APPENDIX C

California Archaeological Inventory

Regional Information Center
Orange Los Angeles Ventura

Mailing Address: Archaeological Information Center
UCLA Institute of Archaeology
Fowler Museum of Cultural History
Los Angeles, CA 90024-1510
Phone: (310) 825-1980 FAX: (310) 206-4723

Cultural Resources Records Search
Quick Check

Lead Agency:_____

Permit/Project #:_____ Date:_____

Case Planner:_____ Attached USGS Quad:_____

Brief Project Description:_____

_____

*** UCLA ARCHAEOLOGICAL INFORMATION CENTER INITIAL RECORDS SEARCH**

/ / The project area has been surveyed by a professional archaeologist and no cultural resources were found.

/ / The project area has been surveyed by a professional archaeologist and cultural resources were found.

/ / The project area has not been surveyed by a professional archaeologist but cultural resources are likely to be in the area.

/ / The project area has not been surveyed by a professional archaeologist and cultural resources are not likely to be in the area.

RECOMMENDATIONS

/ / A Phase I ** archaeological survey should be done by a professional archaeologist prior to approval of project plans.

/ / A Phase II ** testing program for determination of significance.

/ / A professional archaeologist should be retained to monitor any earth moving operations.

/ / No archaeological work is needed prior to approval of the project plans but a halt-work condition should be in place in the event of cultural resources being discovered during construction.

COMMENTS

_____

_____

_____

* This Quick Check does not cover cultural heritage sites, either listed or pending, such as historic buildings or points of interest.

** Phase I survey and Phase II testing includes a complete records search, field evaluation, and a final report with results and recommendations.

Date Completed:_____ Signature:_____

Letter attached / /

(310) 825-1980

NATURAL HISTORY MUSEUM
of Los Angeles County

Foundation

900 Exposition Boulevard
Los Angeles, California 90007

10 September 1993

Mr. Scott E. Rittenhouse
City of Los Angeles
Department of City Planning, Room 400
221 S. Figueroa Street
Los Angeles, CA 90012

Subject: Vertebrate Paleontological Resources on Lands Administered by the City of Los Angeles, Los Angeles County, CA.: Los Angeles General Plan Framework Environmental Impact Report Database.

Dear Mr. Rittenhouse,

Thank you for your recent inquiry concerning paleontological resources for the areas in the City of Los Angeles outlined on the topographic maps provided by your Planning Department. I have made a search of our records on 20 U.S. Geological Survey 7.5' topographic quadrangles for the areas covering the public lands administered by the City of Los Angeles for the General Plan Framework Environmental Impact Report Database. There are eleven main sedimentary rock deposits in the City of Los Angeles that yield vertebrate fossils or have the potential to yield vertebrate fossils. To date, there are a number of Natural History Museum of Los Angeles County (LACM), and former California Institute of Technology (CIT) vertebrate fossil localities documented within your study area. We have also included recorded localities that are within approximately 1 km of the City boundaries. This gives a comprehensive perspective for the City of Los Angeles resources, provides an indication of what might be found in and close to the City of Los Angeles boundaries, and the ways in which some of these rock units produce fossils.

Fossil localities preceded by a CIT number indicate that they were recorded by CalTech researchers prior to 1957. Subsequently, the CalTech collections were incorporated with the LACM collections. The LACM, and CIT localities are plotted on the topographic maps, on either the right or left hand margin, depending on which is closest to the site, and is written at roughly the same "latitude" where the site can be located across the map.

Any ground disturbance in these areas may be expected to encounter fossils from the **Cretaceous Chico Formation**, the **middle Miocene Topanga Formation**, the **middle Miocene Altamira Shale Member of the Monterey Formation**, the **late Miocene Modelo Formation**, the **middle Miocene Monterey Formation**, the **latest Miocene - Pliocene Pico Formation**, the **Pliocene Fernando Formation**, the **Pleistocene Timms Point Silt**, the **Pleistocene Lomita Marl**, the **Quaternary San Pedro Sand**, the **Quaternary Palos Verdes Sand**, or in unnamed **Quaternary sediments**. For that reason all of these geologic units should be considered to have a high potential of producing fossils of scientific significance wherever they are exposed unless a field survey by qualified paleontologists proves otherwise.

Fossils considered scientifically significant include the remains of large to small vertebrates, plants, and invertebrates, or assemblages of plants and animals which are unique, rare, diagnostic or stratigraphically important, especially those which add to existing scientific knowledge of geology, taxonomy, or evolutionary biology. Particularly important are fossils that can provide scientific information critical to the interpretation of geology and paleoclimatology or the relationships of extinct or extant organisms.

The majority of fossils occur in sedimentary rocks, those deposited by marine or fresh water in ocean or lake basins or in river beds. Los Angeles is one of the richest areas in the world for both fossil marine vertebrates (fishes, sharks, seals, sea lions, porpoises and whales), and land vertebrates from rocks deposited over the last 25 million years (Miocene, Pliocene, and Pleistocene). Within the County is one of the richest and most famous fossil deposits in the world, Rancho La Brea. Although Rancho La Brea has been highly publicized, there are many other areas of Los Angeles County which contain equally important fossil occurences, many of which have been destroyed or are now in danger of destruction.

The richness of fossils in the City of Los Angeles is due to several major series of events in the geologic history of the area associated with flucuations in sea-level. During Miocene and Pliocene time (25-5 million years ago) most of what is now the greater Los Angeles basin and the surrounding hills (Santa Monica Mountains, Repetto Hills, San Jose Hills, Puente Hills, Palos Verdes Hills, the San Fernando Valley, the Simi Hills, Santa Susana Mountains, Santa Clarita Valley, and the foothills of the San Gabriel Mountains were all submerged below the Pacific Ocean. Thousands of feet of sands, muds and other materials were deposited on the ocean bottom over this entire area and millions of fish, sharks, marine mammals and shore birds were buried in these deposits as they died and sank to the bottom.

During Pleistocene (Ice Age) times, geologic events elevated much of this area above the ocean and formed hills and mountains where the ocean bottom and valleys once existed. Erosion incised these older sediments as they were being uplifted, redeposited the eroded sediments in adjacent valleys to form the present terrain, and preserved the remains of animals once inhabiting the area. As a result, there are over 1,100 known Los Angeles County Museum vertebrate fossil localities within Los Angeles, and many of them occur in these Pleistocene sediments. These localities are scattered within 697 square miles (17% of the county) of hilly terrain which contain fossil-producing rock formations. In addition, the entire floor of the Los Angeles Basin is mantled with Quaternary sediments.

Definitions for terms used in this report - Potential for Producing Vertebrate Fossils:

- **High Potential** Any rock unit that has produced a significant (important) vertebrate fossil would be considered to have high potential anywhere in its distribution.

- **Low Potential** Typically refers to marine paleozoic and mesozoic rocks in which although invertebrates may be preserved and widely distributed, vertebrates are rare. Or low potential may be used to describe other deposits in which few vertebrate fossil materials have been recovered.

• **Unknown Potential** Various areas of the City of Los Angeles land are underlain by metamorphic and intrusive igneous rocks, that in themselves lack any potential for preserving organic materials. However, notable fossil discoveries have been made in fissure cracks and caves developed in such rock units, including the bones of animals ranging in size from the Shasta ground sloth (*Nothrotheriops shastensis*) to small rodents, e.g., chipmunks (*Tamias* sp.). Therefore, pending project-specific field surveys, these units should be considered to have an unknown paleontologic potential. Although the non-sedimentary formations themselves appear to have little to offer in the way of yielding fossils, caves and fissures in such rocks may possibly be locally rich in fossil material.

The fossil localities plotted on these topographic maps are regarded as priviledged information, details of which should not be released to the general public. This information has been provided to assist you with your land use planning and to encourage the protection of fossil resources. Included in this report is a list of relevant laws providing for the protection of paleontological resources in California and on Federal lands.

Please note, these particular parcels of land have not been recently field surveyed by this Museum's Section of Vertebrate Paleontology to assess the potential for producing fossils. Based on materials recovered from the geologic units exposed in and near this area there is a high potential that as yet undiscovered fossils may be uncovered in this study area as a result of ground disturbance.

Formation Descriptions:

The **Chico Formation** is occasionally exposed in outcrops in the Santa Monica Mountains. The deposit would be considered to have a low potential for encountering either invertebrates or vertebrate fossils. This formation is Cretaceous age deposit, (*circa* 65 - 144 million years ago), and any fossils which are recovered from this unit are significant.

The **Topanga Formation**, a correlative of the Barstovian North American Land Mammal Age, (*circa* 11 - 16 million years ago) is widespread in the Santa Monica Mountains. It yields abundant marine invertebrates, and occaionally land mammals are recovered from this coarse, sandy, rock unit.

The middle Miocene **Altamira Shale Member** of the **Monterey Formation**, is also a correlative of the Barstovian North American Land Mammal Age, (*circa* 11 - 16 million years ago). This sedimentary unit is a hard, yellow to brown finely laminated silicious shale. It is an unusual deposit, in that it has preserved fossil marine and terrestrial land plants, and contains rare invertebrate fossils as well. Interestingly, the mammalian fossils are usually found in concretions.

The **Modelo** Formation, a correlative of the Clarendonian North American Land Mammal Age (*circa* 9 - 12 million years ago), is of consequence, and is comprised of marine sediments and is **highly fossiliferous**. The specimens in our collection from this formation include vertebrate remains of fishes, marine mammals such as pinnipeds, dolphins, whales, sea cows, as well as birds, turtles, and sharks. This fossil fauna is

predominated in numbers by fishes, and although sharks are present, they constitute a very small portion of the fossil record.

In particular, two new species of animals have been recovered elsewhere from the Modelo Formation. They are: *Pithanodelphis nasalis*, an unusual and relatively highly derived dolphin Barnes, 1985, and *Sula pohli* Howard, 1958, a booby that was highly adapted to an aquatic existence. The dolphin and one portion of the booby are curated in our collection. The only sea cow fossil ever recovered from the Santa Monica Mountains was collected near Laurel Canyon, again in the same Modelo Formation. Near Sherman Oaks, the same formation yielded a fossil of the giant toothed bird, *Osteodontornis* Howard and White, 1962. Of note, a number of invertebrate fossils such as bivalves and crustaceans, as well as palm leaves and algae have been preserved as fossils in this formation.

