

PALEONTOLOGICAL ASSESSMENT FOR THE REDLANDS INDUSTRIAL FACILITY PROJECT

PERRIS, RIVERSIDE COUNTY, CALIFORNIA

APNs 300-210-010 and -022

Submitted to:

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

Prepared for:

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May 5, 2022; Revised December 1, 2022

Paleontological Database Information

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Report Date: May 5, 2022; Revised December 1, 2022

Report Title: Paleontological Assessment for the Redlands Industrial Facility
Project, Perris, Riverside County, California

Prepared for: EPD Solutions
2355 Main Street, Suite 100
Irvine, California 92614

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

Assessor's Parcel Numbers: 300-210-010 and -022

USGS Quadrangle: Section 17, Township 4 South, Range 3 West, San Bernardino
Baseline and Meridian of the *Perris, California* (7.5-minute)
Quadrangle

Study Area: 6.91 gross acres

Key Words: Paleontological resource assessment; Pleistocene very old
alluvial fan deposits; high paleontological sensitivity; city of
Perris; full-time monitoring below five feet.

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I. INTRODUCTION AND LOCATION

A paleontological resource assessment has been completed for the Redlands Industrial Facility Project (Assessor's Parcel Numbers [APNs] 300-210-010 and -022) located northeast of the intersection of Redlands and Placentia avenues in the city of Perris, Riverside County, California (Figures 1 and 2). On the U.S. Geological Survey, 7.5-minute, 1:24,000-scale *Perris, California* topographic quadrangle map, the property is located in the northeast quarter of Section 17, Township 4 South, Range 3 West, San Bernardino Baseline and Meridian (see Figure 2). The project applicant proposes the construction of an industrial warehouse building with office and mezzanine space, tractor-trailer loading docks, and associated parking and infrastructure on the 6.91-gross acre property. Currently, the project property is vacant.

As the lead agency, the City of Perris has required the preparation of a paleontological assessment to evaluate the project's potential to yield paleontological resources. The paleontological assessment of the project property included a review of paleontological literature and fossil locality records for a previous project in the area; a review of the underlying geology; and recommendations to mitigate impacts to potential paleontological resources, if necessary. A paleontological field survey was not conducted since the surface of the project property is flat-lying, disturbed, and geologically young.

II. REGULATORY SETTING

The California Environmental Quality Act (CEQA), which is patterned after the National Environmental Policy Act, is the overriding regulation that sets the requirement for protecting California's cultural and paleontological resources. CEQA 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 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 types 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 State CEQA Guidelines Environmental Checklist Form, 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). This is to ensure compliance with California Public Resources Code Section 5097.5, the law that protects nonrenewable resources including fossils:

