PALEONTOLOGICAL ASSESSMENT FOR THE NERIO FARMS PROJECT

SAN BERNARDINO COUNTY, CALIFORNIA

APNs 1013-111-01, -02, and 1013-161-01

Prepared for:

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Submitted to:

County of San Bernardino
385 North Arrowhead Avenue
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Prepared by:

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October 7, 2025; Revised August 24, 2026

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Paleontological Database Information

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Report Title:	Paleontological Assessment for the Nerio Farms Project, San Bernardino County, California
Prepared for:	Borstein Enterprises 11766 Wilshire Boulevard, Suite 820 Los Angeles, California 90025
Submitted to:	County of San Bernardino 385 North Arrowhead Avenue San Bernardino, California 92415
USGS Quadrangle:	Section 34, Township 1 North, Range 8 West of the *Ontario, California* (7.5-minute) USGS Topographic Quadrangle
Assessor's Parcel Numbers:	1013-111-01, -02, and 1013-161-01
Study Area:	24.16 acres
Key Words*:*	Paleontological assessment; Holocene and Pleistocene alluvial deposits; low and high paleontological resource sensitivity; monitoring is recommended.

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I. INTRODUCTION AND LOCATION

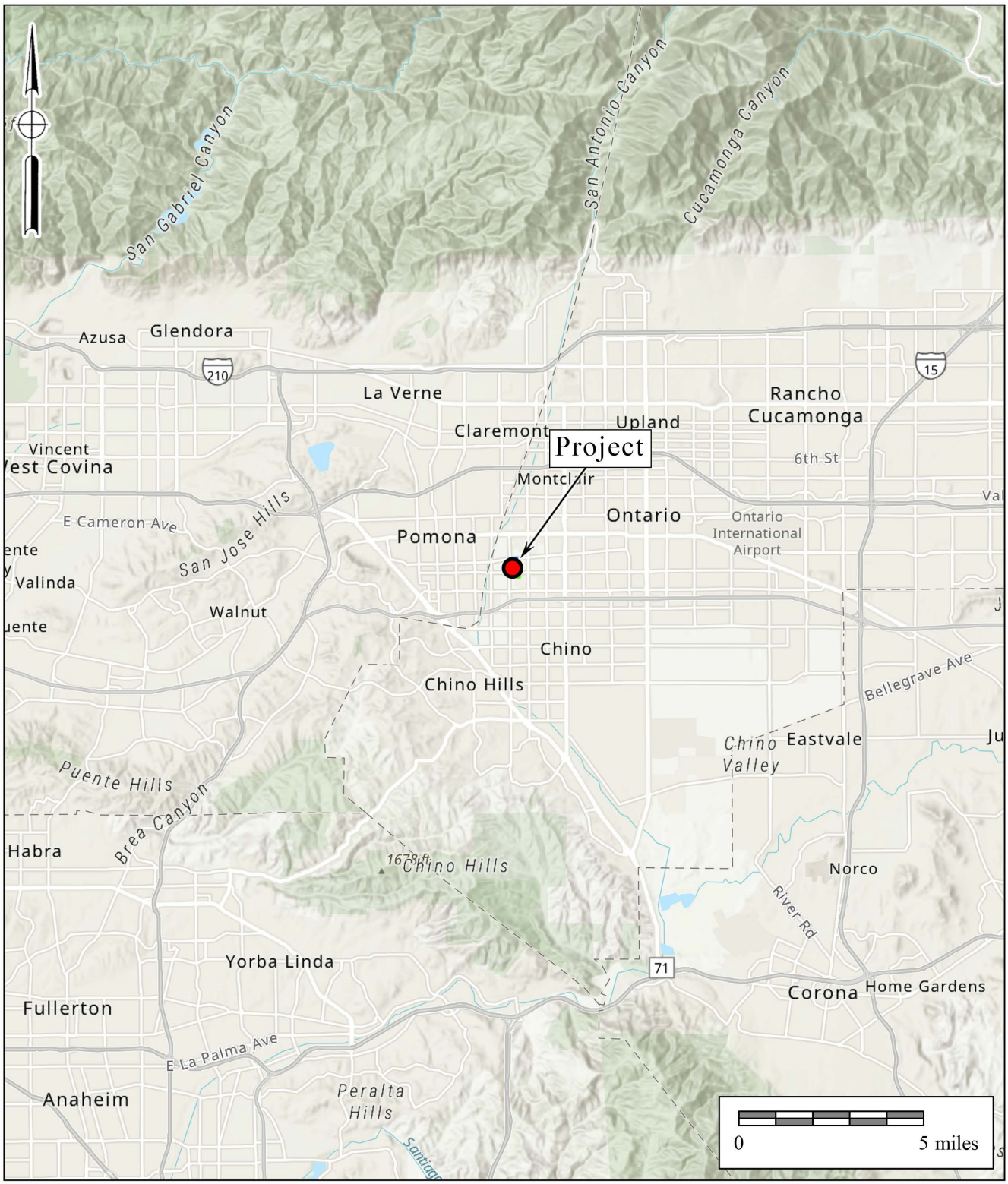
This paleontological resource assessment has been completed for the Nerio Farms Project, located at west of Pipeline Avenue, south of Phillips Boulevard, east of Norton Avenue, and north of Maple Street, south of the Montclair and north of the Chino city limits in unincorporated San Bernardino County, California (Figures 1 and 2). The 24.16-acre project (Assessor's Parcel Numbers [APNs] 1013-111-01, -02, and 1013-161-01) is situated within Section 34, Township 1 North, Range 8 West, on the United States Geological Survey (USGS) *Ontario, California* (7.5-minute) Quadrangle (see Figure 2).

