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December 15, 2023

Anna Choudhuri
Environmental Planning Manager
The Altum Group
73-710 Fred Waring Drive, Suite 219
Palm Desert, California 92260
Via email to max.antono@thealtumgroup.com

RE: Paleontological Resources Addendum Report for the Coachella Airport Business Park Supplemental Project Area, City of Coachella, Riverside County, California

Dear Anna Choudhuri,

At the request of The Altum Group, PaleoWest, LLC, dba Chronicle Heritage (Chronicle Heritage), conducted a paleontological resources addendum report for the Coachella Airport Business Park (Project) in the city of Coachella, Riverside County, California. The goal of the report is to identify the geologic units that may be impacted by development of an additional 3-acre (ac) (Supplemental Project Area), determine the paleontological sensitivity of geologic units within the parcel, assess potential for impacts to paleontological resources from development of the parcel, and recommend mitigation measures to avoid or mitigate impacts to scientifically significant paleontological resources, as necessary.

This report includes a review of existing geologic maps within the Project (Original and Supplemental) vicinity and region. This report, which was written in accordance with the guidelines set forth by the Society of Vertebrate Paleontology (SVP) (2010), has been prepared to support environmental review under the California Environmental Quality Act (CEQA).

Project Location and Description

The Project (Original and Supplemental) is located at the northwestern corner of State Route (SR) 86 and Airport Boulevard and is composed of four parcels totaling approximately 46 ac in size. The Assessor's Parcel Numbers (APNs) of the Original Project area are 763-330-013, 763-330-018, and 763-330-029, and the Supplemental Project Area is "Parcel 'A'." The Project area (Original and Supplemental) is bordered to the north by a vacant, undeveloped property; to the west by the Whitewater River Storm Channel; to the east by State Route 86; and to the south by Airport Boulevard (Figure 1). The Project area (Original and Supplemental) is in Section 15, Township 6 South, Range 18 East, San Bernardino Baseline and Meridian (SBBM) as depicted on the Indio, CA 7.5-minute U.S. Geological Survey (USGS) topographic quadrangle (Figure 2). The elevation of the Project area (Original and Supplemental) ranges between 110 and 120 feet (ft) below mean sea level (bmsl).