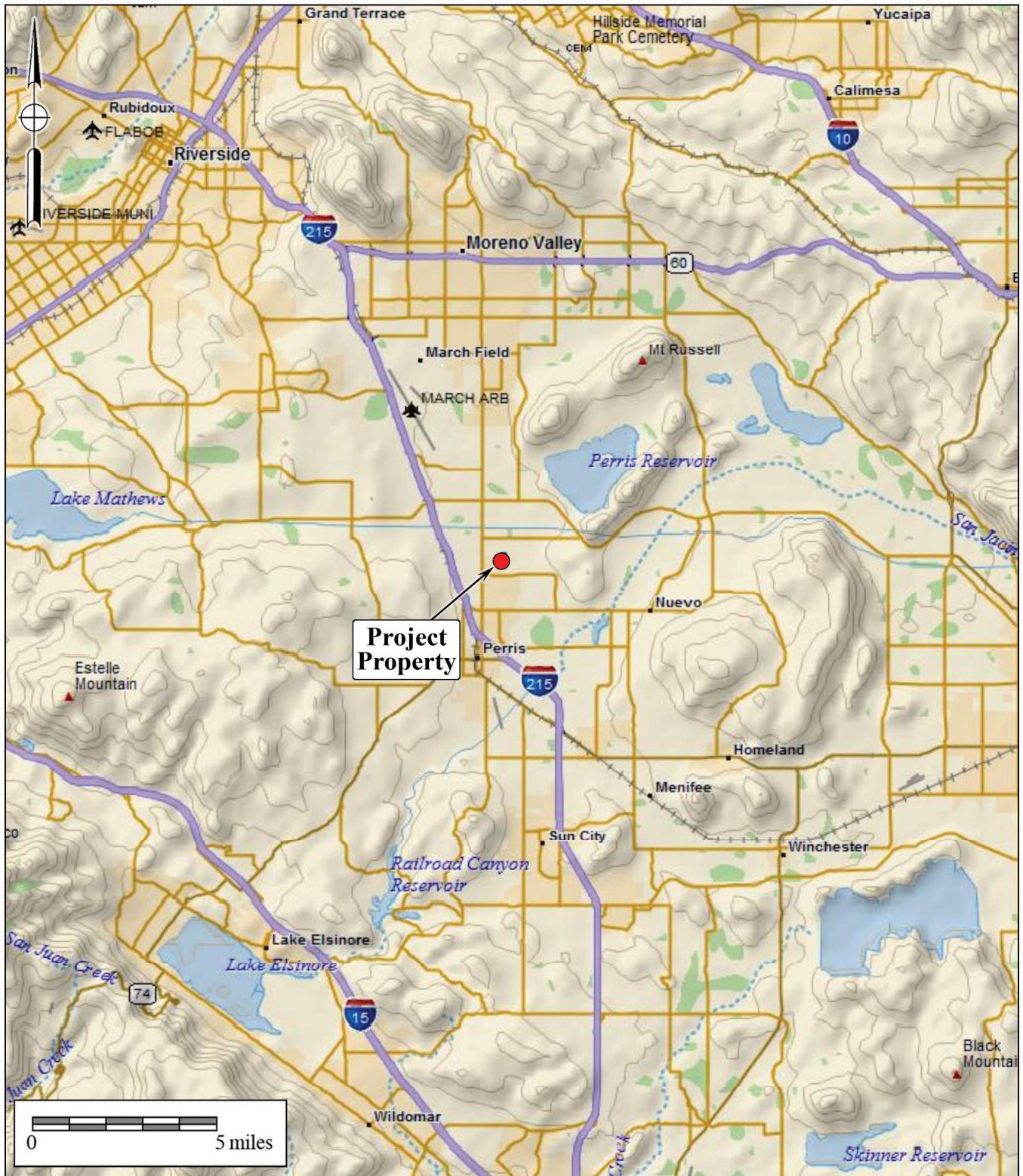
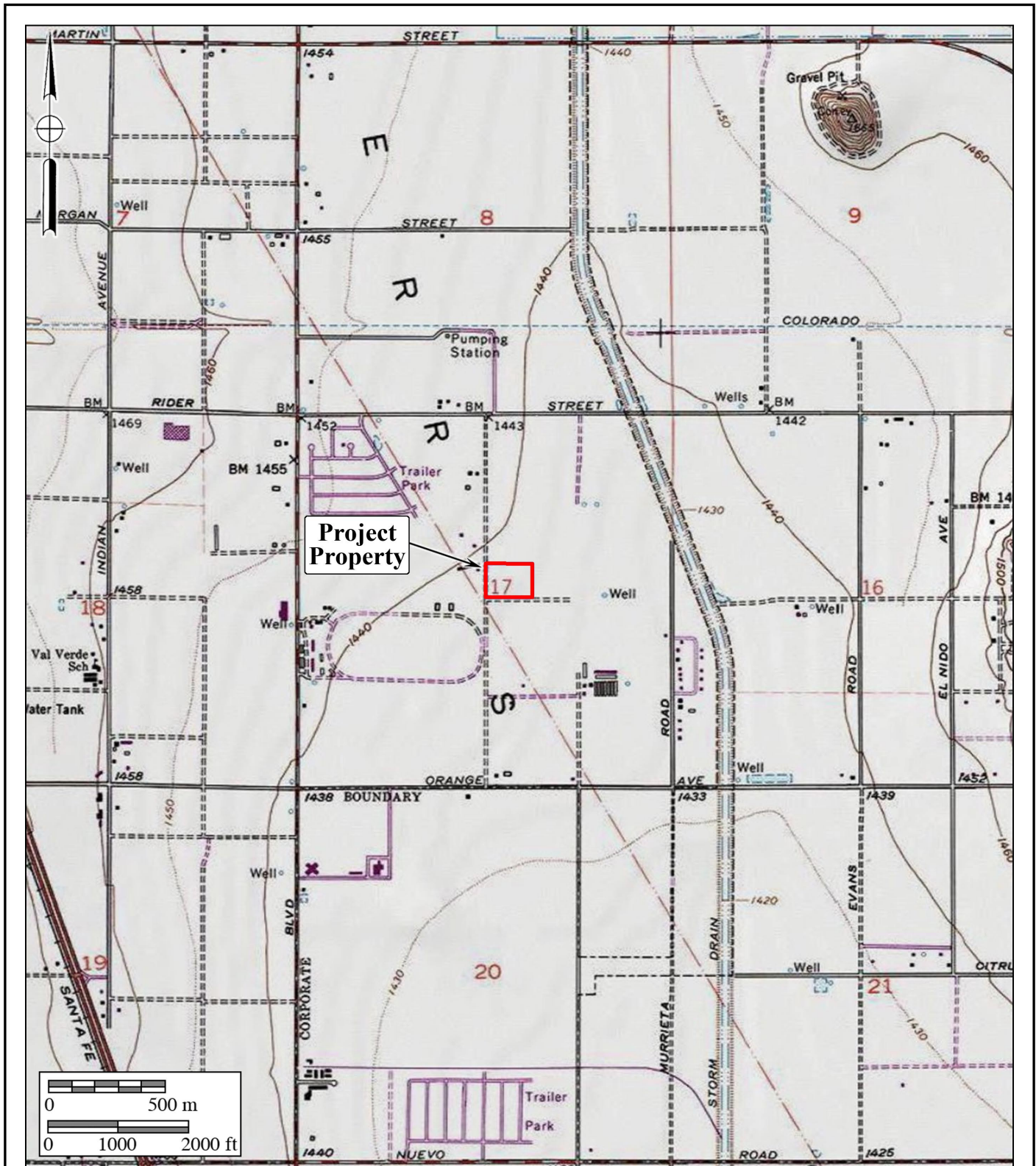


