PALEONTOLOGICAL ASSESSMENT FOR THE STRATFORD RANCH PROJECT

PERRIS, CALIFORNIA

APNs 302-200-020 to -032 and -034
and 302-210-001 to -005 and -007 to -009

Submitted to:

City of Perris
Planning and Development
135 North D Street
Perris, California 92570

Prepared for:

Stratford Ranch Associates, LLC
c/o Jason Keller
4100 Newport Place, Suite 790
Newport Beach, California 92660

Prepared by:

Brian F. Smith and Associates, Inc.
14010 Poway Road, Suite A
Poway, California 92064

January 22, 2021

Paleontological Database Information

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Consulting Firm:	Brian F. Smith and Associates, Inc. 14010 Poway Road, Suite A Poway, California 92064 (858) 484-0915
Report Date:	January 22, 2021
Report Title:	Paleontological Assessment for the Stratford Ranch Project, Perris, Riverside County (APNs 302-200-020 to -032 and -034 and 302-210-001 to -005 and -007 to -009)
Prepared for:	Stratford Ranch Associates, LLC c/o Jason Keller 4100 Newport Place, Suite 790 Newport Beach, California 92660
Submitted to:	City of Perris Planning and Development 135 North D Street Perris, California 92570
USGS Quadrangle:	*Perris, California* (7.5 minute)
Study Area:	Approximately 46 acres
Key Words*:*	Paleontological assessment; Quaternary very old alluvial fan deposits; High paleontological sensitivity; City of Perris; full-time monitoring recommended starting at a depth of five feet below the surface.

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I. INTRODUCTION AND LOCATION

A paleontological resource assessment has been completed for the Stratford Ranch Project (Assessor's Parcel Numbers [APNs] 302-200-020 to -032 and -034 and 302-210-001 to -005 and -007 to -009) located on the north side of Ramona Expressway between Evans Road and Lake Perris Drive, in the northeastern corner of the city of Perris, Riverside County, California (Figures 1 and 2). The approximately 46-acre project is directly west of the Perris Reservoir and is bounded on the north by a residential neighborhood, on the east by county recreational land and parklands, on the south by a vacant lot and residential homes, and on the west by a vacant lot and the Perris Valley Storm Drain. On the U.S. Geological Survey, 7.5-minute, 1:24,000-scale *Perris, California* topographic quadrangle map, the project is located in the southwest corner of Section 4, Township 4 South, Range 3 West, San Bernardino Base and Meridian (see Figure 2). The project proposes the construction of 194 single-family residences and associated infrastructure on what is currently generally flat, former agricultural land.

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 Guidelines for the Implementation of CEQA, 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 CCR 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 V, Part c).

