PALEONTOLOGICAL ASSESSMENT FOR THE NORTH GLENDORA WATER TANK PROJECT

CITY OF GLENDORA
LOS ANGELES COUNTY, CALIFORNIA

APNs 8636-015-902 and -020

Prepared on Behalf of:

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Prepared for:

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September 12, 2022

Paleontological Database Information

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Report Date:	September 12, 2022
Report Title:	Paleontological Assessment for the North Glendora Water Tank Project, city of Glendora, Los Angeles County, California
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Assessor's Parcel Numbers:	8636-015-902 and -020
USGS Quadrangle:	Section 19, Township 1 North, Range 9 West of the USGS *Glendora*, *California* 7.5' Quadrangle
Study Area:	Approximately 5 acres
Key Words:	Paleontological assessment; Cretaceous granitic rocks; City of Glendora; no monitoring recommended.

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I. INTRODUCTION AND LOCATION

A paleontological resource assessment has been completed for the North Glendora Water Tank Project, located at the north terminus of North Glendora Avenue in the city of Glendora in Los Angeles County, California (Figures 1 and 2). On the United States Geological Survey (7.5-minute) 1:24,000-scale *Glendora, California* topographic quadrangle map, the project is situated in Section 19, Township 1 North, Range 9 West, of the San Bernardino Baseline and Meridian. The project spans approximately 5 acres and is defined as Assessor's Parcel Numbers (APNs) 8636-015-902 and -020. The proposed development consists of a new reservoir project by the city of Glendora. Currently, the property is occupied by an existing water tank.

As the lead agency, the City of Glendora 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.

In CEQA's 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, which is paraphrased below:

