Appendix D
Paleontological Resources Assessment Report

PALEONTOLOGICAL RESOURCES ASSESSMENT REPORT

CALHOUN SPECIFIC PLAN

Assessor's Parcel Numbers 692-060-006, -007, -008, and -023
City of Indio, Riverside County, California

For Submittal to:

Community Development Department, Planning Division
City of Indio
100 Civic Center Mall
Indio, CA 92201

Prepared for:

Terra Nova Planning & Research, Inc.
42635 Melanie Place, Suite 101
Palm Desert, CA 92211

Prepared by:

Ron Schmidtling, Principal Paleontologist
Deirdre Encarnación, Report Writer
CRM TECH
1016 East Cooley Drive, Suite A/B
Colton, CA 92324

August 25, 2022

CRM TECH Contract #3874P
Approximately 60 acres
USGS Indio, Calif., 7.5' (1:24,000) quadrangle
Section 13, T5S R7E, San Bernardino Baseline and Meridian

EXECUTIVE SUMMARY

Between April and August 2022, at the request of Terra Nova Planning & Research, Inc., CRM TECH performed a paleontological resource assessment on approximately 60 acres of vacant land in the City of Indio, Riverside County, California. The subject property of the study consists of Assessor's Parcel Numbers 692-060-006, 007, -008, and -023, located on the south side of Avenue 43 and the northeast side of Interstate Highway 10, in the south half of Section 13, Township 5 South Range 7 East, San Bernardino Baseline and Meridian, as depicted in the United States Geological Survey Indio, California, 7.5' quadrangle.

The study is part of the environmental review process for the Calhoun Specific Plan, which proposes a residential development on the property. The City of Indio, as the lead agency for the project, required the study in compliance with the California Environmental Quality Act (CEQA). The purpose of the study is to provide the City with the necessary information and analysis to determine whether the proposed project would adversely affect any significant, nonrenewable paleontological resources, as required by CEQA, and to design a paleontological mitigation program, if necessary.

In order to identify any paleontological resource localities that may exist in or near the project area and to assess the probability for such resources to be encountered during the project, CRM TECH initiated a records search at the appropriate repository, conducted a literature review, and carried out a systematic field survey of the project area. The results of these research procedures indicate that the proposed project's potential to impact significant, nonrenewable paleontological resources is low in the Holocene surface sediments but high in the Pleistocene-age deposits potentially present at unknown depths.

Based on these findings, CRM TECH recommends that a paleontological resource impact mitigation program be developed and implemented during the project to prevent impacts on significant, nonrenewable paleontological resources or reduce them to a level less than significant. As the primary component of the mitigation program, all earth-moving operations impacting relatively undisturbed soils in the project area beyond the depth of three feet should be monitored periodically by a qualified paleontological monitor to identify potentially fossil-bearing sediments when they are encountered, at which time continuous monitoring will become necessary. Under this condition, CRM TECH further recommends that the project may be cleared to proceed in compliance with CEQA provisions on paleontological resources.

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INTRODUCTION

Between April and August 2022, at the request of Terra Nova Planning & Research, Inc., CRM TECH performed a paleontological resource assessment on approximately 60 acres of vacant land in the City of Indio, Riverside County, California (Fig. 1). The subject property of the study consists of Assessor's Parcel Numbers 692-060-006, 007, -008, and -023, located on the south side of Avenue 43 and the northeast side of Interstate Highway 10, in the south half of Section 13, Township 5 South Range 7 East, San Bernardino Baseline and Meridian, as depicted in the United States Geological Survey (USGS) Indio, California, 7.5' quadrangle (Figs. 2, 3).

The study is part of the environmental review process for the Calhoun Specific Plan, which proposes a residential development on the property. The City of Indio, as the lead agency for the project, required the study in compliance with the California Environmental Quality Act (CEQA; PRC §21000, et seq.). The purpose of the study is to provide the City with the necessary information and analysis to determine whether the proposed project would adversely affect any significant, nonrenewable paleontological resources, as required by CEQA, and to design a paleontological mitigation program, if necessary.

In order to identify any paleontological resource localities that may exist in or near the project area and to assess the probability for such resources to be encountered during the project, CRM TECH initiated a records search at the appropriate repository, conducted a literature review, and carried out a systematic field survey of the project area. The following report is a complete account of the methods, results, and final conclusion of this study. Personnel who participated in the study are named in the appropriate sections below, and their qualifications are provided in Appendix 1.