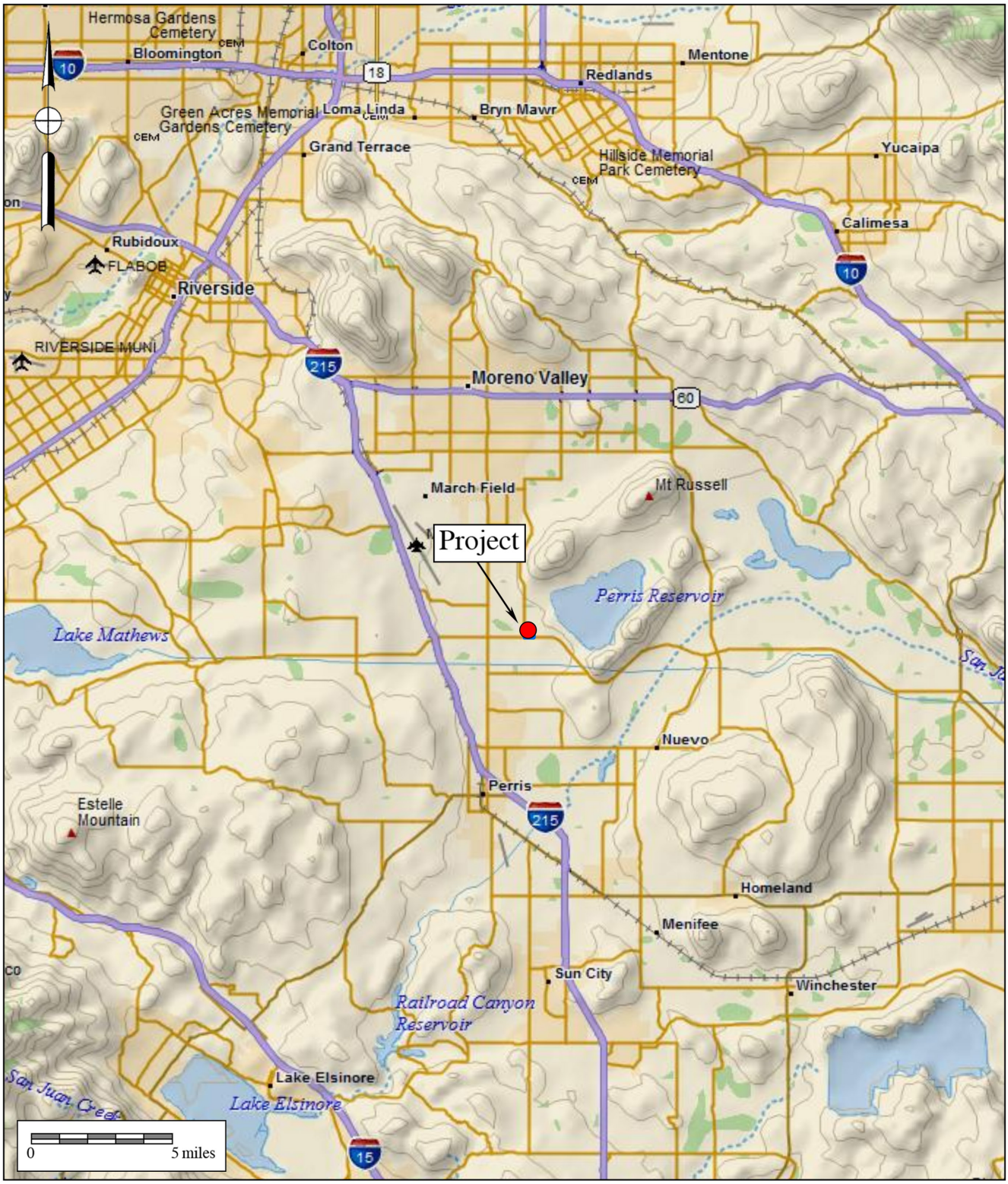


Figure 1

General Location Map

The Stratford Ranch Project

DeLorme (1:250,000)