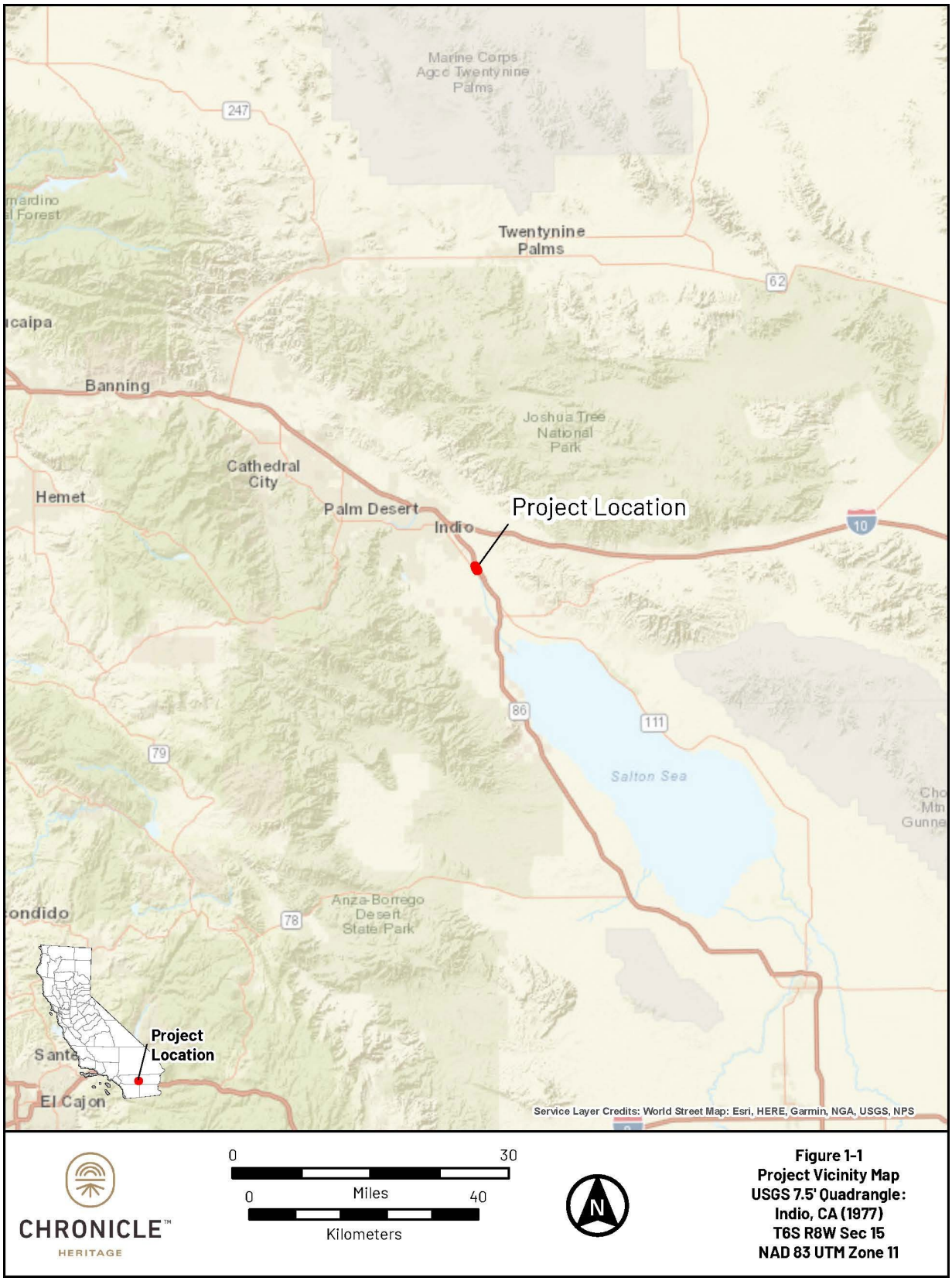


Figure 1. Project vicinity map.

