PALEONTOLOGICAL RESOURCE IMPACT MITIGATION PROGRAM FOR THE BEAUMONT POINTE SPECIFIC PLAN PROJECT

CITY OF BEAUMONT, RIVERSIDE COUNTY

Prepared for:

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Paleontological Database Information

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Report Title:	Paleontological Resource Impact Mitigation Program for the Beaumont Pointe Specific Plan Project, City of Beaumont
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USGS Quadrangle:	*El Casco, California* (7.5 minute)
Study Area:	539.9 acres
Key Words:	PRIMP; "High A" paleontological sensitivity; San Timoteo Formation; Pliocene; Pleistocene; vertebrate fossils; City of Beaumont; monitoring starting at surface recommended.

I. INTRODUCTION AND LOCATION

This Paleontological Resource Impact Mitigation Program (PRIMP) has been completed for the Beaumont Pointe Specific Plan Project (SP2019-0003; PLAN219-0283; PLAN2019-0284; ENV2019-0008). The proposed project includes the industrial and commercial development of an approximately 539.9-acre area between Mt. Eden and Oak Valley near the city of Beaumont, Riverside County, California (Figures 1 and 2). The project is located in portions of Sections 1, 2, and 12 of the USGS 7.5-minute *El Casco, California* topographic quadrangle (Township 3 South, Range 2 West) and lies south and west of the Moreno Valley Freeway (California State Route 60) (Figure 2). The project includes Assessor's Parcel Numbers 422-060-002, -005, -009, -010, -016, -017, -018, -021, and -022 and 422-170-005 and -008. Based upon map figures in the City of Beaumont General Plan (City of Beaumont 2020a), the project is not currently within the Beaumont city boundaries, but is within the city's "sphere of influence." The City of Beaumont is proposing to annex the project.

Implementation of this PRIMP addresses the potential for scientifically significant fossil remains that might be uncovered by earth-moving activities at previously unknown fossil sites within the project area. Without the PRIMP, fossil remains and associated specimen and corresponding geologic data would be lost to excavation activities and unauthorized fossil collecting. The recommendations in this PRIMP are consistent with the intent and provisions of the California Environmental Quality Act (CEQA), environmental guidelines of the County of Riverside and the City of Beaumont, and the procedures outlined of the Society of Vertebrate Paleontology (2010) and should be implemented for any mass grading and excavation-related activities, including utility and storm drain trenching, during construction within the project. This PRIMP will: identify any documented nearby fossil localities; summarize the geology underlying the site and assess the potential to contain paleontological resources; evaluate the potential of project activities to negatively impact fossil resources that might exist below the project site; and provide recommendations for mitigation of potential impacts, if appropriate.

II. REGULATORY SETTING

CEQA, which is patterned after the National Environmental Policy Act, is the overriding environmental document that sets the requirement for protecting California's cultural and paleontological resources. The document does not establish specific rules that must be followed but mandates that governing permitting agencies (lead agencies) set their own guidelines for the protection of nonrenewable paleontological resources under their jurisdiction.

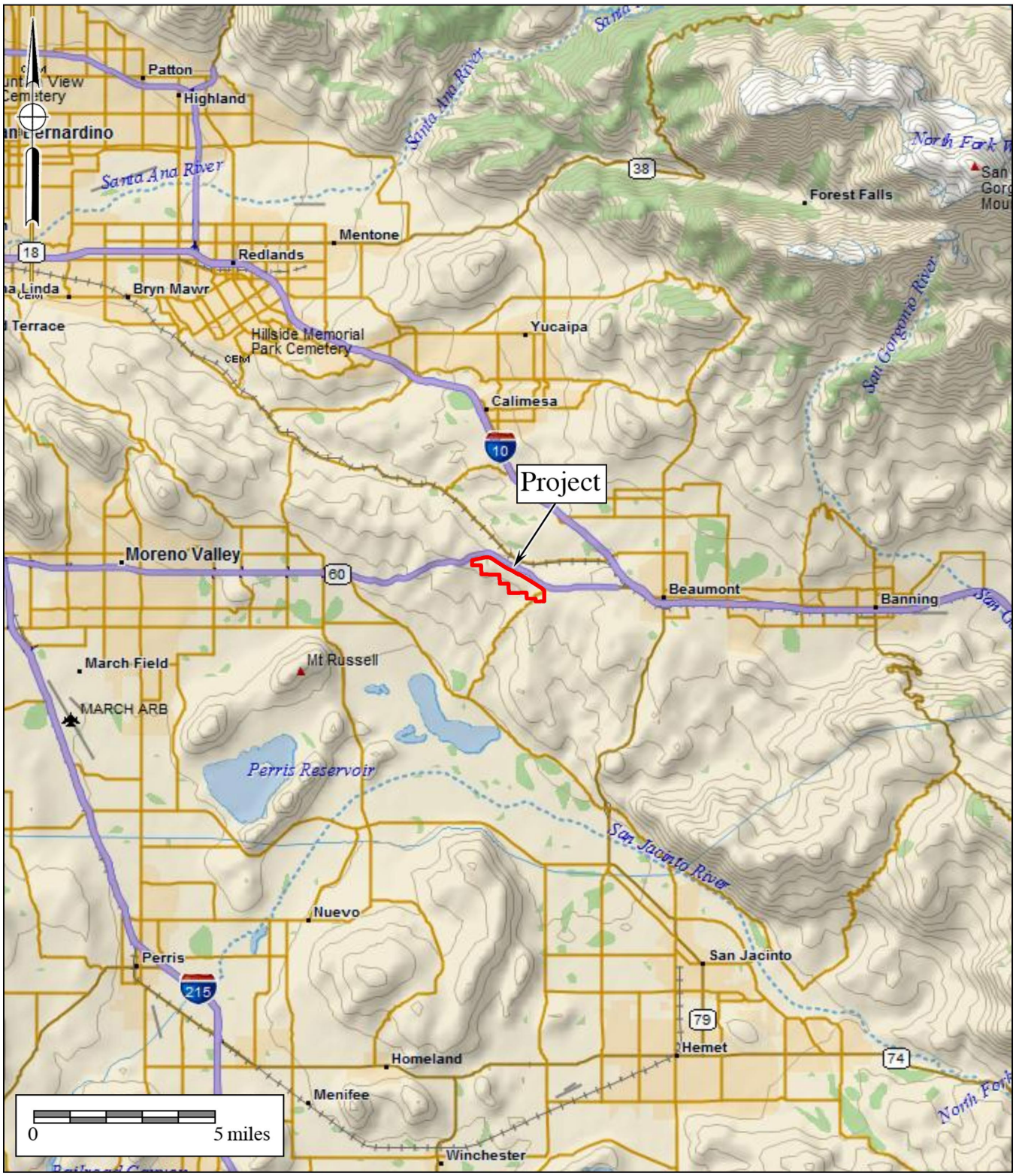


Figure 1

General Location Map

The Beaumont Pointe Specific Plan Project

DeLorme (1:250,000)

