

3.1.6 Paleontological Resources

This section describes the existing paleontological conditions within the Project site and vicinity, identifies regulatory requirements associated with paleontological issues, and evaluates potential impacts related to implementation of the Proposed Project.

This analysis is based on geologic mapping and descriptions provided in a geotechnical information prepared for the Proposed Project by Geocon (2015a). Relevant portions of the investigations are summarized below along with other applicable information, with the complete Geocon information included in Appendix I of this EIR.

3.1.6.1 Existing Conditions

Paleontology is the science dealing with prehistoric plant and non-human animal life. Paleontological resources (or fossils) typically encompass the remains or traces of hard and resistant materials such as bones, teeth, or shells, although plant materials and occasionally less resistant remains (e.g., tissue or feathers) can also be preserved. The formation of fossils typically involves the rapid burial of plant or animal remains and the formation of casts, molds, or impressions in the associated sediment (which subsequently becomes sedimentary rock). As a result, the potential for fossil remains in a given geologic formation can be predicted based on known fossil occurrences from similar (or correlated) geologic formations in other locations. Accordingly, while there are no recorded fossil occurrences or collection efforts known from the Project site, paleontological resource potential can be inferred from on-site geology and off-site fossil occurrences in similar materials, as outlined below.

Geologic Formations

Based on the geotechnical investigations conducted for the Proposed Project, as well as review of regional geologic mapping (CGS 2007), surficial materials and geologic formations observed or expected to occur within the Project site and the off-site roadway and potential utility improvement areas include historic (recent) fill deposits; Quaternary-age topsoil, alluvium and colluvium; and Cretaceous-age igneous intrusive (granitic) rocks commonly referred to as Escondido Creek Granodiorite. Summary descriptions of these materials and formations, as well as any paleontological resource sensitivities associated with these deposits are provided below.

Historic Fill Deposits

Fill deposits within the Project site include three relatively small fill embankments located along the west-central, northern and southeastern site boundaries. Fill materials along the west-central and eastern boundaries are apparently associated with existing horse corrals (resulting from abutting property owners encroaching onto the property) and a (breached) embankment in the eastern portion of the property, with fill in the northern area of unknown origin (and located outside of proposed development areas (Geocon 2015a). Fill deposits exhibit no potential for the occurrence of significant paleontological resources, due to their recent age and the destructive nature of their origin (i.e., they are mechanically processed through methods such as crushing and screening).

Quaternary Topsoils

Native topsoil deposits occur throughout much of the site and generally exhibit depths ranging up to 1 foot. Topsoil deposits do not exhibit any potential for significant paleontological resource values for similar reasons as noted above for fill materials. Specifically, this includes their relatively recent age and high-energy methods of formation and deposition (i.e., physical and chemical weathering to produce soil; and transport/deposition by methods such as water, wind, and gravity).

Quaternary Alluvium

Quaternary alluvial materials occur within a number of drainage courses located throughout the Project site. Alluvial materials on site are assigned a low paleontological resource sensitivity due to their relatively recent age, high-energy formation/deposition environment, and the fact that, with rare exceptions, significant fossil occurrences are unknown from such deposits in San Diego County (Deméré and Walsh 1993).

Quaternary Colluvium

Colluvial deposits are present on-site along the base of several steeper granitic rock slopes located above the alluvial drainages. These materials exhibit no potential for significant paleontological resource values, due primarily to the fact that they are derived from igneous rocks (as described below).

Cretaceous Igneous Intrusive Granitic Rocks

Igneous intrusive rocks are exposed in many of the steeper portions of the Project site, and underlie the remainder of the site at variable depths. Granitic rocks exhibit no potential for the occurrence of paleontological resources due to their molten origin.

Regulatory Setting

State Standards

Under CEQA, lead agencies are required to consider impacts associated with the direct or indirect destruction of unique paleontological resources or sites that are of value to the region or State (County 2009c).

Section 5097.5 of the California Public Resources Code (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.

County Standards

The County Guidelines for Determining Significance – Paleontological Resources (County 2009c) provide direction for evaluating environmental effects related to paleontological resources, pursuant to related CEQA standards. The Guidelines give an overview of paleontological resources and their occurrence in San Diego County, and provide guidance for assessing resource values, identifying the nature and extent of impacts, and establishing attenuation/reporting requirements.

Section 87.430, Paleontological Resources, of the San Diego County Code of Regulatory Ordinances (Grading Ordinance) states:

The County Official may require that a qualified paleontologist be present during all or selected grading operations, to monitor for the presence of paleontological resources. If fossils greater than twelve inches in any dimension are encountered, then all grading operations in the area where they were found shall be suspended immediately and not resumed until authorized by the County Official. The permittee shall immediately notify the County Official of the discovery. The County Official shall investigate and determine the appropriate resource recovery operations, which the permittee shall carry out prior to the County Official's authorization to resume normal grading operations.

Goal COS-9 (Educational and Scientific Uses) in the San Diego County General Plan Conservation and Open Space Element is intended to conserve paleontological resources and unique geologic features (which may encompass paleontological resources). Associated policies include:

- **Policy COS-9.1, Preservation** – Require the salvage and preservation of unique paleontological resources when exposed to the elements during excavation or grading activities or other development processes.
- **Policy COS-9.2, Impacts of Development** – Require development to minimize impacts to unique geological features from human related destruction, damage, or loss.

3.1.6.2 Analysis of Project Effects and Determination as to Significance

Guideline for the Determination of Significance

The Proposed Project would have a potentially significant environmental impact to paleontological resources if it would:

1. Directly or indirectly damage a unique paleontological resource or site, or include grading or excavation that would disturb the substratum or parent material below the major soil horizons in any paleontologically sensitive area of the County, as shown on the San Diego County Paleontological Resources Potential and Sensitivity Map.

Guideline Source

This guideline is taken from the County Guidelines for Determining Significance – Paleontological Resources (2009c).

Analysis

On-site and Off-site Resources

As described above, surficial and underlying deposits in the Project area include historic fill; Quaternary-age topsoil, alluvium and colluvium; and Cretaceous-age granitic rocks. These deposits exhibit either low (alluvium) or no potential (all other Project area materials) for the occurrence of significant paleontological resources. Project elements are also outside areas requiring paleontological monitoring on the San Diego County Paleontological Resources Potential and Sensitivity Map (County 2009f). As a result, **potential impacts to paleontological resources from Project implementation would be less than significant.**

3.1.6.3 Cumulative Impact Analysis

As noted above, all potential Project-specific paleontological impacts would be less than significant, based on the fact that areas subject to potential Project-related disturbance contain surficial and formational deposits that exhibit either low or no potential for the occurrence of significant paleontological resources. Accordingly, **a less than considerable Project-related contribution to regional paleontological resources impacts would be less than significant.**

3.1.6.4 Significance of Impacts

Based on the analysis provided above, the Proposed Project would have less than significant impacts related to paleontological resources.

3.1.6.5 Conclusion

Based on the analysis provided above, no significant Project-specific or cumulative impacts related to paleontological resources would result from implementation of the Project.