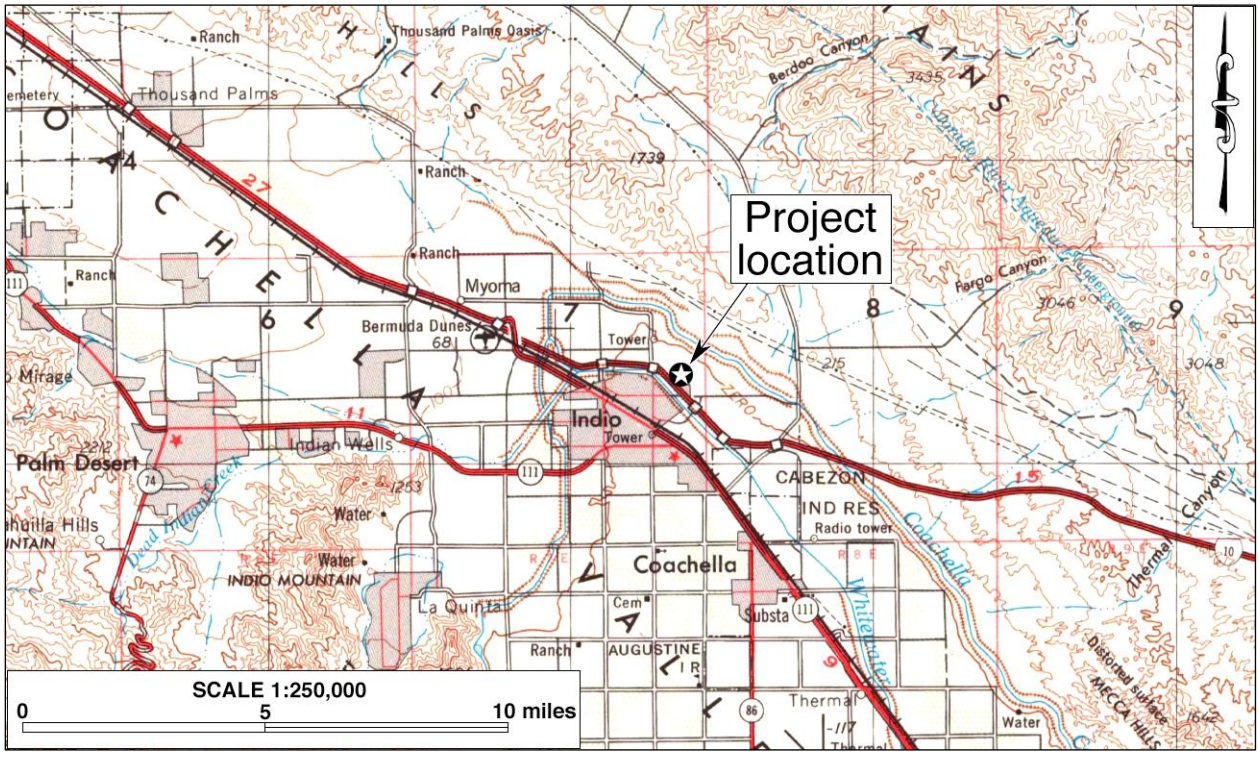

Figure 1. Project vicinity. (Based on USGS Santa Ana, Calif., 120'x60' quadrangle, 1979 edition)

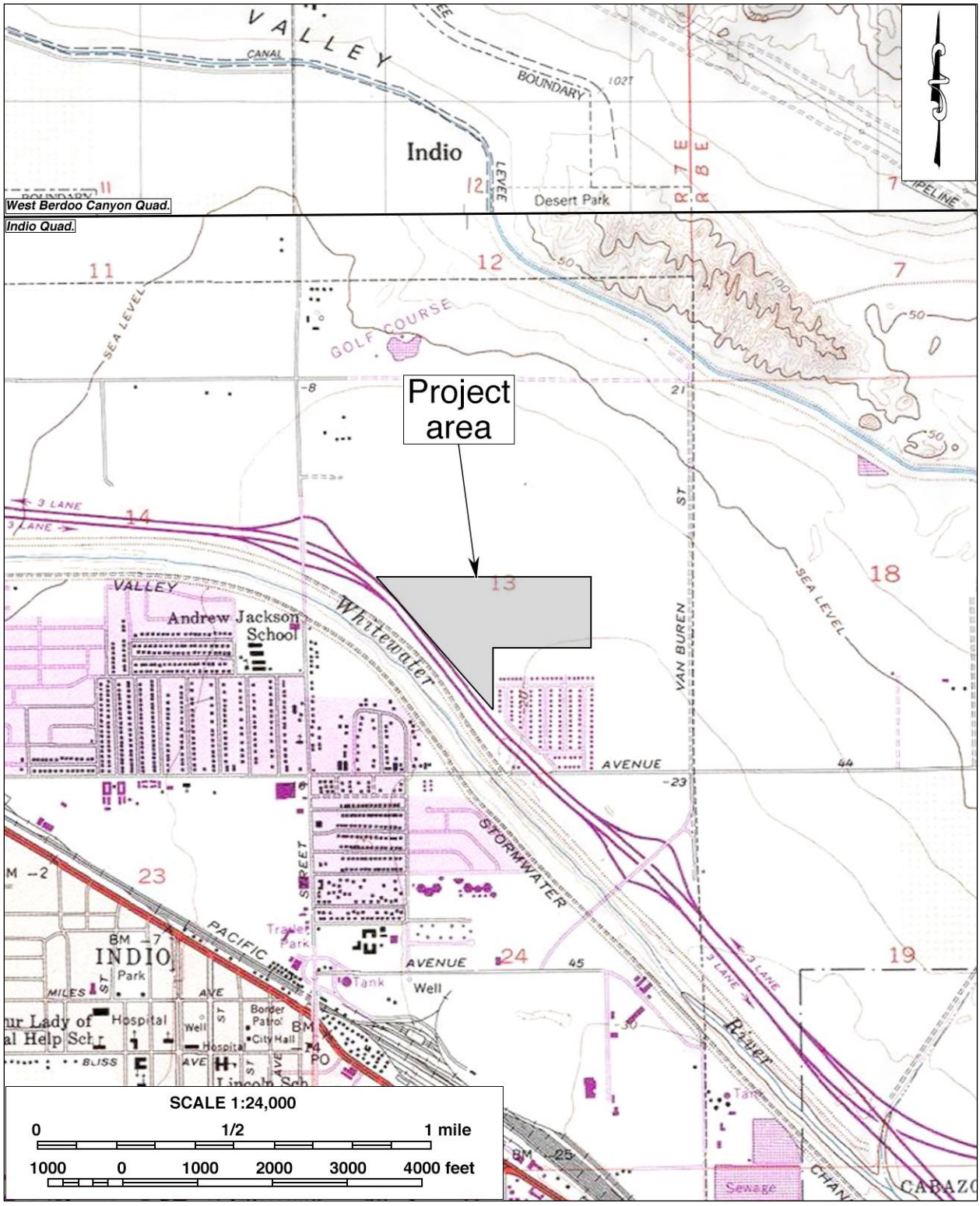

Figure 2. Project area. (Based on USGS Indio and West Berdoo Canyon, Calif., 7.5' quadrangles, 1972/1988 editions)