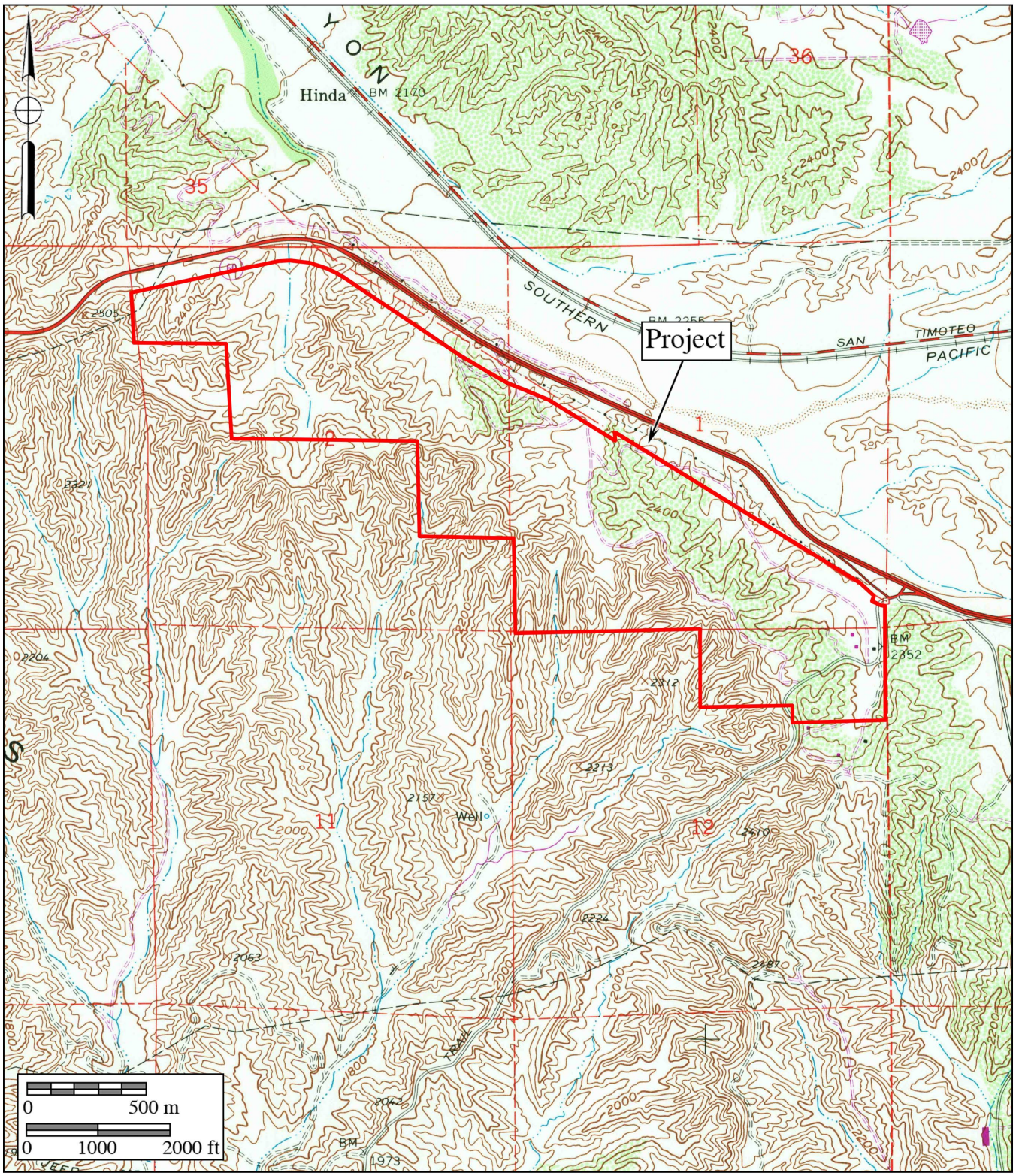


Figure 2

Project Location Map

The Beaumont Pointe Specific Plan Project

USGS *El Casco* Quadrangle (7.5-minute series)

State of California

Under Guidelines for the Implementation of CEQA, 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 the Environmental Checklist, 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 V, Part c). California Public Resources Code Section 5097.5 states:

a) No person shall 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. Violation of this section is a misdemeanor.
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.

Finally, stated under California Public Resources Code Section 30244, in public lands "[w]here development would adversely impact archaeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required."

County of Riverside

An online, interactive, paleontological sensitivity mapping database is maintained by the County of Riverside as a research tool to access the County's assignment of levels of paleontological sensitivity to the various geologic formations within the county (County of Riverside 2021). This is specifically addressed in Section V of this report.

Riverside County's "SABER Policy" (Safeguard Artifacts Being Excavated in Riverside County), enacted in October 2011 by the Riverside County Board of Supervisors, may be applicable to the current project. The "SABER Policy" requires that any paleontological resources found or unearthed in the county of Riverside be curated at a facility within Riverside County, including the Western Science Center located in the city of Hemet (County of Riverside 2015, Policy OS 19.9).

City of Beaumont

Recently, the City of Beaumont adopted a new General Plan (City of Beaumont 2020a). Policy 8.11.1 is the only passage discussing paleontological resources in the new General Plan, and states "Avoid or when avoidance is not feasible, minimize impacts to sites with significant archaeological, paleontological, cultural and tribal cultural resources, to the extent feasible" (City of Beaumont 2020a, p. 217). A final Environmental Impact Report was available for review, but paleontological resources are not addressed in it (City of Beaumont 2020b).

III. GEOLOGY

Geologic mapping by Matti et al. (2015) indicates the majority of the project site is underlain by the middle Pliocene to lower Pleistocene (about three to approximately 1.7-million-year-old) fossiliferous middle member of the San Timoteo Formation (blue-gray areas labeled "Tstm" on Figures 3A and 3B), with Holocene (modern) young alluvial fan deposits lining drainage valleys (pea-green areas labeled "Qyf_5" on Figures 3A and 3B). Minor surficial units include upper Pleistocene to mostly Holocene (50,000 year old to modern) young landslide deposits (yellowish areas with red triangles labeled "Qyls" on Figures 3A and 3B), and a few small patches of middle Pleistocene (about 0.6 million year old) very old alluvial-fan deposits (orange-yellow areas with red dots labeled "$Qvof_3$" on Figures 3A and 3B). In the project area, the San Timoteo Formation consists of sheeted conglomerates, sandy mudstones, and poorly indurated sandstones. Many conglomerate beds grade upward into finer alluvial layers, which, in turn, grade into reddish paleosols (Albright 1999a). Albright (1999a, 1999b) focused fossil collecting mostly to these paleosols. The middle member of the San Timoteo Formation conformably overlies the sandstone unit of the lower member ("Tstls" on Figures 3A and 3B), which in turn conformably overlies the upper Miocene Mount Eden Formation, consisting of fluvio-lacustrine mudstones and sandstones (Albright 1999a; Matti et al. 2015).

