

# **PALEONTOLOGICAL ASSESSMENT FOR THE HARDT & BRIER BUSINESS PARK PROJECT**

**CITY OF SAN BERNARDINO,  
SAN BERNARDINO COUNTY, CALIFORNIA**

**APNs 281-301-17, -20, and -21 and  
281-311-06, -07, -08, -11, -12, -18, and -19**

**Prepared for:**

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**Submitted to:**

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a Perennial Company  
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*August 31, 2023*



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**BFSA Environmental Services**  
A Perennial Company

## **Paleontological Database Information**

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***Report Date:*** August 31, 2023

***Report Title:*** Paleontological Assessment for the Hardt & Brier Business Park Project, City of San Bernardino, San Bernardino County, California

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***Assessor's Parcel Numbers:*** 281-301-17, -20, and -21, and 281-311-06, -07, -08, -11, -12, -18, and -19

***USGS Quadrangle:*** Unsectioned Township 1 South, Range 4 West, *San Bernardino South, California* (7.5-minute) Quadrangle.

***Study Area:*** 7.65 acres

***Key Words:*** Paleontological assessment; Holocene young axial-channel fan deposits; low sensitivity; City of San Bernardino; monitoring is not recommended.

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## **I. INTRODUCTION AND LOCATION**

A paleontological resource assessment has been completed for the Hardt & Brier Business Park Project, located north and south of Hardt Street and north of East Brier Drive in the city of San Bernardino, San Bernardino County, California (Figures 1 and 2). The 7.65-acre project consists of ten parcels, identified as Assessor's Parcel Numbers 281-301-17, -20, and -21 and 281-311-06, -07, -08, -11, -12, -18, and -19. On the U.S. Geological Survey (USGS) (7.5-minute) 1:24,000-scale *San Bernardino South, California* topographic quadrangle map, the project is located in an unsectioned area of Township 1 South, Range 4 West, of the San Bernardino Baseline and Meridian (Figure 2). The project property is being considered for redevelopment as a five-building business park. Currently, the project property is vacant.