Excavations in the area in the past have encountered older marine sedimentary rocks of Miocene age. Sometimes such deposits are identified as the **Topanga Formation**, or sometimes as the **Monterey Formation**. Whatever such deposits are called, they do produce fossils and are occasionally and randomly encountered when the surficial Quaternary.deposits are removed in this area.

The **Monterey Formation**, a correlative of the Clarendonian North American Land Mammal Age, (*circa* 9 - 12 million years ago) is an important lithologic unit comprised of marine sediments and is moderately fossiliferous. The specimens in our collections from this formation include vertebrate remains of aquatic carnivores such as walruses, sea lions and other marine animals such as whales and fishes, and aquatic birds including shearwaters and auks. As is common with fossils, many of these specimens are isolated occurrences and there is no way of predicting where they will be found.

The **Pico Formation**, is a latest Miocene - Pliocene marine deposit, and is a correlative of the Hemphillian North American Land Mammal Age, (*circa* 5 - 9 million years ago). Abundant invertebrates have been recovered from this deposit which consists of marine and nearshore sands and gravels. Marine and terrestrial vertebrates are occasionally recovered.

The **Late Pliocene Fernando Formation** is a correlative of the Blancan North American Land Mammal Age, (*circa* 2.5 - 5 million years ago), and in various places in the City, has yielded fossils including ray-finned bony fishes, sharks, snakes, whales, birds and primitive artiodactyls. This is a shallow-water marine deposit.

The **Timms Point Silt** of early-to-middle Pleistocene time, is correlated to the Irvingtonian North American Land Mammal Age, (*circa* 400,000 - 1.7 million years ago). This unit is a fine-grained, silty deposit, localized on the Palos Verdes Penninsula. Most of the fossil materials recovered are of invertebrates, but as our records show, a few vertebrates are known from this formation.

The **Lomita Marl** is a Pleistocene deposit on the Palos Verdes Penninsula, and is a correlative of the Irvingtonian North American Land Mammal Age, (*circa* 400,000 - 1.7 million years ago). It is a coarse, sandy unit and underlies the Palos Verdes Sand and overlies the Valmonte Diatomite. This sediment is modrately productive for vertebrate and invertebrate fossil materials.

The **San Pedro Sand** is a correlative of the Rancholabrean North American Land Mammal Age, (*circa* 10,000 - 400,000 years ago) deposited in Quaternary times. This is an extensive formation of marine nearshore terraces consisting of fine-grained gray sandstone. Notably, the San Pedro Gray Whale was recovered from this unit. Other fossil materials include moderately abundant invertebrates and vertebrates.

Palos Verdes Sand of late Pleistocene age, is a correlative of the Rancholabrean North American Land Mammal Age, (*circa* 10,000 - 400,000 years ago). This deposit is a widespread near-shore marine terrace deposit and is comprised of coarse, yellowish-red sands. The fossil materials recovered from this unit include a diverse and abundant invertebrate fauna, as well as vertebrates such as, sharks, fish, birds, and mammals.

The **Quaternary deposits** throughout this study area consist of unnamed alluvial units. These units are especially concentrated in the valley and canyon bottoms. There is a **stong possibility** that vertebrate fossils will be encountered by excavation in this area. Several important Pleistocene ("Ice Age") fossil faunas, all of the Rancholabrean North American Land Mammal Age, (*circa* 10,000 - 400,000 years ago) have been recovered in Los Angeles County. These fossils include an extensive and well studied assemblage of terrestrial animals such as sloth, mammoth, mastodont, camel, horse, bison, birds and reptiles.

High Potential Fossil-Producing Geologic Formations		
Formation	Fossils Present	Age (North American Land Mammal Ages)
Alluvium/No Formal Name	Large and small marine and terrestrial vertebrates	Quaternary/Rancholabrean
Palos Verdes Sand	Large and small marine and terrestrial vertebrates	Quaternary/Rancholabrean
San Pedro Sand	marine vertebrates	Quaternary/Rancholabrean
Lomita Marl	vertebrate fossils	Pleistocene/Irvingtonian
Timms Point Silt	marine vertebrates	Pleistocene/Irvingtonian
Fernando Formation	marine and terrestrial vertebrates	Pliocene/Blancan
Monterey Formation	marine vertebrates	Middle Miocene/Clarendonian
Modelo Formation	marine vertebrates	Middle Miocene/Clarendonian
Altamira Shale Member	marine vertebrates	Middle Miocene/Barstovian
Topanga Formation	marine and terrestrial vertebrates	Middle Miocene/Barstovian

Low Potential Fossil-Producing Geologic Formations		
Formation	Fossils Present	Age
Pico Formation	marine vertebrates	Late Miocene/Hemphillian
Chico Formation	marine vertebrates	Cretaceous

List of 7.5' USGS topographic quadrangles surveyed and numbers of localities recorded within the study area:

Quad	Number
Beverly Hills	4
Burbank	1
Calabasas	2
Condor Peak	0
Canoga Park	3
Hollywood	25
Inglewood	5
Long Beach	5
Los Angeles	5
Oat Mountain	2
Pasadena	0
San Fernando	4
San Pedro	31
South Gate	0
Santa Susana	0
Sunland	2
Topanga	3
Torrance	19
Van Nuys	35
Venice	4

Several of the topographic sheets have localities that are close to, but are not within the City of Los Angeles Designated Boundary. We think that it is imperative to note these localities in areas where the fossil-bearing sediments are known to extend outside of the City's present boundary. Therefore, we include this information to make you aware of fossil localities and geologic deposits having high potential to produce fossils, and these areas of

concern, particularly those areas which may be in close proximity to the City of Los Angeles boundaries.

It is also important to mention that the list of localities provided to you is not static. New, previously unreported, localities are often brought to our attention by scientists, hobbists, and construction workers, and we suggest that periodic checks be made to update this information.

TAXONMOIC INVENTORY FOR LACM VERTEBRATE PALEONTOLOGICAL LOCALITIES RECORDED WITHIN THE CITY OF LOS ANGELES

Quad

Beverly Hills — total = 4 localities

LACM 3176 — Rancholabrean — Quaternary Alluvium/No Formal Name
Bison (bison)

LACM 3355 — Rancholabrean — Quaternary Alluvium/No Formal Name
Equus (horse)

LACM 3821 — Rancholabrean — Quaternary Alluvium/No Formal Name
Artiodactyla (herbivores)
Equus (horse)

LACM 5501 — Rancholabrean — Quaternary Alluvium/No Formal Name
Clemmys marmorata (pond turtle)
Canis (dog/wolf)
Equus (horse)

Burbank — total = 1 locality

LACM 1084 — Barstovian — Topanga Formation
Paleoparadoxia (extinct qudrapedal marine mammal)

Calabasas — total = 2 localities

LACM 3173 — Clarendonian — Monterey Formation
Puffinus (shearwater)

LACM 5878 — Rancholabrean — Quaternary Alluvium/No Formal Name
Mammutidae (mastodonts)

Condor Peak

No LACM vetebrate paleontological localities documented within the study area

Canoga Park total = 3 localities

LACM 1213 Rancholabrean Quaternary Alluvium/No Formal Name
Equus (horse)
Paramylodon (extinct ground sloth)

LACM 5125 Clarendonian Modelo Formation
Myctophidae (lanternfishes)

LACM 6021 Clarendonian Modelo Formation
Psephophorus (extinct leatherback turtle)

Hollywood total = 25 localities

LACM 1159 Rancholabrean Palos Verdes Sand
Homo sapiens (human)

LACM 1198 Rancholabrean Palos Verdes Sand
Mammut (mastodont)

LACM 1724 Rancholabrean Quaternary Alluvium/No Formal Name
Clemmys marmorata (pond turtle)
Aves (birds)
Capromeryx minor (extinct pronghorn antelope)
Bison (bison)
Pecora (deer and bovids)
Canis dirus (dire wolf)
Canis latrans (coyote)
Smilodon californicus (sabertooth cat)
Procyonidae (raccoons)

LACM 1814 Rancholabrean Quaternary Alluvium/No Formal Name
Preptoceras sinclairi (shrub-ox)

LACM 2034 (= LACM 3261) Rancholabrean Quaternary Alluvium
Mammut (mastodont)
Mammuthus (mamoth)

LACM 3176 Rancholabrean Palos Verdes Sand
Ungulata (hoofed, grazing mammals)
Bison (bison)
Terrestrial vertebrates

LACM 3250 Rancholabrean Quaternary Alluvium/No Formal Name
Mammuthus (mammoth)

LACM 3329 Rancholabrean Quaternary Alluvium/No Formal Name
Bison (bison)
Equus (horse)

LACM 3366 Rancholabrean Quaternary Alluvium/No Formal Name
Camelops hesternus (Yesterday's camel)

LACM 3367 Rancholabrean Quaternary Alluvium/No Formal Name
Mammut (mastodont)

LACM 3368 Rancholabrean Quaternary Alluvium/No Formal Name
Equus (horse)

LACM 3369 Rancholabrean Palos Verdes Sand
Equus (horse)

LACM 3370 Rancholabrean Quaternary Alluvium/No Formal Name
Smilodon californicus (sabertooth cat)

LACM 3371 Rancholabrean Quaternary Alluvium/No Formal Name
Bison antiquus (extinct bison)

LACM 3868 Blancan Fernando Formation
Carcharocles (great white shark)
Carcharodon sulcidens (great white shark)

LACM 4204 Rancholabrean Quaternary Alluvium/No Formal Name
Antilocapra (pronghorn antelope)

LACM 4232 Rancholabrean Quaternary Alluvium/No Formal Name
Homo sapiens (human)

LACM 4250 Rancholabrean Quaternary Alluvium/No Formal Name
Mammuthus (mammoth)

LACM 4590 Rancholabrean Palos Verdes Sand
Micro-vertebrates

LACM 5481 Rancholabrean Palos Verdes Sand
Tapirus (tapir)

LACM 5487 Clarendonian Monterey Formation
Osteichthyes (bony fishes)

LACM 5599 Rancholabrean San Pedro Sand
Camelops (camel)

LACM 5845 Rancholabrean Quaternary Alluvium/No Formal Name
Mammutidae (mastodontts)