As designed, the project consists of the development of 92 detached single-family homes on minimum 7,200 square-foot lots, associated public streets, a 26,977 square-foot private park, and a 34,518 square-foot water retention basin (Figure 3). The project also proposes to enter into a service agreement with the City of Chino to provide sewer service to the proposed development. The sewer extension would be included in the current proposed project and includes the addition of 2,276 feet of sewer pipeline. The sewer extension would connect to an existing sewer line located within Norton Avenue, travel north to Maple Street, turn and travel west within Maple Street to College Avenue, and turn and travel north within College Avenue to the proposed project (Figure 4). Sewer pipeline depths are as much as 14 feet deep. At onsite building construction areas, Jeon and Albus (2021) recommended the removal of all artificial fill materials and the upper two to three feet of alluvial soils for recompaction as engineered fill.

As the lead agency, the County 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 in the area, a review of the underlying geology, and recommendations to mitigate impacts to potential paleontological resources, if necessary.

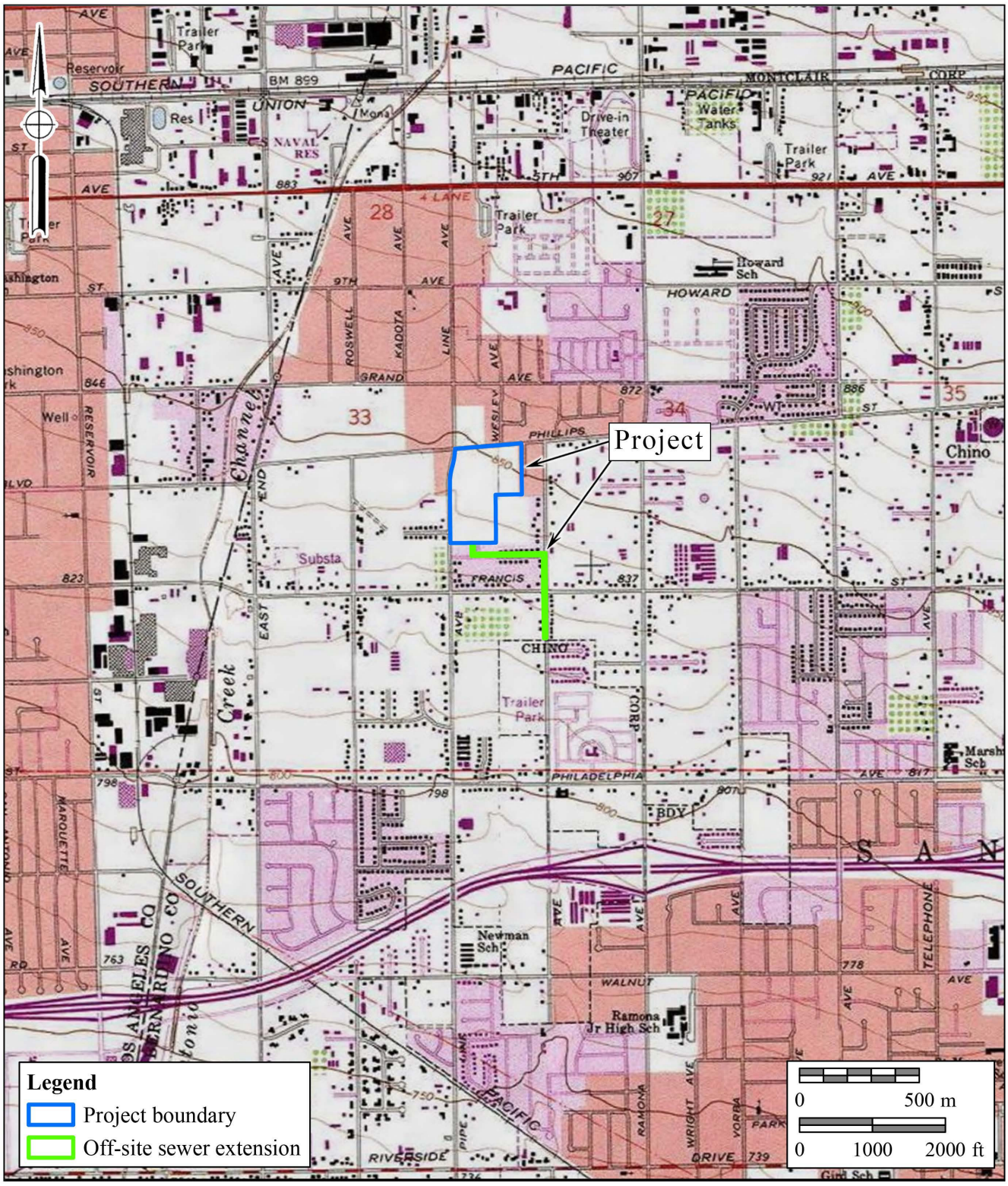
II. REGULATORY SETTING

The California Environmental Quality Act (CEQA), which is patterned after the National Environmental Policy Act, is the overriding environmental policy 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.



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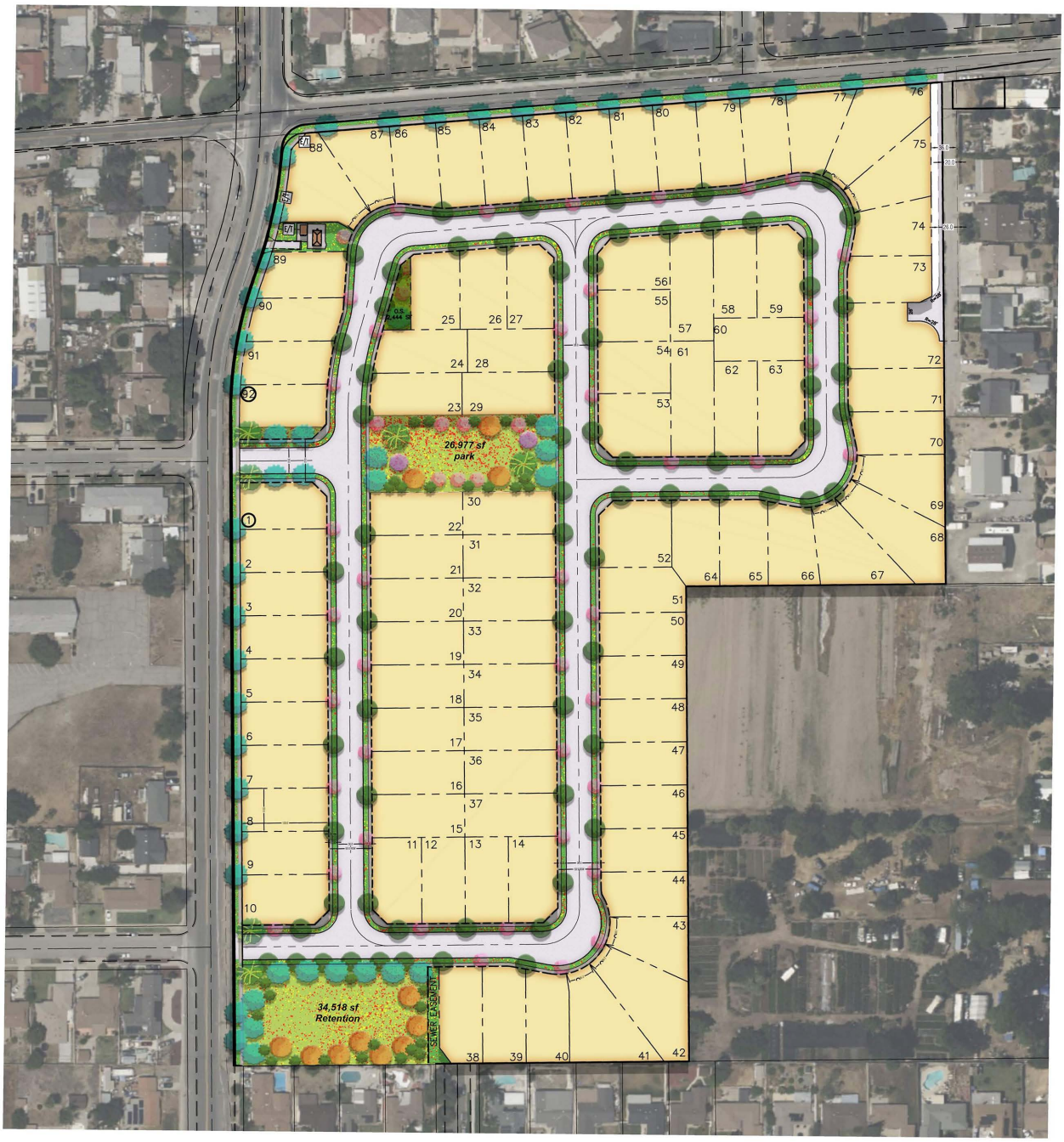
Figure 1
General Location Map
The Nerio Farms Project
Esri World Topographic Map



