PALEONTOLOGICAL ASSESSMENT FOR THE BRADLEY GARDENS PROJECT

CITY OF SAN JACINTO, RIVERSIDE COUNTY, CALIFORNIA

APN 435-330-003

Prepared on Behalf of:

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Prepared for:

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March 13, 2026

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Paleontological Database Information

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Submitted to:	City of San Jacinto Community Development – Planning Division 595 South San Jacinto Avenue, Building A San Jacinto, California 92583
USGS Quadrangle:	Section 34, Township 4 South, Range 1 West, of the *San Jacinto, California* USGS quadrangle topographic map
Study Area:	2.98 acres
Assessor's Parcel Number:	435-330-003
Key Words:	Paleontological assessment; Pleistocene alluvial deposits; high paleontological sensitivity; monitoring recommended.

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1.0 INTRODUCTION AND LOCATION

This paleontological resource assessment has been completed for the Bradley Gardens Project, located at 980 West 7th Street in the southern portion of the city of San Jacinto, Riverside County, California (Figures 1 and 2). The 2.98-acre project consists of one parcel (Assessor's Parcel Number [APN] 435-330-003) and is situated within Section 34, Township 4 South, Range 1 West, in the United States Geological Survey (USGS) *Lakeview, California* topographic quadrangle map (see Figure 2). The applicant proposes removal and/or modifications to the existing buildings within the parcel and the construction of a new care building with associated hardscape, landscape, and infrastructure.

As the lead agency, the City of San Jacinto 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.

2.0 REGULATORY SETTING

State of California

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.

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.



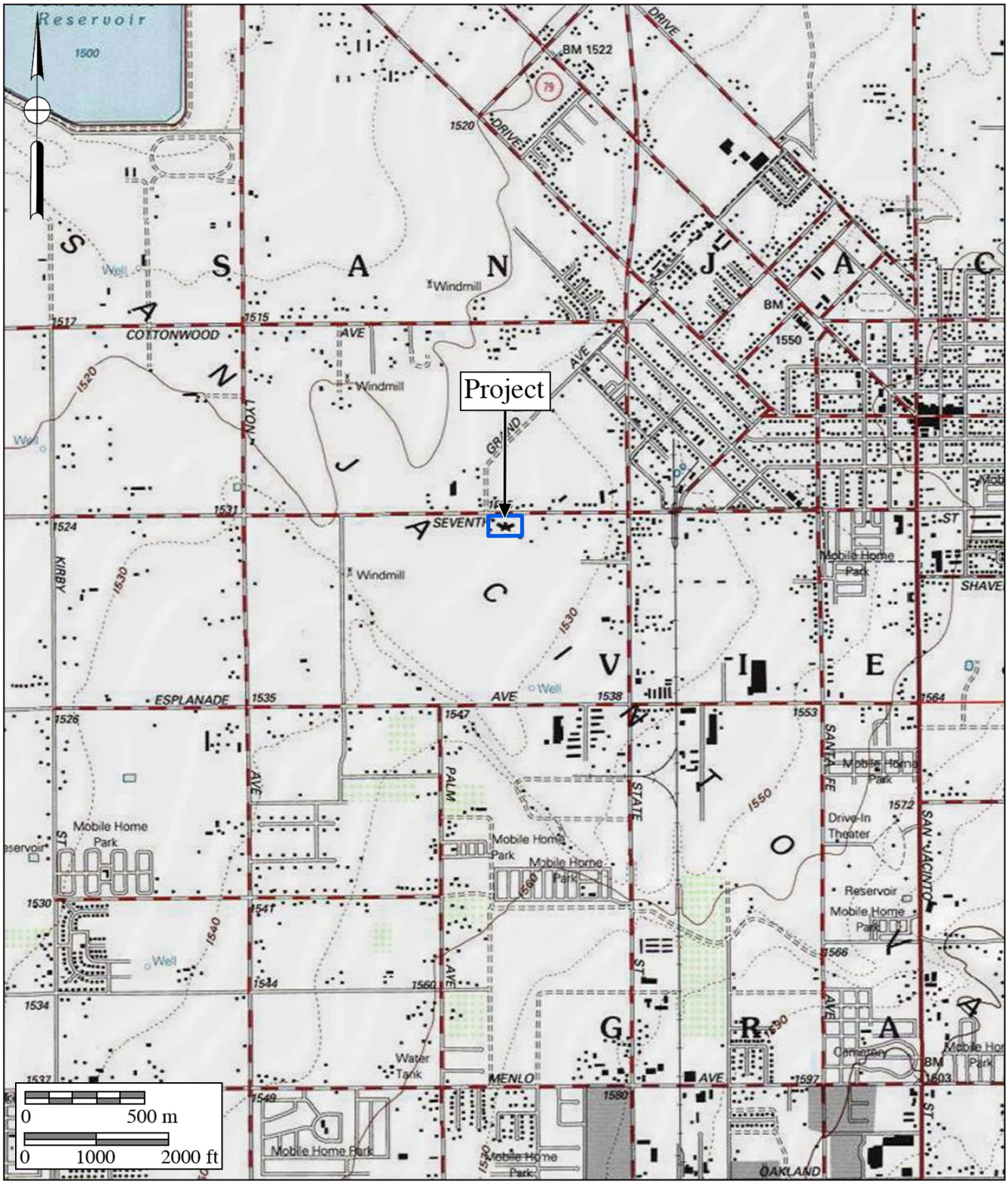
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Figure 1