LACM 7137 Rancholabrean Quaternary Alluvium/No Formal Name
Bison (bison)

LACM 7247 Rancholabrean Quaternary Alluvium/No Formal Name
Canis dirus (dire wolf)
Equus (horse)

Inglewood total = 5 localities

LACM 1295 Rancholabrean Quaternary Alluvium/No Formal Name
Clemmys (pond turtle)
Mancalla (flightless auk)
Parapavo (turkey)
Aves (birds)
Capromeryx (extinct pronghorn antelope)
Bison (bison)
Cervus (elk)
Canis dirus (dire wolf)
Sylvilagus (cottontail)
Equus (horse)
Mammuthus (mammoth)
Microtus (vole)
Thomomys (pocket gopher)
Sciuridae (squirrels)
Rodentia (rodents)
Paramylodon (extinct ground sloth)
Mammalia (mammals)

LACM 1344 Rancholabrean Quaternary Alluvium/No Formal Name
Breameryx (extinct Diminutive pronghorn antelope)
Pecora (deer and bovids)
Equus (horse)
Mammuthus (mammoth)
Sciuridae (squirrels)

LACM 3252 Rancholabrean Quaternary Alluvium/No Formal Name
Bison (bison)
Camelops (camel)

LACM 3266 Rancholabrean Quaternary Alluvium/No Formal Name
vertebrates

LACM ~~4026~~ 4206 ~~Hemphillian~~ Rancholabrean ~~Capistrano Formation~~ Quaternary Alluvium
~~*Mancalla* (flightless auk)~~
Mammuthus (Mammoth)

Long Beach total = 5 localities

LACM (CIT) 879 no catalogue information

LACM 1163 Rancholabrean Quaternary Alluvium/No Formal Name
Bison (bison)

LACM 1165 Rancholabrean Quaternary Alluvium/No Formal Name
Bison (bison)

LACM 3319 Rancholabrean Quaternary Alluvium/No Formal Name
Mammuthus (mammoth)

LACM 4129 Rancholabrean Quaternary Alluvium/No Formal Name
Proboscidea (mammoths and mastodontts)
Camelidae (camels and llamas)

Los Angeles total = 5 localities

LACM 4726 Blancan Fernando Formation
Osteichthyes (bony fishes)

LACM 4967 Clarendonian Modelo Formation
Clupea tiejei (extinct herring)

LACM 7007 no catalogue information

LACM 7015 no catalogue information

LACM 7017 no catalogue information

Oat Mountain total = 2 localities

LACM 1406 Rancholabrean Quaternary Alluvium/No Formal Name
Mammut (mastodont)

LACM 6601 Rancholabrean Quaternary Alluvium/No Formal Name
Cervidae (deer and elk)
Tapirus (tapir)

Pasadena
No LACM vetebrate paleontological localities documented within the study area

San Fernando total = 4 localities

LACM (CIT) 461 Hemphillian Formation not identified
Oreodonta (extinct sheep-like animal)

LACM 3397 Rancholabrean Quaternary Alluvium/No Formal Name
Bison (bison)

LACM 5745 Rancholabrean Quaternary Alluvium/No Formal Name
Equus (horse)
Mammut (mastodont)

LACM 7152 Rancholabrean Quaternary Alluvium/No Formal Name
Bison (bison)
Mammuthus (mammoth)

San Pedro total = 31 localities

LACM (CIT) 186 Rancholabrean Palos Verdes Sand
Clemmys (pond turtle)
Puffinus griseus (shearwater)
Canidae (dosgs and wolves)
Equus (horse)
Mammalia (mammals)

LACM (CIT) 187 Rancholabrean Palos Verdes Sand
Megalonyx (extinct ground sloth)

LACM (CIT) 341 Barstovian Altimira Shale Member
No catalogue information

LACM 1057 Rancholabrean Quaternary Alluvium/No Formal Name
Chondrichthyes (cartilagenous fishes)
Pisces (bony fishes)
Chendytes lawi (flightless goose)
Sulidae (boobies and gannets)
Aves (birds)
Camelops (camel)
Odocoileus (deer)
Canidae (dogs and wolves)
Otariidae (eared seals and sea lions)
Zalophus (California sea lion)
Lepus (rabbit)
Mammuthus (mammoth)
Microtus (vole)
Neotoma (woodrat)
Thomomys (pocket gopher)
Spermophilus (squirrel)
Rodentia (rodents)

LACM 1058 Rancholabrean Palos Verdes Sand
Myliobatis californica (eagle bat ray)
Alcidae (auks, murres, and puffins)
Lophortyx (phesant)
Sylvilagus (cottontail)

Mammalia (mammals)

LACM 1280 Clarendonian Formation not identified
Clupeidae (herrings)
Pisces (bony fishes)

LACM 1294 Clarendonian Formation not identified
Pisces (bony fishes)
Teleostei (bony fishes)

LACM 1348 Barstovian Altamira Shale Member
Dermochelyidae (leatherback turtles)

LACM 1727 (= LACM 2026) Rancholabrean Palos Verdes Sand
Paramylodon harlani (extinct Harlan's ground sloth)

LACM 1925 Barstovian Altamira Shale Member
Myctophidae (lanternfishes)
Chauliodus eximius (viperfish)

LACM 1927 Barstovian Altamira Shale Member
Delphinidae (dolphins)

LACM 1935 Clarendonian Monterey Formation
Notorhynchus maculatus (sevengill shark)
Ganolytes (extinct herring)
Eclipes (extinct codfish)
Pleuronectiformes (righteye flounders)
Cyclothone (extinct butterfish)
Syngnathus avus (extinct pipefish)
Pisces (bony fishes)

LACM 3217 Irvingtonian Timms Point Silt
Raja (skate)
Squalus acanthias (spiny dog-fish)
Atherinops affinis (topsmelt)
Porichthys notatus (plainfin midshipman)
Melamphaes lugubris (extinct fish)
Scopelogadus bispinosas (extinct fish)
Clupea pallasi (Pacific herring)
Engraulis mordax (northern anchovy)
Theragra chalcogramma (walleye pollock)
Merluccius productus (Pacific hake)
Ceratoscopelus townsendi (dogtooth lampfish)
Diaphus theta (California headlightfish)
Electrona rissoi (extinct fish)
Lampadena urophaos (extinct fish)
Protomyctophum crockeri (flashlightfish)
Stenobrachius leucopsarus (northern lampfish)
Tarletonbeania crenularis (blue lanternfish)

Brosmophycis marginata (red brotula)
Chilara taylori (spotted cuskeel)
Otophidium (cuskeel)
Ammodytes hexapterus (Pacific sand lace)
Trachurus symmetricus (jack mackerel)
Lyconectes aleutensis (dwarf wrymouth)
Cymatogaster aggregata (shiner perch)
Coryphopterus nicholsi (blackeye goby)
Lethops connectens (halfblind goby)
Oxyjulis californica (señorita)
Genyonemus lineatus (white croaker)
Seriphus politus (queenfih)
Lycodopsis pacifica (blackbelly eel pout)
Citharichthys sordidus (Pacific sanddab)
Citharichthys stigmaeus (speckled sanddab)
Citharichthys xanthostigma (longfin sanddab)
Atheresthes stomias (arrowtooth flounder)
Lyopsetta exilis (slender sole)
Microstomus pacificus (Dover sole)
Parophrys vetulus (English sole)
Xeneretmus latifrons (blacktip poacher)
Artedius notospilotus (bonehead sculpin)
Chitonotus pugetensis (roughback sculpin)
Enophrys taurina (bull sculpin)
Icelinus burchami (dusky sculpin)
Icelinus filamentosus (thread fin scupin)
Icelinus fimbriatus (fringed sculpin)
Icelinus quadriseriatus (yellow chin sculpin)
Icelinus tenuis (spotfin sculpin)
Leptocottus armatus (Pacific staghorn sculpin)
Malacocottus zonurus (sculpin)
Radulinus asperallus (slim sculpin)
Sebastes goodei (chilipepper)
Sebastes hopkinsi (squarespot rockfish)
Sebastes rosaceus (rosy rockfish)
Sebastolobus (thornyhead)
Glyptocephalus zachirus (rex sole)
Enhydra lutris (sea otter)

LACM 3248 Rancholabrean San Pedro Sand
Equus (horse)

LACM 3251 Rancholabrean Quaternary Alluvium/No Formal Name
Equus (horse)

LACM 3254 Rancholabrean Palos Verdes Sand
Carcharhinus (Requiem shark)
Galeorhinus zyopterus (soupfin shark)
Myliobatis californica (eagle bat ray)
Urolophus halleri (round stingray)

Atherinopsis californiensis (jacksmelt)
Porichthys myriaster (specklefin midshipman)
Porichthys notatus (plain midshipman)
Engraulis mordax (northen anchovy)
Merluccius productus (Pacific hake)
Chilara taylori (spotted cuskeel)
Otophidium scrippsae (basketweave cuskeel)
Otophidium taylori (cuskeel)
Cymatogaster aggregata (shiner perch)
Rhacochilus toxotes (rubberlip seaperch)
Rhacochilus vacca (pile perch)
Coryphopterus nicholsi (blackeye goby)
Lepidogobius (goby)
Bairdiella icistia (bairdiella)
Cynoscion reticulatus (seatrout)
Genyonemus lineatus (white croaker)
Menticirrhus undulatus (California corbina)
Ophioscion (extinct fish)
Roncador stearnsi (spotfin croaker)
Seriphus politus (queenfish)
Umbrina roncador (yellow-fin croaker)
Calamus brochysomus (porgy)
Coelorhynchus scaphopsis (grenadier)
Paralichthys californicus (California halibut)
Citharichthys sordidus (Pacific sanddab)
Citharichthys stigmaeus (speckled sanddab)
Citharichthys xanthostigma (longfin sanddab)
Symphurus atricauda (California tonguefish)
Parophrys vetulus (English sole)
Chitonotus pugetensis (roughback sculpin)
Leptocottus armatus (Pacific staghorn sculpin)
Prionotus ruscarius (sea robin)
Prionotus stephanophrys (lumptail sea robin)
Bufo (frog)
Reptilia (repriles)
Sylvilagus audubonii (desert cottontail)
Neotoma (woodrat)
Thomomys (pocket gopher)