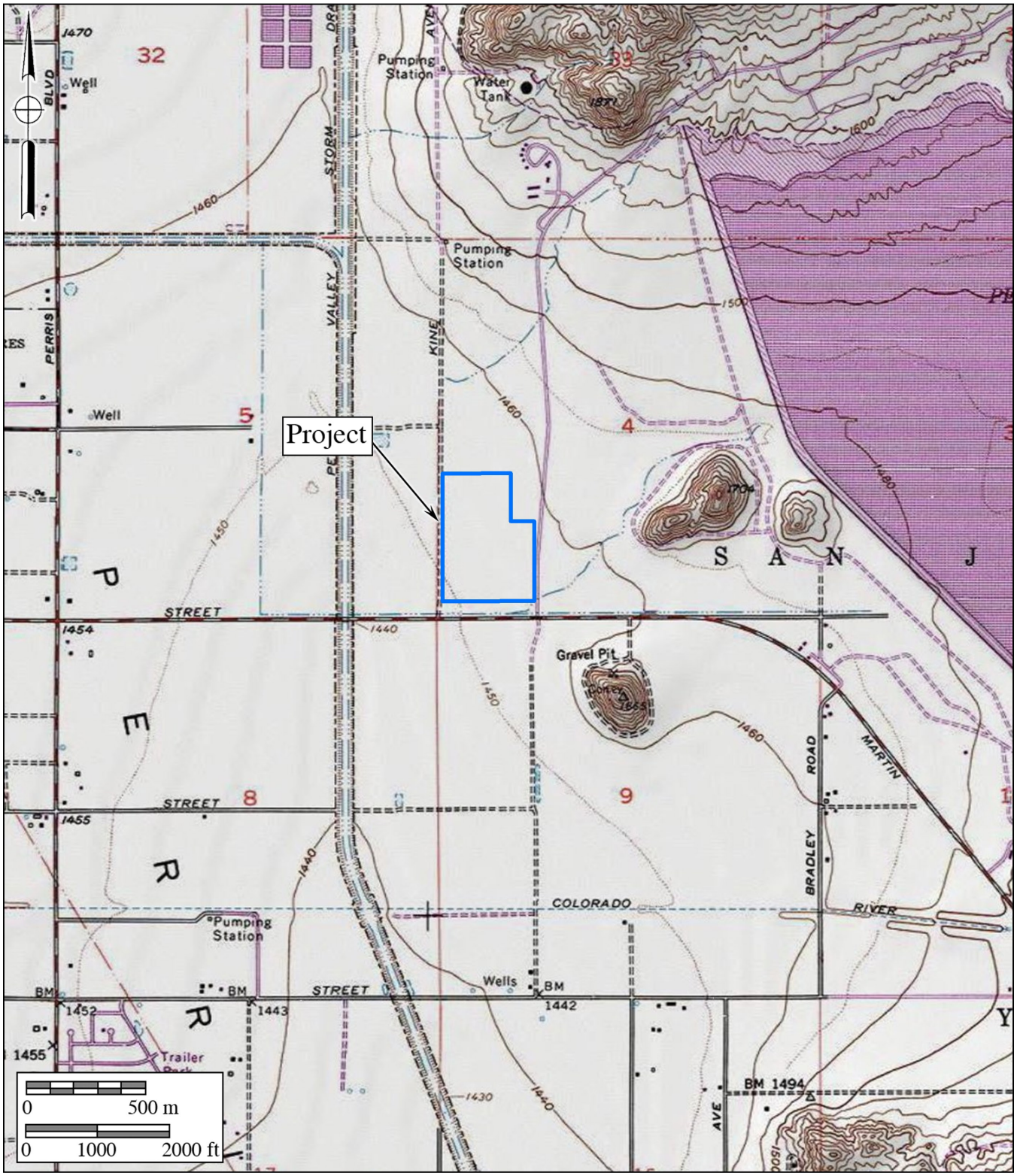


Figure 2

Project Location Map

The Stratford Ranch Project

USGS *Perris* Quadrangle (7.5-minute series)

California Public Resources Code (PRC) Section 5097.5 states:

> 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 2005:26–27 [Exhibit CN-7]). The Conservation Element "provides goals and policies as a framework for the management, preservation, and use of the City's resources" (City of Perris 2005). 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 2005:47)

Based upon the Paleontological Sensitivity Map (Exhibit CN-7) in the Conservation Element of the City's General Plan (City of Perris 2005), the Stratford Ranch Project is located within Area 4, which requires paleontological monitoring beginning at a depth of five feet.

III. GEOLOGY

Regionally, the project lies within the Perris Block, a structural block bounded on the west by the Elsinore Fault Zone and on the east by the San Jacinto Fault Zone (Morton 2003). The geology mapped underlying the project and immediate area indicates that the project is underlain by Quaternary-aged (lower Pleistocene), sandy, very old alluvial fan deposits (area colored brown and labeled as "$Qvof_a$" on Figure 3, after Morton 2003).