General Location Map

The Bradley Gardens Project

Esri World Topographic Map



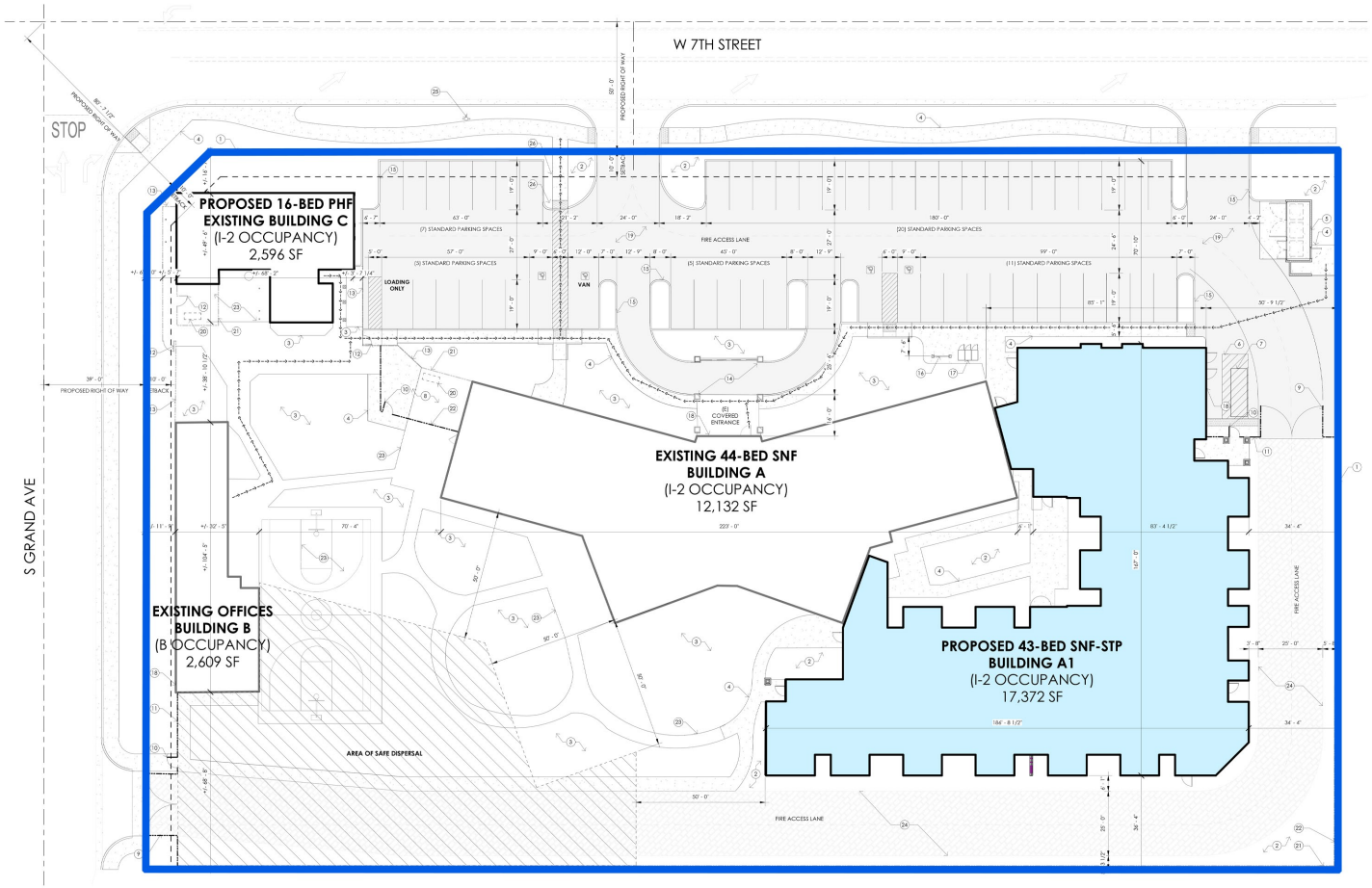
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Figure 2