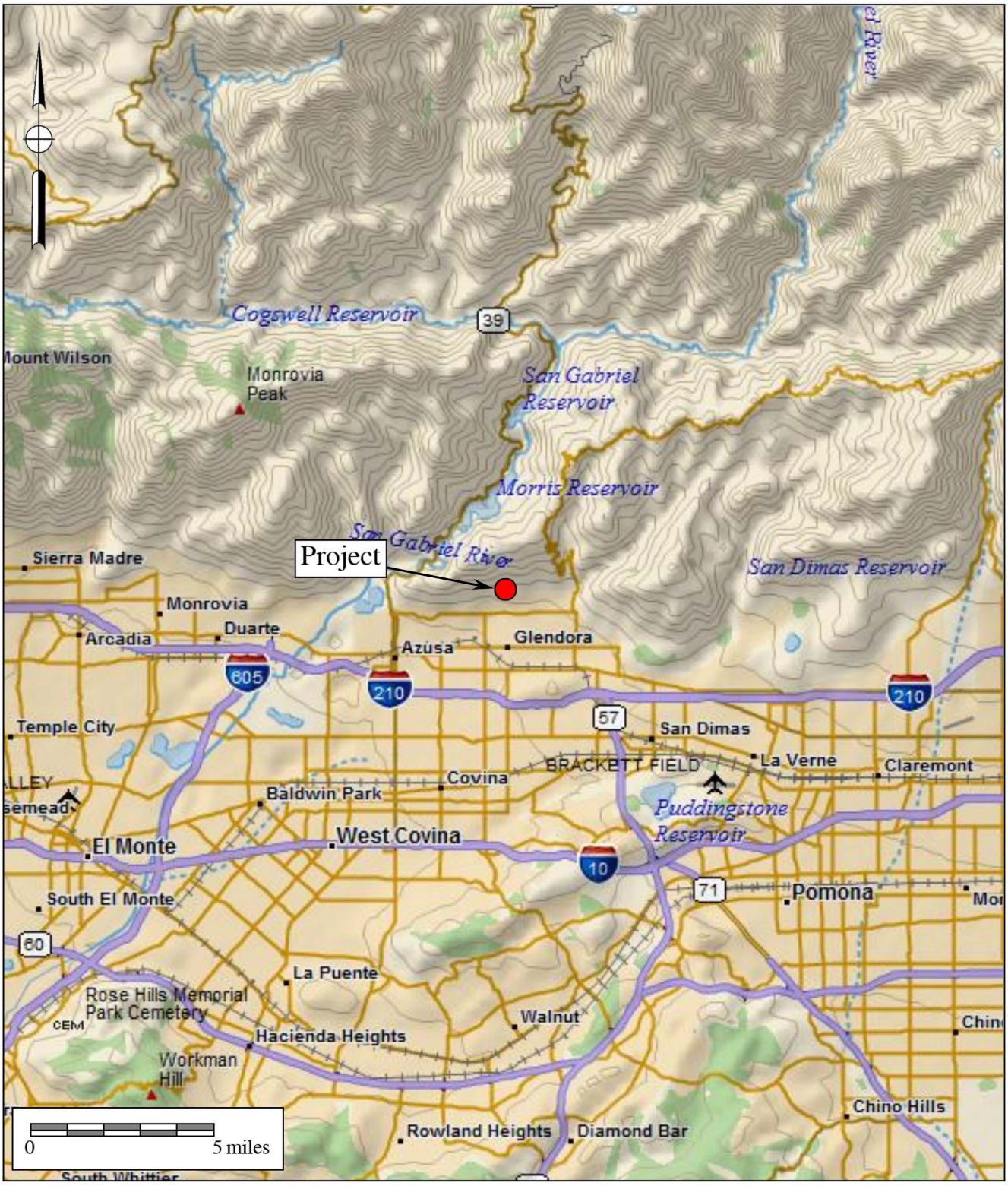


Figure 1

General Location Map

The North Glendora Water Tank Project

DeLorme World Base Map Service (1:250,000 series)