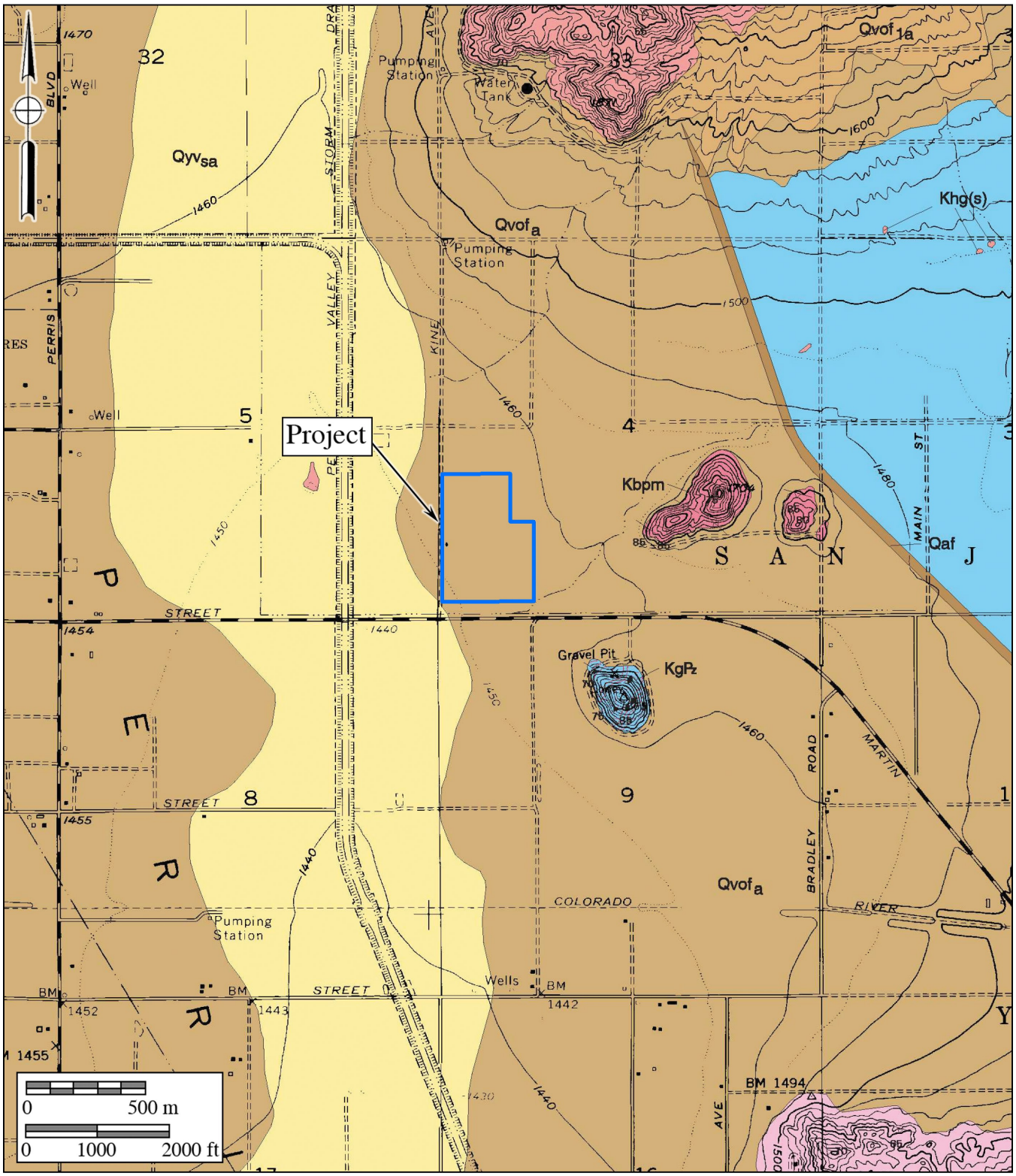


Figure 3

Geologic Map

The Stratford Ranch Project

Geology after Morton (2003)

These sediments are described by Morton (2003) as "… mostly well dissected, well-indurated, reddish-brown sand deposits. Commonly contains duripans and locally silcretes." Nearby to the west are deposits of Quaternary-aged (Holocene and late Pleistocene), silty, sandy, young alluvial-valley deposits (area colored yellow and labeled as "Qyv_{sa}" on Figure 3), which overlie the very old alluvial fan deposits (Morton 2003). According to Woodford et al. (1971), the thickness of the alluvial deposits overlying the granitic bedrock basement beneath the project is approximately 40 to 50 feet.