Project Location Map

The Bradley Gardens Project

USGS *San Jacinto* and *Lakeview* Quadrangles (7.5-minute series)



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Figure 3
Project Development Map
The Bradley Gardens Project

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 Jacinto

The 2022 Envision San Jacinto – General Plan 2040 addresses cultural resources in its Resource Management chapter. The City of San Jacinto's Final Environmental Impact Report (EIR) identifies an existing potential for earth disturbance activities to adversely impact significant paleontological resources (City of San Jacinto 2022). Policy Resource Management (RM) 3.1 Preservation serves to preserve paleontological resources, stating "Protect areas containing significant historic, archaeological, paleontological, and tribal cultural resources, as defined by the California Public Resources Code." In response, Action RM-3e, stated below and in the City's Draft EIR (De Novo Planning Group 2022), is provided to reduce adverse impacts to paleontological resources to a level below significant (City of San Jacinto 2022):

> The City shall require an assessment of the potential for development proposals to significantly impact paleontological resources pursuant to the California Environmental Quality Act Guidelines. If the project involves earthworks, the City may require a study conducted by a professional paleontologist to determine if paleontological assets are present, and if the project will significantly impact the resources. If significant impacts are identified, the City may require the project to be modified to avoid impacting the paleontological materials, require monitoring of rock units with high potential to contain significant nonrenewable paleontological resources, or require mitigation measures to mitigate the impacts, such as recovering the paleontological resources for preservation.

3.0 GEOLOGY

Regionally, the project lies within the San Jacinto Valley, east of the Lakeview Mountains. The surficial geology at the project is mapped as Holocene and late Pleistocene-aged young alluvial valley deposits (area colored pale olive-gray with dots labeled "Qya" on Figure 4, after Lancaster et al. 2012). These deposits are characterized as clay, silt, sand, and gravel along stream valleys and alluvial flats of larger rivers. Disturbed deposits likely overlie the undisturbed alluvial deposits.