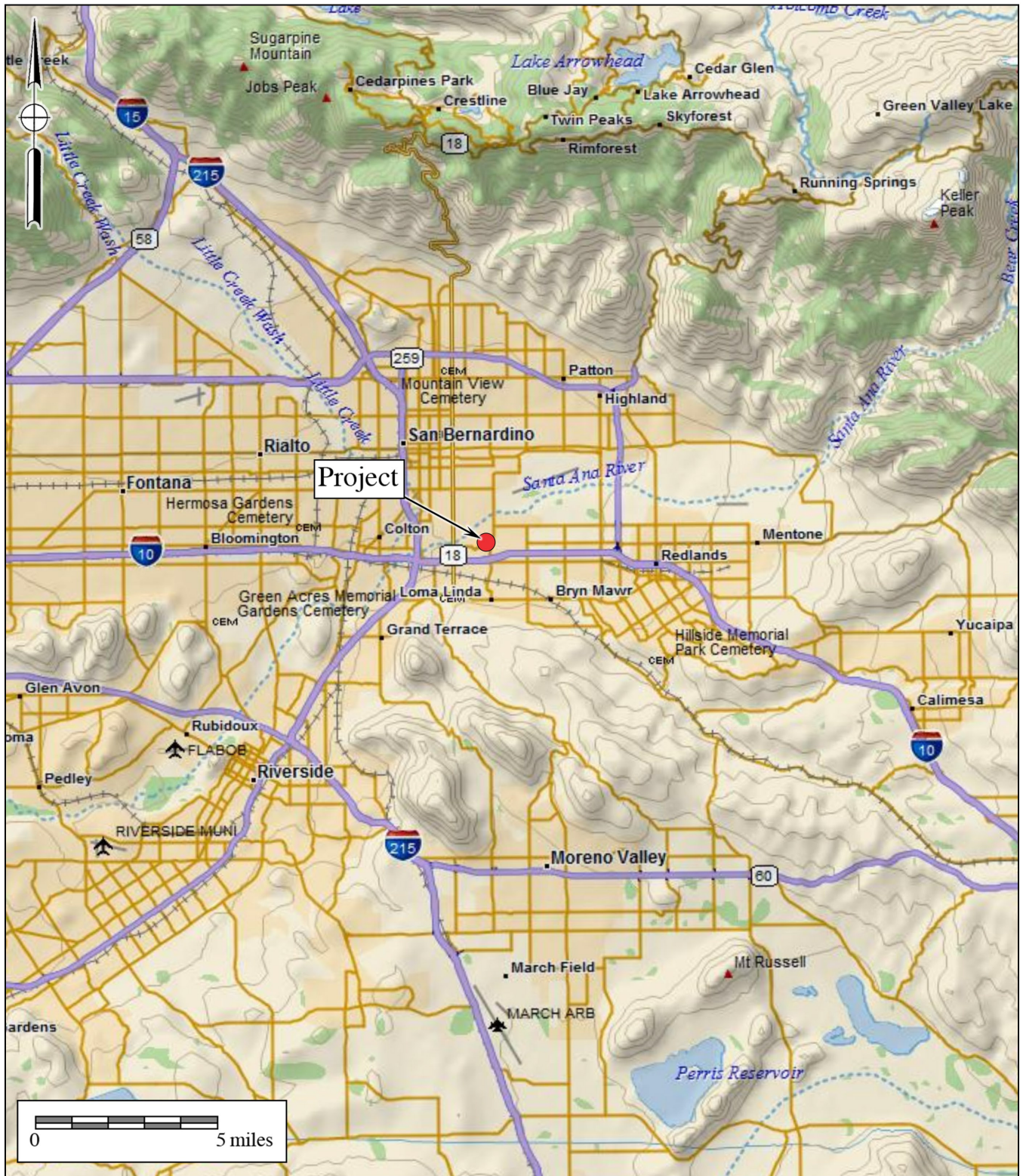
As the lead agency, the City of San Bernardino has required the preparation of a paleontological assessment to evaluate the project's potential to yield paleontological resources. The paleontological assessment of the project included a review of paleontological literature and fossil locality records for a previous project in the area; a review of the underlying geology; and recommendations to mitigate impacts to potential paleontological resources, if necessary.

## **II. REGULATORY SETTING**

The California Environmental Quality Act (CEQA), which is patterned after the National Environmental Policy Act, is the overriding environmental regulation that sets the requirement for protecting California's paleontological resources. CEQA 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 Implementation of the California Environmental Quality Act," 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 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.