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), for example, when viewed in the context of local extinction of the organism or habitat. Fossils are considered a nonrenewable resource under state, county, and local guidelines (see Section II of this documents).

Fossil Records Search

The closest known fossil localities to the Stratford Ranch Project are reported in a paleontological literature review and collections and records search that was conducted for a nearby project (the Ecos Energy, LLC, Nuevo Solar Array Project [Ecos Energy Project]) located at the Lakeview Hot Springs area on the southeast side of the Perris Reservoir. The records search was conducted by a vertebrate paleontologist in the Division of Geological Sciences at the San Bernardino County Museum (SBCM) in Redlands (see Scott 2013 in Appendix B). The Ecos Energy Project is located about three miles east of the Stratford Ranch Project and is underlain by some of the same sedimentary deposits (Morton 2003). Fossil vertebrates collected from these localities, within one-quarter to one-half mile of the Ecos Energy Project, included mammoths, extinct horses, and extinct bison (SBCM localities 5.3.151 and 5.3.153; see Scott 2013 in Appendix B). This records search report indicates that older Pleistocene alluvial fan deposits (including deposits of $Qvof_a$ mapped in Figure 3) have a high potential to contain significant nonrenewable paleontological resources (*i.e.,* fossils), and were therefore assigned a "high paleontological resource sensitivity" by Scott (2013). 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 2013), such as mammoths, mastodons, giant ground sloths, dire wolves, short-faced bears, saber-toothed cats, large and small horses, camels, and bison.

Field Reconnaissance

The property was surveyed by Brain F. Smith and Associates, Inc. (BFSA) staff under the guidance of Todd A. Wirths, a Riverside County Approved Paleontologist, on January 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. During the survey, particular attention was paid to areas with exposed ground surfaces, such as rodent burrows and areas around the base of vegetation. A survey form, field notes, and photographs documented the survey work undertaken.

At the time of the survey, the property could be characterized as flat, former agricultural land. Ground visibility was fair to poor and hindered in areas by dense vegetation that mainly consisted of non-native weeds and grasses such as Russian thistle, stinknet, mustard plant, and fiddleneck. Noted disturbances to the property included evidence of previous clearing and disking, modern trash and building materials that appear to have been recently dumped along the northern, western, and eastern property boundaries, and dirt and gravel access roads along the periphery of the project. No fossils were discovered on the property during the field survey, which 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. Late Quaternary (Holocene, or "modern") alluvium is generally considered to be geologically too young to contain significant nonrenewable paleontological resources (*i.e.,* fossils), and is therefore typically assigned a low paleontological sensitivity. Older, Pleistocene (greater than 11,000 years 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 (see Scott 2013 in Appendix B). These Pleistocene sediments are therefore 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 January 2021 (Figure 4) 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.

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.

