3.13 Paleontological Resources

3.13.1 Introduction

This section analyzes the potential for paleontological discoveries within the project construction area. Paleontological resources are physical remnants of ancient life. Typical paleontological resources could include fossilized bones, teeth, shells, leaves and wood, but could also consist of footprints, burrows or other indicators.

The analysis in this section is based on *Paleontological Assessment for the Exposition Corridor Transit Project (Phase II), Cities of Los Angeles and Santa Monica, California* (July 2008). Full bibliographic references can be found in Appendix B (Bibliography).

3.13.2 Existing Conditions

The project alignments are mapped as Quaternary old alluvial fan deposits and Quaternary young alluvial fan deposits. Quaternary old alluvial fan sediments were deposited during the middle to late Pleistocene epoch, between 800,000 to 10,000 years ago while the young fan deposits are less than 10,000 years old. The Quaternary old alluvial fan deposits are exposed at the surface in the Cheviot Hills, Palms, Culver City, and Santa Monica areas and are crossed by all four LRT Alternatives. The old alluvial fan deposits are also present at variable depths, below the young alluvial fan deposits throughout the project.

Thirteen vertebrate fossil localities have been previously discovered in the Quaternary old alluvial fan deposits within the project alignments and a 1-mile perimeter buffer. Vertebrate fossils are important non-renewable paleontological resources.

3.13.3 Regulatory Setting

State

California Environmental Quality Act (CEQA)

CEQA is intended to prevent substantial, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible. If paleontological resources are identified as being within the proposed project area, the sponsoring agency must take those resources into consideration when evaluating project impacts. The level of consideration may vary with the importance of the resource.

Public Resources Code Section 5097.5

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.

3.13.4 Analytic Methodology

The assessment focuses on identifying potential project-related impacts to important paleontological resources based on information obtained through the archival records search and the paleontological surface survey. A paleontological field survey of the project alignments was performed in January 2008. Open ground surface, very limited in extent given the urban environment, was examined by pedestrian inspection. No surface paleontological resources were observed.

The information on paleontological resources in this section is from record searches at the Natural History Museum of Los Angeles County, Museum of Paleontology at the University of California, Berkeley and online databases, background research including geological mapping, survey, and previous reports for the area.

3.13.5 Criteria, Impact Evaluation, and Mitigation Measures

Criterion	**Would the implementation of the proposed project directly or indirectly damage or destroy a unique paleontological resource or site or unique geologic feature?**

No-Build Alternative

There would be roadway and transit service improvements associated with the No-Build Alternative. However, the only improvement that would change the physical environment in the Expo Phase 2 ROW would be the I-405 Widening project. The I-405 FEIS/EIR identified no impacts to paleontological resources for the portion of the project that crosses the Expo Phase 2 ROW. On-street transit improvements would not result in modification of the street and would have no impact. Therefore, the No-Build Alternative would result in ***no impacts*** associated with paleontological resources.

Transportation Systems Management (TSM) Alternative

The TSM Alternative would include all of the improvements under the No-Build Alternative and new on-street bus services to directly serve the Expo Phase 2 community transit needs. Those additional improvements would include minor physical modifications such as upgraded bus stops and additional buses. As any bus stop upgrades would be on existing streets there would be no disturbance to previously undisturbed areas. Therefore, the TSM Alternative would result in ***no impact*** associated with paleontological resources.

LRT Alternatives

The LRT Alternatives all have the potential to adversely affect sediments of high paleontological sensitivity. The research indicated that Quaternary old alluvial fan deposits of Middle to Late Pleistocene age in the vicinity are known to contain important vertebrate paleontological resources at depths ranging from the surface to approximately 55 feet below the surface.

One vertebrate fossil locality is known to be within the project alignments in the Quaternary old alluvial fan deposits. Another dozen vertebrate fossil localities are known from these sediments to be within 1 mile of the project alignments. These fossils have been found at depths from the surface to many feet below the surface. Extinct animals from these localities include American

lion, saber-toothed cat, western horse, mammoth, mastodon, yesterday's camel, and antique bison. The research thus indicated that important vertebrate paleontological resources from the Pleistocene Epoch are known from the Quaternary old alluvial fan deposits in the project vicinity and the sediments were assigned a ranking of high paleontological sensitivity.

The study area is highly sensitive for paleontological resources at variable depth and should be considered highly sensitive in regard to any excavations more than 4 feet below the surface.

In order to protect these paleontological resources, the following mitigation measure has been identified.

MM PAL-1 *Per CEQA Guidelines, ~~T~~the Expo Authority shall retain a qualified paleontologist to prepare and implement a Paleontological Resources Management Plan (PRMP) to the standards detailed in the* Paleontological Resources Technical Background Report*.*

Monitoring is required at the surface and below of Segment 1 (Expo ROW) from station 540+00 to 600+00, Segment 1a (Venice/Sepulveda) from station 615+00 to 635+00, Segment 3 (Olympic) from station 790+00 to 855+00, Segment 3a (Colorado) from station 830+00 to 855+00 where there are known surface exposures of Quaternary old alluvial fan deposits of high paleontological sensitivity.

In other project areas, the paleontologist will examine subsurface work to adjust monitoring to cover Quaternary old alluvial fan sediments only.

Upon completion of all monitoring and mitigation activities, the paleontologist will submit a final report to the Expo Authority summarizing the work and confirming that all recommendations were implemented.

With the implementation of this mitigation measure the LRT Alternatives would result in ***less-than-significant*** impacts.

FEIR Design Options

Development of the Sepulveda Grade Separation, Colorado Parking Retention, Colorado/4th Parallel Platform and South Side Parking, Maintenance Facility Buffer, or Expo/Westwood Station No Parking design options would involve the redesign of certain elements of the proposed project. However, as the paleontological study area associated with the design options would be the same as for the LRT Alternatives, implementation of the design options would result in ***less-than-significant*** impacts.