**Figure 1**

**General Location Map**

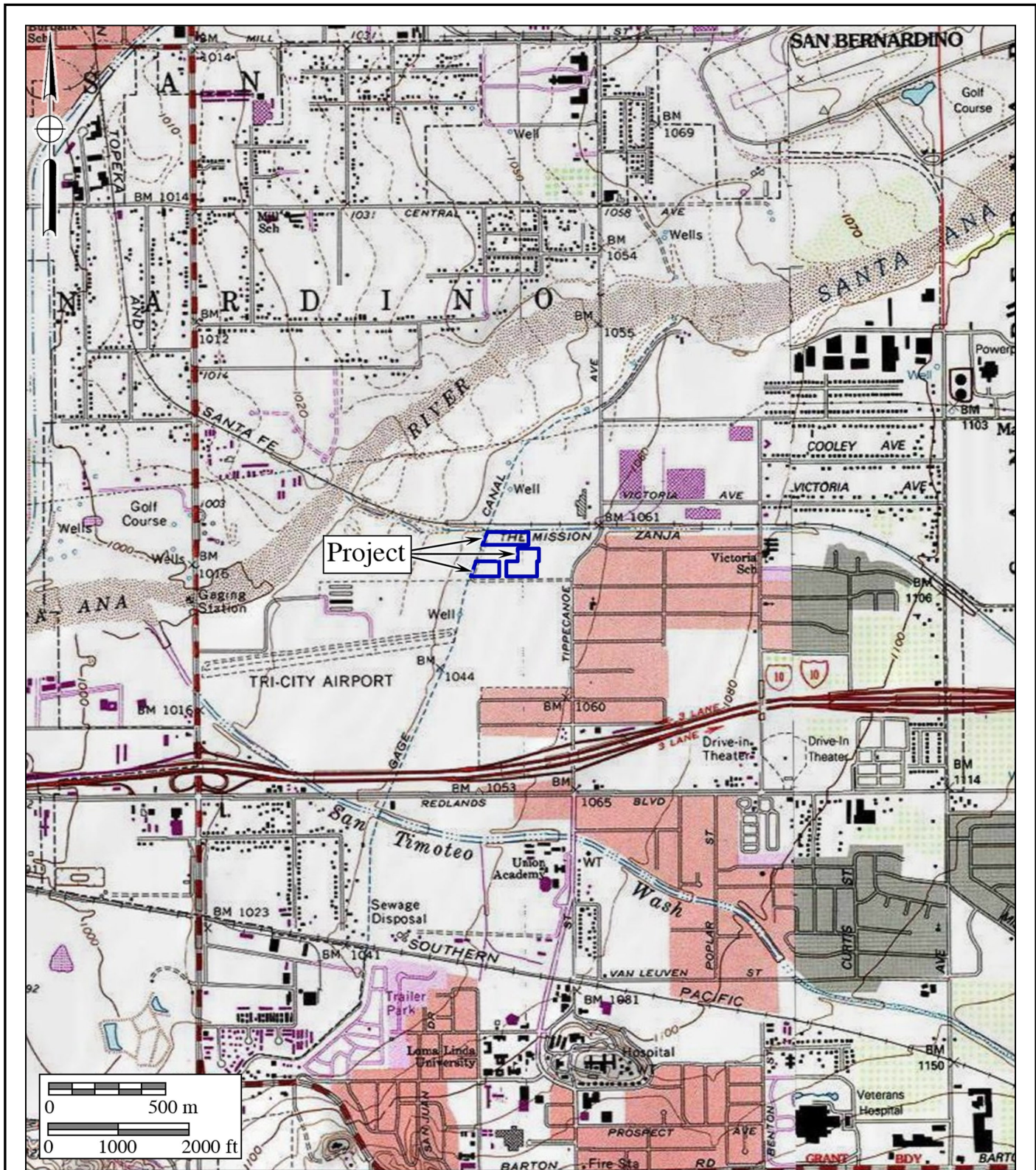
The Hardt & Brier Business Park Project

DeLorme (1:250,000)



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**Figure 2**  
**Project Location Map**

The Hardt & Brier Business Park Project

USGS San Bernardino South and Redlands Quadrangles (7.5-minute series)



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In CEQA's Environmental Checklist Form, a question to respond to 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, which is paraphrased below:

- 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.