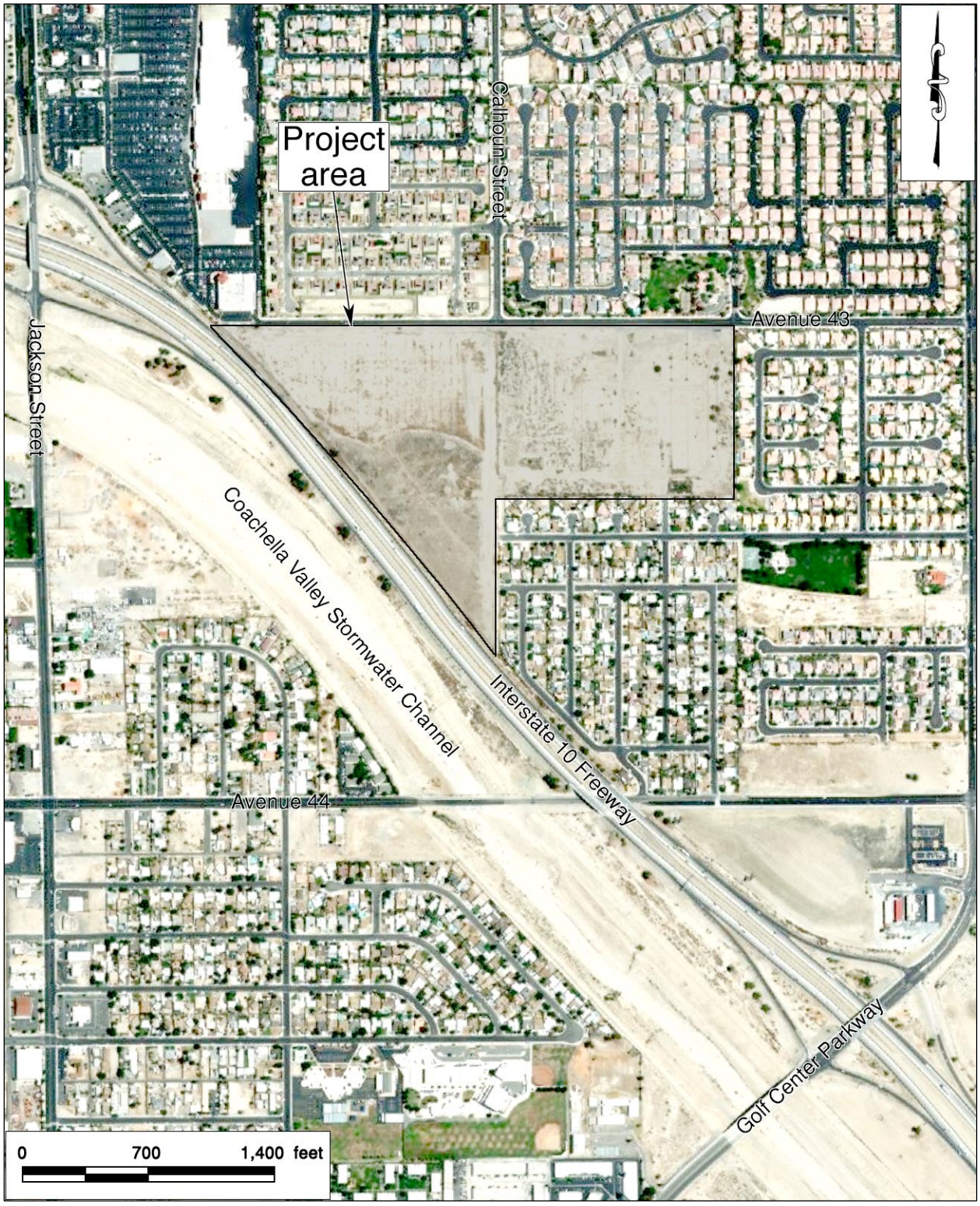

Figure 3. Recent Satellite image of the project area.

PALEONTOLOGICAL RESOURCES

DEFINITION

Paleontological resources represent the remains of prehistoric life, exclusive of any human remains, and include the localities where fossils were collected as well as the sedimentary rock formations in which they were found. The defining character of fossils or fossil deposits is their geologic age, typically older than recorded human history and/or older than the middle Holocene Epoch, which dates to circa 5,000 radiocarbon years (Society of Vertebrate Paleontology 2010:11).

Common fossil remains include marine and freshwater mollusk shells; the bones and teeth of fish, amphibians, reptiles, and mammals; leaf imprint assemblages; and petrified wood. Fossil traces, another type of paleontological resource, include internal and external molds (impressions) and casts created by these organisms. These items can serve as important guides to the age of the rocks and sediments in which they are contained, and may prove useful in determining the temporal relationships between rock deposits from one area and those from another as well as the timing of geologic events. They can also provide information regarding evolutionary relationships, development trends, and environmental conditions.

Fossil resources generally occur only in areas of sedimentary rock (e.g., sandstone, siltstone, mudstone, claystone, or shale). Because of the infrequency of fossil preservation, fossils, particularly vertebrate fossils, are considered nonrenewable paleontological resources. Occasionally fossils may be exposed at the surface through the process of natural erosion or because of human disturbances; however, they generally lay buried beneath the surficial soils. Thus, the absence of fossils on the surface does not preclude the possibility of their being present within subsurface deposits, while the presence of fossils at the surface is often a good indication that more remains may be found in the subsurface.