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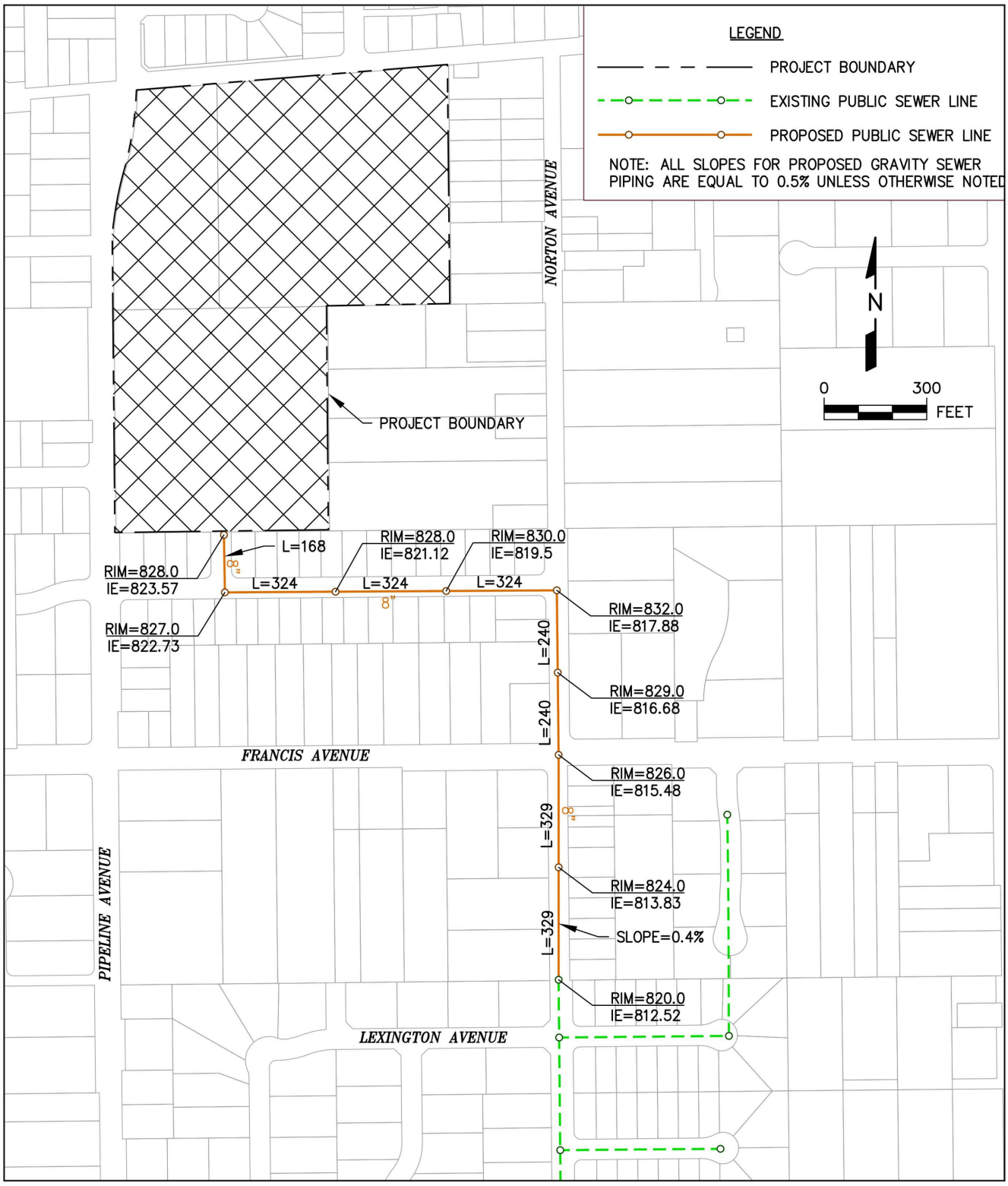
Figure 2
Project Location Map
The Nerio Farms Project

USGS *Ontario* Quadrangle (7.5-minute)



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Figure 3
Project Development Map
The Nerio Farms Project



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Figure 4
Sewer Extension Plan
The Nerio Farms Project

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, 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.

County of San Bernardino

The County of San Bernardino 2007 Development Code has developed criteria for applying guidelines to preserve and protect nonrenewable paleontological resources (County of San Bernardino 2019). In Chapter 82.20, the "Paleontologic Resources (PR) Overlay" of the Development Code, purpose, location requirements, development standards, and paleontologist qualifications are described in Sections 82.20.010 to 82.20.040, respectively (County of San Bernardino 2019).

III. GEOLOGY

The project is located in the Pomona Valley, the surface of which is covered by Holocene-aged young alluvial fan deposits (gray and yellow areas labeled "Qyf3a" and "Qyf5a," respectively, on Figure 5, after Morton and Miller 2006). These deposits mostly consist of unconsolidated to moderately consolidated very fine to coarse sandy deposits. Mapping by Dibblee (2002) characterizes the surficial sediments in the area as Holocene-aged alluvial valley fill, composed of gravel and sand. These Holocene deposits overlie older, Pleistocene-aged alluvial fan deposits at various depths in the region.