LACM 3258 Rancholabrean Quaternary Alluvium/No Formal Name
Cymatogaster aggregata (shiner perch)
Osteichthyes (bony fishes)
Bison (bison)
Cetacea (whales)
Equus (horse)
Mammuthus (mammoth)

LACM 3259 Rancholabrean San Pedro Sand
Mammut (mastodont)
Proboscidea (mammoths and mastodonts)

LACM 3539 Barstovian Altamira Shale Member
Cetacea (whales)

LACM 3658 Rancholabrean Palos Verdes Sand
Carcharhinus (Requiem shark)
Galeorhinus zyopterus (soupfin shark)
Triakis semifasciata (leopard shark)
Heterodontus francisci (horn shark)
Notorhynchus maculatus (sevengill shark)
Carcharodon carcharias (white shark)
Dasyatis dipterurus (diamond stingray)
Raja (skate)
Squatina californica (Pacific angel shark)
Atherinops affinis (topsmelt)
Porichthys myriaster (specklefin midshipman)
Porichthys notatus (plainfin midshipman)
Engraulis mordax (northern anchovy)
Theragra chalcogramma (walleye pollock)
Lepophidium negropinna (cuskeel)
Otophidium scrippsae (basketweave cuskeel)
Otophidium taylori (cuskeel)
Amphistichus koelzi (calico surfperch)
Embiotoca jacksoni (black perch)
Cynoscion reticulatus (seatrout)
Genyonemus lineatus (white croaker)
Micropogon ectenes (extinct fish)
Seriphus politus (queenfish)
Paralichthys californicus (California halibut)
Citharichthys sordidus (Pacific sanddab)
Citharichthys stigmaeus (speckled sanddab)

LACM 3760 Rancholabrean San Pedro Sand
Mammalia (mammals)

LACM 3888 Barstovian Altamira Shale Member
Sulidae (boobies and gannets)
Phocoenidae (porpoises)
Cetacea (whales)

LACM 4167 Rancholabrean San Pedro/Palos Verdes Sand
Sebastes (rockfish)

LACM 4537 Rancholabrean Quaternary Alluvium/No Formal Name
Chendytes lawi (flighless goose)

LACM 4587 Rancholabrean Quaternary Alluvium/No Formal Name
Arctocephalus (fur seal)
Cetacea (whales)
Xenarthra (ground sloths)

LACM 5162 Barstovian Monterey Formation
Physeteridae (sperm whales)

LACM 5783 Barstovian Monterey Formation
Cetacea (whales)

LACM 5784 Barstovian Monterey Formation
Otariidae (eared seals and sea lions)

LACM 5906 Barstovian Monterey Formation
Isurus planus (extinct mako shark)

LACM 6118 Barstovian Monterey Formation
Odontoceti (toothed whales)

LACM 6456 Barstovian Altamira Shale Member
no catalogue information

LACM 7138 Rancholabrean Quaternary Alluvium/No Formal Name
Chendytes lawi (flightless goose)
Diomedea albatrus (short-tailed albatross)
Mammut (mastodont)

South Gate

No LACM vetebrate paleontological localities documented within the study area

Santa Susana

No LACM vetebrate paleontological localities documented within the study area

Sunland total = 2 localities
LACM (CIT) 130 Hemphillian Pico Formation
Pliohippus (extinct primitive horse)

LACM 3690 [General Locality] Clarendonian Modelo Formation
Mammalia (extensive collection of mammals)

Topanga total = 3 localities
LACM 3785 Cretaceous Chico Formation
Elasmobranch (shark-like fish)

LACM 3886 Clarendonian Modelo Formation
no catalogue information

LACM 4247 Rancholabrean San Pedro Sand
Chendytes lawi (flightless goose)

Torrance total = 19 localities

LACM (CIT) 363 Clarendonian Modelo Formation
Ganolytes cameo (extinct herring)
Lampanyctus bolini (extinct lampfish)

LACM (CIT) 484 Rancholabrean Palos Verdes Sand
Mirounga angustirostris (northern elephant seal)

LACM 1012 Rancholabrean San Pedro Sand
Branta canadensis (Canada goose)
Fulica americana (American coot)
Aves

LACM 1056 Rancholabrean San Pedro Sand
Bison (bison)
Cetacea (whales)

LACM 1158 Rancholabrean Palos Verdes Sand
Bison (bison)
Equus (horse)

LACM 1228 Rancholabrean Palos Verdes Sand
Bison (bison)
Camelidae (camels and llamas)

LACM 1602 Rancholabrean San Pedro Sand
Myliobatiformes (eagle rays)
Squatina californica (Pacific angel shark)
Porichthys myriaster (specklefin midshipman)
Cymatogaster aggregata (shiner perch)
Genyonemus lineatus (white croaker)
Seriphus politus (queenfish)
Citharichthys stigmaeus (speckled sanddab)
Clemmys (pond turtle)
Chendytes (flightless goose)
Pelecanus erythrorhynchus (American white pelican)
Breameryx (extinct Diminutive Pronghorn antelope)
Pecora (deer and bovids)
Canis dirus (dire wolf)
Otariidae (eared seals and sea lions)
Cetacea (whales)
Sylvilagus bachmani (brush rabbit)
Equus (horse)
Mammuthus (mammoth)
Microtus (vole)
Thomomys (pocket gopher)
Ungulata (hoofed, grazing mammals)

LACM 1714 Barstovian Altamira Shale Member
Allodesmus courseni (extinct sea lion)

LACM 1809 RancholabreanQuaternary Alluvium/No Formal Name
Aves (birds)

LACM 3175 Rancholabrean San Pedro Sand
Galeorhinus zyopterus (soupfin shark)
Notorhynchus maculatus (sevengill shark)
Myliobatis californica (eagle bat ray)
Raja (skate)
Squalus acanthias (spiny dogfish)
Squatina californica (Pacific angel shark)
Atherinops affinis (topsmelt)
Porichthys notatus (plainfin midshipman)
Clupea pallasi (Pacific herring)
Engraulis mordax (northern anchovy)
Microgadus proximus (Pacific tomcod)
Stenobrachius leucopsarus (northern lampfish)
Brosmophycis marginata (red brotula)
Trachurus symmetricus (jack mackerel)
Icichthys lockingtoni (medusafish)
Cymatogaster aggregata (shiner perch)
Rhacochilus vacca (pile perch)
Coryphopterus nicholsi (blackeye goby)
Oxyjulis californica (señorita)
Genyonemus lineatus (white croaker)
Seriphus politus (queenfish)
Lycodopsis pacifica (blackbelly eelpout)
Citharichthys sordidus (Pacific sanddab)
Citharichthys stigmaeus (speckled sanddab)
Eopsetta jordani (petrale sole)
Lyopsetta exilis (slender sole)
Spirinchus starksi (night smelt)
Chitonotus pugetensis (roughback sculpin)
Enophrys taurina (bull sculpin)
Icelinus tenuis (spotfin sculpin)
Leptocottus armatus (Pacific staghorn sculpin)
Radulinus asprellus (slim sculpin)
Scorpaenichthys marmoratus (cabezon)
Sebastes carnatus (gopher rockfish)
Glyptocephalus zachirus (rex sole)
Teleostei (bony fishes)

LACM 3262 Rancholabrean Palos Verdes Sand
Clemmys (pond turtle)
Aves (birds)
Carnivora (carnivores)
Mammalia (mammals)

LACM 3268 Rancholabrean San Pedro Sand
Pisces (bony fishes)
Mammuthus (mammoth)

LACM 3270 Irvingtonian Lomita Marl
Eschrichtius (gray whale)

LACM 3758 Irvingtonian Lomita Marl
Galeorhinus zyopterus (soupfin shark)
Prionace glauca (blue shark)
Raja (skate)
Porichthys notatus (plainfin midshipman)
Microgadus proximus (Pacific tomcod)
Stenobrachius leucopsarus (northern lampfish)
Cymatogaster aggregata (shiner perch)
Lycodopsis pacifica (blackbelly eelpout)
Citharichthys sordidus (Pacific sanddab)
Lyopsetta exilis (slender sole)
Glyptocephalus zachirus (rex sole)
Otariidae (eared seals and sea lions)

LACM 3759 Irvingtonian Lomita Marl
Carcharhinus (Requiem shark)
Prionace glauca (blue shark)

LACM 3823 Rancholabrean Quaternary Alluvium/No Formal Name
Camelops (camel)
Artiodactyla (herbivores)
Mammalia (mammals)

LACM 4205 Rancholabrean Palos Verdes Sand
Equus (horse)
Mammuthus (mammoth)

LACM 6664 Rancholabrean Quaternary Alluvium/No Formal Name
no catalogue information

LACM 7140 Miocene Formation not identified
Odontoceti (toothed whales)

Van Nuys total = 35 localities
LACM (CIT) 320 Clarendonian Modelo Formation
Etringus scintillans (extinct herring)
Eclipes santamonicae (extinct codfish)
Lampanyctus (lampfish)
Scomber sanctaemonicae (makerel)
Pisces (bony fishes)

LACM (CIT) 321 Clarendonian Modelo Formation
Etringus scintillans (extinct herring)
Scomber sanctaemonicae (makerel)
Plectrites classeni (porgie)

LACM (CIT) 326 Clarendonian Modelo Formation
Ganolytes (extinct herring)
Xyne grex (extinct herring)
Eclipes (extinct codfish)
Lampanyctus bolini (extinct lampfish)
Lampanyctus petrolifer (extinct lampfish)
Decapterus agilis (extinct scad)
Scomber (makerel)
Bathylagus angelensis (extinct smooth tongue)
Quaesita (extinct fish)
Chauliodus barbatus (extinct viperfish)
Hipposyngnathus imporcitor (extinct pipefish)
Syngnathus avus (extinct pipefish)
Pisces (bony fishes)

LACM (CIT) 329 Clarendonian Modelo Formation
Myctophidae (lanternfish)
Carangidae (jacks)
Bathylagus angelensis (extinct smooth tongue)
Cyclothone (extinct butterfish)
Hipposyngnathus imporcitor (extinct pipefish)
Syngnathus (extinct pipefish)
Pisces (bony fishes)