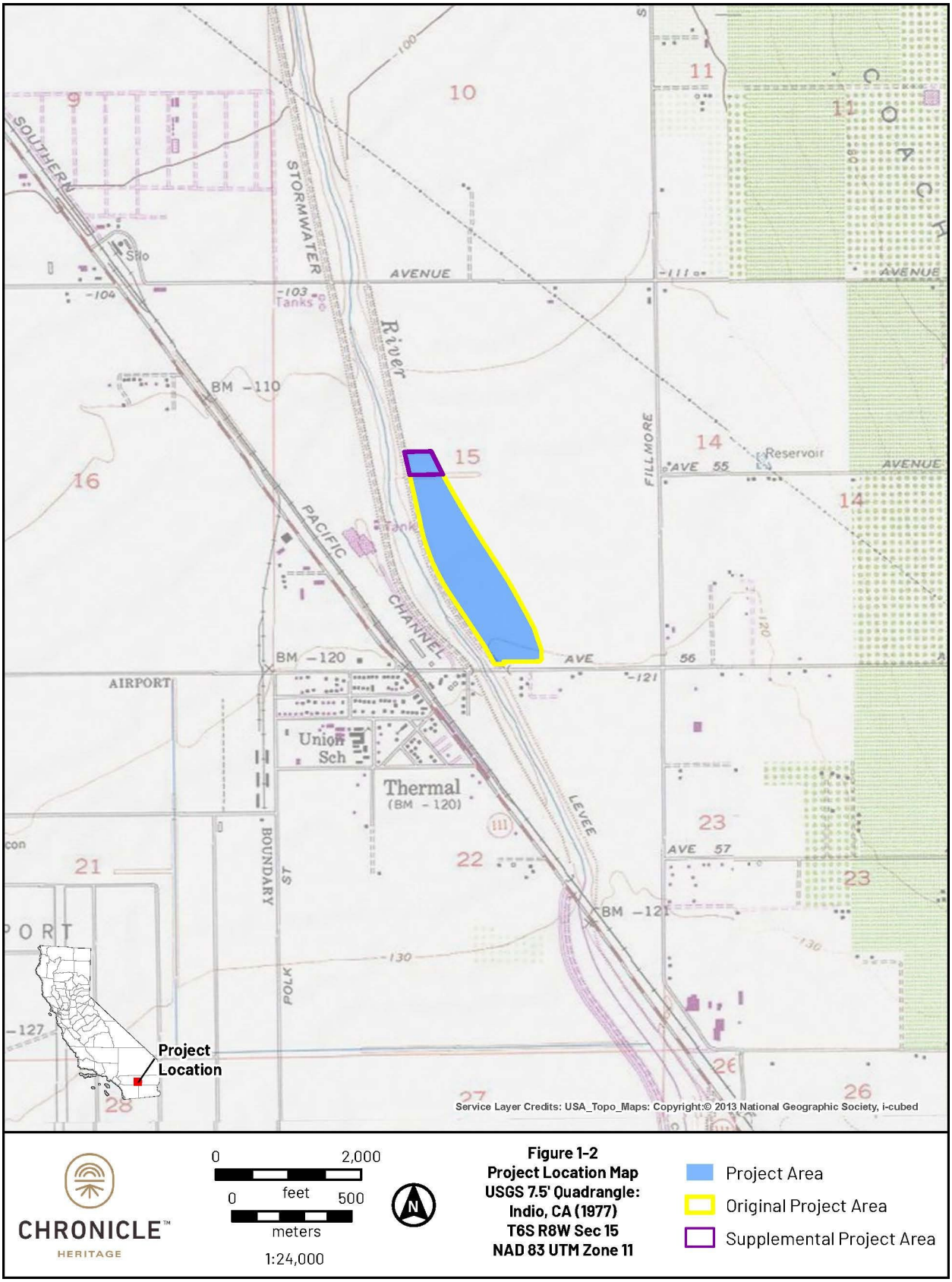


Figure 2: Project location map.

The service station, mini mart, and drive-thru coffee shop are proposed to be developed at the southern end of the Original Project area near the Original Project's two primary access points along Airport Boulevard within close proximity to the SR 86 off ramp. North of these two retail buildings will be the small business sector that will be comprised of 18 leasable buildings for office or warehouse uses. Beyond the small business sector to the north will be the brick-yard sector of the business park that will contain a total of four hangar-type buildings with a centralized courtyard-type green space. The brick-yard sector will be designed for storage of automobile models and motorsport vehicles. The self-storage sector will be located within the western portion of the center of the Original Project area and will include 16 buildings ranging in size. The small warehouse sector will be located within the eastern portion of the center of the Original Project area and will consist of four warehouse buildings. The large warehouse sector will be located within the northern portion of the Original Project area and will consist of four to six warehouses. Both the large and small warehouse sectors will be built to accommodate both logistical and distribution-related uses (i.e., fulfillment centers) and for cannabis-related uses (i.e., cultivation, manufacturing, and distribution).

The Project (Original and Supplemental) will be completed in phases and will be used as a mixed-use business park with a focus on warehouse and commercial cannabis, small business and service station-related land uses including a large warehouse, small warehouse, small business, brick yard, self-storage, service station and mini mart, and drive-thru coffee shop totaling 676,997 ft^2 of building space.

Regulatory Context

Paleontological resources (i.e., fossils) are considered nonrenewable scientific resources because, once destroyed, they cannot be replaced. As such, paleontological resources are afforded protection under various federal, state, and local laws and regulations. Laws pertinent to this Project (Original and Supplemental) are discussed below.

State Laws and Regulations

California Environmental Quality Act

CEQA requires that public agencies and private interests identify the potential environmental consequences of their projects on any object or site of significance to the scientific annals of California (Division I, California Public Resources Code [PRC] Section 5020.1[j]). Appendix G in Section 15023 provides an Environmental Checklist of questions (Section 15023, Appendix G, Section XIV, Part A) that includes the following: "Would the project directly or indirectly destroy a unique paleontological resource or site or unique geological feature?"

