



April 23, 2025

Tatiana Torres
EPD Solutions, Inc.
3333 Michelson Drive, Suite 500
Irvine, California 92612

Subject: Paleontological Records Search for the Westoria (Torrance Townhomes) Project, City of Torrance, Los Angeles County, California (APNs 7355-032-010 to -012)

Dear Ms. Torres:

A paleontological records search and survey report has been completed for the 7.8-acre Westoria (Torrance Townhomes) Project, located southwest of the intersection of Torrance Boulevard and Western Avenue in the city of Torrance, California (Assessor's Parcel Numbers [APNs] 7355-032-010 to -012). A residential development is being proposed for construction at the project. The project is situated within Township 4 South, Range 14 West, of the United States Geological Survey 1:24,000-scale *Torrance, California* (7.5-minute) topographic quadrangle map.

Introduction and Background

The paleontological records search focused upon the property's potential to contain significant paleontological resources that could constrain use of the property for future redevelopment. The scope of work for this paleontological records search included a review of existing records regarding recorded fossil localities within and adjacent to the property, the project's geologic setting, and preparation of this letter report to summarize the results of the search and to present an opinion regarding the potential to encounter significant paleontological resources during development of the project. An on-site survey was not performed since the project parcels are completely covered by existing pavement and buildings.

Paleontological resources are the remains of prehistoric life that have been preserved in geologic strata. These remains are called fossils and include bones, shells, teeth, and plant remains (including their impressions, casts, and molds) in the sedimentary matrix, as well as trace fossils such as footprints and burrows. Fossils are considered older than 5,000 years of age (Society of Vertebrate Paleontology 2010) but may include younger remains (subfossils) when viewed in the context of local extinction of the organism or habitat. Fossils are considered a nonrenewable resource under state and county guidelines. The current General Plan for the city of Torrance does not discuss paleontological resources (City of Torrance 2010).

Geology

Geologically, the project is mapped as late to middle Pleistocene old alluvium, described as fluvial sediments deposited on canyon floors consisting of consolidated, poorly sorted, gravel, sand, silt, and clay-bearing alluvium (Saucedo et al. 2016).

Below the surface, the Pleistocene deposits mapped by Saucedo et al. (2016) and Dibblee et al. (1999) in the area of the project may be correlative, in part, to the Palos Verdes Sand, the San Pedro Sand, and/or the Timms Point Silt (Kennedy 1975). All are known to be fossiliferous, yielding abundant molluscan and vertebrate faunas (Kennedy 1975; Langenw&alter 1975).

Paleontological Records Search

A paleontological collections and locality records search was conducted for the project by Natural History Museum of Los Angeles County (LACM) (Bell 2025, attached). Based upon the records search, the closest fossil locality to the project lies just north of the Torrance Boulevard/Western Avenue intersection, perhaps as little as 100 feet away, consisting of uncatalogued invertebrates (likely molluscan shells) of Pleistocene age found during an excavation for an oil tank (LACM locality number (loc.) 21125). The nearest terrestrial Pleistocene locality, represented by fossilized bones from a camel, is located about two and a half miles southeast of the project in the southwest corner of the city of Carson, discovered at a depth of 12 to 14 feet deep (LACM loc. 3823). About three and a half miles to the southwest, uncatalogued Pleistocene vertebrate remains were found in a gravel pit from the Palos Verdes Sands or the San Pedro Sands (LACM loc. 3265). The remaining localities reported by Bell (2025) are several miles distant.

From literature, the closest fossil locality, LACM loc. 4444, is reported by Jefferson (1991), consisting of the remains of extinct horse (*Equus* sp.). This fossil locality is situated at the petroleum refinery in Torrance, accessed from 190th Street, between a mile and a mile and a half away. No other data is provided.