LACM (CIT) 334 Clarendonian Modelo Formation
Etringusscintillans (extinct herring)
Ganolytes cameo (extinct herring)
Eclipes (extinct codfish)
Lampanyctus (extinct lampfish)
Lompoquia (extinct perch)
Sarda stocki (extinct bonito)
Sebastodes porteousi (extinct rockfish)
Pisces (bony fishes)
Teleostei (bony fishes)

LACM (CIT) 379 Clarendonian Modelo Formation
Decapterus agilis (extinct scad)
Bathylagus angelensis (extinct smooth tongue)
Scorpaena (scorpionfish)
Pisces (bony fishes)

LACM (CIT) 380 Clarendonian Modelo Formation
Ganolytes (extinct herring)
Bathylagus angelensis (extinct smooth tongue)
Cyclothone solitudinis (extinct butterfish)

Osteichthyes (bony fishes)
Pisces (bony fishes)

LACM (CIT) 381 Clarendonian Modelo Formation
Araeosteus rothi (extinct perch)
Chauliodus barbatus (extinct viperfish)
Chauliodus eximius (extinct viperfish)
Pisces (bony fishes)

LACM (CIT) 382 Clarendonian Modelo Formation
Eclipes (extinct codfish)
Zaphlegulus (extinct snake makerel)
Lompoquia (extinct perch)
Chauliodus barbatus (extinct viperfish)
Chauliodus eximius (extinct viperfish)
Cyclothone solitudinis (extinct butterfish)
Argyropelecus bullockii (extinct fish)
Pisces (bony fishes)

LACM (CIT) 387 Clarendonian Modelo Formation
Xyne grex (extinct herring
Eclipes (extinct codfish)
Lampanyctus bolini (extinct lampfish)
Bathylagus angelensis (extinct smooth tongue)
Cyclothone solitudinis (extinct butterfish)
Pisces (bony fishes)

LACM 1029 Clarendonian Modelo Formation
Pisces (bony fishes)

LACM 1038 Clarendonian Modelo Formation
Etringus scintillans (extinct herring)
Ganolytes cameo (extinct herring)
Scomber sanctaemonicae (extinct makerel)
Pisces (bony fishes)
Plantae (plants)

LACM 1146 Rancholabrean Quaternary Alluvium/No Formal Name
Camelidae (camels and llamas)
Equus occidentalis (extinct western horse)
Mammut americanum (American mastodontt)

LACM 1229 Clarendonian Modelo Formation
Decapterus (extinct scad)
Oncorhynchus rastrosus (extinct salmon)
Sula pohli (extinct aquatic booby)

LACM 1230 Clarendonian Modelo Formation
Pithanodelphis nasalis (extinct, highly derived, dophin)

LACM 1267 Clarendonian Modelo Formation
Carcharocles angustidens (extinct shark)
Isurus (extinct mako shark)
Atherinops barkeri (extinct topsmelt)
Euleptorhamphus (extinct fish)
Ganolytes cameo (extinct herring)
Xyne grex (extinct herring)
Eclipes (extinct codfish)
Myctophidae (lanternfish)
Carangidae (perch)
Zaphlegulus venturaensis (extinct snake makerel)
Scomber (makerel)
Bathylagus angelensis (extinct smooth tongue)
Smilodonichthys (extinct sabertooth salmon)
Chauliodus eximius (extinct viperfish)
Cyclothone (extinct butterfish)
Hipposyngnathus imporcitor (extinct pipefish)
Osteichthyes (bony fishes)
Pisces (bony fishes)
Teleostei (bony fishes)
Pseudodontornithidae (extinct marine diving bird)
Osteodontornis orri (extinct giant toothed bird)
Sula willetti (extinct booby)
Puffinus diatomicus (extinct booby)

LACM 1282 Clarendonian Modelo Formation
Chauliodus (extinct viperfish)

LACM 1408 Clarendonian Modelo Formation
Scaldicetus (extinct sperm whale)

LACM 1894 Clarendonian Modelo Formation
Chondrichthyes (cartilagenous fishes)
Pleuronectiformes (flounder)
Chauliodus(extinct viperfish)
Osteichthyes (bony fishes)
Aves (birds)

LACM 3263 Rancholabrean Quaternary Alluvium/No Formal Name
Equus (horse)

LACM 3822 Rancholabrean Quaternary Alluvium/No Formal Name
Bison (bison)
Camelops (camel)
Platygonus (peccary)
Artiodactyla (herbivores)

LACM 4159 Clarendonian Modelo Formation
Sarda stocki (extinct bonito)

LACM 4176 Clarendonian Modelo Formation
Xyne grex (extinct herring)

LACM 4247 Rancholabrean San Pedro Sand
Chendytes lawi (flightless goose)

LACM 4727 Clarendonian Modelo Formation
Dugongidae (sea cows)

LACM 5063 Clarendonian Modelo Formation
Osteichthyes (bony fishes)

LACM 5435 Clarendonian Modelo Formation
Osteichthyes (bony fishes)

LACM 5567 Clarendonian Modelo Formation
Physeteridae (sperm whales)

LACM 7019 Clarendonian Modelo Formation
Osteichthyes (bony fishes)

LACM 7020 Clarendonian Modelo Formation
Osteichthyes (bony fishes)

LACM 7022 Clarendonian Modelo Formation
No catalogue information

LACM 7045 Clarendonian Modelo Formation
Syngnathus (extinct pipefish)

Venice total = 4 localities
LACM 1024 Rancholabrean Palos Verdes Sand
Carcharhinus (Requiem shark)
Galeorhinus zyopterus (soupfin shark)
Rhizoprionodon longurio (Pacific sharpnose shark)
Sphyrna (hammerhead shark)
Notorhynchus maculatus (sevengill shark)
Alopias vulpinus (thresher shark)
Carcharodon carcharias (white shark)
Isurus glaucus (blue shark)
Myliobatis californica (eagle bat ray)
Urolophus halleri (round stingray)
Raja (skate)
Squatina californica (Pacific angel shark)
Atherinops affinis (topsmelt)
Atherinopsis californiensis (jacksmelt)
Leuresthes tenuis (California grunion)
Porichthys myriaster (specklefin midshipman)
Porichthys notatus (plainfin midshipman)

Anchoa compressa (deep body anchovy)
Engraulis mordax (northern anchovy)
Merluccius productus (Pacific hake)
Stenobrachius leucopsarus (northen lampfish)
Symbolophorus californiensis (extinct fish)
Lepophidium negropinna (cuskeel)
Otophidium scrippsae (basketweave cuskeel)
Otophidium taylori (cuskeel)
Trachurus symmetricus (jack makerel)
Cymatogaster aggregata (shiner perch)
Lepidogobius lepidus (bay goby)
Lepidogobius tenuis (goby)
Anisotremus davidsoni (sargo)
Xenistius californiensis (salema)
Pimelometopon pulchru m (wrasse)
Cynoscion nobilis (seatrout)
Cynoscion reticulatus (seatrout)
Genyonemus lineatus (white croaker)
Menticirrhus undulatus (California corbina)
Micropogon ectenes (extinct fish)
Roncador stearnsi (spotfin croaker)
Seriphus politus (queen fish)
Umbrina roncador (yellow-fin croaker)
Paralabrax (bass)
Sphyraena argentea (extinct hammerhead shark)
Coelorhynchus scaphopsis (swordfish)
Paralichthys californicus (California halibut)
Citharichthys sordidus (Pacific sanddab)
Citharichthys stigmaeus (speckled sanddab)
Symphurus atricauda (California tongue fish)
Lyopsetta exilis (slender sole)
Parophrys vetulus (English sole)
Pleuronichthys ritteri (spotted turbot)
Argentia sialis (Pacific argentine)
Occa verrucosa (scorpionfish)
Chitonotus pugetensis (roughback sculpin)
Icelinus quadriseriatus (yellow-chin sculpin)
Sebastes paucispinis (bocaccio)
Sebastes rhodochloris (rockfish)
Prionotus stephanophrys (lumptail sea robin)
Zaniolepis latipinnus (longspine combfish)
Pisces (bony fishes)
Teleostei (bony fishes)
Chendytes lawi (fightless goose)
Uria aalge (common murre)
Corvus corax (common raven)
Morus reyana (extinct gannet)
Aechmophorus occidentalis (western grebe)
Diomedea albatrus (short-tailed albatross)
Puffinus griseus (sooty shearwater)

Puffinus opisthomelas (black vented shearwater)
Phoca vitulina (harbor seal)
Delphinidae (dolphins)
Odontoceti (toothed whales)
Thomomys (pocket gopher)
Rodentia (rodents)

LACM 1180 Rancholabrean Quaternary Alluvium/No Formal Name
Equus (horse)
Mammuthus (mammoth)
Proboscidea (mamoths and mastodonts)
Mammalia (mammals)

LACM 3264 Rancholabrean Quaternary Alluvium/No Formal Name
Proboscidea (mamoths and mastodonts)

LACM 3789 Rancholabrean Quaternary Alluvium/No Formal Name
Citharichthys stigmaeus (speckled sanddab)
Mammuthus (mammoth)
Rodentia (rodents)

SUMMARY AND RECOMMENDATIONS

The lands evaluated for this literature and records review contain 14 formations ranging in age from the Cretaceous (*circa* 144 million years ago) to late Pleistocene age (*circa* 10,000 years ago) that are considered to have a high potential to contain scientifically significant fossil resources. That determiniation is based on the presence of significant fossil remains in the formations in question within or in the vicinity of the project area.

There is a high potential for scientifically significant fossil resources to be found within the City of Los Angeles, and we recommend that the Department of City Planning develop and implement a treatment plan for paleontologic resources (e.g., see Raschke, Barnes, and McLeod, 1988) for future project-specific ground disturbance activities that could imperil these resources protected under federal statutes. Such a plan should include consultation with a qualified paleontologist who would coordinate efforts with City Planning personnel and should involve the following:

(1) Updated and additional literature and records searches. This review should not be considered an exhaustive search as it only documents fossil localities recorded by this Museum and a few selected sites recorded by other institutions. Pertinent literature should be reviewed and a records search should be conducted at other univerisites and museums housing paleontologic records that have conducted research in the City of Los Angeles. We recommend that other institutions, such as the Museum of Paleontology, Universiity of California, Berkeley, (UCMP), and the San Bernardino County Museum, also be contacted during any other literature and records reviews. Paleontology is not a static science --new fossil localities are discovered and specimens collected from known localities are re-evaluated for significance as the science progresses. For that reason we recommend that literature and records searches be reviewed and updated periodically in response to projects that arise.