California Public Resources Code

Section 5097.5 of the PRC states:

> 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, 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. As used in this PRC 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.

Consequently, public agencies are required to comply with PRC 5097.5 for their activities including construction and maintenance as well as for permit actions (e.g., encroachment permits) undertaken by others.

Local

The City of Coachella General Plan Update (2015) covers eight elements, one of which includes Sustainability and the Natural Environment. This element includes two goals and four associated policies related to paleontological resources:

> **Goal 10. Passive Open Space**. Preserved open space areas that represent significant aesthetic, cultural, environmental, economic, and recreational resources for the community.
>
> **Policies**
>
> > **10.3 Archaeological resource preservation.** Preserve important archaeological and paleontological resources from loss or destruction and require development to include appropriate mitigation to protect the quality and integrity of these resources.
> >
> > **10.4 Mitigation and preservation of cultural resources.** Require development to avoid archaeological and paleontological resources, whenever possible. If complete avoidance is not possible, require development to minimize and fully mitigate the impacts to the resources.
> >
> > **10.5 Grading.** Require that proposed projects that involve a significant amount of grading shall have an archaeological and paleontological survey conducted before construction.
>
> **Goal 12. Cultural Resources and Sites.** Preserved and protected cultural resources that provide the community with significant cultural, scientific, or educational value.
>
> **Policies**
>
> > **12.7 Paleontological resources.** Require any paleontological artifacts found within the City or Sphere of Influence be reported to the City and temporarily loaned to local museums like the Western Science Center for Archaeology and Paleontology, in Hemet, CA.

Paleontological Resources

Paleontological Resource Definition

SVP has provided guidance designed to support state and federal environmental review. The SVP broadly defines significant paleontological resources as follows:

> Fossils and fossiliferous deposits consisting of identifiable vertebrate fossils, large or small, uncommon invertebrate, plant, and trace fossils, and other data that provide taphonomic, taxonomic, phylogenetic, paleoecologic, stratigraphic, and/or biochronologic information. Paleontological resources are considered to be older than recorded human history and/or older than middle Holocene (i.e., older than about 5,000 radiocarbon years). (SVP, 2010)

Significant paleontological resources are determined to be fossils or assemblages of fossils that are unique, unusual, rare, diagnostically important; are common but have the potential to provide valuable scientific information for evaluating evolutionary patterns and processes; or that could improve our understanding of paleochronology, paleoecology, paleophylogeography, or depositional histories. New or unique specimens can provide new insights into evolutionary history; however, additional specimens of even well-represented lineages can be equally important for studying evolutionary patterns and processes, evolutionary rates, and paleophylogeography. Even unidentifiable material can provide useful data for dating geologic units if radiometric dating is possible. As such, common fossils (especially vertebrates) may be scientifically important and therefore considered significant.

This definition is used for all projects that are subject to CEQA since CEQA does not define "a unique paleontological resource or site."

Paleontological Resource Potential

Absent specific agency guidelines, most professional paleontologists in California adhere to the guidelines set forth by SVP (2010) to determine the course of paleontological mitigation for a given project. These guidelines establish protocols for the assessment of the paleontological resource potential of underlying geologic units and outline measures to mitigate adverse impacts that could result from project development. Using baseline information gathered during a paleontological resource assessment, the paleontological resource potential of geologic units, or members thereof, underlying a project area can be assigned to one of four categories defined by SVP (2010). Although these standards were written specifically to protect vertebrate paleontological resources, all fields of paleontology have adopted the following guidelines.