In a geotechnical investigation for the project, Jeon and Albus (2021) indicated the surficial sediments at the project include minor fills up to about four feet thick in the south and western portions of the site. Generally, the underlying alluvial deposits at the project are composed of silty sand, silty sand with gravel, sand with gravel, and silt. The alluvial deposits extended to the maximum depth explored of 51.5 feet. Jeon and Albus (2021) did not speculate on the geologic age of the alluvial deposits.

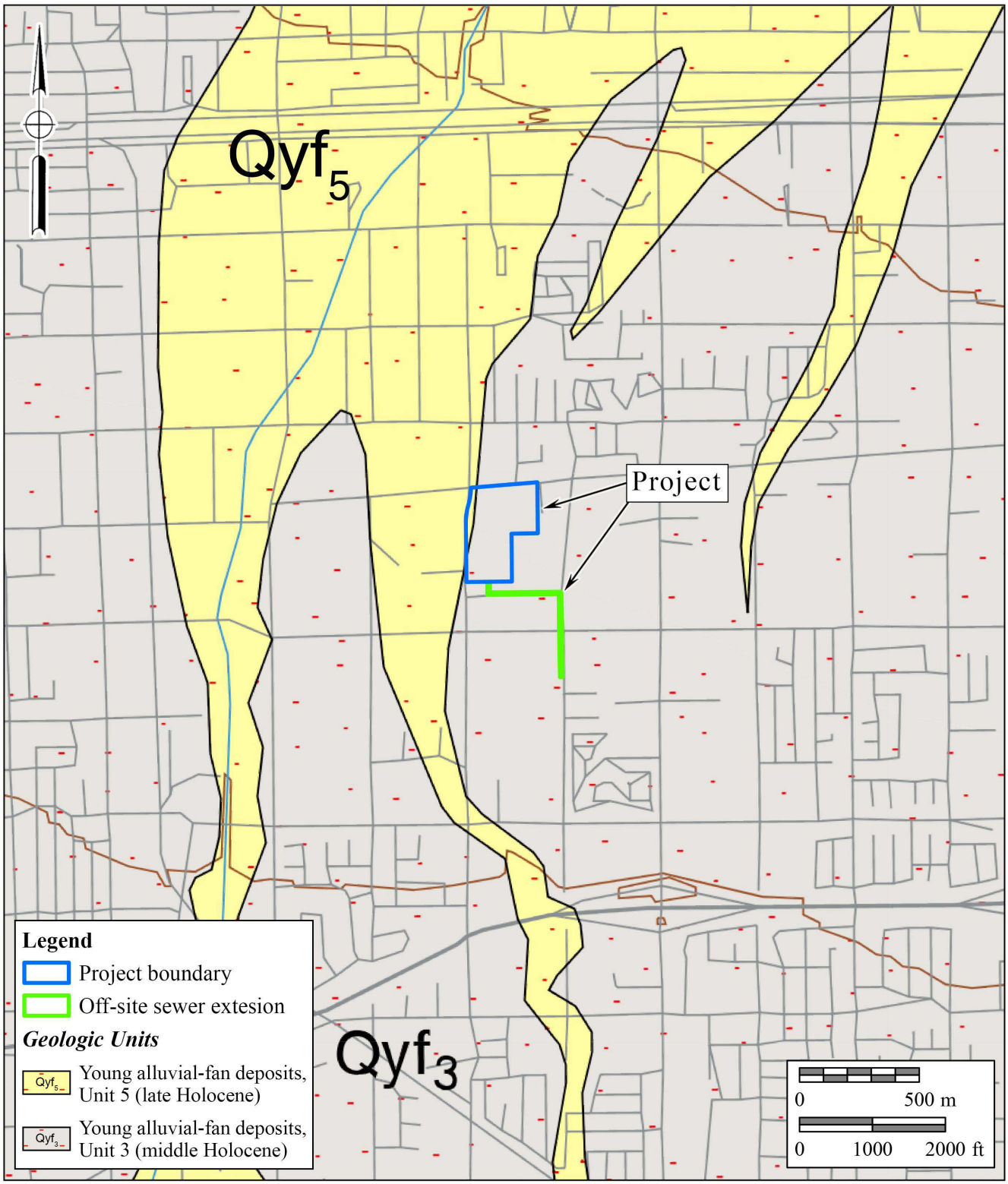
IV. PALEONTOLOGICAL RESOURCES

Definition

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

Fossil Locality Records Search

A paleontological collections and records search was performed for the project by the Division of Geological Sciences at the San Bernardino County Museum (SBCM) (Kottkamp 2025; Appendix B). The records search indicated that the closest locality held by the SBCM is located approximately 0.9 mile southwest of the project, consisting of late Pleistocene-aged undetermined vertebrate bones (SBCM locality 1.116.275). Additional fossil localities are approximately two to three miles to the southwest, consisting of Pleistocene terrestrial fossil bones mixed with Miocene (approximately five to 11 million years old) marine fossils from the underlying Puente Formation.