Holocene alluvium is generally considered to be geologically too young to contain significant nonrenewable paleontological resources (*i.e.*, fossils) and is, therefore, typically assigned a low paleontological sensitivity. Pleistocene (more than 11,700 years 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, and camel, saber-toothed cats, and others (Jefferson 1991). These Pleistocene sediments are accorded a high paleontological resource sensitivity.

Conclusions

The review of the records search and geologic data for the property yielded sufficient information to provide an opinion regarding the potential to constrain property redevelopment due to paleontological resources. The following points are salient to the evaluation of potential constraints:

- The surface of the project is mapped as late Pleistocene older alluvium.
- Pleistocene old alluvium has a high potential to yield significant paleontological resources.
- The completed records search indicates paleontological resources are known to be near the property.
- The completed geological and paleontological records search results indicate the property has a high potential to yield Pleistocene-aged vertebrate and invertebrate fossils.

Recommendations

Adverse impacts to potential paleontological resources below the surface could occur if the subject property is planned for future development. Paleontological monitoring is recommended during earth disturbance activities to minimize potential impacts.

Based upon the geologic setting at the project and the high paleontological resource sensitivity assigned to the deposits in the area of the subject property by the City of Torrance, monitoring for potential paleontological resources may be required by the City during earth-disturbance activities at the project. The City may require the preparation of a paleontological mitigation monitoring and reporting plan prior to grading that would stipulate the protocols and procedures to deal with any fossils that may be encountered during grading for the proposed development. The potential to encounter fossils during grading of the property is not considered to be a constraint to development. The mitigation for the discovery of fossils is the removal of the fossils from the property, analysis and stabilization of the fossils, and preparation of the fossils for placement in a museum or curation center for permanent storage. Encountering fossils during grading will require that the grading be redirected elsewhere on the project while the paleontologists remove the fossils. Grading can resume when the fossils are safely removed.

The information and conclusions provided in this letter report represent opinions based upon a preliminary review of the property. No significant constraints to development are anticipated based upon this analysis of paleontological resources. The eventual use of the property may require paleontological monitoring during earthwork; however, the cost of this mitigation monitoring program would not be a significant constraint to development.

If you have any questions concerning this evaluation, please feel free to contact us at our Poway address. Thank you for the opportunity to provide paleontological services for this project.

Sincerely,



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

Attachment: Letter (Bell 2025)

References

Bell, A. 2025. Paleontological Resources for the Westoria (Torrance Townhomes) Project (BFSA project no. 25-082). Prepared for BFSA Environmental Services, Poway, California, by the Natural History Museum of Los Angeles County, Los Angeles, California. (attached)

City of Torrance. 2010. City of Torrance General Plan 2009. <https://www.torranceca.gov/our-city/community-development/general-plan>.

Dibblee, T.W., Ehrenspeck, H.E., Ehlig, P.L., and Bartlett, W.L. 1999. Geologic map of the Palos Verdes Peninsula and vicinity, Redondo Beach, Torrance, and San Pedro quadrangles, Los Angeles County, California. Dibblee Foundation Map DF-70, by the Dibblee Geological Foundation, Santa Barbara Museum of Natural History.

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.

Kennedy, G.L. 1975. Paleontologic record of areas adjacent to the Los Angeles and Long Beach Harbors, Los Angeles County, California. *In*, Soule, D.F., and Oguri, M., eds., Marine studies of San Pedro Bay, California: Part 9: Paleontology. Published by The Allen Hancock Foundation Harbors Environmental Projects and The Office of Sea Grant Programs, University of Southern California, Los Angeles, California.

Langenwalter, P.E., II. 1975. Chordates: The fossil vertebrates of the Los Angeles-Long Beach Harbors region, *in*, Kennedy, G.L., Paleontologic record of areas adjacent to the Los Angeles and Long Beach Harbors, Los Angeles County, California. *In*, Soule, D.F., and Oguri, M., eds., Marine studies of San Pedro Bay, California: Part 9: Paleontology.