High Potential (Sensitivity)

Rock units from which significant vertebrate or significant invertebrate fossils or significant suites of plant fossils have been recovered have a high potential for containing significant nonrenewable fossiliferous resources. These units include but are not limited to sedimentary formations and some volcanic formations that contain significant nonrenewable paleontological resources anywhere within their geographical extent and sedimentary rock units temporally or lithologically suitable for the preservation of fossils. Sensitivity comprises both (a) the potential for yielding abundant or significant vertebrate fossils or for yielding a few significant fossils, large or small, vertebrate, invertebrate, or botanical and (b) the importance of recovered evidence for new and significant taxonomic, phylogenetic, ecologic, or stratigraphic data. Areas that contain potentially datable organic remains older than recent, including deposits associated with nests or middens, and areas that may contain new vertebrate deposits, traces, or trackways are also classified as significant.

Low Potential (Sensitivity)

Sedimentary rock units that are potentially fossiliferous but have not yielded fossils in the past or contain common and widespread invertebrate fossils of well-documented and understood taphonomic, phylogenetic species, and habitat ecology are considered to have a low potential for containing significant nonrenewable fossiliferous resources. Reports in the paleontological literature or field surveys by a qualified vertebrate paleontologist may allow a determination that some areas or units have a low potential for yielding significant fossils before the start of construction. Generally, these units will be poorly represented by specimens in institutional

collections and will not require protection or salvage operations. However, as excavation for construction is underway, it is possible that significant and unanticipated paleontological resources might be encountered and require a change of classification from low to high potential and thus require monitoring and mitigation if the resources are found to be significant.

Undetermined Potential (Sensitivity)

Specific areas underlain by sedimentary rock units for which little information is available have undetermined fossiliferous potentials. Field surveys by a qualified vertebrate paleontologist to determine the rock units' potential are required before programs of impact mitigation for such areas can be developed.

No Potential

Rock units of metamorphic or igneous origin are commonly classified as having no potential for containing significant paleontological resources.

Methods

To assess whether a particular area has the potential to contain significant paleontological resources in the subsurface, it is necessary to review published geologic mapping at the largest scale available and pertinent published scientific literature to determine the geology and stratigraphy of the area. Geologic units are considered sensitive for paleontological resources if they are known to contain significant fossils anywhere in their extent.

Resource Context

Geologic Setting

The Project area (Original and Supplemental) is in the Colorado Desert geomorphic province of California. The Colorado Desert extends from the Mojave Desert to the north, the Colorado River on the east, the Peninsular Ranges on the west, and south into Mexico. Dominant features within the Colorado Desert include the Salton Trough, the Colorado River, and the Orocopia, Chocolate, Palo Verde, and Chuckwalla mountains (Norris and Webb, 1976). Locally, the Project (Original and Supplemental) is in the Coachella Valley, which is in the Salton Trough, a large structural depression that extends from the San Gorgonio Pass in the north to the Gulf of Mexico in the south (Norris and Webb, 1976). The Salton Trough formed due to tectonic activity associated with the San Andreas Fault Zone and the East Pacific Rise spreading ridge that opened the Gulf of California (Alles, 2011). Starting in the Pleistocene Epoch (2.58 million years ago to 11,700 years ago), the freshwater Lake Cahuilla periodically occupied the Salton Trough. The lake formed, drained, and reformed between approximately 37,000 and 300 years ago due to the fluctuations in the course of the Colorado River and the subsequent diversion of its mouth from the Gulf of California to the Salton Trough (Norris, 1999). Lake Cahuilla reached a maximum depth of 300 ft, 105 mi long, and 35 mi across at its last high stand at approximately 45 ft above sea level in the Imperial Valley.

Site Specific Geology and Paleontology

The geology of the Original Project area and Supplemental Project area is mapped by Dibblee and Minch (2008) at a scale of 1:62,500 (Figure 3). The Supplemental Project Area is underlain by surficial sedimentary deposits composed of alluvial sand and clay deposited in valley areas (Qa) and fluvial sand and gravel deposited by the Whitewater River (Qg), both during the Holocene Epoch (11,700 years ago to present) (Dibblee and Minch, 2008). Holocene sedimentary deposits are typically too young to have accumulated or preserved significant biological material but may overlie older Pleistocene deposits with significant paleontological resources.