Figure 1
General Location Map
 The Redlands Industrial Facility Project

DeLorme (1:250,000)





Project Property

Figure 2

Project Location Map

The Redlands Industrial Facility Project

USGS *Perris* Quadrangle (7.5-minute series)



- a) A person shall not 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.
- 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.
- c) A violation of this section is a misdemeanor.

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 Redlands Industrial Facility Project property is located within Area 4, which requires paleontological monitoring beginning at a depth of five feet.

Perris Valley Commerce Center Specific Plan

The Redlands Industrial Facility Project property is located within the boundaries of the Perris Valley Commerce Center Specific Plan (PVCCSP) planning area of the city of Perris (City of Perris 2011). The Environmental Impact Report (EIR) prepared for the PVCCSP includes mitigation measures addressing cultural resource impacts, which include paleontological resources. In the PVCCSP EIR, mitigation measure MM Cultural 1 outlines the requirements for preparation of a Phase I cultural resources study, which has been completed through the preparation of this assessment. Mitigation measure MM Cultural 5 would be applicable to the

Redlands Industrial Facility Project for any excavations that exceed five feet in depth (City of Perris 2011). PVCCSP EIR mitigation measure MM Cultural 5 is stated below:

MM Cultural 5: Prior to grading for projects requiring subsurface excavation that exceeds five (5) feet in depth, proponents of the subject implementing development projects shall retain a professional paleontologist to verify implementation of the mitigation measures identified in the approved Phase I Cultural Resources Study and to monitor the subsurface excavation that exceed five (5) feet in depth. Selection of the paleontologist shall be subject to the approval of the City of Perris Planning Manager and no grading activities shall occur at the site until the paleontologist has been approved by the City.