SIGNIFICANCE CRITERIA

According to guidelines proposed by Scott and Springer (2003), paleontological resources can be considered to be of significant scientific interest if they meet one or more of the following criteria:

1. The fossils provide information on the evolutionary relationships and developmental trends exhibited among organisms, living or extinct;
2. The fossils provide data useful in determining the age(s) of the rock unit or sedimentary stratum, including data important in determining the depositional history of the region and the timing of geologic events therein;
3. The fossils provide data regarding the development of biological communities or the interactions between paleobotanical and paleozoological biotas;
4. The fossils demonstrate unusual or spectacular circumstances in the history of life; and/or
5. The fossils are in short supply and/or in danger of being depleted or destroyed by the elements, vandalism, or commercial exploitation, and are not found in other geographic locations.

PALEONTOLOGICAL SENSITIVITY

The fossil record is unpredictable, and the preservation of organic remains is rare, requiring a particular sequence of events involving physical and biological factors. Skeletal tissue with a high percentage of mineral matter is the most readily preserved within the fossil record; soft tissues not intimately connected with the skeletal parts, however, are the least likely to be preserved (Raup and Stanley 1978). For this reason, the fossil record contains a biased selection not only of the types of organisms preserved but also of certain parts of the organisms themselves. As a consequence, paleontologists are unable to know with certainty, the quantity of fossils or the quality of their preservation that might be present within any given geologic unit.

Sedimentary units that are paleontologically sensitive are those geologic units (mappable rock formations) with a high potential to contain significant nonrenewable paleontological resources. More specifically, these are geologic units within which vertebrate fossils or significant invertebrate fossils have been determined by previous studies to be present or are likely to be present. These units include, but are not limited to, sedimentary formations that contain significant paleontological resources anywhere within their geographical extent as well as sedimentary rock units temporally or lithologically amenable to the preservation of fossils.

A geologic formation is defined as a stratigraphic unit identified by its lithic characteristics (e.g., grain size, texture, color, and mineral content) and stratigraphic position. There is a direct relationship between fossils and the geologic formations within which they are enclosed and, with sufficient knowledge of the geology and stratigraphy of a particular area, it is possible for paleontologists to reasonably determine the formation's potential to contain significant nonrenewable vertebrate, invertebrate, marine, or plant fossil remains.

The paleontological sensitivity for a geologic formation is determined by the potential for that formation to produce significant nonrenewable fossils. This determination is based on what fossil resources the particular geologic formation has produced in the past at other nearby locations. Determinations of paleontologic sensitivity must consider not only the potential for yielding vertebrate fossils but also the potential of yielding a few significant fossils that may provide new and significant taxonomic, phylogenetic, and/or stratigraphic data.

The Society of Vertebrate Paleontology issued a set of standard guidelines intended to assist paleontologists to assess and mitigate any adverse effects/impacts to nonrenewable paleontological resources. The guidelines defined four categories of paleontological sensitivity for geologic units that might be impacted by a proposed project, as listed below (Society of Vertebrate Paleontology 2010:1-2):

- **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.
- **Low Potential**: Rock units that are poorly represented by fossil specimens in institutional collections, or based on general scientific consensus 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.

SETTING

REGIONAL GEOLOGY

The City of Indio lies in the heart of the Coachella Valley, which occupies the northwestern portion of the Colorado Desert geomorphic province (Jenkins 1980:40-41). The Colorado Desert province, one of 11 in the state of California, is bounded by the Peninsular Ranges province on the southwest, the eastern Transverse Ranges province on the north, and the southern portion of the Mojave Desert province on the northeast (*ibid*.). The province widens to the southeast as it extends through the Imperial Valley and into Mexico.

One of the major features within the Colorado Desert province is the Salton Trough, a 290-kilometer-long (approximately 180 miles) structural depression containing the present-day Salton Sea. Historically, the Salton Trough was the site of Holocene Lake Cahuilla, which was in fact a series of lakes that once filled portions of the depression, including much of the Coachella Valley. Some 4.5 million years ago, the Salton Trough was a northward extension of the Gulf of California. At that time the gulf extended as far north as the Painted Hills area, just northeast of where the Whitewater River intersects the Interstate 10 today. Rocks containing marine fossils that were deposited during this period can be found outcropping at Painted Hill, Garnet Hill, and at least two places in the Indio Hills (Proctor 1968:Plate 1).

The Salton Trough was eventually cut off from the Gulf of California by the delta built up at the mouth of the Colorado River. Containing materials eroded from the Grand Canyon, this delta extended across the gulf from one end to the other, creating a barrier between the gulf and the trough. While much of the Salton Trough is below sea level, the delta prevents any gulf waters from reaching the trough. Conversely, the delta prevents any water in the trough from flowing to the gulf except when the trough is full and the water level rises over the delta.

The delta determined the direction of flow for the Colorado River. When the flow was to the north, it went into the Salton Basin and over time filled it to the spill point of the delta. Once the spill point was reached, the water forming a Holocene Lake Cahuilla would flow over the western portion of the delta and south through Baja California to the Gulf of California. When the flow of the river switched to the south, the Colorado River would flow directly to the gulf and the waters filling the Salton Basin would evaporate, leaving behind a salt-encrusted basin at the lowest point. As floods occurred on the Colorado River, the flow of water switched directions many times, resulting in the development of a series of lakes filling the Salton Basin, and probably many more that partially filled the basin.

Along the western shoreline of the lake, tufa was deposited on some of the rocks. At Travertine Point, the tufa is in some places over a foot thick and has been deposited in layers, forming bands somewhat like the rings in a tree. The rings in these tufa bands developed from weathering of the tufa when the lake was absent and the tufa deposits between the rings represent times when the lake waters were present. Based on one tufa coated boulder near the northeast portion of Travertine Point, there have been at least five lake fillings, and the changes in tufa thickness between the erosion rings indicate that these different fillings had varied duration.