(2) Development of a field assessment strategy. Based on the literature and records review, a field assessment startegy should be developed to inventory rock units with a high or unknown potential to yield fossil resources of scientific significance, that takes into account the nature of the potential ground disturbance.

(3) Field Survey. A field survey should be conducted to identify new fossil localities and futher define the extent of existing localities that contain scientifically significant fossil resources. Field surveys should be focused on rocks with high or unknown paleontologic potential, but should also include a windshield survey of other areas to evaluate existing geologic mapping. The windshield survey should help ensure that rock units with high paleontologic potential have not been incorrectly mapped as low potential units. Limited field collection of specimens should be a part of the field survey. Collection during this stage should be limited to that necessary to ensure the recovery of fragile specimens discovered during the survey or that necessary to define the fossiliferous nature of a locality or fossil bearing unit.

(4) Development of a comprehensive paleontologic resource plan. A comprehensive paleontologic resource plan should be developed based on the results of the literature and records search and the field survey. This plan should address how fossil resources are identified and evaluated and how adverse effects to significant fossil

resources would be mitigated in the event they cannot be avoided. This comprehensive treatment would expedite responses to project-specific demands.

For example, major ground-disturbance operations using machinery will certainly destroy or damage any naturally exposed fossil localities on the land's surface as well as undiscovered remains in the subsurface. Small specimens such as fishes, birds, or sharks would be completely destroyed. Skeletons of large animals, such as sea turtles, whales, sea lions, horses, camels and etc., however, if uncovered by machinery, may be only partly damaged or just barely uncovered.

This report does not contain an exhaustive taxonomic list of the types of fossils that may be expected to occur within each formation. Parts of the Santa Monica Mountains are prime localities for recovering fossils where the appropriate formations are exposed or encountered during subsurface excavations. Various publications on the invertebrate and vertebrate faunas have been based on the records from these important geologic units.

It is customary for an oversight agency to require a paleontologic assessment for any site known to produce fossils or to have the potential for producing fossils. An on-site check is part of preparation of any Environmental Impact Report (EIR), which includes a statement of any fossils, vertebrate and/or invertebrate, found and a program to deal with any that are threatened by any project.

Usually collecting is required in advance of any grading, and salvage is required during grading. An agreement is made in advance to deposit the specimens in a permanent, systematics institution. We suggest that any paleontologist retained for this mitigation work be able to meet the criteria of, and be experienced in scientific methods acceptable to, the Section of Vertebrate Paleontology of this Museum.

Any significant excavation within this study area will almost certainly uncover fossils such as those mentioned above. Additionally, surface activities, such as foot and vehicle traffic can destroy fossils that have weathered out on the surface. As is common with fossils, many of the specimens are isolated occurrences and there is no way of predicting where they will be found.

Fossil-producing rock units in this study area should be very closely monitored during any excavation so that any fossils found may be quickly and safely recovered. All planning documents and environmental assessments for this area should include references to the fossil resources (including vertebrates) and make strong recommendations for collecting and salvage of specimens wherever subsurface sedimentary rocks and surficial alluvium are disturbed. Such a recommendation has support in existing city, county, state and Federal guidelines.

We would be happy assist you in developing the recommended paleontological resource assessment and mitigation plan.

Please contact Dr. Edward C. Wilson of the Museum's Invertebrate Paleontology Section for information on the invertebrate localities in the area of study 213/ 744-4367. This area may contain invertebrate localities which may be significant to your study.

Paleontological Resources Legal Protection

Fossil resources are protected on federal lands by federal legislation and on California State and private lands, where a state or federal permit or other entitlement are required, by state legislation. Where fossils have not been expressly mentioned they have been interpreted by federal and state agencies to be covered by reference to "scientific values." This legislation included the following acts (ref: California State Office of Historic Preservation, 1983):

1) **Antiquities Act of 1906** (Pl 59-209; 34 Stat 225, 16 USC 432, 433). This act forbids the disturbance of any object of antiquity on federal lands without a permit issued by a responsible agency. It also establishes criminal sanctions for unauthorized desecration, or appropriation of antiquities.

2) **Mineral leasing Act of 1920** (sec. 30). This act requires and provides for the protection of interest of the United States. Fossils and other natural resource values are commonly regarded as such interests.

3) **National Environmental Policy Act of 1969** (**NEPA**, Pl 91-100, 31 Stat 852, 42 USC 4321-4327). This act requires that important natural aspects of our national heritage be considered in assessing the environmental consequences of a proposed project.

4) **Act of May 24, 1974** (88 Stat 174, sec. 3 a0, 4a). This act provides for the preservation of historical and archaeological data which might be lost as a result of federal projects or federally licensed projects or activities. Sections 3a and 4a require the survey, protection, or recovery of objects or data of scientific significance that are threatened by construction projects.

5) **Federal Land Policy and Management Act of 1976** (**FLPMA**, sec. 102a, 103 a, 103 c, 201a, 202 c). This act provides the BLM with basic management mandate for natural resources and requires that scientific values must be addressed in the management of public lands and resources.

6) **Federal Coal Leasing Amendment of 1976** (**FCLAA**, Sec. 3,a, 3c). This act requires that a comprehensive land-use plan, which considers impacts to the environment before any coal lease may be issued. Paleontological resources are part of the environment.

7) **Surface Mining Control and Reclamation Act of 1977** (**SMCRA**, Sec. 522 a). Provides that lands may be declared unsuitable for surface coal mining where significant damage could result to important scientific values.

8) **California Environmental Quality Act of 1970** (**CEQA**, 13 California Public Resources Code, 21000 *et seq.*). This act requires public agencies and private interests to identify the environmental consequences of their proposed projects on any object, or site, significant to the scientific annals of California (Division I, Public Resources Code: 5020.1).

9) **Guidelines for the implementation of CEQA, as amended May 10, 1980** (14 California Administrative Code: 15000 et seq.). These guidelines define procedures, types of
activities, people, and public agencies required to comply with CEQA and include definitions of significant effects on a fossil locality (Sec. 15023, Appendix G).

10) **California Public Resources Code, Sec. 5097.5** (Stat 1965 , ch. 1136, p. 2792). This code defines any unauthorized disturbance or removal of fossil remains, or localities located on public lands as a misdemeanor.

In addition to this legislation, a 1978 memorandum by G.E. Petty, Acting Director of the U.S. Bureau of Land Management, declared all vertebrate fossils to be of significant scientific value. A 1990 decision by Administrative Law Judge E. C. Lee required the assessment of adverse impacts on fossil resources and development of a plan to mitigate adverse impacts on vertebrate or plant fossil localities, before granting an application of a pipeline expansion project to the California Utilities Commission for the construction of a gas and transmission pipeline expansion project.

Thank you again for your inquiry. Please feel free to contact this department for data on fossil sites or on salvage priorities and methods. We will be happy to answer any questions and provide additional information that you require.

Sincerely,

Denny V. Diveley

Denny V. Diveley
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213/ 744-3323
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cc: Dr. L.G. Barnes, Section of Vertebrate Paleontology

California Archaeological Inventory

Regional Information Center
Orange Los Angeles Ventura

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August 17, 1993

Scott Rittenhouse
City of Los Angeles
Department of City Planning
Room 561
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200 N. Spring St.
Los Angeles, CA 90012-4801

RE: Archaeological Records Search for the City of Los Angeles.

Dear Mr. Rittenhouse,

As per your request of August 5, 1993, we have conducted an archaeological records search of the above referenced project. This document search includes a review of all recorded historic and prehistoric archaeological sites in the vicinity as well as a review of all known cultural resource survey and excavation reports.

Due to the sensitive nature of cultural resources, archaeological site locations are not released. On the enclosed maps, archaeological site numbers (trinomials) are underlined in blue, while the approximated locations of the sites have been indicated by black ovals. Archaeological surveys and excavations have been outlined and crosshatched in red, and their corresponding report numbers have been underlined in red.

Each archaeological site is assigned a trinomial. The trinomial numbering system, for example CA-LAN-123, consists of the following: The first two letters indicate the state (in this case California). The following three letters indicate the county (LAN=Los Angeles, ORA=Orange, VEN=Ventura). The numerals indicate the number of the site within the particular county. An H following a number indicates that this site is historic, while /H indicates that this site has both a prehistoric as well as a historic component. In addition, IF signifies an isolated find, for example one or two (but not more) artifacts, such as a projectile point.

These documents revealed:

BEVERLY HILLS QUADRANGLE

PREHISTORIC RESOURCES:

Four prehistoric archaeological sites and two isolated finds have been identified within the subject area (see enclosed map).

CA-LAN-68 CA-LAN-220 CA-LAN-382 CA-LAN-1063

A wide range of artifacts were found at all of four of these sites. Burials have been recovered at CA-LAN-382, the University High School site.

HISTORIC RESOURCES:

No historic archaeological sites have been identified within the subject area (see enclosed map).

PREVIOUS ARCHAEOLOGICAL INVESTIGATIONS:

Fifty seven surveys and/or excavations have been conducted within the subject area (see enclosed map and bibliography).

BURBANK QUADRANGLE

PREHISTORIC RESOURCES:

No prehistoric archaeological sites have been identified within the subject area (see enclosed map). It should be noted that an area designated with the letter "H" on our map may be a site. This office, however, does not house any records for this area.

HISTORIC RESOURCES:

Three historic archaeological sites have been identified within the subject area (see enclosed map).

CA-LAN-797H CA-LAN-1418H CA-LAN-1945H

CA-LAN-797H is a pre-1843 limekiln located in Griffith Park. CA-LAN-1418H is an extensive trash dump which was possibly in use as early as the Late Rancho Period and continued until the early 1950's. Numerous glass bottles have been found at this site. CA-LAN-1945H is the site of Feliz Adobe, the former headquarters of Rancho Cahuenga.

PREVIOUS ARCHAEOLOGICAL INVESTIGATIONS:

Thirty seven surveys and/or excavations have been conducted within the subject area (see enclosed map and bibliography).

CALABASAS QUADRANGLE

PREHISTORIC RESOURCES:

Twenty prehistoric archaeological sites and one isolated find have been identified within the subject area (see enclosed map).