Holocene lacustrine silt deposits of Lake Cahuilla shallowly underlie surficial sedimentary deposits in the southern Coachella Valley. These Holocene Lake Cahuilla deposits grade into older Pleistocene deposits of "ancient" Lake Cahuilla deposits at depth (Waters, 1983; Whistler et al., 1995; Norris, 1999; Alles, 2011). The depth of the contact between the Holocene-age and Pleistocene-age Lake Cahuilla deposits in the Project area (Original and Supplemental) is unknown; however, radiocarbon dating derived from an exposure of Lake Cahuilla deposits located approximately 5 miles south of Indio indicated that lacustrine silt sediments at a depth of 20 ft below ground surface (bgs) have an age of approximately 4,000 years B.P. (Waters, 1983). The Pleistocene- to Holocene-age Lake Cahuilla deposits are generally composed of weakly consolidated, shallow-to-moderately deep lacustrine sands, silts, and clays with tufa and travertine rock coatings (Waters, 1983; Norris, 1999). The Lake Cahuilla sediments range from several feet deep at the margin of the Coachella Valley to as much as 300 ft thick in the center of the Salton Trough (Arnal, 1961; Norris and Webb, 1976).

Lacustrine deposits derived from ancient Lake Cahuilla have yielded scientifically significant mollusc shells within the Salton Trough (Whistler et al., 1995), and Holocene-age, nonmineralized, mollusc shells have also been found in the Lake Cahuilla silt deposits (Norris and Webb, 1976). A previous paleontological assessment for the Original Project (Kottachchi and DeBusk, 2020) documented four fossil localities from Lake Cahuilla deposits approximately 7 miles west of the Project area (Original and Supplemental) that produced material from bighorn sheep (*Ovis canadensis*), small terrestrial vertebrates, fish, freshwater bivalves, freshwater gastropods, diatoms, spores, pollen, land plants, sponges, and ostracods.