Regionally, the project lies within the San Timoteo Badlands, a rugged area underlain by approximately 2,000 meters of nonmarine sedimentary rocks spanning a period of deposition from approximately seven or eight million to about 0.5 million years ago, and includes the San Timoteo Formation (Albright 1999a; Matti et al. 2015). The San Timoteo Badlands occupy an area bracketed by the northwest-southeast trending San Andreas and San Jacinto fault zones. Within the El Casco quadrangle, cessation of major depositional systems occurred about 700,000 years ago, coinciding with initiation of the erosion of landforms as a result of regional tectonics (Matti et al. 2015).

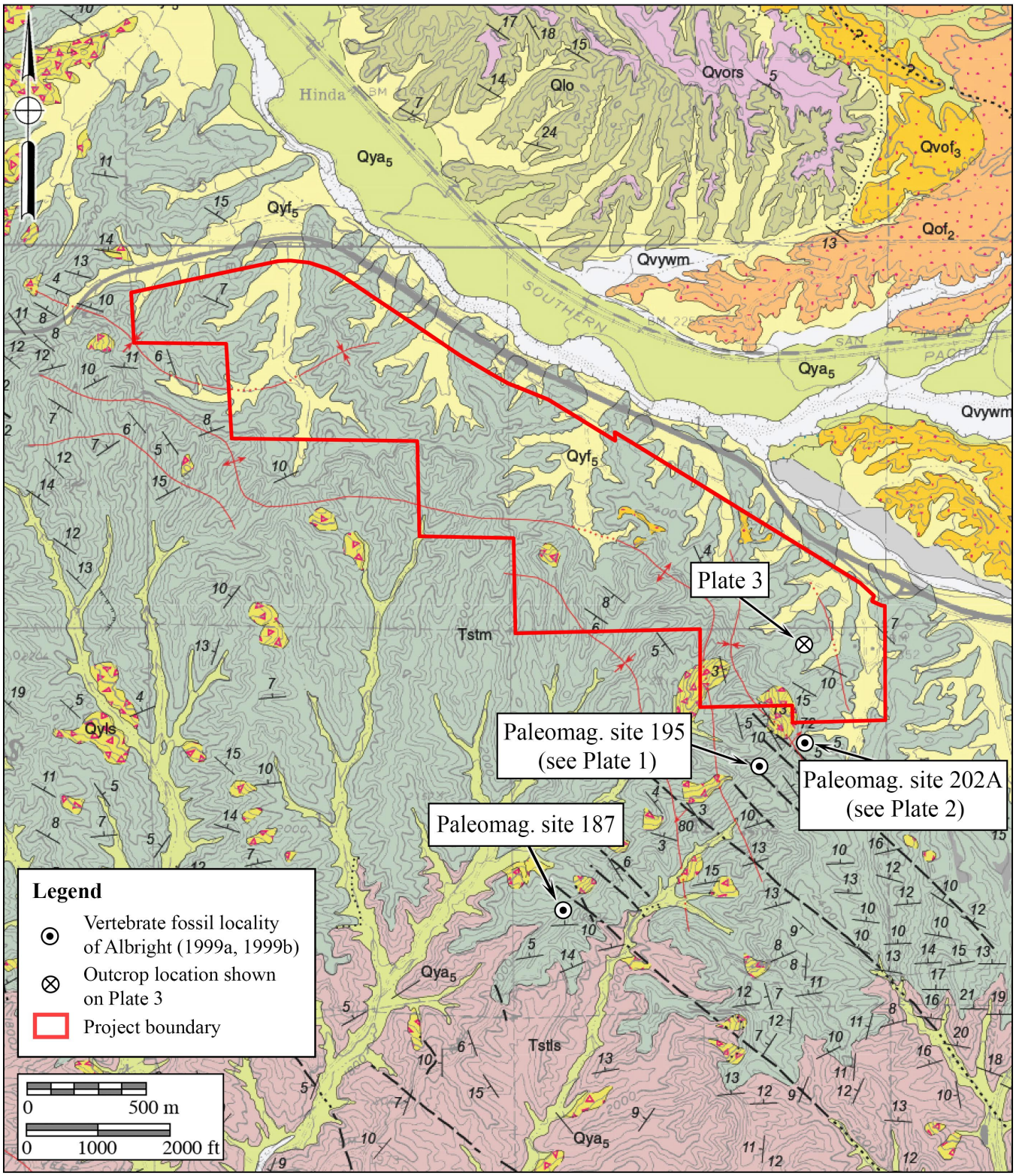


Figure 3A

Geologic Map

The Beaumont Pointe Specific Plan Project

Geology after Matti et al. (2015)

DESCRIPTION OF MAP UNITS

Holocene

Qvywm — **Very young wash deposits, modern**—Very slightly to slightly consolidated sandy and gravelly sediment in active channels.

Qya5 — **Young axial-valley deposits, unit 5 (uppermost Holocene)**

Qyf5 — **Young alluvial-fan deposits, unit 5 (uppermost Holocene)**

Qyls — **Young landslide deposits (Holocene & uppermost Pleistocene)**—Slightly dissected slope-movement deposits. Locally may include old landslide material.

Pleistocene

Qof2 — **Old alluvial-fan deposits, unit 2 (upper to middle Pleistocene)**

Qvors — **Very old residuum and (or) pedogenic soil (middle to lower Pleistocene)**—Consists of residuum and (or) pedogenic-soil profile developed on Sedimentary deposits of Live Oak Canyon (unit Qlo).

Qvof3 — **Very old alluvial-fan deposits, unit 3 (middle Pleistocene)**

Qlo — **Sedimentary deposits of Live Oak Canyon (Pleistocene)**—Unconsolidated and consolidated nonmarine sedimentary material.

Pliocene San Timoteo Formation

Tstm — **Middle member (upper and middle Pliocene)**—Forms middle part of San Timoteo formation. Consists of four principal lithologies that recur throughout sequence: (1) thick sheet-like layers of conglomeratic rock; (2) light-gray to white sandstone and slightly conglomeratic sandstone; (3) reddish mudstone and sandstone; and (4) locally significant but minor grayish-green mudrock.