Monitoring should be restricted to undisturbed subsurface areas of older alluvium, which might be present below the surface. The 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. (City of Perris 2011)

III. GEOLOGY

The geology of the property and immediately surrounding areas is shown on the published geologic map of the Perris quadrangle (Figure 3, after Morton 2003). The map indicates that the property is located on Holocene and upper Pleistocene (present day to perhaps 120,000-year-old) young alluvial-valley deposits (area colored yellow and labeled “Qyv_{sa}” on Figure 3), composed

of unconsolidated, gray silts and sands. These deposits overlie, at an unknown but likely shallow depth, older, lower Pleistocene (approximately 1.8 million to perhaps 500,000-year-old) very old alluvial-fan deposits (area colored light brown and labeled “Qvof_a” on Figure 3), composed of “mostly well-dissected, well-indurated, reddish-brown sand deposits. Commonly contains duripans and locally silcretes” (Morton 2003). These deposits are mapped at the surface just to the west of the property, as shown on Figure 3. According to Woodford et al. (1971), the alluvium overlying the granitic bedrock below the property is approximately 450 feet thick.

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 and local guidelines (see Section II of this report).

Fossil Records Search

A paleontological literature review and collections and records search was performed by the Western Science Center (WSC) for the nearby Rider and Redlands Project, located approximately one-half mile north of the Redlands Industrial Facility Project property (Radford 2021, attached). The record search indicated that the WSC has no fossil localities within the project boundaries or within one mile of the Rider and Redlands Project property, and therefore, within the Redlands Industrial Facility Project. Furthermore, Radford (2021), using Dibblee’s mapping (2003), indicated the property is underlain by Holocene deposits that are unlikely to yield paleontological resources. In conclusion:

While the presence of any fossil material is unlikely, if excavation activity disturbs deeper alluvial sediment dating to the earliest parts of the Holocene or Late Pleistocene periods, the material would be scientifically significant. Excavation activity associated with the development of the Rider and Redlands Project area is unlikely to be paleontologically sensitive, but caution during development should be observed. (Radford 2021)