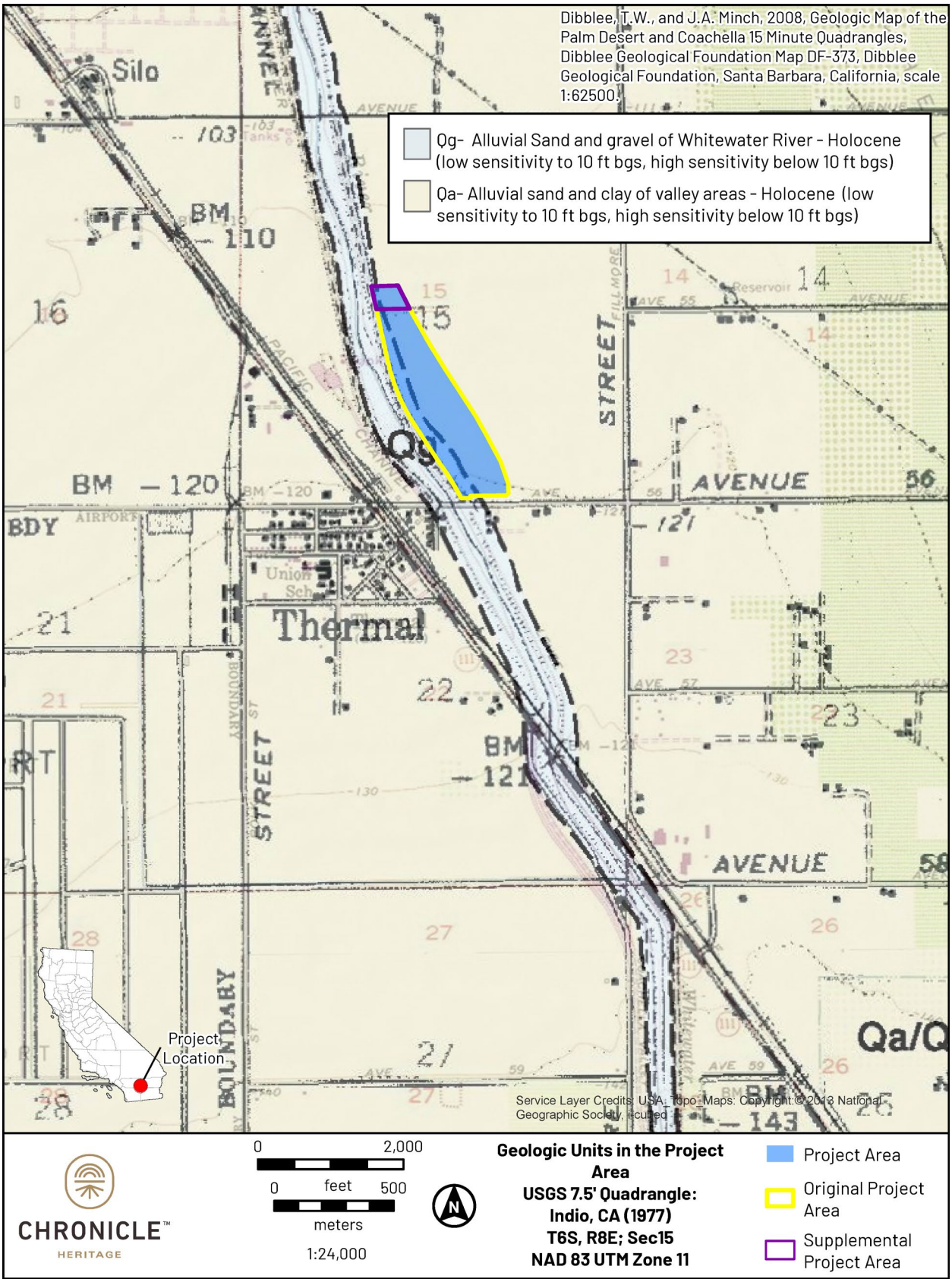


Figure 3. Project geology map.

Findings

This memorandum uses the SVP (2010) system to assess paleontological sensitivity and the level of effort required to manage potential impacts to significant fossil resources. Using this system, the sensitivity of geologic units was determined by the relative abundance and risk of adverse impacts to vertebrate fossils and significant invertebrates and plants.

In accordance with the SVP (2010) sensitivity scale, the previous paleontological assessment for the Project (Kottachchi and DeBusk, 2020) determined shallow excavations in the Original Project area above approximately 10 ft bgs, would impact only Holocene-age sedimentary deposits, which typically do not contain paleontological resources and are assigned a low paleontological sensitivity. As a result, since the Original Project area and Supplemental Project area are adjacent and share the same underlying geologic units, shallow ground disturbance above 10 ft bgs in the Supplemental Project Area is also unlikely to impact paleontological resources. However, deeper excavations below 10 ft bgs may extend down into older Pleistocene deposits that have a high paleontological sensitivity due to the presence of Pleistocene fossil localities in the region (Kottachchi and DeBusk, 2020) (Table 1).

Deeper ground disturbing activities below 10 ft bgs in the Supplemental Project Area parcel could impact paleontological resources and should be monitored by a qualified paleontological monitor to identify and effectively salvage any recovered resources while minimizing delays. The paleontological sensitivity assignments of Kottachchi and DeBusk (2020) are generally consistent with the County of Riverside (2015), which maps the Original Project area and Supplemental Project area as high paleontological sensitivity (Ha) due to the presence of the fossiliferous Lake Cahuilla lacustrine deposits.

Table 1. Geologic Units in the Project Area and their Paleontological Sensitivity[1]

Geologic Unit[2]	Map Abbreviation[2]	Age	Typical Fossils[3]	Paleo Sensitivity[3]
Surficial sediments (alluvial sand and clay of valley areas)	Qa	Holocene	Low in Holocene-age sedimentary deposits; bighorn sheep (Ovis canadensis), small terrestrial vertebrates, fish, freshwater bivalves, freshwater gastropods, diatoms, spores, pollen, land plants, sponges, and ostracod in Pleistocene deposits.	Low to 10 ft bgs, high below 10 ft bgs
Surficial sediments (alluvial sand and gravel of Whitewater River)	Qg			