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Figure 5
Geologic Map
The Nerio Farms Project
Geology after Morton and Miller (2006)

Project Survey

BFSA Environmental Services, a Perennial Company (BFSA), personnel, under the direction of Principal Investigator Todd A. Wirths, M.S., P.G., conducted a pedestrian survey of the project on August 21, 2025. The field methodology employed for the project included walking evenly spaced transects while visually inspecting the ground surface. All potentially sensitive areas where paleontological resources might be located were closely inspected. The entire property was accessible, and ground surface visibility was excellent, except in areas where existing structures were located. The areas without existing structures are currently utilized for agricultural purposes and include fields of tilled soil and dirt roads. The areas with existing structures include the southwest corner, the northwest corner, the northeast corner, and a portion of the center of the project. The southwest corner is currently developed with temporary structures and plants associated with the nursery business in that location. The northwest corner is currently developed with two electrical facility buildings for the associated power poles in the area. The central portion currently features four greenhouse structures without sides or foundations. The northeast corner of the property is currently developed with several buildings, including two residences, three auxiliary buildings, and a detached garage. No paleontological resources, or evidence suggesting the presence of paleontological resources, were observed during the survey.

V. PALEONTOLOGICAL SENSITIVITY

Overview

The degree of paleontological sensitivity of any particular area is based upon 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 may 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, are known to 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 accorded a high paleontological resource sensitivity.

Professional Standards

The Society of Vertebrate Paleontology (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 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.

Using these criteria, based upon the regional geology and the location of the nearest-known Pleistocene fossils, the Holocene alluvial cover at the project, as mapped, has a low paleontological potential, since these sedimentary strata are too young to yield significant fossils. The underlying Pleistocene deposits are considered to have a high paleontological potential, as significant fossils are known to occur in these deposits in the region.

County of San Bernardino Assessment

The County of San Bernardino regards Holocene alluvial sediments as having a low to high paleontological sensitivity (Bell 2018). Typically, these deposits are too young to produce fossils but, with depth, may increase in age to at least 5,000 years old (Society of Vertebrate Paleontology 2010). Therefore, these deeper deposits have a high paleontological sensitivity.

The County of San Bernardino applies its "[PR] Overlay" guideline to those areas where paleontological resources are known to occur or are likely to be present by using fossil location criteria reported by the SBCM, the University of California Museum of Paleontology (Berkeley), the Los Angeles County Natural History Museum, or other institutions (County of San Bernardino 2019, Section 82.20.020). The following criteria are to be used to evaluate a project's compliance with the intent of the overlay in Section 82.20.030 (County of San Bernardino 2019):

a. **Field survey before grading.** In areas of potential but unknown sensitivity, field surveys before grading shall be required to establish the need for paleontologic monitoring.
b. **Monitoring during grading.** A project that requires grading plans and is located in an area of known fossil occurrence within the overlay, or that has been demonstrated to have fossils present in a field survey, shall have all grading monitored by trained paleontologic crews working under the direction of a qualified professional, so that fossils exposed during grading can be recovered and preserved. Paleontologic monitors shall 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 shall be empowered to temporarily halt or divert equipment to allow removal of abundant or large specimens. Monitoring is not necessary if the potentially fossiliferous units described for the property in question are not present, or if present are determined upon exposure and examination by qualified paleontologic personnel to have low potential to contain fossil resources.

c. **Recovered specimens.** Qualified paleontologic personnel shall prepare 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 is essential in order to fully mitigate adverse impacts to the resources.

d. **Identification and curation of specimens.** Qualified paleontologic personnel shall identify and curate specimens into the collections of the Division of Geological Sciences, San Bernardino County Museum, an established, accredited museum repository with permanent retrievable paleontologic storage. These procedures are also essential steps in effective paleontologic mitigation and CEQA compliance. 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 considered complete until curation into an established museum repository has been fully completed and documented.

e. **Report of findings.** Qualified paleontologic personnel shall prepare a report of findings with an appended itemized of specimens. A preliminary report shall be submitted and approved before granting of building permits, and a final report shall be submitted and approved before granting of occupancy permits. The report and inventory, when submitted to the appropriate lead agency, along with confirmation of the curation of recovered specimens into the collections of the San Bernardino County Museum, will signify completion of the program to mitigate impacts to paleontologic resources.

f. **Mitigation financial limits.** In no event shall the County require the applicant to pay more for mitigation as required by Subsections (b), (c), and (d), above within the site of the project than the following amounts:

    1. One-half of one percent of the projected cost of the project, if the project is a commercial or industrial project;
    2. Three-fourths of one percent of the projected cost of the project for a housing project consisting of one unit; and
    3. If a housing project consists of more than one unit, three-fourths of one percent of the projected cost of the first unit plus the sum of the following:

A. $200 per unit for any of the next 99 units;
B. $150 per unit for any of the next 400 units; and
C. $100 per unit for units in excess of 500.