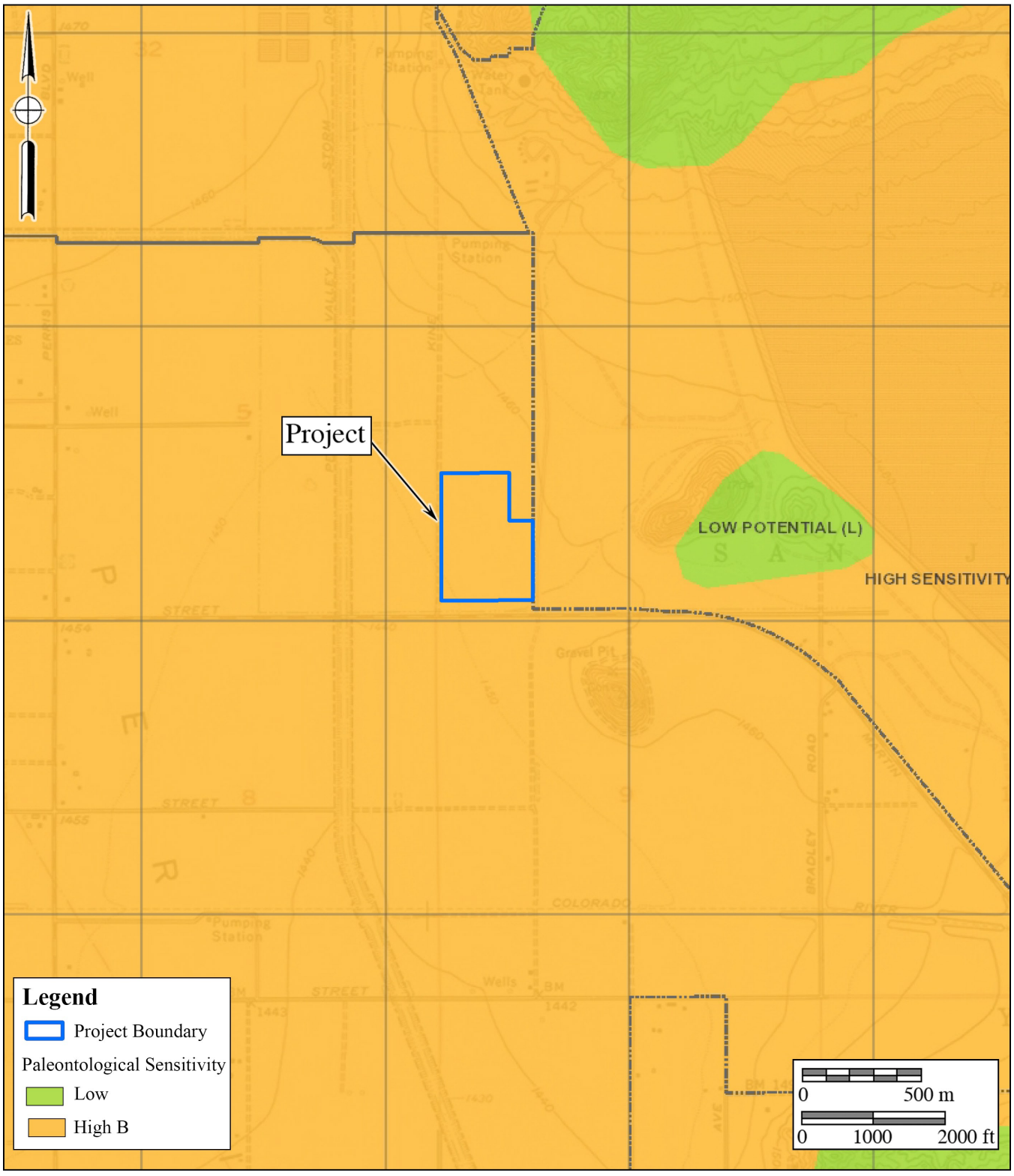


Figure 4

Paleontological Sensitivity Map

The Stratford Ranch Project

After Riverside County Land Information System (2021)

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 [Exhibit CN-7] in the Conservation Element of the City's General Plan (City of Perris 2005), the Stratford Ranch Project is located within Area 4, which is assigned a "low to high" paleontological sensitivity, based on the presence of the Pleistocene older valley deposits (high sensitivity) underlying young alluvium at the surface (low sensitivity). Sites located within Area 4 require that paleontological monitoring be initiated once subsurface excavations reach five feet below the surface, with a stipulation that monitoring "levels" be reduced at the discretion of the project paleontologist, if appropriate (City of Perris 2005 [Goal IV.A.4]).

VI. RECOMMENDATIONS

The existence of potentially fossiliferous Quaternary very old alluvial fan deposits mapped across the Stratford Ranch Project ($Qvof_a$ on Figure 3); the known occurrence of terrestrial vertebrate fossils at shallow depths from Quaternary older alluvial fan sediments across the Inland Empire of western Riverside County; and the High paleontological sensitivity typically assigned to Quaternary older 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 Quaternary older alluvial fan sediments in order to mitigate any adverse impacts (loss or destruction) to potential nonrenewable paleontological resources. Full-time monitoring is recommended starting at a depth of five feet below the surface during earth disturbance activities, as required by the City of Perris (City of Perris 2005). The proposed MMRP is detailed below. When implemented with the provisions of CEQA, Scott (2013; see Appendix B), and the guidelines of the Society of Vertebrate Paleontology (2010), this MMRP would mitigate any adverse impacts (loss or destruction) to potential nonrenewable paleontological resources (fossils), if present, to a level below significant.

