

Natural History Museum
of Los Angeles County
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Vertebrate Paleontology Section
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9 November 2018

Orange County Water District
18700 Ward Street
Fountain Valley, CA 92708

Attn: Daniel Bott, Principal Environmental Planner

re: Paleontological Resources for the proposed OCWD-M43R Monitoring Well Replacement Project, in the City of Costa Mesa, Orange County, project area

Dear Daniel:

I have conducted a thorough search of our Vertebrate Paleontology records for the proposed OCWD-M43R Monitoring Well Replacement Project, in the City of Costa Mesa, Orange County, project area as outlined on the portion of the Newport Beach USGS topographic quadrangle map that you sent to me on 29 October 2018. We do not have any vertebrate fossil localities that lie directly within the proposed project area boundaries, but we do have localities nearby in the same sediments that may occur at depth in the proposed project area.

According to the geologic mapping, in the entire proposed project area there are surface exposures of marine older Quaternary Terrace deposits, although our vertebrate fossil localities in this area almost always contain terrestrial fossil vertebrates. Our closest vertebrate fossil locality from these deposits is LACM 1339, just south of due west of the proposed project area along Adams Avenue near the top of the mesa bluffs east of the Santa Ana River. Fossil mammoth, *Mammuthus*, and camel, Camelidae, bones were recovered from LACM 1339 approximately 15 feet below the top of the mesa in sand deposits that are overlain by shell bearing silts and sands. Our next closest vertebrate fossil locality is LACM 4219, south-southeast of the proposed project area in a roadcut for the Newport Freeway near Santa Isabel Avenue, that produced fossil sea turtle, Cheloniidae, and camel, Camelidae, bones in coarse poorly sorted friable sands about 30 feet below the grade of Newport Boulevard. We further

have a large number of localities from the marine and terrestrial Late Pleistocene terraces deposits on the east side of Upper Newport Bay. Those localities have produced an extensive composite fauna.

Any excavations in the nominally marine older Quaternary terrace deposits exposed throughout the proposed project area may well encounter significant fossil vertebrate specimens. 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,

A handwritten signature in cursive script that reads "Samuel A. McLeod".

Samuel A. McLeod, Ph.D.
Vertebrate Paleontology

enclosure: invoice