CA-LAN-249	CA-LAN-251	CA-LAN-253	CA-LAN-254
CA-LAN-413/H	CA-LAN-416	CA-LAN-418/481	CA-LAN-489
CA-LAN-511	CA-LAN-652	CA-LAN-653	CA-LAN-784
CA-LAN-793	CA-LAN-833	CA-LAN-834	CA-LAN-835
CA-LAN-885	CA-LAN-1060	CA-LAN-1223	CA-LAN-1413

It should be noted that CA-LAN-418 is a duplicate of CA-LAN-481. Four of these sites consist of bedrock mortars (CA-LAN-249, CA-LAN-251, CA-LAN-418/481, and CA-LAN-652). CA-LAN-253, CA-LAN-784, and CA-LAN-885 are rock shelters.

HISTORIC RESOURCES:

Eight historic archaeological sites have been identified within the subject area (see enclosed map).

CA-LAN-247H	CA-LAN-413/H	CA-LAN-792H	CA-LAN-783H
CA-LAN-899H	CA-LAN-900H	CA-LAN-964H	CA-LAN-1608H

CA-LAN-247H consists of three kilns used for roof tiles. CA-LAN-413/H, which may be the village of El Escorpion, contains numerous prehistoric artifacts as well as historic Mission pottery. CA-LAN-792H consists of the foundations of an adobe house built in the late 1800's or early 1900's and two adjacent trash dumps. CA-LAN-783H is a Spanish or Mexican Period limekiln with two pediments on either side. CA-LAN-899H is the former site of an Indian adobe built before 1850. CA-LAN-900H consists of two adobe houses, a barn, smokehouse, two smaller structures, two wells, trash areas and a privy. One or both houses were built before 1850. CA-LAN-964H is a two story adobe built in 1844 including wells, privies and trash pits. CA-LAN-1608H consists of two rock walls and associated trash deposits.

PREVIOUS ARCHAEOLOGICAL INVESTIGATIONS:

Twenty-five surveys and/or excavations have been conducted within the subject area (see enclosed map and bibliography).

CANOGA PARK QUADRANGLE

PREHISTORIC RESOURCES:

Thirteen prehistoric archaeological sites, and three isolated finds (two non-numbered isolates and one designated as "Isolate 1", Canoga Park Quadrangle), have been identified within the subject area (see enclosed map):

CA-LAN-6	CA-LAN-35	CA-LAN-177	CA-LAN-218
CA-LAN-246	CA-LAN-293	CA-LAN-336	CA-LAN-841
CA-LAN-975	CA-LAN-1017	CA-LAN-1026	CA-LAN-1125
CA-LAN-1695			

At three of these sites (CA-LAN-35, CA-LAN-218, and CA-LAN-246), burials or cremations were observed or recovered. Two of the sites are rockshelters (CA-LAN-293 and CA-LAN-336).

HISTORIC RESOURCES:

Two historic archaeological sites have been identified within the subject area (see enclosed map):

CA-LAN-1048H CA-LAN-1353H

One of these sites (CA-LAN-1048H) is a historic limekiln, and the other site (CA-LAN-1353H) consists of two gravestones. One of the gravestones indicates that the person died in 1846. Both gravestones denote that the people were born in 1811.

PREVIOUS ARCHAEOLOGICAL INVESTIGATIONS:

Fifty-seven surveys and/or excavations have been conducted within the subject area (see enclosed map and bibliography).

CONDOR PEAK QUADRANGLE

PREHISTORIC RESOURCES:

No prehistoric archaeological sites have been identified within the subject area (see enclosed map).

HISTORIC RESOURCES:

No historic archaeological sites have been identified within the subject area (see enclosed map).

PREVIOUS ARCHAEOLOGICAL INVESTIGATIONS:

Two surveys have been conducted within the subject area (see enclosed map and bibliography).

HOLLYWOOD QUADRANGLE

PREHISTORIC RESOURCES:

Eleven prehistoric archaeological sites have been identified within the subject area (see enclosed map):

CA-LAN-69	CA-LAN-70	CA-LAN-71	CA-LAN-72
CA-LAN-73	CA-LAN-74	CA-LAN-80	CA-LAN-159
CA-LAN-171	CA-LAN-172	CA-LAN-1336	

Most of these sites contain a range of artifacts indicating that they are village sites. Burials have been excavated in four of the sites (CA-LAN-80, CA-LAN-159, CA-LAN-171, and CA-LAN-172). The documentation for CA-LAN-1336 is missing, therefore we know very little about this site.

HISTORIC RESOURCES:

One historic archaeological site has been identified within the subject area (see enclosed map):

CA-LAN-1261H

This site consists of a filled in open pit asphalt mine of the civil war period and a historic midden possibly associated with the Hancock family occupation of the area.

PREVIOUS ARCHAEOLOGICAL INVESTIGATIONS:

Thirty two surveys and/or excavations have been conducted within the subject area (see enclosed map bibliography).

INGLEWOOD QUADRANGLE

PREHISTORIC RESOURCES:

One prehistoric archaeological site has been identified within the subject area (see enclosed map).

CA-LAN-88

This site consists of a flake scatter and a midden deposit.

HISTORIC RESOURCES:

No historic archaeological sites have been identified within the subject area (see enclosed map).

PREVIOUS ARCHAEOLOGICAL INVESTIGATIONS:

Six surveys and/or excavations have been conducted within the subject area (see enclosed map and bibliography).

LONG BEACH QUADRANGLE

PREHISTORIC RESOURCES:

No prehistoric archaeological sites have been identified within the subject area (see enclosed map).

HISTORIC RESOURCES:

No historic archaeological sites have been identified within the subject area (see enclosed map).

PREVIOUS ARCHAEOLOGICAL INVESTIGATIONS:

Two surveys, one partial survey and one record search have been conducted within a one mile radius of the subject area (see enclosed map and bibliography).

LOS ANGELES QUADRANGLE

PREHISTORIC RESOURCES:

One prehistoric archaeological site (which also has a historic component, see below), and one isolated find, CA-LAN-IF-6, have been identified within the subject area (see enclosed map) In addition, there is one possible unrecorded site discussed in report L-292 (see enclosed bibliography):

CA-LAN-2121/H

CA-LAN-2121/H consists of a historic trash deposit from which prehistoric artifacts were recovered, while CA-LAN-IF-6 is a single granite mano.

HISTORIC RESOURCES:

Four historic archaeological sites have been identified within the subject area (see enclosed map):

CA-LAN-887H CA-LAN-1112H CA-LAN-1575H
CA-LAN-2121/H

CA-LAN-887H and CA-LAN-1112H consist of a variety of artifacts and structures associated with El Pueblo. CA-LAN-1575H consists of a variety of artifacts and structures associated with ca. 1860-1930's Chinatown. CA-LAN-2121/H consists of a historic trash deposit from which pre-historic artifacts were recovered.

PREVIOUS ARCHAEOLOGICAL INVESTIGATIONS:

Thirty seven surveys and/or excavations have been conducted within the subject area (see enclosed map and bibliography).

OAT MOUNTAIN QUADRANGLE

PREHISTORIC RESOURCES:

Thirty seven prehistoric archaeological sites, and one isolated find, have been identified within the subject area (see enclosed map):

CA-LAN-21	CA-LAN-89	CA-LAN-93	CA-LAN-209
CA-LAN-251	CA-LAN-357	CA-LAN-448	CA-LAN-449
CA-LAN-474	CA-LAN-640	CA-LAN-649	CA-LAN-660
CA-LAN-662	CA-LAN-663	CA-LAN-664	CA-LAN-665
CA-LAN-668	CA-LAN-670	CA-LAN-672	CA-LAN-673
CA-LAN-786	CA-LAN-870	CA-LAN-963	CA-LAN-995
CA-LAN-996	CA-LAN-997	CA-LAN-998	CA-LAN-1028
CA-LAN-1047	CA-LAN-1049	CA-LAN-1050	CA-LAN-1097
CA-LAN-1620	CA-LAN-1736/H	CA-LAN-1737	CA-LAN-1738
CA-LAN-1743			

These sites contain a variety of artifacts, and at least one third of them contain features and/or midden deposit. Burials have been excavated from five of these sites (CA-LAN-21, CA-LAN-357, CA-LAN-448, CA-LAN-474, and CA-LAN-668). In addition, the isolated find is listed on our map as a skull; however, we have no further information regarding this find.

HISTORIC RESOURCES:

Six historic archaeological sites have been identified within the subject area (see enclosed map):

CA-LAN-474/H	CA-LAN-901H	CA-LAN-1126H	CA-LAN-1728H
CA-LAN-1736/H	CA-LAN-2105H		

CA-LAN-474/H, which has both a prehistoric and a historic component, is a Native American village site that was inhabited into the historic period. CA-LAN-901H consists of two historic petroglyphs. CA-LAN-1126H is the remains of a sandstone quarry that was in use from the 1880's until the 1920's. CA-LAN-1728H consists of a historic trash dump, while CA-LAN-1736/H is a historic trash dump from which prehistoric flakes have been recovered. CA-LAN-2105H is the Los Angeles Aqueduct system, built in two phases; construction began ca. 1908 and was completed in 1940.

PREVIOUS ARCHAEOLOGICAL INVESTIGATIONS:

Eighty-three surveys and/or excavations have been conducted within the subject area (see enclosed map and bibliography).

PASADENA QUADRANGLE

PREHISTORIC RESOURCES:

No prehistoric archaeological sites have been identified within the subject area (see enclosed map).

HISTORIC RESOURCES:

No historic archaeological sites have been identified within the subject area (see

enclosed map).

PREVIOUS ARCHAEOLOGICAL INVESTIGATIONS:

Three surveys and one partial survey have been conducted within the subject area (see enclosed map and bibliography).