4.0 PALEONTOLOGICAL RESOURCES

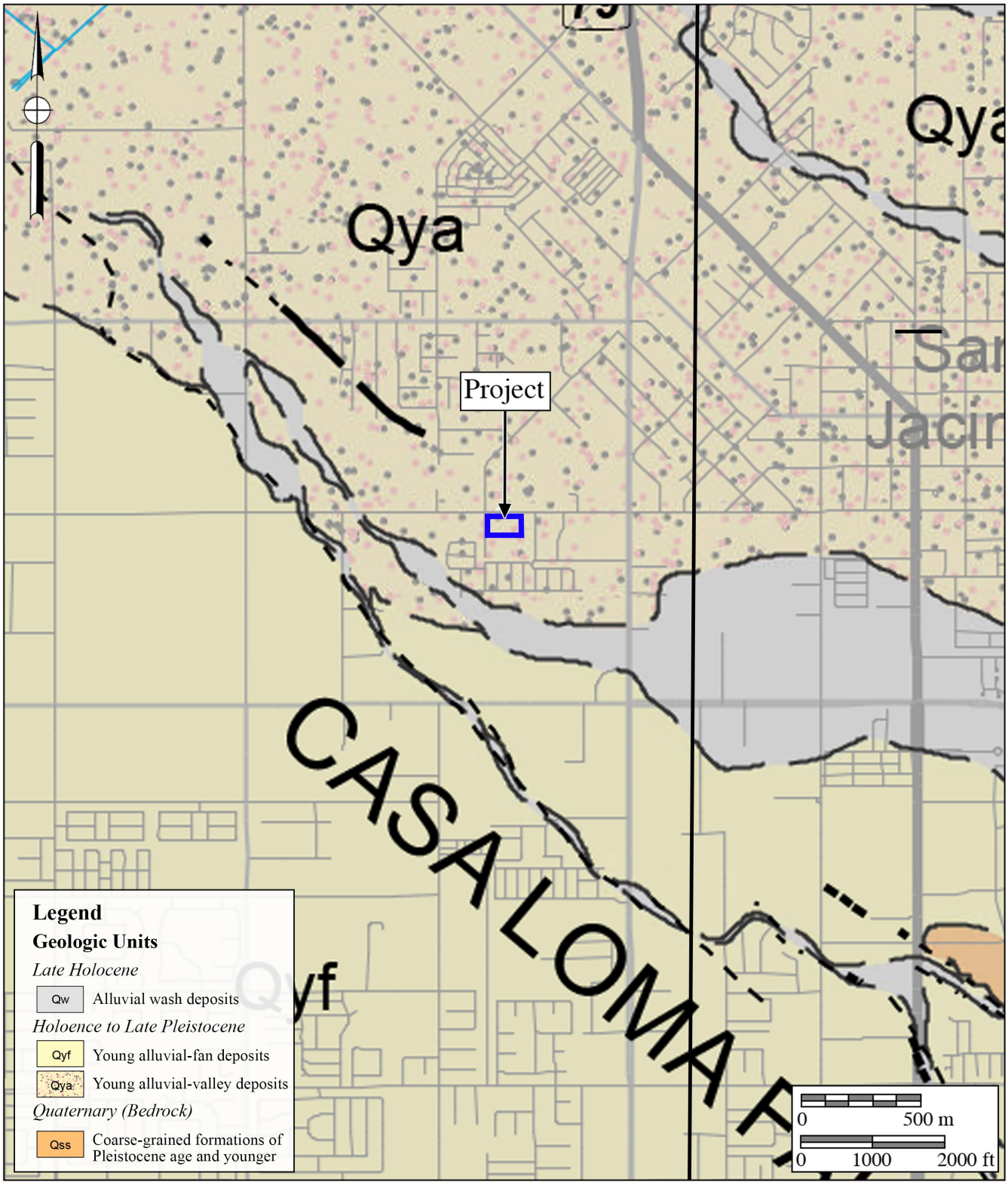
Definition

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 2025) 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 (see Sections 2.0 and 5.0 of this report).

Paleontological Locality Records 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., and BFSA Environmental Services, a Perennial Company (BFSA) projects, the Division of Geological Sciences at the San Bernardino County Museum (SBCM), the Los Angeles County Museum of Natural History, the San Diego Society of Natural History (SDSNH), and the Western Science Center (WSC), as well as data from published and unpublished paleontological literature (Jefferson 1991). The resulting locality records search did not identify any previously recorded fossil localities within the project boundaries.

The closest known fossil localities were recovered during mitigation monitoring for improvements at the Monte Vista Middle School, situated approximately one mile northeast of the project. The late Pleistocene fossils consisted of the shells of freshwater snails and the bones of frogs, snakes, lizards, and mammals, as well as the dental remains of rodents, including those of pocket gophers (*Thomomys* sp.) (SDSNH locality number 7971). This locality was recovered as a result of screenwashing about 400 pounds of fossiliferous sedimentary matrix consisting of pale olive siltstone, collected at approximately seven feet deep in an area mapped as young alluvial valley deposits. The deposits were interpreted as representing a fluvial overbank environment and are mapped within the same geologic unit by Lancaster et al. (2012) as the current project.