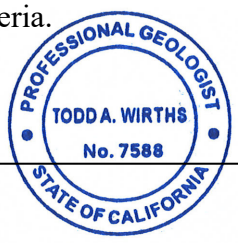
Proposed Paleontological MMRP

1. Monitoring of mass grading and excavation activities in areas identified as likely to contain paleontological resources shall be performed by a qualified paleontologist or paleontological monitor. Full-time monitoring for paleontological resources will be conducted in areas where grading, excavation, or drilling activities occur at five feet or deeper in order to mitigate any adverse impacts (loss or destruction) to potential nonrenewable paleontological resources.

2. Paleontological monitors will be equipped to salvage fossils as they are unearthed to avoid construction delays and to remove samples of sediment that are likely to contain the remains of small fossil invertebrates and vertebrates. The monitor must be empowered to temporarily halt or divert equipment to allow for the removal of abundant or large specimens in a timely manner. Monitoring may be reduced if the potentially fossiliferous units are not present in the subsurface, or if they are present, are determined upon exposure and examination by qualified paleontological personnel to have low potential to contain fossil resources.
3. Preparation of recovered specimens to a point of identification and permanent preservation, including screen-washing sediments to recover small vertebrates and invertebrates if indicated by the results of test sampling. Preparation of any individual vertebrate fossils is often more time-consuming than for accumulations of invertebrate fossils.
4. All fossils must be deposited in an accredited institution (university or museum) that maintains collections of paleontological materials. All costs of the paleontological monitoring and mitigation program, including any one-time charges by the receiving institution, are the responsibility of the developer.
5. Preparation of a final monitoring and mitigation report of findings and significance, including lists of all fossils recovered and necessary maps and graphics to accurately record their original location(s). A letter documenting receipt and acceptance of all fossil collections by the receiving institution must be included in the final report. The report, when submitted to and accepted by the appropriate lead agency (*e.g.,* the City of Perris), will signify satisfactory completion of the project program to mitigate impacts to any nonrenewable paleontological resources.

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.



January 22, 2021

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

Date

VIII. REFERENCES CITED

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Woodford, A.O., Shelton, J.S., Doehring, D.O., and Morton, R.K. 1971. Pliocene-Pleistocene history of the Perris Block, southern California. Geological Society of America Bulletin, v. 82, p. 3421–3448, 18 figs.

APPENDIX A

Qualifications of Key Personnel

Todd A. Wirths, MS, PG No. 7588

Senior Paleontologist

Brian F. Smith and Associates, Inc.
14010 Poway Road • Suite A •
Phone: (858) 679-8218 • Fax: (858) 679-9896 • E-Mail: twirths@bfsa-ca.com

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 Eastvale Self Storage Project, City of Eastvale, Riverside County, California.* Prepared for Gossett Development, Inc. Report on file at Brian F. Smith and Associates, Inc., Poway, California.

2019 *Paleontological Resource Impact Mitigation Monitoring Program for the IPT Perris DC III Western/Nandina Project, Perris, Riverside County, California.* Prepared for IPT/Black Creek Group. Report on file at Brian F. Smith and Associates, Inc., Poway, California.

2019 *Paleontological Assessment for the 10407 Elm Avenue Project, City of Fontana, San Bernardino County, California*. Prepared for Advantage Environmental Consultants, Inc. Report on file at Brian F. Smith and Associates, Inc., Poway, California.

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 Resource Impact Mitigation Program (PRIMP) for the Speedway TPM 37676 Project, Temescal Valley, Riverside County, California.* Prepared for Speedway Development. Report on file at Brian F. Smith and Associates, Inc., Poway, California.