Tstls — **Sandstone unit of Lower member (lower Pliocene)** - Forms lower part of San Timeteo formation of Frick (1921). Consists dominantly of sandy rock interbedded with sparse conglomeratic rock.

Figure 3B

Geologic Key

The Beaumont Pointe Specific Plan Project

Geology after Matti et al. (2015)

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 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 non-renewable resource under state and county guidelines (Section II of this report).

Fossil Records Search

Four paleontological literature reviews and collections and records searches were performed for the project area: two in-house reviews by BFSA, one by the Natural History Museum of Los Angeles County (LACM), and one by the Western Science Center, based in Hemet. The in-house reviews included published field work conducted in the San Timoteo Badlands and reviewed the online fossil data files held at the University of California Museum of Paleontology (UCMP) in Berkeley, California.

Paleontological field work for a Ph.D. dissertation was performed by L.B. Albright, resulting in two publications, a Geological Society of America Bulletin (Albright 1999a), and a University of California (UC) Press volume (Albright 1999b). Both of these publications generally shared the same mapping and locality data and figures; the UC Press volume was more focused on elaborating paleontological taxonomy and specimen-specific data. Albright's work included the collection of fossil vertebrate remains in both the Mt. Eden and San Timoteo Formations and resulted in the identification of 36 species of mammals, including six new taxa (1999b). Almost all the fossil materials were derived from intensive screening methods of matrix totaling 49,150 pounds. Albright recorded 13 fossil localities along the length of Jack Rabbit Trail. Two of these localities ("Paleomag. site 195" [Plate 1] and "Paleomag. site 202A" [Plate 2]; see Figure 3A) lie just outside the southern project boundary, while a third is located west of the property boundary at a distance of about one-third of a mile ("Paleomag. site 187"). The other localities along Jack Rabbit Trail are located further southwest beyond one mile, as well as two more located northwest of the project between one and two miles distant. Specimens of several rodent species were recovered from the San Timoteo Formation, including extinct species of porcupine, gopher, kangaroo rat, cotton rat, pack rat, vole, and deer mouse. Other mammalian taxa include rabbit, shrew, and horse (*Plesippus idahoensis*) fossils (Albright 1999a, 1999b). Additional mammalian fossils recovered by Albright at the northern locality located about two miles northwest of the northern area of the project include coyote, tapir, and a different species of horse (*Equus*). Finally, a mammoth tooth as recovered at the surface about five miles northwest of the project (Albright 1999b).

Plate 1: Overview of the approximate location of Paleomag. site 195 (Albright 1999a, 1999b) outside of the project, facing southeast. Pick for scale.

Plate 2: Overview of the approximate location of Paleomag. site 202A (Albright 1999a, 1999b) outside of the project, facing east-southeast. Pick for scale.

Records of specimens held by the UCMP were searched online for fossil vertebrate localities from the San Timoteo Formation (Appendix B). In addition to housing some (or all) of the localities collected by L.B. Albright discussed above ("Paleomag. site"), another 19 localities are listed as occurring within the San Timoteo Formation. However, no location or specimen data are included, with the exception of age.

A paleontological literature review and collections and records search was performed by the LACM (McLeod 2019; Appendix B). The review did not find any localities held by the LACM from within the project; however, six localities held by the LACM are just west of the southern-most portion of the project. Fossil specimens of horse, *Equus*, and camel were recovered. McLeod (2019) concluded that significant fossil vertebrate remains "may well" be encountered in any digging in the San Timoteo Formation, as well as in older Quaternary alluvial deposits that may underlie the younger alluvium mapped on the surface within the project area. However, based upon the topography and the distribution of the various Quaternary deposits in the project vicinity (see Figure 3A), it is more likely that the San Timoteo Formation underlies the young alluvial fan deposits within the project.

Additionally, a paleontological literature review and collections and records search was performed by the Western Science Center (Radford 2021; Appendix B). The review did not find any localities held by the Western Science Center from within the project; however, the search did identify fossil localities held by the Western Science Center within 1.5 miles north of the project at the Southern California El Casco Substation Project. These localities consist of over 15,000 specimens collected from the San Timoteo Formation, including "Sabertooth cat (*Smilodon gracilis*), Ancient horse (*Equus sp*.), Ground Sloth (*Paramylodon*), and many other Pleistocene and Pliocene megafauna" (Radford 2021). The records search further states:

> Any fossils recovered from the Beaumont Pointe Specific Plan Project area would be scientifically significant. Excavation activity associated with development of the area has the potential to impact the paleontologically sensitive Pliocene and Pleistocene units and it is the recommendation of the Western Science Center that a paleontological resource mitigation plan be put in place to monitor, salvage, and curate any recovered fossils associated with the current study area. (Radford 2021)

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 therefore typically assigned a low paleontological sensitivity. Pleistocene (greater than 11,700 years old) alluvial and alluvial fan deposits in the Inland Empire, 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 thus accorded a High paleontological resource sensitivity.

Professional Standards

The Society of Vertebrate Paleontology drafted guidelines outlining procedures, including:

> [E]valuating the potential for impacts of a proposed action on paleontological resources and for mitigating those impacts. Impact mitigation includes pre-project survey and salvage, monitoring and screen washing during excavation to salvage fossils, conservation and inventory, and final reports and specimen curation. The objective of these procedures is to offer standard methods for assessing potential impacts to fossils and mitigating these impacts. (Society of Vertebrate Paleontology 2010)

The guidelines 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.

Riverside County Sensitivity

Since the City of Beaumont does not have specific guidelines for the preservation of paleontological resources, Riverside County guidelines for rating the paleontological sensitivity of geologic formations are employed. A paleontological sensitivity map generated by the Riverside County Land Information System in February 2021 (Figure 4) ranks most of the project area as having a High Paleontological Potential/Sensitivity (High A), which is:

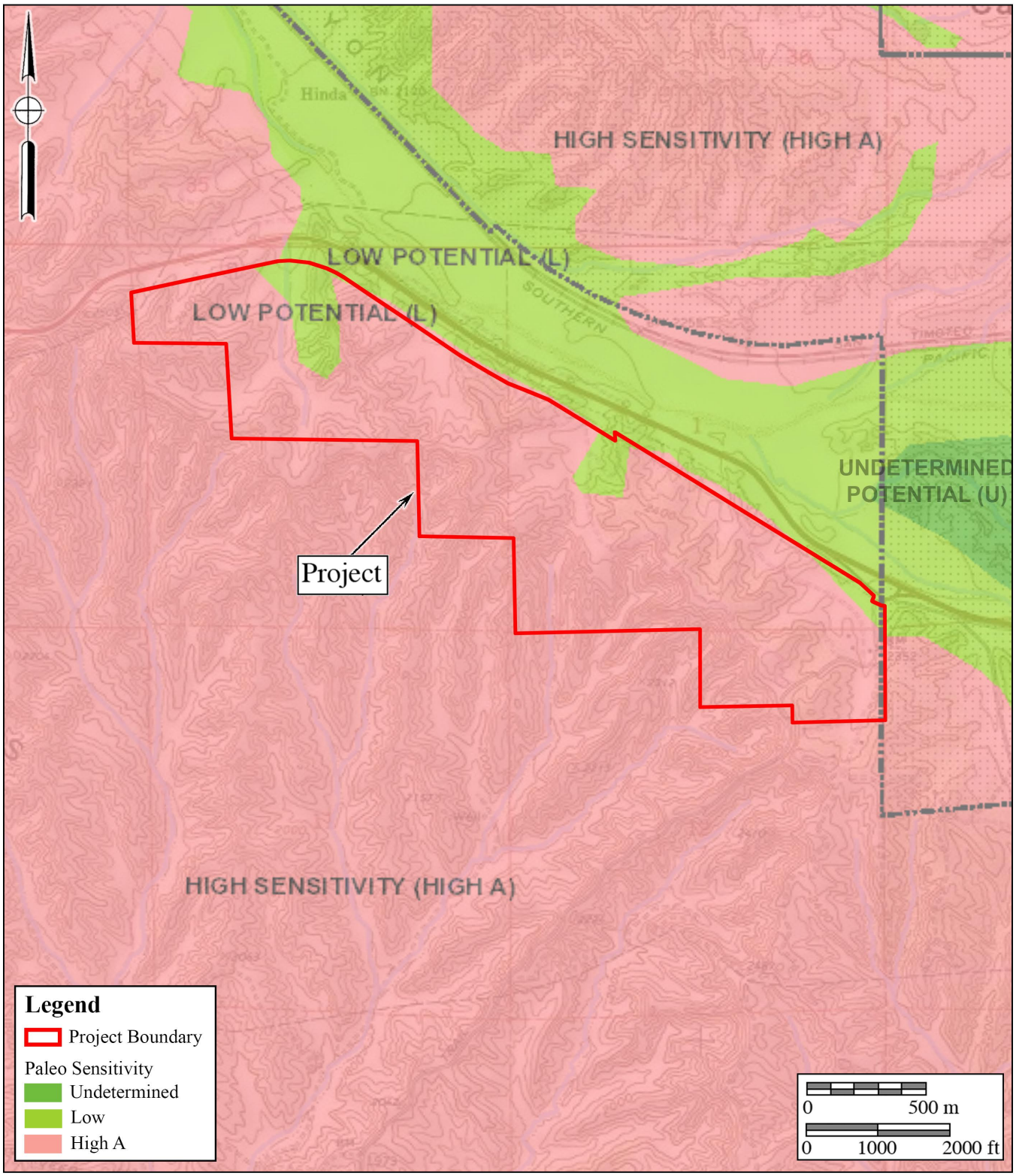


Figure 4

Paleontological Sensitivity Map

The Beaumont Pointe Specific Plan Project

After Riverside County Land Information System (2021)

> [B]ased on [the presence of] geologic formations or mappable rock units that are rocks that contain fossilized body elements, and trace fossils such as tracks, nests and eggs. These fossils occur on or below the surface. (County of Riverside 2021)

The category "High A" indicates that fossils are likely to be encountered at the surface and may be impacted during excavation by construction activities. Areas mapped as the San Timoteo Formation, as well as Quaternary young landslide deposits (which are composed of the San Timoteo Formation) (areas labeled "Tstm" and Qyls," respectively, in Figures 3A and 3B), are indicated as having a High Potential/Sensitivity to yield nonrenewable paleontological resources (*i.e.,* fossils), are shown in pale red tint on Figure 4. Areas having a low paleontological sensitivity, colored green, are represented by Holocene (modern) young alluvial fan deposits lining the drainage valleys. Generally, these sedimentary deposits do not yield fossils, being too young. Due to website design scaling limits, colored areas in Figure 4 do not closely match the associated geology as shown on Figure 3A.

VI. FIELD SURVEY

A field survey was performed at the Beaumont Pointe Specific Plan Project by the author on June 6, 2019. The survey consisted of a vehicular excursion on jeep trails through all topographic map sections, as well as inspection of outcrops and roadcuts by foot. Jack Rabbit Trail was explored by foot. In general, grasses such as foxtail covered the area, while the steep, west-facing slopes were dotted with shrubs and were mostly inaccessible. Trees were present in some of the flat drainage areas along the northeast edge of the project. Natural outcrops of exposed formation were rare, but when present, were observed to consist of variably cemented, gravelly sands (Plate 3; see Figure 3A). Outside of the project, along Jack Rabbit Trail, fossil localities "Paleomag. site 195" and "Paleomag. site 202A" (see Plates 1 and 2; Albright 1999a, 1999b) were approximately located and investigated. No fossils were observed.