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Figure 4

Geologic Map

The Bradley Gardens Project

Geology after Lancaster et al. (2012)

Other fossil localities were discovered during mitigation monitoring for the construction of the Eastside Pipeline (De Novo Planning Group 2022), a little more than three miles west of the project. From WSC records, these Pleistocene vertebrate localities extend from Esplanade Avenue to as far south as Stetson Avenue and are situated within areas mapped as young alluvial valley deposits. Fossil specimens include rodents (*Thomomys* sp., *Dipodomys* sp.), camels (*Camelops* sp.), and more (Stoneburg 2024).

Approximately four miles south of the project, south of the Hemet-Ryan Airport off Warren Road, a locality consisting of the bones of an extinct horse and other unidentified large mammal remains were discovered during mitigation monitoring. Fossils were recovered from 10 places at the locality, at depths as little as a few feet below the surface, in an area mapped as young alluvial valley deposits (Kennedy 2006). These fossils are housed at the WSC. From similar deposits as the project, the closest SBCM localities are located at Lakeview Hot Springs near Lake Perris, and the nearest LACM locality is near the Lake Skinner reservoir.

Project Survey

BFSA staff, under the supervision of Principal Investigator Todd A. Wirths, M.S., P.G., conducted a project survey on February 6, 2026, employing a series of parallel survey transects spaced at approximately 15-meter intervals. The entire property was covered by the survey process. Approximately half of the area proposed for development had existing structures, with the remainder occurring as paved parking lots and graded dirt areas. The proposed development area was 100 percent disturbed. No paleontological resources, or evidence indicating the presence of paleontological resources, were identified as a result of the survey.

5.0 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 (older than 11,700 years old) alluvial and alluvial fan deposits in the Inland Empire and western Riverside County, 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 (2025) has put forth the guideline criteria, a "Fossil Prediction Map System" (FPMS), which include six categories of paleontological sensitivity for geologic units (formations) that might be impacted by a proposed project, as listed below:

- *5 = Very High Potential:* Highly fossiliferous geologic units that consistently and predictably preserve scientifically significant fossils.
- *4 = High Potential:* Highly fossiliferous geologic units that preserve scientifically significant fossils, but their concentrations vary and are less predictable than 5.
- *3 = Moderate Potential:* Fossiliferous geologic units that are often marine in origin and in which fossils may be common, but scientifically significant fossils are isolated or sparse.
- *2 = Low Potential:* Geologic units that are not likely to preserve fossils, including sedimentary deposits that are generally younger than 11,700 years before present, older sedimentary units that only rarely preserve fossils, or units that exhibit physical and chemical alteration (diagenetic changes) that make fossil preservation unlikely.
- *1 = Very Low Potential:* Geologic units that are not likely to contain recognizable fossils including Precambrian units and units that are igneous or metamorphic, excluding air-fall and reworked volcanic ash.
- *U = Undetermined Potential:* Geologic units that cannot be assigned an informed FPMS designation. This includes units that have not been subject to prior field surveys but that contain lithologies or preserve depositional settings that are known to be conducive to fossil preservation, units that have not been published in the scientific literature, and units in which reports of fossils have not been verified.

Using these criteria, and based upon the distribution of nearby fossil localities, surficial fill and Holocene alluvial deposits at the project have a low potential to yield significant paleontological resources. The underlying Pleistocene young alluvial deposits may be considered to have a high potential to yield significant paleontological resources. The depth of age transition from Holocene to Pleistocene within the alluvial deposits at the project is unknown.

City of San Jacinto Sensitivity Assessment

The surficial alluvial deposits at the project are regarded by the City of San Jacinto as having a low potential to contain paleontological resources; however, the potential increases to high with (an unspecified) depth, in accordance with their increasing (verging into Pleistocene) age (De Novo Planning Group 2022:5.7–5.16).