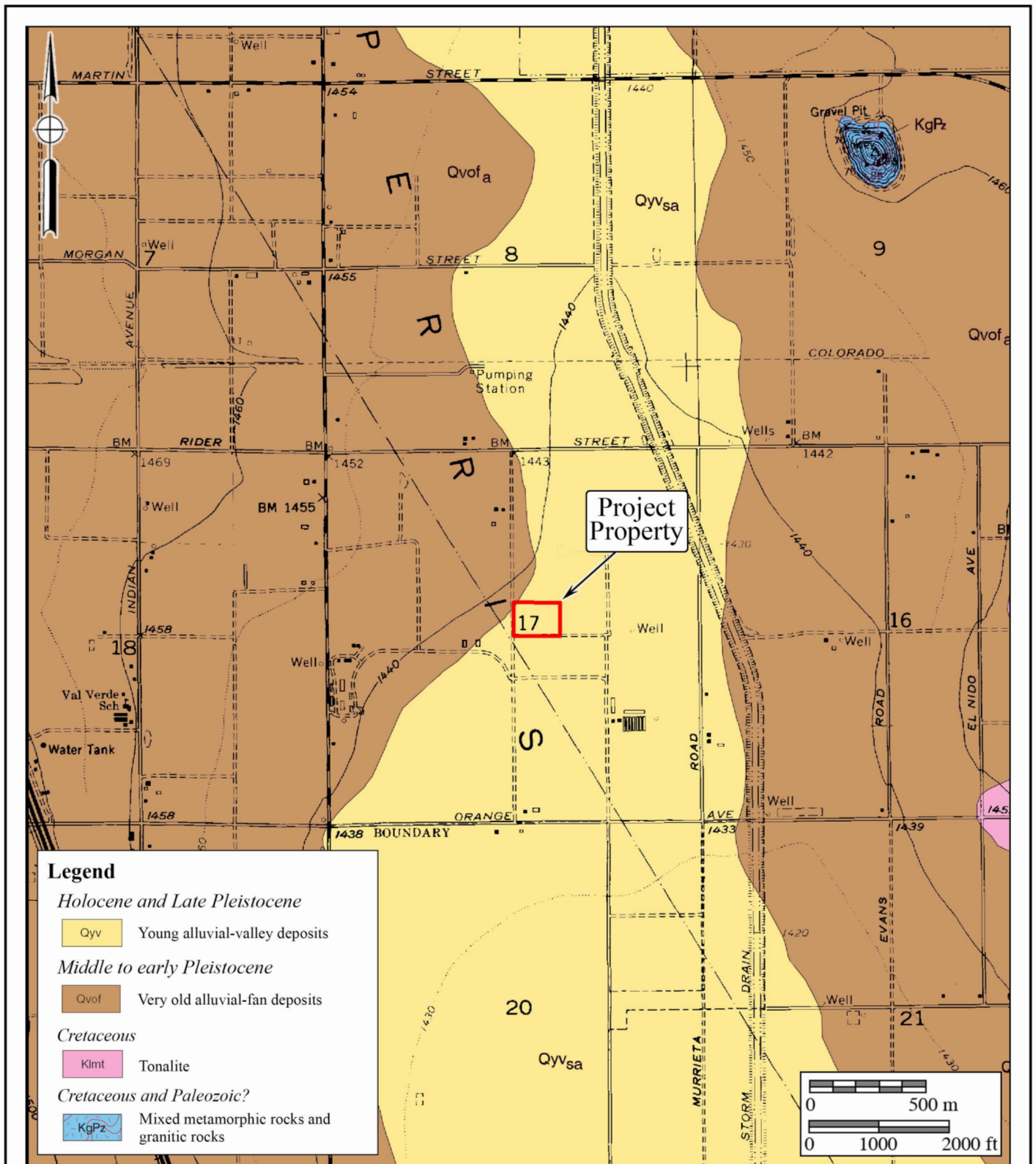


Figure 3
Geologic Map

The Redlands Industrial Facility Project

Geology after Morton (2003)



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 therefore typically assigned a low paleontological sensitivity. However, Pleistocene (greater than 11,700 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, camel, saber-toothed cats, and others (Jefferson 1991). Therefore, these Pleistocene sediments are accorded a High paleontological resource sensitivity.

Professional Standard

The Society of Vertebrate Paleontology has drafted guidelines that 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 on 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.

Using these criteria, based on the presence of nearby significant fossil localities in Riverside County and the strong likelihood that the nearby fossil localities originated from the same geologic formation as that which underlies the project at depth, the Pleistocene old alluvial fan deposits may be considered to have a high potential to yield significant paleontological resources. The Holocene deposits may be considered to have an undetermined or low potential.

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 2005 [Exhibit CN-7]), the Redlands Industrial Facility Project property 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). Implementation measure IV.A.4 of the Conservation Element requires that paleontological monitoring be initiated for sites within Area 4 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). However, because the property is also located within the area covered by the PVCCSP, it is subject to the mitigation measure guidelines specified within the PVCCSP EIR (City of Perris 2011). PVCCSP EIR mitigation measure MM Cultural 5 (City of Perris 2011) requires the monitoring of paleontological resources to excavations exceeding five feet deep in subsurface areas of undisturbed older alluvium.