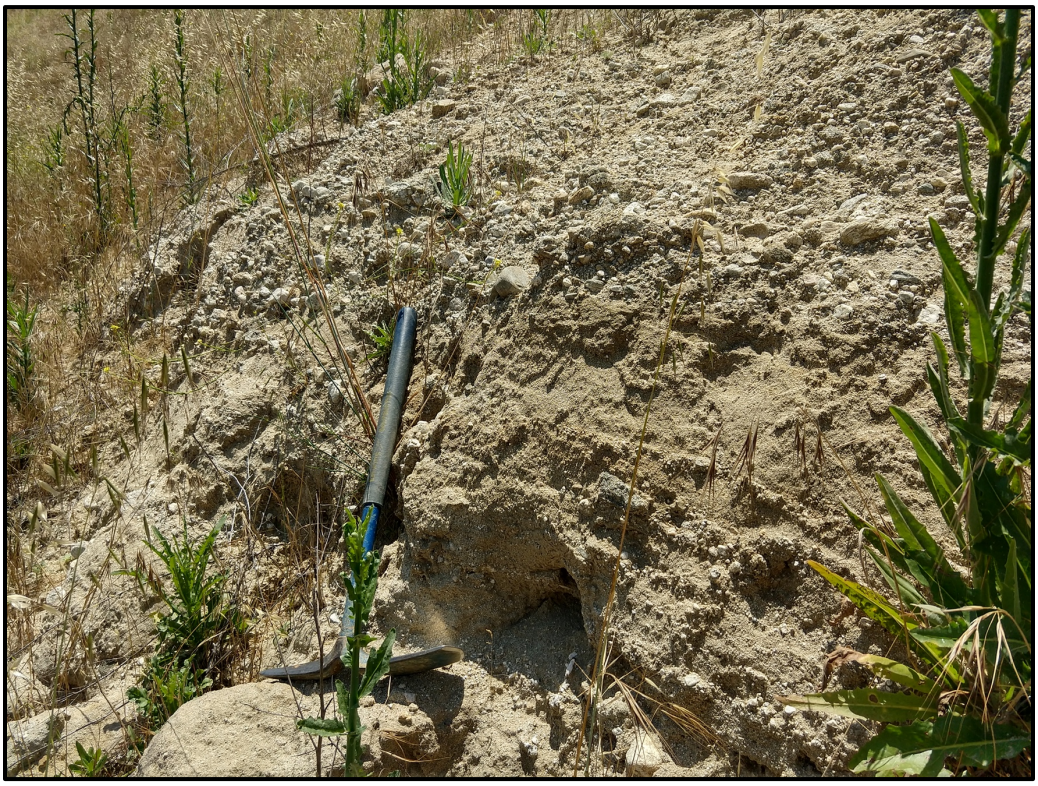


Plate 3: View of an outcrop of cemented gravelly sandstone within the project. Pick for scale.

VII. PALEONTOLOGICAL RESOURCE IMPACT MITIGATION PROGRAM

The presence of the fossiliferous middle Pliocene to lower Pleistocene middle member of the San Timoteo Formation mapped across the project ("Tstm" on Figures 3A and 3B), the recovery of fossils from the formation within and nearby the project site boundaries, and the "High" Paleontological Sensitivity assigned to the San Timoteo Formation for yielding paleontological resources all support the recommendation that paleontological monitoring be required during mass grading and excavation activities in undisturbed San Timoteo Formation sedimentary rocks in order to mitigate any adverse impacts (loss or destruction) to potential nonrenewable paleontological resources. Full-time monitoring is recommended starting at the surface. Paleontological monitoring of the young alluvial fan deposits, as mapped ("Qyf_5" on Figures 3A and 3B), is not warranted, since their potential to yield fossils is low. However, if, during earth disturbance activities, the San Timoteo Foundation is exposed beneath the overlying young alluvial fan deposits, monitoring should be initiated during periods in which the San Timoteo Formation will be impacted.

The specific guidelines implementing this recommendation are outlined below, which are consistent with the provisions of CEQA, the City of Beaumont, 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. Paleontological monitoring may be reduced at the discretion of the professional-level project paleontologist. The following guidelines of this PRIMP, when implemented, would allow potential impacts of paleontological resources to be reduced to a level below significant:

1. Paleontological monitoring should be initiated if, during earth disturbance activities, the San Timoteo Foundation is exposed beneath the overlying young alluvial fan deposits. Prior to the initiation of any grading, drilling, and/or excavation activities, a preconstruction meeting will be held and attended by the paleontologist of record, representatives of the grading contractor and subcontractors, the project owner or developer, and a representative of the lead agency. The nature of potential paleontological resources shall be discussed, as well as the protocol that is to be implemented following discovery of any fossiliferous materials.
2. Monitoring of mass grading and excavation activities in areas identified as likely to contain paleontological resources shall be performed by a qualified paleontologist or paleontological monitor. Monitoring will be conducted full-time in areas of grading or excavation in undisturbed sediments of the San Timoteo Formation. Complete grading plans for each phase must be made available to the paleontologist or paleontological monitor prior to the start of any earth-moving activities for that phase.
3. 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.
4. Notification of fossil discoveries shall be immediately reported by the paleontologist or paleontological monitor to the City of Beaumont, the project owner or developer, and the consulting company overseeing development of the project.
5. Paleontological salvage during trenching and boring activities is typically from the generated spoils and does not delay the trenching or drilling activities. Fossils will be collected and placed in cardboard flats or plastic buckets and identified by field number, collector, and date collected. Notes will be taken on the map location and stratigraphy of the discovery site, and the discovery site will be photographed before it is vacated and the fossils are removed to a safe place.
6. Isolated fossils will be collected by hand, wrapped in paper, and placed in temporary collecting flats or five-gallon buckets. Notes will be taken on the map location and

stratigraphy of the discovery site, and the discovery site will be photographed before it is vacated and the fossils are removed to a safe place.

7. Particularly small invertebrate fossils typically represent multiple specimens of a limited number of organisms, and a scientifically suitable sample can be obtained from one to 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. For vertebrate fossils, the test is usually the observed presence of small pieces of bones within the sediments. If present, as many as 20 to 40 five-gallon buckets of sediment can be collected and returned to a separate facility to wet-screen the sediment.
8. In accordance with the "Microfossil Salvage" section of the Society of Vertebrate Paleontology guidelines (2010, p. 7), bulk sampling and screening is warranted of fine-grained sedimentary deposits (including carbonate-rich paleosols) 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.
9. 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).
10. The recovered specimens will be prepared to a point of identification and permanent preservation (not display), including screen-washing of sediments to recover small invertebrates and vertebrates. Preparation of individual vertebrate fossils is often more time consuming than for accumulations of invertebrate fossils.
11. The prepared specimens, along with relevant information, will be curated into a professional, accredited public museum repository with a commitment to archival conservation and permanent retrievable storage (*e.g.*, the Western Science Center in Hemet, California). The paleontological program should include a written repository agreement prior to the initiation of mitigation activities. The Lead Agency may select another repository if it so desires.
12. A final monitoring and mitigation report of findings and significance, including lists of all fossils recovered and necessary maps and graphics to accurately record their original location, will be prepared. 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 non-renewable paleontological resources (*i.e.*, fossils) that might have been lost or otherwise adversely affected without such a program in place.

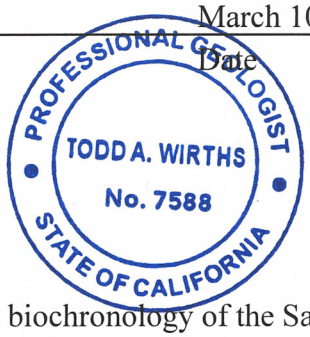
VIII. CERTIFICATION

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 10, 2021

Todd A. Wirths, M.S.
Senior Paleontologist
California Professional Geologist No. 7588

Date



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McLeod, Samuel A. 2019. Paleontological Resources Records Search for the proposed Jack Rabbit Trail Project, BFSA Project # 19-063, west of Beaumont, Riverside County, project area. Vertebrate Paleontology Section, Natural History Museum of Los Angeles County, Los Angeles, California.