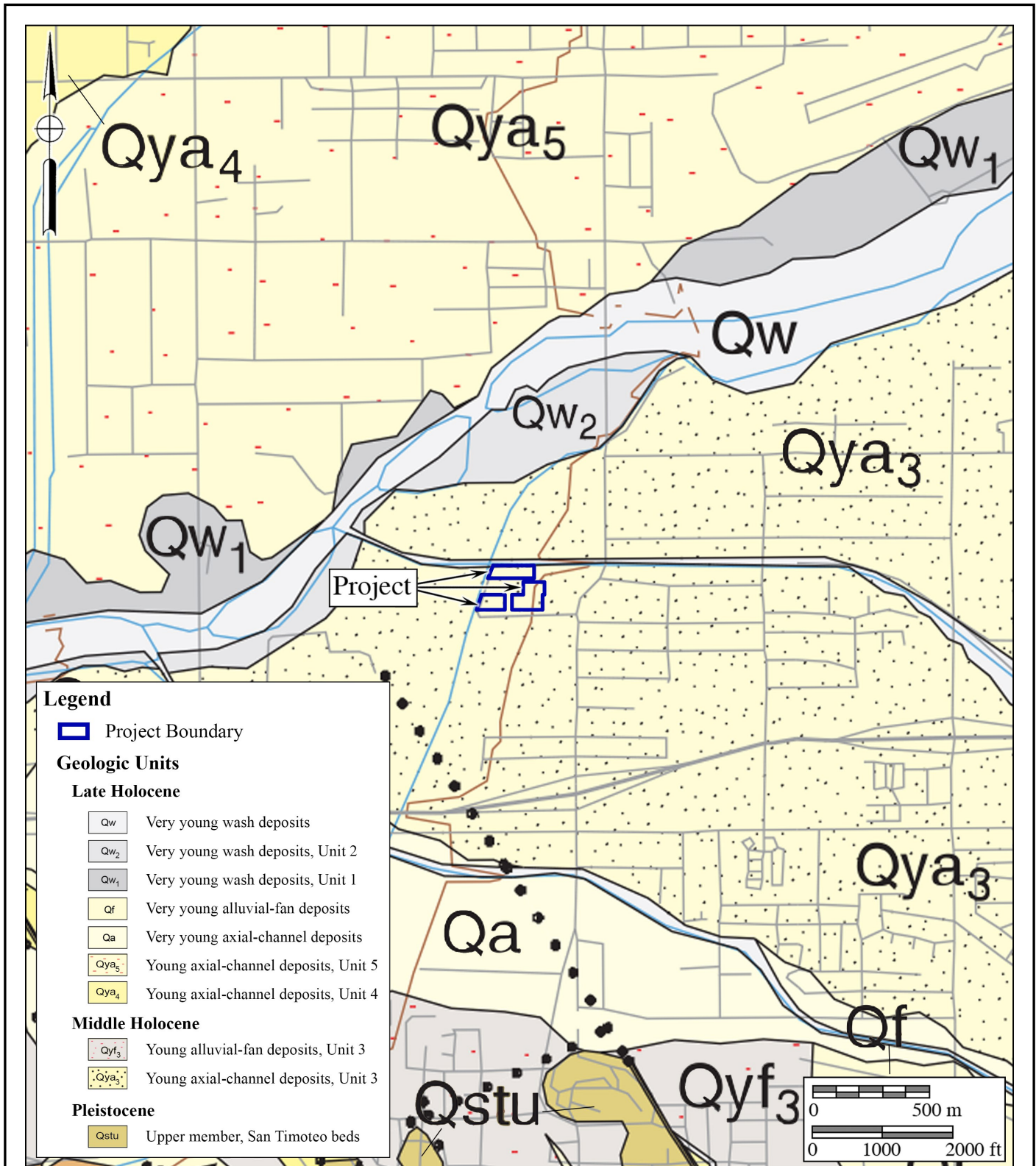
### **City of San Bernardino**

The City of San Bernardino does not have goals or policies related to paleontological resources in their General Plan (City of San Bernardino 2005). However, the City recognizes that paleontological resources are "important assets for City residents," under CCCI-2, Historic Structures, Districts and the Depot (City of San Bernardino 2005: Appendix 7: 6).

## **III. GEOLOGY**

The Hardt & Brier Business Park Project lies within the broad, fault-bounded alluvial valley of the Santa Ana River channel between the San Bernardino Mountains to the north and the San Timoteo Badlands to the south (Morton and Miller 2006). The project is just south of the Santa Ana River. Stratigraphically, the project overlies middle Holocene-aged young axial-channel deposits, Unit 3 (labeled as "Qya3" on Figure 3). These sedimentary deposits form terraces standing one to two meters above active washes, and are characterized as fine to coarse-grained sands and pebbly sands that coarsen eastward. The Mission Creek flood control channel borders the northern edge of the project. Active wash deposits of unconsolidated sand and gravel characterize the path of the Santa Ana River (labeled as "Qw" on Figure 3) (Morton and Miller 2006).





**Figure 3**  
**Geologic Map**

The Hardt & Brier Business Park Project

Geology after Morton and Miller (2006)



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## **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 [SVP] 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 nonrenewable resource under state and local guidelines (see Section II).