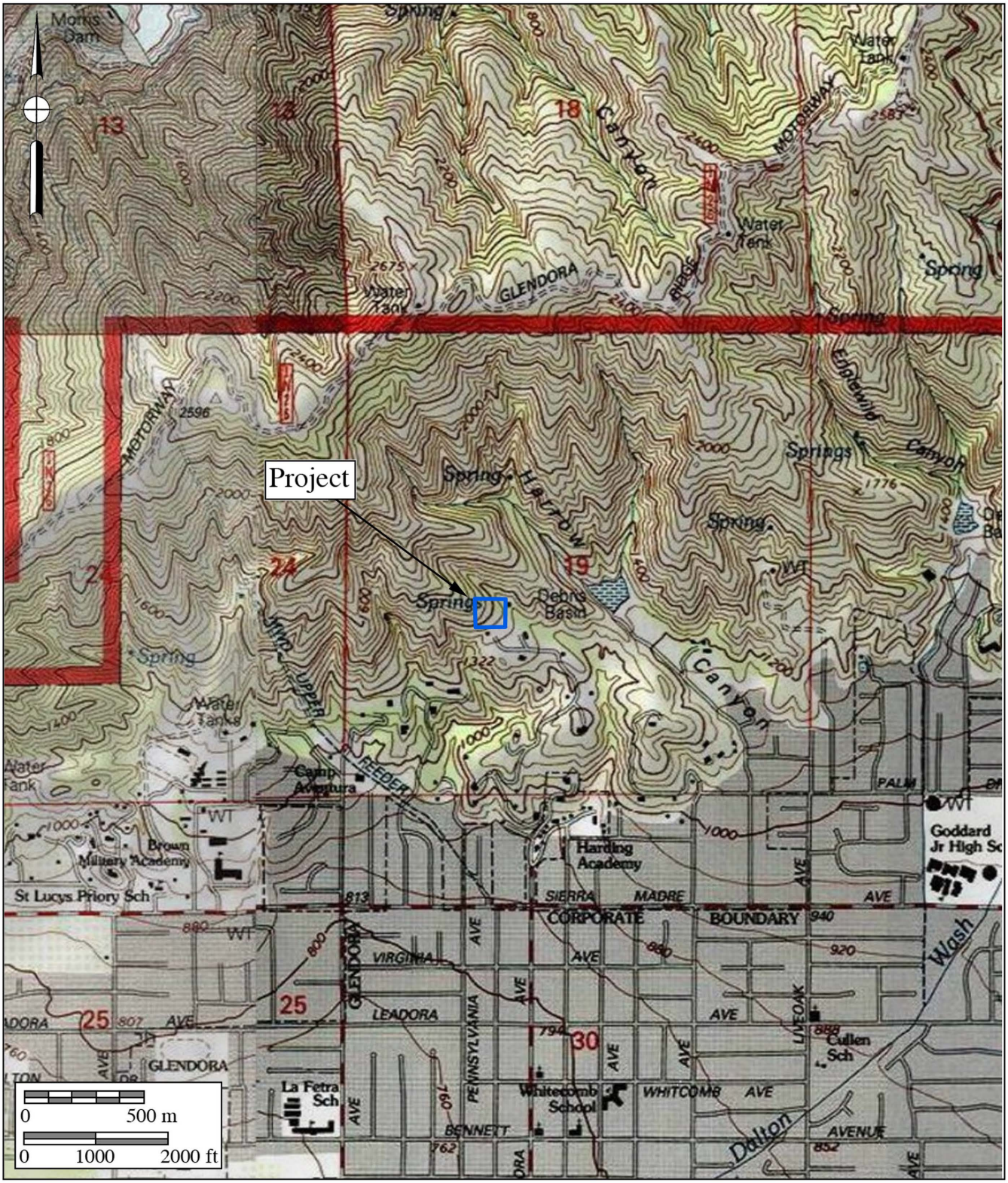


Figure 2

Project Location Map

The North Glendora Water Tank Project

USGS *Glendora* 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 Glendora

The General Plan of the City of Glendora does not address paleontological resources (City of Glendora n/d).

III. GEOLOGY

The project is located along the southern edge of the San Gabriel Mountains, which form a part of the Transverse Ranges. The Transverse Ranges run east–west between the Peninsular Ranges to the south and the Coast Ranges and Mojave Desert to the north. The project lies just north of the northern edge of the Los Angeles Basin. Geologically, the project sits on Cretaceous granitic rocks (labeled as "Kgl" on Figure 3, after Morton and Miller 2006; Dibblee 2002).

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 guidelines (see Section II).