Radford, Darla. 2021. Beaumont Pointe Specific Plan records search. Western Science Center, Hemet, California.

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: http://vertpaleo.org/Membership/Member-Ethics/SVP_Impact_Mitigation_Guidelines.aspx.

APPENDIX A

Qualifications of Key Personnel

Todd A. Wirths, MS, PG No. 7588

Senior Paleontologist

Brian F. Smith and Associates, Inc.
14010 Poway Road • Suite A •
Phone: (858) 679-8218 • Fax: (858) 679-9896 • E-Mail: twirths@bfsa-ca.com

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 Eastvale Self Storage Project, City of Eastvale, Riverside County, California.* Prepared for Gossett Development, Inc. Report on file at Brian F. Smith and Associates, Inc., Poway, California.

2019 *Paleontological Resource Impact Mitigation Monitoring Program for the IPT Perris DC III Western/Nandina Project, Perris, Riverside County, California.* Prepared for IPT/Black Creek Group. Report on file at Brian F. Smith and Associates, Inc., Poway, California.

2019 *Paleontological Assessment for the 10407 Elm Avenue Project, City of Fontana, San Bernardino County, California*. Prepared for Advantage Environmental Consultants, Inc. Report on file at Brian F. Smith and Associates, Inc., Poway, California.

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 Resource Impact Mitigation Program (PRIMP) for the Speedway TPM 37676 Project, Temescal Valley, Riverside County, California.* Prepared for Speedway Development. Report on file at Brian F. Smith and Associates, Inc., Poway, California.

2019 *Paleontological Assessment for the Natwar Project, Perris, Riverside County, California.* Prepared for Advantage Environmental Consultants, LLC. Report on file at Brian F. Smith and Associates, Inc., Poway, California.

2019 *Paleontological Resource and Mitigation Monitoring Assessment, Beyond Food Mart, City of Perris, Riverside 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 West Markham Project (TR 33587), City of Perris, Riverside County, California*. Prepared for Markham JP/ARA, LLC. Report on file at Brian F. Smith and Associates, Inc., Poway, California.

2019 *Paleontological Monitoring and Mitigation Report for the Artesa at Menifee Town Center Project Site, Sherman Road and La Piedra Road, Menifee, Riverside County, California.* Prepared for MBK Real Estate. Report on file at Brian F. Smith and Associates, Inc., Poway, California.

2019 *Paleontological Monitoring Report, Diarq Residence, La Jolla, City of San Diego, San Diego County, California.* Prepared for West Way Drive, LLC. 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.

APPENDIX B

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

NATURAL HISTORY MUSEUM
LOS ANGELES COUNTY

Vertebrate Paleontology Section
Telephone: (213) 763-3325

e-mail: smcleod@nhm.org

2 April 2019

Brian F. Smith & Associates, Inc.
14010 Poway Road, Suite A
Poway, CA 92064

Attn: Todd Wirths, Senior Paleontologist

re: Paleontological Resources Records Search for the proposed Jack Rabbit Trail Project, BFSA Project # 19-063, west of Beaumont, Riverside County, project area

Dear Todd:

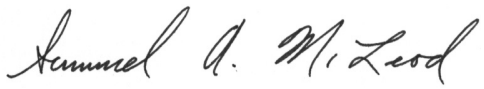
I have thoroughly searched our paleontology collection records for the locality and specimen data for the proposed Jack Rabbit Trail Project, BFSA Project # 19-063, west of Beaumont, Riverside County, project area as outlined on the portion of the El Casco USGS topographic quadrangle map that you sent to me via e-mail on 19 March 2019. We do not have any vertebrate fossil localities that lie within the boundaries of the proposed project area, but we do have localities nearby from the same sedimentary deposits that occur within the proposed project area.

In the drainages on the northern margin of the proposed project area there are surface exposures of younger Quaternary Alluvium. These deposits typically do not contain significant vertebrate fossils, at least in the uppermost layers, but they are underlain by older sedimentary deposits at relatively shallow depth. Otherwise the entire proposed project area has exposures of the Plio-Pleistocene San Timoteo Formation. Our closest locality from the San Timoteo Formation is LACM 7620, just west of the southern-most portion of the proposed project area, that produced fossil specimens of camel, Camelidae. Further to the west we have a series of localities from the San Timoteo Formation in the Badlands, LACM (CIT) 133, LACM (CIT) 515, LACM 7618-7619 and LACM 7622. These localities all produced fossil specimens of horse, *Equus*, and camel, Camelidae.

Shallow excavations in the exposures of younger Quaternary Alluvium in the drainages in the proposed project area are unlikely to uncover any significant vertebrate fossils. Deeper excavations in those areas that extend down into older sedimentary deposits, as well as any excavations in the Plio-Pleistocene San Timoteo Formation exposed in the more elevated terrain of the proposed project area may well encounter significant fossil vertebrate remains. Any substantial excavations in the proposed project area, therefore, should be monitored closely to quickly and professionally recover any fossil remains discovered while not impeding development. Also, sediment samples should be collected and processed to determine the small fossil potential in the proposed project area. Any fossils recovered during mitigation should be deposited in an accredited and permanent scientific institution for the benefit of current and future generations.

This records search covers only the vertebrate paleontology records of the Natural History Museum of Los Angeles County. 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.

Sincerely,



Samuel A. McLeod, Ph.D.
Vertebrate Paleontology

enclosure: invoice

UC Museum of Paleontology Localities

Number of matches: 36

- Download your results (tab-delimited text file with .xls file extension, 36 lines, file size = 4.9 K)
- Map localities with a US county

Query: SELECT FROM ucmp_loc2 WHERE formation = "san timoteo" ORDER BY loc_prefix,cast(loc_num as unsigned integer),loc_suffix