Another interesting localized feature to be found within the Coachella Valley is the Whitewater River Delta/Dune Complex, an area along the Whitewater River drainage from near Point Happy eastward to just past Jefferson Street (Quinn 1999). When Holocene Lake Cahuilla was present and the Whitewater River had flowing water, the river developed a delta in this area that prograded into the lake. This same area is the terminus of a large sand dune high, or ridge, that extends east-southeast from the San Gorgonio Pass area. This sand dune ridge can still be seen today as a high area separating the low regions along the north and south sides of the valley.

During its last high stand, Holocene Lake Cahuilla reached the present-day 42-foot contour line before desiccating around 1730 A.D. (Rockwell et al. 2022). An earlier high stand of ancient Lake Cahuilla, however, reached the elevation of approximately 160 feet above mean sea level during the Pleistocene Epoch (Stokes et al. 1997). The current elevations in the project area range approximately from 25 feet to 30 feet below mean sea level. These elevations place the location inside the lakebed of Holocene Lake Cahuilla, within that of its Pleistocene predecessor, within the Whitewater Delta/Dune Complex (Quinn 1999), and a short distance to the east of the former delta itself (Rogers 1965).

CURRENT NATURAL SETTING

The City of Indio lies in the heart of the Coachella Valley, a northwest-southeast trending desert valley that constitutes the western end of the Colorado Desert. Dictated by this geographic setting, the climate and environment of the region are typical of the southern California desert country, marked by extremes in temperature and aridity. Temperatures in the region reach over 120 degrees Fahrenheit in summer, and dip to freezing in winter. Average annual precipitation is less than five inches, and the average annual evaporation rate exceeds three feet.

The project area consists of open, formerly agricultural land wedged between Interstate Highway 10 on the southwest and Avenue 43 on the north and surrounded mostly by suburban residential tracts, with a shopping center across Avenue 43 from the northwestern corner of the property (Fig. 3). The ground surface in all but the southernmost portion has been extensively disturbed by past agricultural use and by grading for anticipated roads and building pads that did not materialize. Soil and debris piles dot the property, and debris has also collected in the lower areas between the pads (Fig. 4). The original flora in the vicinity belongs to the California Floristic Province, represented in this area by the creosote bush scrub plant community. At the present time, the sparse vegetation growth on the property includes tamarisk trees, mesquite, and various small desert grasses and shrubs, with bougainvillea and cacti in a few spots near the eastern project boundary, next to existing residences.

METHODS AND PROCEDURES

RECORDS SEARCH

The records search service for this study was provided by the Western Science Center (WSC) in Hemet, California, which maintains files of regional paleontological localities as well as supporting maps and documents. The records search results were used to identify known previously performed paleontological resource assessments as well as known paleontological localities within a one-mile

Figure 4. Current natural setting of the project area. (View to the southeast; photograph taken on May 26, 2022).

radius of the project location. A copy of the records search results is attached to this report in Appendix 2.

LITERATURE REVIEW

In conjunction with the records search, CRM TECH report writer Deirdre Encarnación pursued a literature review on the project area and vicinity under the direction of principal paleontologist Ron Schmidtling. Sources consulted during the review include primarily topographic, geologic, and soil maps of the Coachella Valley region, published geologic literature pertaining to the project location, the Riverside County GIS database on paleontological sensitivity, satellite and aerial images available at the Nationwide Environmental Title Research (NETR) Online website and through the Google Earth software, and other materials in the CRM TECH library, including unpublished reports produced during similar surveys in the vicinity.

FIELD SURVEY

On May 26, 2022, CRM TECH paleontological surveyors Hunter O'Donnell and Ashley Conner-Ayala carried out the field survey of the project area under Ron Schmidtling's direction. The survey was completed by walking a series of parallel transects spaced 15 meters (approximately 50 feet) apart and oriented north-south in the northern portion and east-west in the southern portion. In this way, the ground surface in the entire project area was systematically and carefully examined to determine soil types, verify the geological formations, and search for indications of paleontological remains. Ground visibility was good to excellent (85-95%) over most of the previously disturbed

northern portion of the project area and was fair to good (75-80%) in the less disturbed southern portion due to light vegetation cover.

RESULTS AND FINDINGS

RECORDS SEARCH

The records search by the WSC identified no known paleontological localities at the project location or within a one-mile radius but noted a fossil locality from a Miocene-Pliocene sandstone unit situated outside of that radius to the north (Stoneburg 2022; see App. 2). The WSC describes the surface geology at the project location as alluvial sand and clay deposits dating to the Holocene Epoch (*ibid.*). These deposits are considered to have a high preservation value, but a low paleontological sensitivity based on the relatively young age of deposition.

The WSC further states that, although these uppermost layers of soil would be too young to contain significant paleontological resources, deeper excavations extending into older Pleistocene alluvial sediments may encounter vertebrate fossil remains at substantial depth (Stoneburg 2022). Therefore, the WSC concludes that excavation activity associated with the development of the project area is unlikely to be paleontologically sensitive but "caution during development should be observed" (*ibid.*).

LITERATURE REVIEW

The surface geology in the project area was mapped by Rogers (1965) as *Ql-Qal*, with the *Ql* defined as Quaternary lake deposits and the *Qal* as Recent alluvium. Dibblee (2008) mapped the project area in its entirety as *Qa*, described as alluvial sand and clay of valley areas (Fig. 5). More recently, Lancaster et al. (2012) mapped the surface geology at the project location as mostly *Qe*, or eolian and dune deposits described as "unconsolidated, generally well-sorted wind-blown sand." Riverside County paleontological sensitivity map classifies the project location as High Sensitivity ("High A"; RCIT n.d.):

> High A is based on geologic formations or mapped rock units that are known to contain or have the correct age and depositional conditions to contain significant paleontological resources. These include rocks of Silurian or Devonian age and younger that have potential to contain remains of fossil fish, and Mesozoic and Cenozoic rocks that contain fossilized body elements and trace fossils such as tracks, nests and eggs. (County of Riverside 2015:4.9-4.11)

Historical maps and aerial/satellite photographs consulted during this study indicate that a building, likely a farmstead, was present in the eastern portion of the property in the early 1940s, but that the entire project area was used as farmlands in the 1950s (NETR Online 1953). On the northern portion of the property, farming operations continued until the early years of the current century (NETR Online 1953-2005; Google Earth 1996-2005). In 2005-2006, the eastern portion of the project area was cleared and graded, and a grid of roads were laid out, indicating the beginning of a residential development that was later abandoned (Google Earth 2005; 2006). Since then, the entire project area has remained undeveloped and largely unused to the present time, and no additional major changes have occurred to the landscape (NETR Online 2005-2018; Google Earth 2005-2021).