VI. CONCLUSIONS AND RECOMMENDATIONS

Research has confirmed the existence of potentially fossiliferous lower Pleistocene very old alluvial fan deposits (“Qvof_a” on Figure 3) that likely underlie the young alluvial fan sediments mapped at the surface (“Qyv_{sa}” on Figure 3) at the property. The occurrence of terrestrial vertebrate fossils at shallow depths from Pleistocene old alluvial fan sediments across the Inland Empire of western Riverside County is well documented. The “High” paleontological sensitivity rating typically assigned to Pleistocene old alluvial fan sediments for yielding paleontological resources supports the recommendation that paleontological monitoring be implemented during mass grading and excavation activities in undisturbed Pleistocene old alluvial fan sediments to mitigate any adverse impacts (loss or destruction) to potential nonrenewable paleontological resources. Full-time monitoring of undisturbed Pleistocene old alluvial fan deposits at the project is warranted starting at a depth of five feet below the surface, in accordance with MM Cultural 5 of the PVCCSP (City of Perris 2005, 2011). A suggested paleontological monitoring program is detailed below.

Paleontological Resources Impact Mitigation Program (PRIMP)

The following PRIMP, outlined below, is based on the findings stated above. Paleontological monitoring may be reduced upon the observations and recommendations of the professional-level project paleontologist. The following PRIMP, when implemented, would reduce potential impacts of paleontological resources to a level below significant:

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. Starting at a depth of five feet, monitoring will be conducted full-time in areas of grading or excavation in undisturbed sediments of Pleistocene very old alluvial fan deposits (“Qvof_a”), if earth disturbance activities achieve this depth.
2. If a fossil(s) is found at a shallower depth, earth disturbance activities should be halted within a radius of 50 feet from the location of the fossil, and a project-level paleontologist shall be consulted to determine the significance of the fossilized remains. If the fossil is deemed significant by the project-level paleontologist, full-time monitoring should be initiated at the project.
 3. Paleontological monitors will be equipped to salvage fossils as they are unearthed to avoid construction delays. The monitor must be empowered to temporarily halt or divert equipment to allow 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 present, are determined upon exposure and examination by qualified paleontological personnel to have low potential to contain fossil resources. The monitor shall notify the project paleontologist, who will then notify the concerned parties of the discovery.
 4. Paleontological salvage during trenching and boring activities is typically from the generated spoils and does not delay the trenching or drilling activities. Fossils will be collected and placed in cardboard flats or plastic buckets and identified by field number, collector, and date collected. Notes will be taken on the map location and stratigraphy of the site, which is photographed before it is vacated, and the fossils are removed to a safe place. On mass grading projects, discovered fossil sites will be protected by flagging to prevent them from being overrun by earthmovers (scrapers) before salvage begins. Fossils will be collected in a similar manner, with notes and photographs being taken before removing the fossils. Precise location of the site will be determined with the use of handheld GPS units. If the site involves remains from a large terrestrial vertebrate, such as large bone(s) or a mammoth tusk, that is/are too large to be easily removed by a single monitor, a fossil recovery crew shall excavate around the find, encase the find within a plaster and burlap jacket, and remove it after the plaster is set. For large fossils, use of the contractor’s construction equipment may be solicited to help remove the jacket to a safe location.
 5. Isolated fossils will be collected by hand, wrapped in paper, and placed in temporary collecting flats or five-gallon buckets. Notes will be taken on the map location and stratigraphy of the site, which is photographed before it is vacated, and the fossils are removed to a safe place.
 6. Particularly small invertebrate fossils typically represent multiple specimens of a limited number of organisms, and a scientifically suitable sample can be obtained from one to several five-gallon buckets of fossiliferous sediment. If it is possible to dry screen the sediment in the field, a concentrated sample may consist of one or two