According to Section 82.20.040, a qualified paleontologist working within the County jurisdiction is required to meet the following criteria (County of San Bernardino 2019):

A. **Education**: An advanced degree (master's or higher) in geology, paleontology, biology or related disciplines (exclusive of archaeology).
B. **Professional experience**: At least five years professional experience with paleontologic (not including cultural) resources, including the collection, identification and curation of the resources.

VI. CONCLUSIONS AND RECOMMENDATIONS

Research indicates the likely presence of potentially fossiliferous Pleistocene old alluvial fan deposits that underlie the Holocene deposits mapped at the project. The occurrence of terrestrial vertebrate fossils from Pleistocene alluvial fan deposits in southwestern San Bernardino County is well documented. The high paleontological sensitivity rating assigned to Pleistocene alluvial fan deposits for yielding paleontological resources supports the recommendation that paleontological monitoring be implemented during mass grading and excavation activities in these deposits to mitigate any adverse impacts (loss or destruction) to potential nonrenewable paleontological resources. However, the depth of transition from Holocene to Pleistocene age within the deposits at the project is unknown. As such, part-time "spot-check" monitoring of undisturbed alluvial fan deposits at the project is recommended, starting at five feet below the surface. Starting at a depth of 10 feet below the surface, full-time monitoring is recommended. If a significant fossil is discovered at any time, full-time monitoring should be implemented. A Paleontological Resource Impact Mitigation Program (PRIMP) is suggested below and should be approved and implemented before the issuance of the grading permit.

Suggested PRIMP

The following guidelines, outlined below, are based upon the findings stated above, which are consistent with the provisions of CEQA, the City of Chino, and the guidelines of the Society of Vertebrate Paleontology (2010) for any mass grading and excavation-related activities, including utility trenching, during construction within the project. When implemented, this suggested PRIMP would reduce potential impacts to paleontological resources to a level below significant.

1. A paleontologist shall be retained for the project and will be on-call during grading and other significant ground-disturbing activities. All mitigation programs should be performed by a qualified professional (project) paleontologist, defined as an individual with a masters or doctorate degree in paleontology or geology, who has proven experience in paleontology and is knowledgeable in professional paleontological procedures and techniques. Fieldwork may be conducted by a qualified paleontological monitor, defined as an individual who has experience in the collection and salvage of fossil materials. The paleontological monitor shall always work under the direction of a qualified paleontologist.
2. Starting at five feet below the surface, monitoring should be conducted on a part-time basis ("spot-check") in areas of grading or excavation in undisturbed alluvial fan deposits. At a depth of 10 feet, full-time monitoring should be implemented.
3. Should any paleontological resources be discovered, no further grading shall occur within 50 feet of the discovery. The monitor shall notify the project paleontologist, who will then notify the County of San Bernardino of the discovery. If the fossil is deemed as significant by the project paleontologist, full-time monitoring shall be conducted.
4. 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.
5. Paleontological salvage during trenching and boring activities is typically from the generated spoils and does not delay the trenching or drilling activities. Fossils are collected and placed in cardboard flats or plastic buckets and identified by field number, collector, and date collected. Before the site is vacated and the fossils are moved to a safe place, notes are taken on the map location and stratigraphy of the site. On mass grading projects, discovered fossil sites are protected by flagging to prevent them from being overrun by earthmovers (scrapers) before salvage begins. Fossils are collected in a similar manner, with notes and photographs being taken before removing the fossils. 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 move the jacket to a safe location.
6. Particularly small invertebrate fossils typically represent multiple specimens of a limited number of organisms, and a scientifically suitable sample can be obtained

from 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.

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 are cleaned of extraneous matrix, any breaks are repaired, and the specimen, if needed, is stabilized by soaking in an archivally approved acrylic hardener (*e.g.,* a solution of acetone and Paraloid B-72).
9. Recovered specimens are prepared to a point of identification and permanent preservation (not display), including screen-washing sediments to recover small invertebrates and vertebrates.
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 SBCM) 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 (the County of San Bernardino) 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.



October 7, 2025; Revised August 24, 2026

Todd A. Wirths, M.S., P.G. Date
Principal Paleontologist
California Professional Geologist No. 7588

VIII. REFERENCES

County of San Bernardino. 2019. County of San Bernardino 2007 Development Code. Prepared for the County of San Bernardino Land Use Services Division by several consultants. Adopted March 13, 2007; effective April 12, 2007; amended May 2, 2019. Electronic document, http://www.sbcounty.gov/Uploads/lus/DevelopmentCode/DCWebsite.pdf.