6.0 CONCLUSION AND RECOMMENDATIONS

Research has confirmed the existence of potentially fossiliferous Pleistocene alluvial deposits that underlie Holocene deposits at the project. The occurrence of terrestrial vertebrate fossils from Pleistocene-aged alluvial deposits in western Riverside County and San Jacinto is well documented. The high paleontological sensitivity rating assigned to this formation for yielding paleontological resources supports the recommendation that paleontological monitoring be implemented during mass grading and excavation activities within these deposits to mitigate any adverse impacts (loss or destruction) to potential nonrenewable paleontological resources. Since the younger deposits are likely very thin at the surface, full-time monitoring at the project is warranted starting at three feet deep below the current surface. Monitoring disturbed soils or artificial fill deposits is not recommended.

A Paleontological Resource Impact Mitigation Program (PRIMP) with the recommended mitigation monitoring procedures at the project is outlined below. When implemented, this PRIMP would reduce potential impacts to paleontological resources to a level below significant.

Suggested PRIMP

1. All mitigation programs should be performed by a qualified professional (project) paleontologist, defined as an individual with a master's or doctorate 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. Monitoring of mass grading and excavation activities shall be performed by a qualified paleontologist or paleontological monitor. Full-time monitoring for paleontological resources from three feet deep below the surface will be conducted in areas where grading, excavation, or drilling activities occur in undisturbed alluvium to mitigate any adverse impacts (loss or destruction) to potential nonrenewable paleontological resources. The duration and frequency of monitoring may be altered at the discretion of the project paleontologist based upon geologic conditions encountered. Monitoring is not warranted in disturbed soils, such as artificial fill, or in crystalline bedrock formations, should they become exposed.
3. Paleontological monitors will be equipped to salvage fossils as they are unearthed to avoid construction delays and to remove samples of sediment that are likely to contain the remains of small fossil invertebrates and vertebrates. The monitor must be empowered to temporarily halt or divert equipment to allow for the removal of abundant or large specimens in a timely manner. The monitor shall notify the project paleontologist, who will then notify the concerned parties of the discovery.

Monitoring may be reduced if the potentially fossiliferous units are not present in the subsurface or, if they are present, are determined upon exposure and examination by qualified paleontological personnel to have low potential to contain fossil resources.

4. In accordance with the "Microfossil Salvage" section of the Society of Vertebrate Paleontology guidelines (2025), 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. If indicators of potential microvertebrate fossils are found, screening of a test sample (approximately 600 pounds) is recommended, according to the Society of Vertebrate Paleontology guidelines. If feasible, wet screening shall be conducted on-site. If screening yields significant fossils, removing and processing a "standard sample" of 6,000 pounds shall be performed.
5. Preparation of recovered specimens to a point of identification and permanent preservation will be conducted, including screen washing sediments to recover small vertebrates and invertebrates if indicated by the results of test sampling.
6. All fossils must be deposited in an accredited institution (university or museum) that maintains collections of paleontological materials. The Western Science Center in Hemet, California, is the preferred institution for fossils recovered within the County of Riverside. All costs of the paleontological monitoring and mitigation program, including any one-time charges by the receiving institution, are the responsibility of the developer.
7. Preparation of a final monitoring and mitigation report of findings and significance will be completed, including lists of all fossils recovered and necessary maps and graphics to accurately record their original location(s). A letter documenting receipt and acceptance of all fossil collections by the receiving institution must be included in the final report. The report, when submitted to and accepted by the appropriate lead agency (*e.g.,* the City of San Jacinto), will signify satisfactory completion of the project program to mitigate impacts to any nonrenewable paleontological resources.

7.0 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.



March 13, 2026

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

Date

8.0 REFERENCES

City of San Jacinto. 2022. Envision San Jacinto – General Plan 2040. https://static1.squarespace.com/static/5a999021cc8fedea12873268/t/639a30e962747e6d737cfb59/1671049471437/SanJacinto_AdoptedGPU.pdf.