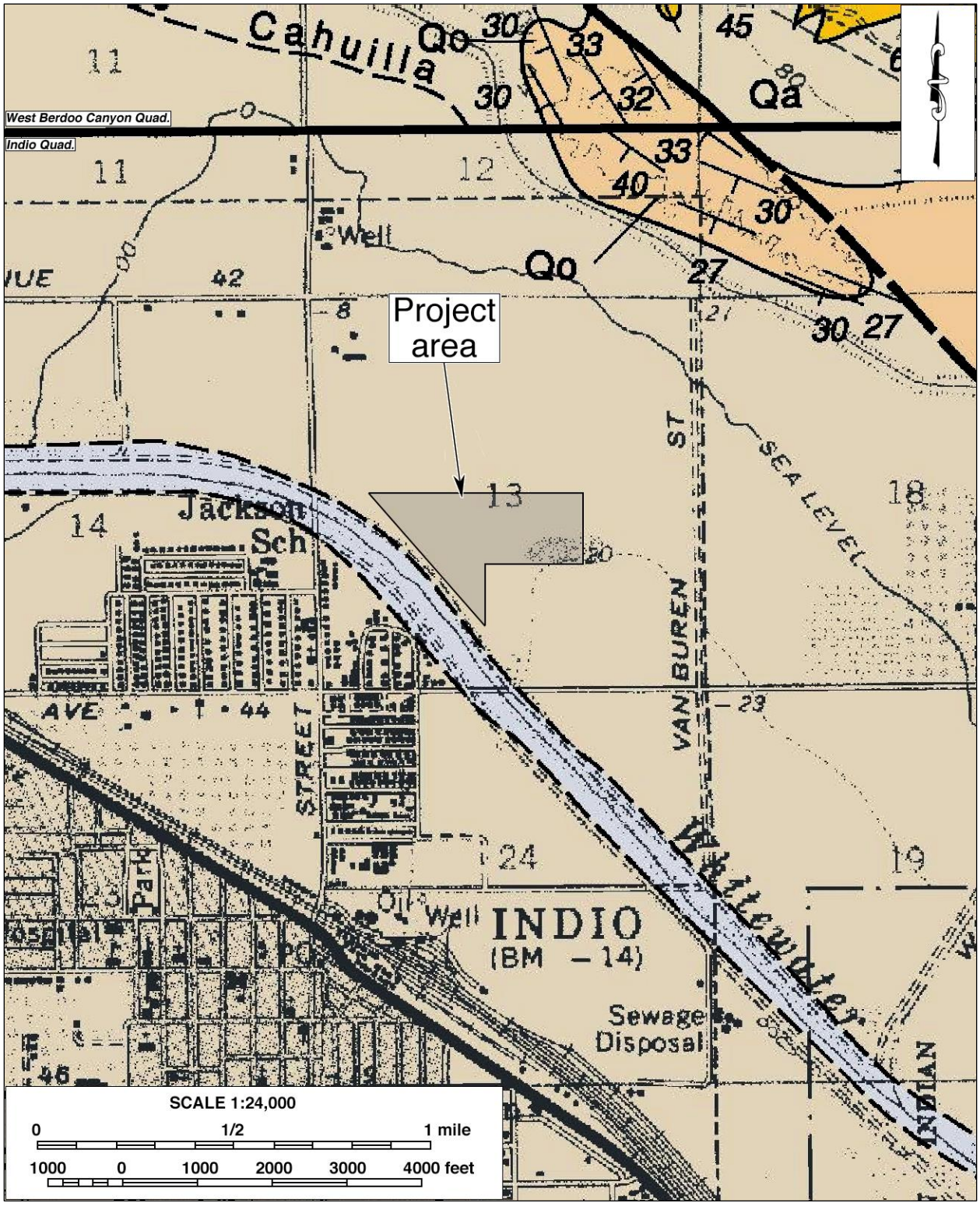

Figure 5. Geologic map of the project vicinity. (Source: Dibblee 2008)

FIELD SURVEY

The field survey yielded negative findings for potential paleontological resources, and no surficial indications of any fossil remains were observed within or adjacent to the project area. Field observations confirmed that the ground surface in the project area has been extensively disturbed by past agricultural use and the abandoned development activities in the most recent decades.

CONCLUSION AND RECOMMENDATIONS

CEQA guidelines (Title 14 CCR App. G, Sec. V(c)) require that public agencies in the State of California determine whether a proposed project would "directly or indirectly destroy a unique paleontological resource" during the environmental review process. The present study, conducted in compliance with this provision, is designed to identify any significant, non-renewable paleontological resources that may exist within or adjacent to the project area, and to assess the possibility for such resources to be encountered in future excavation and construction activities.

Based on the research results presented above, the proposed project's potential to impact significant, nonrenewable paleontological resources appears to be low in the surface and near-surface soils of Holocene age but high in the subsurface deposits of older Pleistocene alluvial sediments. Sources suggest that the project area is located in a region of relatively thick Holocene sedimentation. However, based on the presence of Pleistocene sediments at unknown depth, the County of Riverside categorizes the property in the highest category of paleontological sensitivity, High A.