Click on the Loc ID to see the full locality record

Loc ID	Coll	Locality Name	County	State / Province	Country	Cont	Period	Epoch	Formation	Member	Storage Age	Flora/Fauna
-3248	v	San Timoteo	Riverside County	California	United States	North America	Tertiary	Pliocene	San Timoteo		Blancan	
-3249	v	San Timoteo	Riverside County	California	United States	North America	Tertiary	Pliocene	San Timoteo		Blancan	
-3250	v	San Timoteo	Riverside County	California	United States	North America	Tertiary	Pliocene	San Timoteo		Blancan	
-3251	v	San Timoteo	Riverside County	California	United States	North America	Tertiary	Pliocene	San Timoteo		Blancan	
-3252	v	San Timoteo	Riverside County	California	United States	North America	Tertiary	Pliocene	San Timoteo		Blancan	
-3253	v	San Timoteo	Riverside County	California	United States	North America	Tertiary	Pliocene	San Timoteo		Blancan	
-3254	v	San Timoteo	Riverside County	California	United States	North America	Tertiary	Pliocene	San Timoteo		Blancan	
-3255	v	San Timoteo	Riverside County	California	United States	North America	Tertiary	Pliocene	San Timoteo		Blancan	
-3256	v	San Timoteo	Riverside County	California	United States	North America	Tertiary	Pliocene	San Timoteo		Blancan	
-3257	v	San Timoteo 10	Riverside County	California	United States	North America	Tertiary	Pliocene	San Timoteo		Blancan	
-3258	v	San Timoteo 11	Riverside County	California	United States	North America	Tertiary	Pliocene	San Timoteo		Blancan	
-3259	v	San Timoteo 12	Riverside County	California	United States	North America	Tertiary	Pliocene	San Timoteo		Blancan	
-3260	v	San Timoteo 13	Riverside County	California	United States	North America	Tertiary	Pliocene	San Timoteo		Blancan	
-3261	v	San Timoteo 14	Riverside County	California	United States	North America	Tertiary	Pliocene	San Timoteo		Blancan	
-3262	v	San Timoteo 15	Riverside County	California	United States	North America	Tertiary	Pliocene	San Timoteo		Blancan	
-3263	v	San Timoteo 16	Riverside County	California	United States	North America	Tertiary	Pliocene	San Timoteo		Blancan	
-3264	v	San Timoteo 17	Riverside County	California	United States	North America	Tertiary	Pliocene	San Timoteo		Blancan	
RV7150	v		Riverside County	California	United States	North America	Tertiary	Pliocene	San Timoteo		Blancan	
RV9601	v	San Timoteo Paleomag. Site 157A	Riverside County	California	United States	North America	Tertiary	Pliocene	San Timoteo	Unit 3	Blancan	
RV9602	v	San Timoteo Paleomag. Site 160A	Riverside County	California	United States	North America	Tertiary	Pliocene	San Timoteo	Unit 3	Blancan	
RV9603	v	San Timoteo Paleomag. Site 160B	Riverside County	California	United States	North America	Tertiary	Pliocene	San Timoteo	Unit 3	Blancan	
RV9604	v	San Timoteo Paleomag. Site 164	Riverside County	California	United States	North America	Tertiary	Pliocene	San Timoteo	Unit 3	Blancan	
RV9605	v	San Timoteo	Riverside	California	United	North	Tertiary	Pliocene	San	Unit 3	Blancan	

		Paleomag. Site 164A	County		States	America			Timoteo			
RV9606	v	San Timoteo Paleomag. Site 176B	Riverside County	California	United States	North America	Tertiary	Pliocene	San Timoteo	Unit 3	Blancan	
RV9607	v	San Timoteo Paleomag. Site 177	Riverside County	California	United States	North America	Tertiary	Pliocene	San Timoteo	Unit 3	Blancan	
RV9608	v	San Timoteo Paleomag. Site 181A	Riverside County	California	United States	North America	Tertiary	Pliocene	San Timoteo	Unit 3	Blancan	
RV9609	v	San Timoteo Paleomag. Site 182	Riverside County	California	United States	North America	Tertiary	Pliocene	San Timoteo	Unit 3	Blancan	
RV9610	v	San Timoteo Paleomag. Site 187	Riverside County	California	United States	North America	Tertiary	Pliocene	San Timoteo	Unit 4	Blancan	
RV9611	v	San Timoteo Paleomag. Site 195	Riverside County	California	United States	North America	Tertiary	Pliocene	San Timoteo	Unit 4	Blancan	
RV9612	v	San Timoteo Paleomag. Site 202A	Riverside County	California	United States	North America	Tertiary	Pleistocene	San Timoteo	Unit 4	Irvingtonian	
RV9613	v	San Timoteo Paleomag. Site 304	Riverside County	California	United States	North America	Tertiary	Pliocene	San Timoteo		Blancan	
RV9614	v	San Timoteo Paleomag. Site 311	Riverside County	California	United States	North America	Tertiary	Pliocene	San Timoteo		Blancan	
RV9615	v	San Timoteo Paleomag. Site 313	Riverside County	California	United States	North America	Tertiary	Pliocene	San Timoteo		Blancan	
RV9616	v	San Timoteo Paleomag. Site 350	Riverside County	California	United States	North America	Tertiary	Pliocene	San Timoteo		Irvingtonian	
RV9617	v	San Timoteo Paleomag. Site HTS	Riverside County	California	United States	North America	Tertiary	Pliocene	San Timoteo		Blancan	
V65406	v	San Timoteo Fm General	Riverside County	California	United States	North America	Tertiary	Pliocene	San Timoteo		Blancan	

WESTERN SCIENCE CENTER

Brian F. Smith and Associates, Inc.
Todd Wirths, M.S.
14010 Poway Road, Suite A
Poway, CA 92064

March 2, 2021

Dear Mr. Wirths,

This letter presents the results of a record search conducted for the Beaumont Pointe Specific Plan Project in the city of Beaumont, Riverside County, California. The project site is located south of State Route 60 in Section 1, 2, and 12 of Township 3 South and Range 2 West on the El Casco CA USGS 7.5 minute topographic quadrangle.

The geologic unit underlying the project area is mapped primarily as San Timoteo Formation with small segments of alluvial sand and gravel deposits dating to the Holocene epoch (Dibblee, 2003). Holocene alluvial units have high preservation rates but are generally not considered to be paleontologically sensitive due to their more recent depositional dates. San Timoteo Formation deposits however are considered to be of high paleontological sensitivity. San Timoteo Formation sediments date from 3.5 million years ago to roughly 70,000 years ago and are well known to contain abundant fossil resources associated with both Pliocene and Pleistocene fauna. The Western Science Center does not have localities within the project area, but does have numerous localities within similarly mapped alluvial sediments within 1.5 miles from the project area. These localities are associated with the Southern California El Casco Substation Project and presented over 15,000 fossil specimens dating to roughly 1 million years old resources including those associated with Sabertooth cat (*Smilodon gracilis*), Ancient horse (*Equus sp*.), Ground Sloth (*Paramylodon*), and many other Pleistocene and Pliocene megafauna.

Any fossils recovered from the Beaumont Pointe Specific Plan Project area would be scientifically significant. Excavation activity associated with development of the area has the potential to impact the paleontologically sensitive Pliocene and Pleistocene units and it is the recommendation of the Western Science Center that a paleontological resource mitigation plan be put in place to monitor, salvage, and curate any recovered fossils associated with the current study area. If you have any questions, or would like further information, please feel free to contact me at dradford@westerncentermuseum.org

Sincerely,

Darla Radford
Collections Manager