Dibblee, T.W., Jr. 2002. Geologic map of the San Dimas and Ontario quadrangles, Los Angeles and San Bernardino Counties, California. Dibblee Geological Foundation, Dibblee Foundation Map DF-91.

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Kottkamp, S. 2025. Paleontology Records Review for proposed site of Nerio Farms Project, Chino, San Bernardino County. Unpublished letter report prepared for BFSA Environmental Services, Poway, California, by the San Bernardino County Museum, Redlands, California. (Appendix B)

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Society of Vertebrate Paleontology. 2010. Standard procedures for the assessment and mitigation of adverse impacts to paleontological resources; by the SVP Impact Mitigation Guidelines Revision Committee: 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

Principal Paleontologist

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Phone: (858) 484-0915 *Email: twirths@bfsa.perennialenv.com

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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.

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APPENDIX B

Paleontological Locality Search Letter

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SAN BERNARDINO COUNTY

Museum
Division of Earth Science

David Myers
Director

Scott Kottkamp
Curator of Earth Science

October 3rd, 2025

BFSA Environmental Services
Attn: Todd Wirths
14010 Poway Road
Poway, CA 92064

PALEONTOLOGY RECORDS REVIEW for proposed site of Nerio Farms project, Chino, San Bernardino County, California

Dear Mr. Wirths,

The Division of Earth Science of the San Bernardino County Museum (SBCM) has completed a record search for the above-named project in San Bernardino County, California. The proposed project site (Nerio Farms) is in the city of Chino, California, as shown on the United States Geological Survey (USGS) 7.5-minute Ontario, California, quadrangle.

Geologic mapping of that region done by Dibblee and Minch (2002) indicates that the project area occurs atop recent alluvial sediments of Holocene age (Qa). Qa is comprised of gravelly sand and is unlikely to be fossiliferous, though it may contain subfossils. Regional Qa overlies older alluvial deposits of Pleistocene age (Qoa), often by as shallowly as 5 - 15 ft (Reynolds and Reynolds, 1991). Such older alluvial deposits are often fossiliferous in the Santa Ana River Valley, yielding the remains of †*Mammut pacificus*, †*Mammuthus columbi*, †*Smilodon* sp., Camelidae, Equidae, *Bison* sp., and ground sloths, as well as microfossils including rodents and mollusks.

Near the Puente Hills, Qoa is in turn underlain by the Miocene age Puente Formation, a sequence of marine sandstones, conglomerates, and shales (Dibblee and Minch, 2001, 2002; Morton and Miller, 2006). The Puente Formation (Tp) is equivalent in age to the Monterey Formation found elsewhere in southern California. Tp is distinguished from the Monterey

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Formation via the former's thick and widespread clastic units, especially those containing coarse grained sediments (Scott, 1998). The Puente Formation has multiple fossiliferous members, producing fossils of marine vertebrates and invertebrates. Bivalves, gastropods, and microinvertebrates like diatoms and foraminifera are common, fish are uncommon though abundant in select localities, and cetaceans are rare. Terrestrial plant fossils are also common in several units of the Puente Formation. The deep-water Yorba Shale Member of Tp is the most abundantly fossiliferous subunit and contains well-preserved and articulated remains of mesophotic marine taxa (Reynolds 1989). However, the uppermost Sycamore Canyon Member is also of high paleontological sensitivity, hosting a diverse assemblage of taxa across a depth gradient that generally shallows upwards through the unit.

For this review, I conducted a search of the Regional Paleontological Locality Inventory (RPLI) at the SBCM. The results of this search indicate that no SBCM localities occur at the project site; however, a single paleontological locality, SBCM 1.116.275, is located within a 1-mile perimeter of the project. SBCM 1.116.275 is 0.9 miles southwest of the project site, situated in Qoa. Sifting of these alluvial sediments yielded chordate bone fragments. Tp directly underlies Qoa at this locality, but no fossils were recorded as being collected from Tp.

SBCM 1.116.275 is part of a series of 14 localities (1.116.275 – 288) that occur alongside East End Avenue. Unlike SBCM 1.116.275, most of these localities occur in both Qoa and Tp. The total fossil assemblage recovered from these localities includes Gastropoda indet., Aves indet., cf. *Syngnathus* sp., Teleostei indet., Rodentia indet., Chordata indet., *Platanus* sp., Plantae indet., eggshell fragments, and a possible avian gastrolith. In addition to their distinct lithologies, taphonomy differs considerably between the two units present at these localities. Fossils found in Tp tend to be well-preserved, with articulated partial-to-complete skeletons being common. By contrast, fossils from Qoa mostly occur as disassociated elements that are often fragmental.

This records search covers only the paleontological records of the San Bernardino County Museum. It is not intended to be a thorough paleontological survey of the proposed project area covering other institutional records, a literature survey, or any potential on-site survey. Please do not hesitate to contact us with any further questions that you may have.

Sincerely,

Scott Kottkamp

Scott Kottkamp, Curator of Earth Science
Division of Earth Science
San Bernardino County Museum

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