In light of the potential sensitivity of the project location for paleontological resources, CRM TECH recommends that a paleontological resource impact mitigation program be developed and implemented during the project to prevent impacts on significant, nonrenewable paleontological resources or reduce them to a level less than significant. The mitigation program should be formulated in accordance with the provisions of CEQA (Scott and Springer 2003) as well as the proposed guidelines of the Society of Vertebrate Paleontology (2010), and should include but not be limited to the following components:

- All earth-moving operations within the project area reaching beyond the depth of three feet below the current ground surface should be monitored periodically for potential paleontological resources, with a full-time monitoring program implemented if potentially fossiliferous soils are encountered. The monitor should be prepared to quickly salvage fossils as they are unearthed to avoid construction delays and should collect samples of sediments that are likely to contain fossil remains of small vertebrates or in vertebrates. However, the monitor must have the power to temporarily halt or divert grading equipment to allow for the removal of abundant or large specimens.
- Collected samples of sediment should be processed to recover small fossils, and all recovered specimens should be identified and curated at a repository with permanent retrievable storage.
- A report of findings, including an itemized inventory of recovered specimens, should be prepared upon completion of the procedures outlined above. The report should include a discussion of the significance of the paleontological findings, if any. The report and the inventory, when submitted to the City of Indio, would signify completion of the program to mitigate potential impacts on paleontological resources.

Under this condition, the proposed project may be cleared to proceed in compliance with CEQA provisions on paleontological resources.

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APPENDIX 1:
PERSONNEL QUALIFICATIONS

PRINCIPAL PALEONTOLOGIST
Ron Schmidtling, M.S.

Education

1995	M.S., Geology, University of California, Los Angeles.
1991	Pasadena City College, Pasadena, California.
1985	B.A., Archaeology, Paleontology, Ancient Folklore, and Art History, University of Southern Mississippi, Hattiesburg.

Professional Experience:

2020-	Principal Paleontologist, CRM TECH, Colton, California.
2014-	Instructor of Earth Science, History of Life, Ecology, and Evolutionary Biology, Columbia College Hollywood, Reseda, California.
2013, 2015	Volunteer, excavation of a camarasaur and a diplodocid in southern Utah, Natural History Museum of Los Angeles County, California.
1993-2014	Consultant, Getty Conservation Institute, Brentwood, California. • Geological Consultant on the Renaissance Bronze Project, characterizing constituents of bronze core material; • Paleontological Consultant for Antiquities/Conservation, identifying the foraminifera and mineral constituents of a limestone torso of Aphrodite; • Scientific Consultant on the Brentwood Site Building Project, testing building materials for their suitability in the museum galleries.
1999-2001	Archaeological and Paleontological Monitor, Michael Brandman Associates, Irvine, California.
1997	Department of Archaeology, University of California, Los Angeles.
1994	Scientific Illustrator and Teaching Assistant, Department of Earth and Space Sciences and Department of Biological Sciences, University of California, Los Angeles.

Memberships

AAPS (Association of Applied Paleontological Sciences), USA; CSEOL (Center for the Study of Evolution and the Origin of Life), Department of Earth Sciences, University of California, Los Angeles.

Publications and Reports

Author, co-author, and contributor on numerous paleontological publications and paleontological resource management reports.

REPORT WRITER
Deirdre Encarnación, M.A.

Education

2003	M.A., Anthropology, San Diego State University, California.
2000	B.A., Anthropology, minor in Biology, with honors; San Diego State University, California.

Professional Experience

2004-	Project Archaeologist/Report Writer, CRM TECH, Riverside/Colton, California.
2001-2003	Part-time Lecturer, San Diego State University, California.
2001	Research Assistant for Dr. Lynn Gamble, San Diego State University.
2001	Archaeological Collection Catalog, SDSU Foundation.

Memberships

Society for California Archaeology; Society for Hawaiian Archaeology; California Native Plant Society; San Diego Archaeological Center.

PALEONTOLOGICAL SURVEYOR
Ashley Conner-Ayala, B.S.

Education

2021	GIS Certification, Pasadena City College, Pasadena.
2020	B.S., Anthropology, University of California, Riverside.
2019	Paleoanthropology Field School, Dmanisi, Republic of Georgia.
2019	M.A.R.I. CRM Field School, Milford, Utah.

Professional Experience

2021-	Project Archaeologist, CRM TECH, Colton, California.
2021	Field Technician, Bruce Love Consulting, Littlerock, California.
2020	Archaeological Monitor and Field Technician, McKenna et al., Whittier, California.

PALEONTOLOGICAL SURVEYOR
Hunter C. O'Donnell, B.A.

Education

2016-	M.A. Program, Applied Archaeology, California State University, San Bernardino.
2015	B.A. (*cum laude*), Anthropology, California State University, San Bernardino.
2012	A.A., Social and Behavioral Sciences, Mt. San Antonio College, Walnut, California.
2011	A.A., Natural Sciences and Mathematics, Mt. San Antonio College, Walnut, California.

Professional Experience

2017-	Project Archaeologist, CRM TECH, Colton, California.
2016-2018	Graduate Research Assistant, Applied Archaeology, California State University, San Bernardino.
2016-2017	Cultural Intern, Cultural Department, Pechanga Band of Luiseño Indians, Temecula, California.
2015	Archaeological Intern, U.S. Bureau of Land Management, Barstow, California.
2015	Peer Research Consultant: African Archaeology, California State University, San Bernardino.

APPENDIX 2

RECORDS SEARCH RESULTS

WESTERN SCIENCE CENTER

April 22, 2022

CRM TECH
Nina Gallardo
1016 E. Cooley Drive, Suite A/B
Colton, CA

Dear Ms. Gallardo,

This letter presents the results of a record search conducted for the Proposed Calhoun Specific Plan Project in the City of Indio, Riverside County, California. The project site is located immediately south of Avenue 43 and northeast of the I-10 Freeway in the Township 5 South, Range 7 East, Section 13 on the *Indio and West Berdoo Canyon, CA* USGS 7.5 minute quadrangle.