De Novo Planning Group. 2022. Public Review Draft, Environmental Impact Report for the San Jacinto General Plan Update (Sch: 2020120312). Report prepared for City of San Jacinto Community Development Department, by De Novo Planning Group, Tustin, Calif. https://drive.google.com/file/d/12Vj9c-gjvsqypdwprdq_9OCvIt8OCksM/view.

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.

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Society of Vertebrate Paleontology. 2025. Best Practice Guidelines for Mitigation of Adverse Impacts on Paleontological Resources; by the SVP Government Affairs Committee. https://vertpaleo.org/wp-content/uploads/2025/10/SVP_Mitigation_Paleontology_Best_Practices_First_edition_October_2025.pdf.

Stoneburg, B.E. 2024. Letter for record search and map for the Hemet 80 Project. For BFSA Environmental Services, Poway, California, by the Western Science Center, Hemet, California.

APPENDIX A

Qualifications of Key Personnel

Todd A. Wirths, MS, PG No. 7588

Principal 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 Director, 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

2025 *Paleontological Monitoring Report for the Ontario Ranch Business Park Project, City of Ontario, San Bernardino County, California*. Prepared for Real Estate Developmental Associates, LLC.

2025 *Paleontological Assessment for the Irwindale Aggregates Project, 13550 Live Oak Avenue, Irwindale, Los Angeles County, California*. Prepared for Lilburn Corporation, Inc.

2025 *Paleontological Resource Impact Mitigation Program for the Canterwood 53 Project (BGR2400072; TTM 38332), Riverside County, California*. Prepared for KB Home Inland Empire Division.

2025 *Paleontological Monitoring Report for the Alberhill Tract 28214-9 Project, city of Lake Elsinore, Riverside County, California*. Prepared for Pulte Group.

2025 *Paleontological Assessment for the Quail Valley Nature Park Project, City of Menifee, Riverside County, California*. Prepared for EPD Solutions, Inc.

2025 *Paleontological Assessment for the Hesperia Gateway Project, City of Hesperia, San Bernardino County, California.* Prepared for T&B Planning.

2024 *Paleontological Resource Impact Mitigation Program for the 450 The Promenade North Project, City of Long Beach, Los Angeles County, California.* Prepared for JPI-West Region.

2024 *Paleontological Assessment for the Noble Creek Vistas SPA Project, Beaumont, Riverside County, California*. Prepared for EPD Solutions, Inc.

2024 *Paleontological Assessment for the High Desert Gas Station Project, Yucca Grove, San Bernardino County, California*. Prepared for Lilburn Corporation, Inc.

2024 *Paleontological Resource Impact Mitigation Program for the 424 Berry Way Project, Brea, Orange County, California*. Prepared for EPD Solutions, Inc.

2024 *Paleontological Monitoring Report for the Manchester Pacific Gateway/IQHQ RaDD Project, San Diego, California*. Prepared for Manchester Financial Group LP.

2024 *Paleontological Resource Impact Mitigation Program for the Vernola Ranch Project, Jurupa Valley, Riverside County, California.* Prepared for Lennar Homes of California.

2023 *Paleontological Assessment for the Kramer Junction Solar Project, Kramer Junction, San Bernardino County, California*. Prepared for San Bernardino CSG 3 LLC.

2023 *Paleontological Monitoring and Mitigation Plan for the Moss Street Beach Access Improvements Project, Moss Street Beach, City of Laguna Beach, California*. Prepared for the City of Laguna Beach.

2023 *Paleontological Monitoring Report for the 11th and Broadway Residential Towers Project, San Diego, California*. Prepared for Pinnacle International Development.

2023 *Paleontological Assessment for the Willow Street and Orange Avenue Project, City of Signal Hill, Los Angeles County, California*. Prepared for CenterPoint Properties.

2023 *Paleontological Resource Assessment Update for the Summerwind Ranch Specific Plan Amendment, Phases 2-5, Calimesa*. Prepared for Jen So Cal 2, LLC.

2023 *Paleontological Resource Impact Mitigation Program for the Palisade Temescal Canyon Project, Riverside County, California, PPT220036, BGR2300031, BGR2300032*. Prepared for North Palisade Partners, LLC.