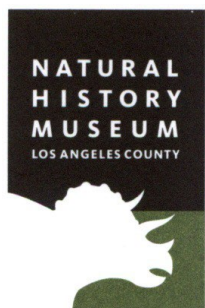
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Society of Vertebrate Paleontology. 2010. Standard procedures for the assessment and mitigation of adverse impacts to paleontological resources; by the SVP Impact Mitigation Guidelines Revision Committee. Electronic document, https://vertpaleo.org/wp-content/uploads/2021/01/SVP_Impact_Mitigation_Guidelines-1.pdf.

ATTACHMENT

Paleontological Records Search Results



Natural History Museum
of Los Angeles County
900 Exposition Boulevard
Los Angeles, CA 90007

tel 213.763.DINO
www.nhm.org

Research & Collections

e-mail: paleorecords@nhm.org

April 13, 2025

BFSA Environmental Services
Attn: Todd A. Wirths

re: Paleontological resources records search for the Westoria (Torrance Townhomes) Project (#25-082)

Dear Todd:

I have conducted a thorough search of our paleontology collection records for the locality and specimen data for proposed development at the Westoria (Torrance Townhomes) project area as outlined on the portion of the Torrance USGS topographic quadrangle map that you sent to me via e-mail on April 8, 2025. We do not have any fossil localities that lie directly within the proposed project area, but we do have fossil localities nearby from the same sedimentary deposits that may occur in the proposed project area, either at the surface or at depth.

The following table shows the closest known localities in the collection of the Natural History Museum of Los Angeles County (NHMLA).

Locality Number	Location	Formation	Taxa	Depth
LACM IP 21125	North of the intersection of Western Ave & Torrance Blvd	Unnamed formation (Pleistocene)	Invertebrates (uncatalogued)	Unrecorded (in excavation for an oil tank)
LACM VP 3823	Vicinity of Figueroa St & Sepulveda Blvd	Unnamed formation (Pleistocene; grey buff arenaceous silt)	Camel family (Camelidae)	12-14 feet bgs
LACM VP 3265	Gravel pit located in Torrance south of Winlock; west of Crenshaw & east of Hawthorne Blvd.	Palos Verdes Sand / San Pedro Sand (terrace deposits)	Vertebrata: marine & terrestrial (uncatalogued specimens)	Unknown

Table continued on next page

Locality Number	Location	Formation	Taxa	Depth
LACM VP 1295, 1344, 4206	Harbor Freeway excavations between 112 St & 113 St.*	Unknown formation (Pleistocene)	Horse (<i>Equus</i>), Bison (<i>Bison</i>), canine (<i>Canis</i>), birds (<i>Mancalla</i> , <i>Parapavo</i> , Aves), rabbit (<i>Sylvilagus</i> , Leporidae), mammoth (<i>Mammuthus</i>), rodent (<i>Thomomys</i> , <i>Microtus</i> , Sciuridae, Rodentia), ground sloth (<i>Paramylodon</i>), turtle (<i>Clemmys</i>), antelope (<i>Breameryx</i>), artiodactyl (<i>Pecora</i>)	Unknown
LACM VP 4129	South of 223rd St. & west of Alameda Street	Unknown formation (Pleistocene sand)	Elephant family (Proboscidea); camel family (Camelidae)	24 feet bgs

VP, Vertebrate Paleontology; IP, Invertebrate Paleontology; bgs, below ground surface

**As published in see Miller 1971; Bulletin of the Los Angeles County Museum of Natural History, Science: no. 10*

This records search covers only the records of the NHMLA. It is not intended as a paleontological assessment of the project area for the purposes of CEQA or NEPA. Potentially fossil-bearing units are present in the project area, either at the surface or in the subsurface. As such, NHMLA recommends that a full paleontological assessment of the project area be conducted by a paleontologist meeting Federal (43 Code of Federal Regulations Part 49.110) or Society of Vertebrate Paleontology standards.

Sincerely,



Alyssa Bell, Ph.D.
Natural History Museum of Los Angeles County