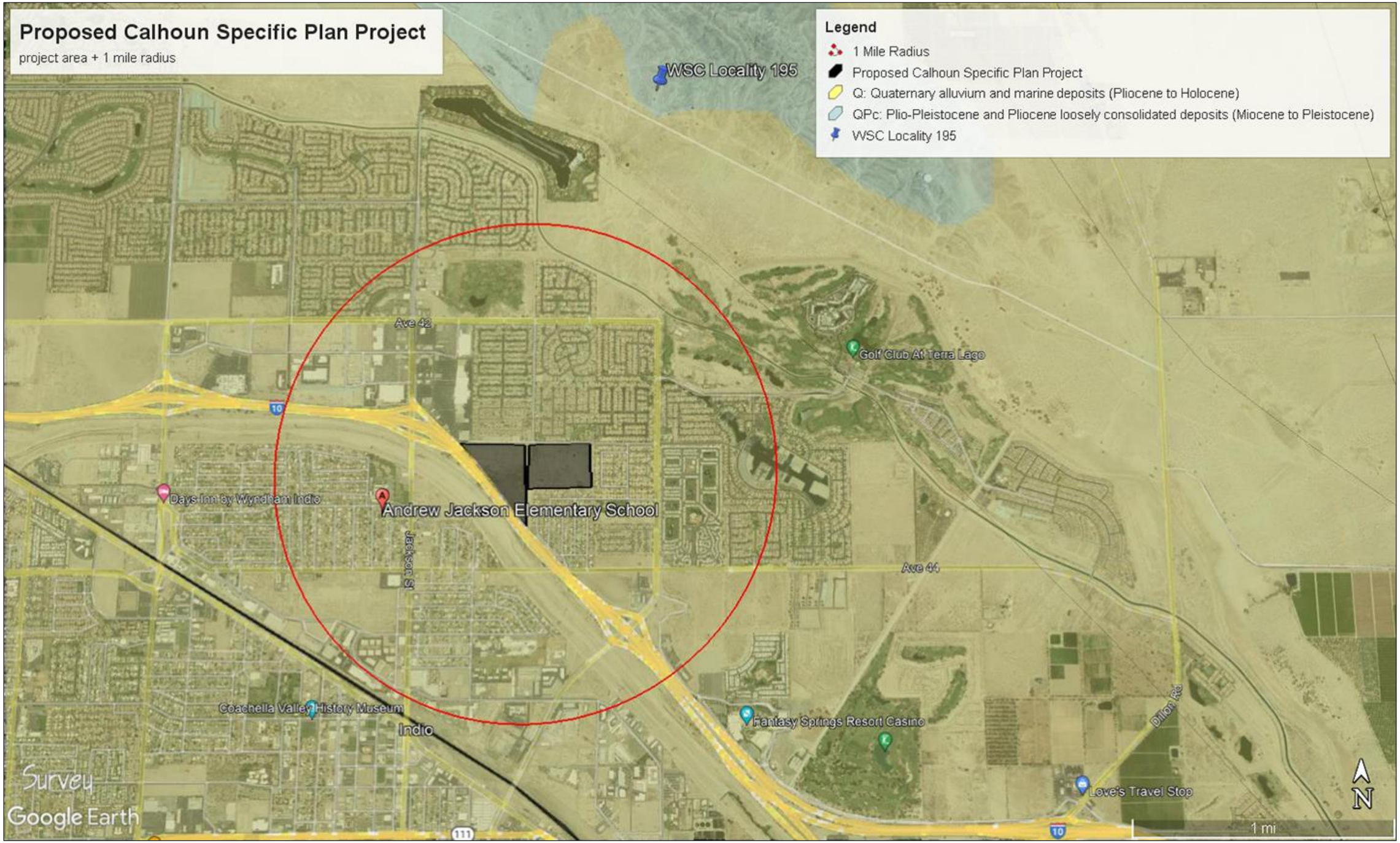
The geologic units underlying this project are mapped entirely as alluvial sand and clay deposits dating from the Holocene period (Dibblee and Minch, 2008). Holocene alluvial units are considered to be of high preservation value, but material found is unlikely to be fossil material due to the relatively modern associated dates of the deposits. However, if development requires any substantial depth of disturbance, the likelihood of reaching Pleistocene alluvial sediments would increase. The Western Science Center does not have localities within the project area or within a 1 mile radius. However, the Western Science Center does have a locality in a Miocene-Pliocene aged sandstone unit north of the project.

While the presence of any fossil material is unlikely, if excavation activity disturbs deeper sediment dating to the earliest parts of the Holocene or Late Pleistocene periods, the material would be scientifically significant. Excavation activity associated with the development of the project area is unlikely to be paleontologically sensitive, but caution during development should be observed.

If you have any questions, or would like further information, please feel free to contact me at bstoneburg@westerncentermuseum.org.

Sincerely,

Brittney Elizabeth Stoneburg
Collections Technician


Proposed Calhoun Specific Plan Project
project area + 1 mile radius
Legend
1 Mile Radius
Proposed Calhoun Specific Plan Project
Q: Quaternary alluvium and marine deposits (Pliocene to Holocene)
QPc: Plio-Pleistocene and Pliocene loosely consolidated deposits (Miocene to Pleistocene)
WSC Locality 195
WSC Locality 195
Ave 42
Golf Club At Terra Lago
Days Inn by Wyndham Indio
Andrew Jackson Elementary School
Jackson St
Ave 44
Coachella Valley History Museum
Indio
Fantasy Springs Resort Casino
Dillon Rd
Love's Travel Stop
10
111
Survey
Google Earth
1 mi
N