essential steps in effective paleontologic mitigation (Scott and others, 2004) and CEQA compliance (Scott and Springer, 2003). The paleontologist must have a written repository agreement in hand prior to the initiation of mitigation activities. Mitigation of adverse impacts to significant paleontologic resources is not complete until such curation into an established, accredited museum repository has been fully completed and documented.
4. Preparation of a report of findings with an appended itemized inventory of specimens. The report and inventory, when submitted to the appropriate Lead Agency along with confirmation of the curation of recovered specimens into an established, accredited museum


repository, would signify completion of the program to mitigate impacts to paleontologic resources.

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

Sincerely,

A handwritten signature in black ink, appearing to read 'Eric Scott', written in a cursive style.

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