[1] SVP (2010)

[2] Dibblee and Minch (2008)

[3] Kottachchi and DeBusk (2020)

Recommendations

In general, the potential for a given project to result in negative impacts to paleontological resources is directly proportional to the amount of ground disturbance associated with the project; thus, the higher the amount of ground disturbances within geological deposits with a known paleontological sensitivity, the greater the potential for negative impacts to paleontological resources. Since this Project construction of multiple buildings, significant ground disturbances are anticipated. The presence of high sensitivity units at the surface suggests that ground disturbance may result in significant impacts under CEQA to paleontological resources including destruction, damage, or loss of scientifically

important paleontological resources. A qualified paleontologist should be retained to develop and implement the measures recommended below. These measures have been developed in accordance with SVP guidelines; if implemented, these measures will satisfy the requirements of CEQA.

Paleontological Mitigation Monitoring

Per Policies 10.3, 10.4, and 10.5 of the City of Coachella (2015), construction monitoring is recommended for geologic units with high sensitivity. Sedimentary deposits below 10 ft bgs in the Supplemental Project Area are assigned a high paleontological sensitivity and ground disturbing activities below 10 ft bgs should be monitored. The monitoring procedures for ground disturbing activities in the Supplemental Project Area should follow the same procedures for the Original Project area, as will be detailed in the Paleontological Resources Monitoring and Mitigation Plan (PRMMP) for the Original Project.

Fossil Discoveries

Per Policies 10.3 and 10.4 of the City of Coachella (2015), if a paleontological resource is discovered in the Supplemental Project Area, the paleontological monitor will have the authority to temporarily divert the construction equipment around the find until it is assessed for scientific significance and, if appropriate, collected. If the resource is determined to be of scientific significance, the project paleontologist shall complete the following steps:

1. **Salvage of Fossils.** If fossils are discovered, all work in the immediate vicinity should be halted to allow the paleontological monitor and project paleontologist to evaluate the discovery and determine if the fossil may be considered significant. If the fossils are determined to be potentially significant, the project paleontologist or paleontological monitor should recover them following standard field procedures for collecting paleontological resources as outlined in the PRMMP for the Original Project. Typically, fossils can be safely salvaged quickly by a single paleontologist and not disrupt construction activity. In some cases, larger fossils (such as complete skeletons or large mammal fossils) require more extensive excavation and longer salvage periods. In this case, the paleontologist should have the authority to temporarily direct, divert, or halt construction activity to ensure that the fossils can be removed in a safe and timely manner.
2. **Fossil Preparation and Curation.** Per Policy 12.7 of the City of Coachella (2015), and as will be detailed in the PRMMP for the Original Project, all fossils discovered during Project-related excavations will be accessioned at the Western Science Center (WSC). Upon completion of fieldwork, all significant fossils collected will be prepared in a properly equipped laboratory to a point ready for curation. Preparation may include the removal of excess matrix from fossil materials and stabilizing or repairing specimens. During preparation and inventory, the fossils specimens will be identified to the lowest taxonomic level practical prior to curation. The fossil specimens must be delivered to the WSC no later than 30 days after all laboratory work is completed. The cost of curation will be assessed by the repository and will be the responsibility of the client.

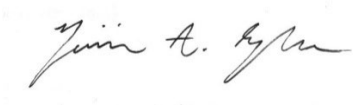
Final Paleontological Mitigation Report

Upon completion of ground disturbing activity (and curation of fossils if necessary) in the Project area (Original and Supplemental), the Project paleontologist should prepare a final mitigation and monitoring report outlining the results of the PRMMP. The report should include discussion of the

location, duration and methods of the monitoring, stratigraphic sections, any recovered fossils, and the scientific significance of those fossils, and where fossils were curated.

Thank you for contacting Chronicle Heritage for this Project. If you have any questions, please do not hesitate to contact us.

Sincerely,
Chronicle Heritage



Benjamin Scherzer, M.S.
Senior Paleontologist

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