### **Fossil Locality Search**

A paleontological literature review and collections and locality records search was conducted for the project using records obtained from prior projects at Brian F. Smith and Associates, Inc. from the Division of Geological Sciences at the San Bernardino County Museum (SBCM), the Los Angeles County Museum of Natural History, the Western Science Center in Hemet, and data from published and unpublished paleontological literature (Jefferson 1986, 1991, 2009). The resulting locality records search did not identify any previously recorded fossil localities from within the boundaries of the project, nor from within several miles of the project. The closest-known fossil localities are located in Fontana and Calimesa, according to SBCM records.

### **Project Survey**

BFSA staff, under the supervision of Principal Investigator Todd A. Wirths, conducted a project survey on December 29, 2021. During the survey, BFSA staff carefully inspected exposed ground surfaces within the landscaping (eroded slopes, disturbed ground, and rodent burrows). Survey conditions were generally good and ground visibility was only hindered by sparse grass cover. The entirety of the property has been previously disked and modern trash was identified in the southern half of the project. No paleontological resources or evidence indicating the presence of paleontological resources were identified as a result of the survey.

## **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 (over 11,700 years old) alluvial and alluvial fan deposits in the Inland Empire, however, often yield important terrestrial vertebrate fossils, such as extinct mammoths, mastodons, giant ground sloths, extinct species of horse, bison, camel, saber-toothed cats, and others (Jefferson 1991). These Pleistocene sediments are thus accorded a high paleontological resource sensitivity.

### **Professional Standards**

The SVP (2010) 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 young geologic age of the sediments mapped at the project and the lack of nearby significant fossil localities, the Holocene young axial-channel deposits can be considered to have a low potential to yield significant paleontological resources.

## **VI. CONCLUSIONS AND RECOMMENDATIONS**

The existence of middle Holocene axial-channel deposits at the project, and the lack of any known fossil specimens or fossil localities from within a several-mile radius encompassing the subject property support the recommendation that paleontological monitoring need *not* be required during earth disturbance activities at the Hardt & Brier Business Park Project.

## **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.



August 31, 2023

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

Date

## **VIII. REFERENCES**

- City of San Bernardino. 2005. San Bernardino General Plan, Appendix 7: Issues Report; <https://www.sbcity.org/civicax/filebank/blobdload.aspx?blobid=26199>.
- Jefferson, G.T. 1986. Fossil vertebrates from the late Pleistocene sedimentary deposits in the San Bernardino and Little San Bernardino Mountains region, *in*, Kooser, M.A., and Reynolds, R.E., eds., *Geology around the margins of the eastern San Bernardino Mountains*. Publications of the Inland Geological Society, v. 1, Redlands, California.
- Jefferson, G.T. 1991. A catalogue of late Quaternary vertebrates from California: Part two, mammals. Natural History Museum of Los Angeles County, Technical Reports, no. 7: i-v + 1-129.
- Jefferson, G.T. 2009. A catalogue of Blancan and Irvingtonian vertebrates and floras from Arizona, southern California, Nevada, Utah, and northwestern Mexico. Unpublished draft manuscript, Colorado Desert District Stout Research Center, Anza-Borrego Desert State Park, Borrego Springs, California. Dated March 11, 2009.
- Morton, D.M. and Miller, F.K. 2006. Geologic map of the San Bernardino and Santa Ana 30' x 60' quadrangles, California: U.S. Geological Survey Open-File Report 06-1217, scale 1:100,000.
- 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: [https://vertpaleo.org/wp-content/uploads/2021/01/SVP\\_Impact\\_Mitigation\\_Guidelines-1.pdf](https://vertpaleo.org/wp-content/uploads/2021/01/SVP_Impact_Mitigation_Guidelines-1.pdf)



**APPENDIX A**

**Qualifications of Key Personnel**

# Todd A. Wirths, MS, PG No. 7588

## Senior Paleontologist

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## Education

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**Master of Science, Geological Sciences, San Diego State University, California** **1995**

**Bachelor of Arts, Earth Sciences, University of California, Santa Cruz** **1992**

## Professional Certifications

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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

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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

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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 BFSAE nvironmental Services, 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

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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.