2019 *Paleontological Assessment for the Natwar Project, Perris, Riverside County, California.* Prepared for Advantage Environmental Consultants, LLC. Report on file at Brian F. Smith and Associates, Inc., Poway, California.

2019 *Paleontological Resource and Mitigation Monitoring Assessment, Beyond Food Mart, City of Perris, Riverside 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 West Markham Project (TR 33587), City of Perris, Riverside County, California*. Prepared for Markham JP/ARA, LLC. Report on file at Brian F. Smith and Associates, Inc., Poway, California.

2019 *Paleontological Monitoring and Mitigation Report for the Artesa at Menifee Town Center Project Site, Sherman Road and La Piedra Road, Menifee, Riverside County, California.* Prepared for MBK Real Estate. Report on file at Brian F. Smith and Associates, Inc., Poway, California.

2019 *Paleontological Monitoring Report, Diarq Residence, La Jolla, City of San Diego, San Diego County, California.* Prepared for West Way Drive, LLC. 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.

APPENDIX B

Paleontological Records Search

SAN BERNARDINO COUNTY MUSEUM
2024 Orange Tree Lane ~ Redlands, California USA 92374-4560
(909) 307-2669 ~ Fax (909) 307-0539 www.sbcountymuseum.org

COUNTY OF SAN BERNARDINO
ROBERT L. McKERNAN
Director

2 April 2013

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, ECOS NUEVO PROJECT, LAKEVIEW HOT SPRINGS REGION, 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 Lakeview Hot Springs region of Riverside County, California. The proposed project property is located in the southeastern quadrant of section 12, Township 4 South, Range 3 West, San Bernardino Base and Meridian, as seen on the Perris, California 7.5' United States Geological Survey topographic quadrangle map (1967 edition).

Previous geologic mapping (Rogers, 1965; Morton, 2003) indicates that the proposed project property is situated entirely upon active valley deposits of recent age (= unit $\mathbf{Qv_{sc}}$) associated with the present-day San Jacinto River. These sediments have low potential to contain significant nonrenewable paleontologic resources in a reliable stratigraphic context, and so are assigned low paleontologic sensitivity. However, these sediments overlie older Pleistocene alluvium (= $\mathbf{Qvof_{a}}$) that has high paleontologic sensitivity. Similar older Pleistocene sediments throughout Riverside and San Bernardino Counties and the Inland Empire have been previously reported to yield significant fossils of plants and extinct animals from the Ice Age (Jefferson, 1991; Reynolds and Reynolds, 1991; Anderson and others, 2002; Springer and others, 2009, 2010; Scott, 2010). Fossils recovered from these Pleistocene sediments represent extinct taxa including mammoths, mastodons, ground sloths, dire wolves, short-faced bears, sabre-toothed cats, large and small horses, large and small camels, and bison (Jefferson, 1991; Reynolds and Reynolds, 1991; Springer and others, 2009, 2010; Scott, 2010).

For this review, I conducted a search of the Regional Paleontologic Locality Inventory (RPLI) at the SBCM. The results of this search indicate that two previously-known paleontologic resource localities are recorded by the SBCM within ¼ to ½ mile of portions of the proposed study area. These localities, SBCM 5.3.151 and 5.3.153, yielded fossils of late Pleistocene vertebrates including

mammoths, horses, and bison from Pleistocene older alluvium. The proximity of these localities to the proposed project demonstrates the high paleontologic sensitivity of Pleistocene older alluvium at the surface and in the subsurface in this region.

Recommendations

The results of the literature review and the search of the RPLI at the SBCM demonstrate that the above named study area is located on subsurface Pleistocene alluvial sediments with high potential to contain 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 implemented by the County of Riverside. This program should include, but not be limited to:

1. Monitoring of excavation into rock units having high potential to contain significant nonrenewable paleontologic resources. Based upon the results of this review, all Pleistocene older alluvial sediments present within the area of potential effect are considered to have high potential to contain such resources. 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.

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

References

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

Sincerely,

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