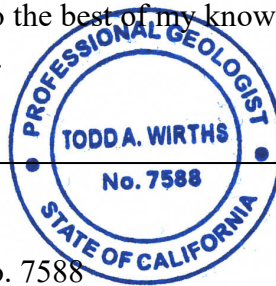
- buckets of material. For vertebrate fossils, the test is usually the observed presence of bone fragments within the sediments. If present, up to 20 to 40 five-gallon buckets of sediment can be collected and returned to a separate facility to wet-screen the sediment.
7. In accordance with the “Microfossil Salvage” section of the Society of Vertebrate Paleontology guidelines (2010:7), bulk sampling and screening of fine-grained sedimentary deposits (including carbonate-rich paleosols) must be performed if the deposits are identified to possess indications of producing fossil “microvertebrates” to test the feasibility of the deposit to yield fossil bones and teeth.
 8. In the laboratory, individual fossils will be cleaned of extraneous matrix, any breaks will be repaired, and the specimen, if needed, will be stabilized by soaking in an archivally approved acrylic hardener (*e.g.*, a solution of acetone and Paraloid B-72).
 9. Recovered specimens will be prepared to a point of identification and permanent preservation (not display), including screen-washing sediments to recover small invertebrates and vertebrates. Preparation of individual vertebrate fossils is often more time-consuming than for accumulations of invertebrate fossils.
 10. Identification and curation of specimens into a professional, accredited public museum repository with a commitment to archival conservation and permanent retrievable storage (*e.g.*, the WSC) shall be conducted. The paleontological program should include a written repository agreement prior to the initiation of mitigation activities. Prior to curation, the lead agency (*e.g.*, the City of Perris) will be consulted on the repository/museum to receive the fossil material.
 11. A final report of findings and significance will be prepared, including lists of all fossils recovered and necessary maps and graphics to accurately record their original location(s). The report, when submitted to, and accepted by, the appropriate lead agency, will signify satisfactory completion of the project program to mitigate impacts to any potential nonrenewable paleontological resources (*i.e.*, fossils) that might have been lost or otherwise adversely affected without such a program in place.

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.



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



December 1, 2022
Date

VIII. REFERENCES

- City of Perris. 2005. Conservation Element, City of Perris General Plan. Electronic document, http://www.cityofperris.org/city-hall/general-plan/Conservation_Element_01-08-09.pdf, accessed January 20, 2021.
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- Radford, D. 2021. Untitled letter regarding paleontological resources near the Rider and Redlands Project, for Brian F. Smith and Associates, Inc., Poway, California, by the Western Science Center, Hemet, California. (attached)
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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



Brian F. Smith and Associates
Todd Wirths
14010 Poway Road,
Poway, CA 92064

March 24, 2021

Dear Mr. Wirths,

This letter presents the results of a record search conducted for the Rider and Redlands Project (19-127) in the city of Perris, Riverside County, California. The project site is located at the south east intersection of Redlands Avenue and Rider Street in Section 17 of Township 4 South and Range 3 West on the Perris, CA USGS 7.5 minute topographic quadrangle. The geologic units underlying this project are mapped entirely as alluvial sand and clay dating to the Holocene (Dibblee, 2003). While Holocene alluvial units are considered to be of high preservation value, material found is unlikely to be fossil material due to the relatively modern associated dates of the deposits. However, if development requires any substantial depth of disturbance, the likelihood of reaching Late Pleistocene alluvial sediments could increase. The Western Science Center does not have localities within the project area or within a one mile radius.

While the presence of any fossil material is unlikely, if excavation activity disturbs deeper alluvial sediment dating to the earliest parts of the Holocene or Late Pleistocene periods, the material would be scientifically significant. Excavation activity associated with the development of the Rider and Redlands Project area is unlikely to be paleontologically sensitive, but caution during development should be observed. If you have any questions or would like further information, please feel free to contact me at dradford@westerncentermuseum.org

Sincerely,

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

Darla Radford
Collections Manager