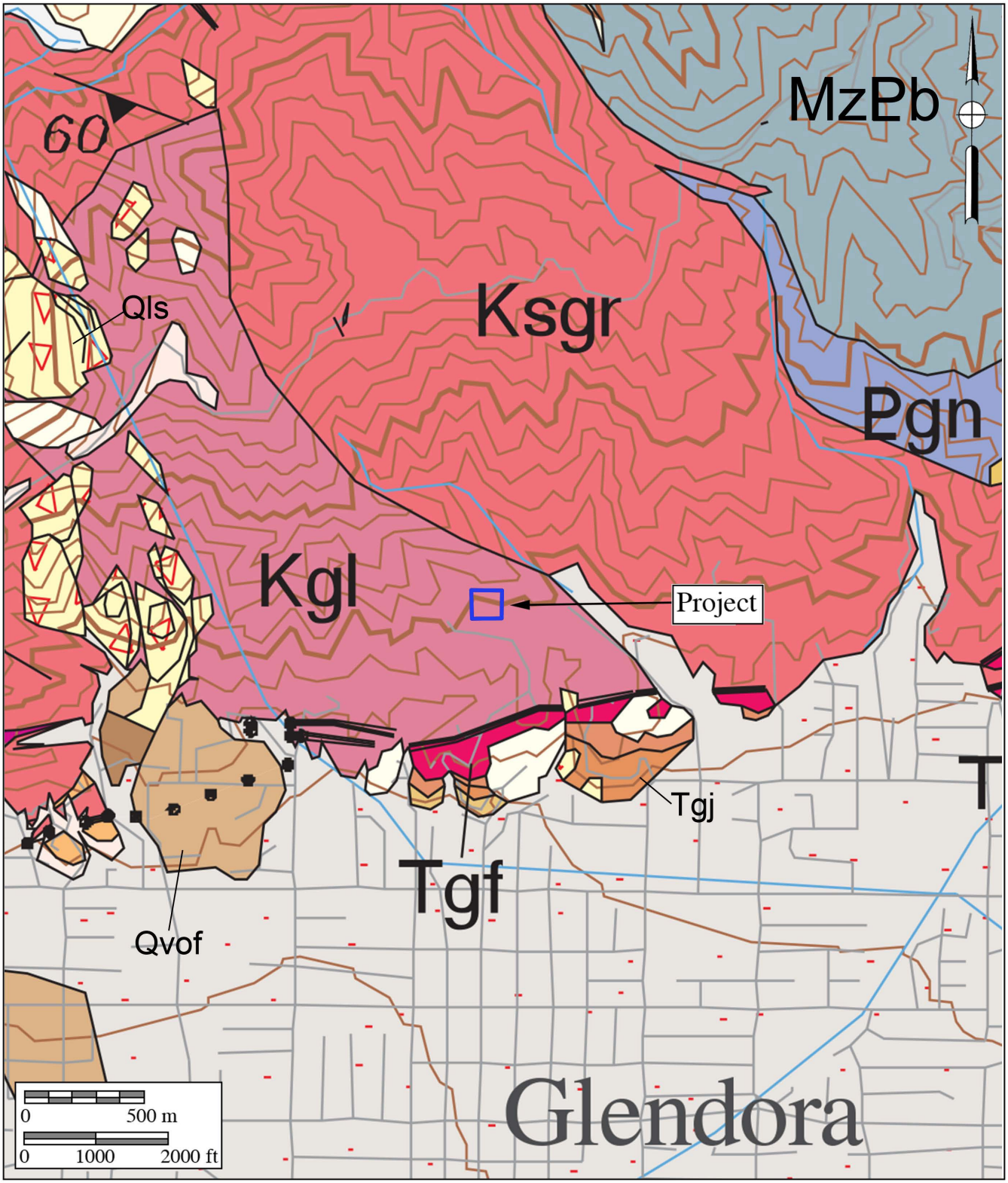


Figure 3

Geologic Map

The North Glendora Water Tank Project

Geology after Morton and Miller (2006)

Fossil Locality Search

A paleontological literature review and collections and locality records search was conducted for the project using records from prior Brian F. Smith and Associates, Inc. (BFSA) projects, the San Bernardino County Museum, the Los Angeles County Museum of Natural History (LACM), as well as data from published and unpublished paleontological literature (Jefferson 1991, 2009; Bell 2016; Gust and Wilson 2018). The resulting locality records search did not identify any previously recorded fossil localities from within the project boundaries. Jefferson (1991) and the consulting report by Cogstone (Gust and Wilson 2018) indicate the closest-known fossil locality is located about five to six miles southwest of the current project in Irwindale, consisting of the remains of a Pleistocene mastodon (LACM locality 1807). In a consulting report by SWCA Environmental Consultants (Bell 2016) for a project situated southwest of the intersection of the I-210 and the I-605 freeways, the nearest fossil locality was reported to be from Pleistocene alluvium in Eagle Rock, several miles to the west, consisting of a nearly complete mammoth in addition to turkey remains (Jefferson 1991; LACM locality 2027).

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 Los Angeles Basin, 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, 2009). These Pleistocene sediments are thus accorded a High paleontological resource sensitivity. Plutonic rocks, such as the granitic rocks mapped at the project, do not yield fossils, and therefore have no 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.

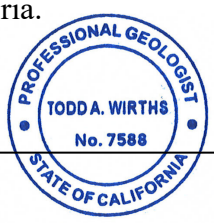
Using these criteria, the granitic rocks mapped at the project area have no potential to yield paleontological resources.

VI. CONCLUSIONS AND RECOMMENDATIONS

Research has confirmed the presence of Cretaceous granitic rocks mapped at the surface of the project. Paleontological resources do not occur in plutonic rocks such as those mapped at the project; therefore, monitoring for potential paleontological resources during earth disturbance activities is not recommended. A paleontological resource impact mitigation program for the project is not warranted.

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.



September 12, 2022

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

Date

VIII. REFERENCES

Bell, A. 2016. Paleontological Resources Impact Assessment Report for the City of Hope Specific Plan, City of Duarte, Los Angeles County, California. Unpublished report for PlaceWorks, Santa Ana, California, by SWCA Environmental Consultants, Pasadena,

California.

City of Glendora. No date. Glendora general plan. https://www.cityofglendora.org/departments-services/planning/applications-documents/general-plan-specific-plans/glendora-general-plan.

Dibblee, T.W., Jr. 2002. Geologic map of the Glendora quadrangle, Los Angeles County, California. Dibblee Foundation Map DF-89, edited by J.A. Minch: Dibblee Geological Foundation, Santa Barbara Natural History Museum.

Gust, S., and Wilson, M. 2018. Cultural and paleontological resources assessment for the City of La Verne General Plan Update, city of La Verne, Los Angeles County, California. Unpublished report for De Novo Planning Group, Orange, California, by Cogstone, Orange, 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.

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: Electronic document, 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

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.