SAN FERNANDO QUADRANGLE

PREHISTORIC RESOURCES:

Twenty-three prehistoric archaeological sites have been identified within the subject area (see enclosed map):

CA-LAN-28	CA-LAN-34	CA-LAN-95	CA-LAN-255
CA-LAN-300	CA-LAN-407	CA-LAN-408	CA-LAN-409
CA-LAN-410	CA-LAN-411	CA-LAN-412	CA-LAN-475/H
CA-LAN-490	CA-LAN-491	CA-LAN-492	CA-LAN-493
CA-LAN-629	CA-LAN-642	CA-LAN-643	CA-LAN-644
CA-LAN-645	CA-LAN-646/H	CA-LAN-2003	

These sites contain a variety of artifacts and midden deposit. In addition, burials have been recovered and or reported from six of these sites (CA-LAN-28, CA-LAN-95, CA-LAN-255, CA-LAN-300, CA-LAN-629, and CA-LAN-646/H). The burial component at CA-LAN-646/H is a historic grave, although no date is given. The historic components of CA-LAN-475/H and CA-LAN-646/H are discussed in greater detail below under historic resources.

HISTORIC RESOURCES:

Eleven historic archaeological sites have been identified within the subject area (see enclosed map):

CA-LAN-169H	CA-LAN-475/H	CA-LAN-646/H
CA-LAN-799H	CA-LAN-960H	CA-LAN-1124H
CA-LAN-2006H	CA-LAN-2073H	CA-LAN-2089H
CA-LAN-2090H	CA-LAN-2105H	

CA-LAN-169H is the remains of a historic mission. CA-LAN-475/H is a historic trash scatter combined with prehistoric artifacts. CA-LAN-646/H is a historic grave as well as prehistoric artifacts. CA-LAN-799H is the remains of a limekiln and associated artifacts. CA-LAN-960H is the remains of a dam associated with the Mission San Fernando. CA-LAN-1124H is the site of the Southern Pacific engine house and San Fernando railroad station, built ca. 1874. CA-LAN-2006H is the Andres Pico Adobe, built in the early 1830's. CA-LAN-2073H is a 1920's-1930's residential subdivision. CA-LAN-2089H is the former location of a ranch house, built before 1925. CA-LAN-2090H consists of various concrete building slabs dating to the 1920's. CA-LAN-2105H is the Los Angeles Aqueduct system, built in two phases; construction began ca. 1908 and was completed in 1940.

PREVIOUS ARCHAEOLOGICAL INVESTIGATIONS:

Fifty six surveys and/or excavations have been conducted within the subject area (see enclosed map and bibliography).

SAN PEDRO QUADRANGLE

PREHISTORIC RESOURCES:

Thirteen prehistoric archaeological sites have been identified within the subject area (see enclosed map):

CA-LAN-105	CA-LAN-109	CA-LAN-142	CA-LAN-143
CA-LAN-145	CA-LAN-146	CA-LAN-147	CA-LAN-152
CA-LAN-283	CA-LAN-291	CA-LAN-849	CA-LAN-1144
CA-LAN-1269			

These sites contain a range of artifacts and or midden deposits.

HISTORIC RESOURCES:

Two historic archaeological sites have been identified within the subject area (see enclosed map):

CA-LAN-1129H CA-LAN-1450H

CA-LAN-1129H is the remains of Lower Fort MacArthur, which was built between 1918 and 1938. CA-LAN-1405H is the submerged remains of an unknown wrecked 19th century vessel that sunk sometime after 1934.

PREVIOUS ARCHAEOLOGICAL INVESTIGATIONS:

Twenty-one surveys and/or excavations have been conducted within the subject area (see enclosed map and bibliography).

SANTA SUSANA QUADRANGLE

PREHISTORIC RESOURCES:

Two prehistoric archaeological sites have been identified within the subject area (see enclosed map):

CA-LAN-1718 CA-LAN-1719

These two sites are both rockshelters with open air components, a range of artifacts and midden deposit.

HISTORIC RESOURCES:

No historic archaeological sites have been identified within a one mile radius of the subject area (see enclosed map).

PREVIOUS ARCHAEOLOGICAL INVESTIGATIONS:

Three surveys and two partial surveys have been conducted within a one mile radius of the subject area (see enclosed map and bibliography).

SOUTH GATE QUADRANGLE

PREHISTORIC RESOURCES:

No prehistoric archaeological sites have been identified within the subject area (see enclosed map).

HISTORIC RESOURCES:

No historic archaeological sites have been identified within the subject area (see enclosed map).

PREVIOUS ARCHAEOLOGICAL INVESTIGATIONS:

One survey and one record search have been conducted within the subject area (see enclosed map and bibliography).

SUNLAND QUADRANGLE

PREHISTORIC RESOURCES:

Three prehistoric archaeological sites have been identified within the subject area (see enclosed map).

CA-LAN-167 CA-LAN-657 CA-LAN-1525

CA-LAN-657 consists of two house pits and various artifacts.

HISTORIC RESOURCES:

Three historic archaeological sites have been identified within the subject area (see enclosed map).

CA-LAN-1700H CA-LAN-2087H CA-LAN-2088H

CA-LAN-1700H is a residential structure built in 1923 including a main residence, garage, corrals, and a chicken coop. CA-LAN-2087H was the sand and gravel processing facility of the Consumers Rock and Gravel Company. This facility was operated in the

1920's and 1930's. CA-LAN-2088H consists of surface refuse. Glass material indicates that the site was in use from 1943 to 1949.

PREVIOUS ARCHAEOLOGICAL INVESTIGATIONS:

Thirty-six surveys and/or excavations have been conducted within the subject area (see enclosed map and bibliography).

TOPANGA QUADRANGLE

PREHISTORIC RESOURCES:

Ten prehistoric archaeological sites and one isolated find have been identified within the subject area (see enclosed map):

CA-LAN-4	CA-LAN-5	CA-LAN-134	CA-LAN-135
CA-LAN-219	CA-LAN-224	CA-LAN-388	CA-LAN-525
CA-LAN-666	CA-LAN-667		

These sites contain a range of artifacts and/or midden deposits.

HISTORIC RESOURCES:

One historic archaeological site has been identified within the subject area (see enclosed map):

CA-LAN-1428H

This site consists of the fragmentary remains of a one story log cabin built by Will Rogers, built around 1930.

PREVIOUS ARCHAEOLOGICAL INVESTIGATIONS:

Forty surveys and/or excavations have been conducted within the subject area (see enclosed map and bibliography).

TORRANCE QUADRANGLE

PREHISTORIC RESOURCES:

Twenty-five prehistoric archaeological sites and one isolated find have been identified within the subject area (see enclosed map).

CA-LAN-88	CA-LAN-91	CA-LAN-115	CA-LAN-116
CA-LAN-117	CA-LAN-118	CA-LAN-119	CA-LAN-120
CA-LAN-121	CA-LAN-123	CA-LAN-124	CA-LAN-125
CA-LAN-126	CA-LAN-148	CA-LAN-149	CA-LAN-150
CA-LAN-151	CA-LAN-285	CA-LAN-286	CA-LAN-287
CA-LAN-288	CA-LAN-289	CA-LAN-774	CA-LAN-789
CA-LAN-790			

These sites consist of a variety of artifacts and/or midden components.

HISTORIC RESOURCES:

One historic archaeological site has been identified within the subject area (see enclosed map).

CA-LAN-2135H

This is the site of the Los Angeles Union Oil Refinery (c.1917). It consists of a series of tanks and refinery facilities.

PREVIOUS ARCHAEOLOGICAL INVESTIGATIONS:

Twenty surveys and/or excavations have been conducted within the subject area (see enclosed map and bibliography). It should be noted that the boundaries for report number L-1431 are unknown due to an incomplete report and inadequate map.

VAN NUYS QUADRANGLE

PREHISTORIC RESOURCES:

Five prehistoric archaeological sites have been identified within the subject area (see enclosed map).

CA-LAN-43	CA-LAN-111	CA-LAN-345	CA-LAN-871
CA-LAN-1110			

CA-LAN-1110 has a cemetery component with human burials and various artifacts.

HISTORIC RESOURCES:

Two historic archaeological sites have been identified within the subject area (see enclosed map).

CA-LAN-343/H CA-LAN-871H

CA-LAN-343/H contains both historic and prehistoric components. It consists of the prehistoric and historic Fernando village and cemetery, a rancheria, stage stop and settlement. There are also 19th century adobes and various prehistoric artifacts present. This site is part of the Los Encinos State Historical Monument. CA-LAN-871H was a combination saloon, restaurant, and grocery store built in 1872. This site is part of the Los

Encinos State Historical Monument.

PREVIOUS ARCHAEOLOGICAL INVESTIGATIONS:

Forty-four surveys and/or excavations have been conducted within the subject area (see enclosed map and bibliography).

VENICE QUADRANGLE

PREHISTORIC RESOURCES:

Twenty-eight prehistoric archaeological sites have been identified within the subject area:

CA-LAN-47	CA-LAN-54	CA-LAN-59	CA-LAN-60
CA-LAN-62	CA-LAN-63	CA-LAN-64	CA-LAN-65
CA-LAN-66	CA-LAN-67	CA-LAN-193	CA-LAN-194
CA-LAN-202	CA-LAN-203	CA-LAN-204	CA-LAN-206
CA-LAN-211	CA-LAN-212	CA-LAN-213	CA-LAN-214
CA-LAN-216	CA-LAN-356	CA-LAN-691	CA-LAN-1018
CA-LAN-1118	CA-LAN-1698	CA-LAN-1716	

These sites contain a range of artifacts and midden deposits, and at least four of them are village sites. Burials have been recovered from five of these sites: CA-LAN-47, CA-LAN-54, CA-LAN-59, CA-LAN-62, and CA-LAN-356.

HISTORIC RESOURCES:

Five historic archaeological sites have been identified within the subject area (see enclosed map):

CA-LAN-1596H	CA-LAN-1932H	CA-LAN-1933H	CA-LAN-1934H
CA-LAN-1970H			

CA-LAN-1596H consists of artifacts and features associated with a ca. 1920's Japanese labor camp. CA-LAN-1932H and CA-LAN-1933H consist of a surface scatter of recent (1930-1960) historic artifacts. CA-LAN-1934H is a scatter of redeposited fill; artifacts range from the 1900's to 1970's. CA-LAN-1970H is a series of elevated berms and pads for oil rigs that were in use from the 1920's to the 1950's.

PREVIOUS ARCHAEOLOGICAL INVESTIGATIONS:

Forty-nine surveys and/or excavations have been conducted within the subject area (see enclosed map and bibliography).

RECOMMENDATIONS

Because there is good potential for encountering cultural resources within the City of Los Angeles boundaries, our office recommends that when the information in this record search is used for planning purposes each project be reviewed on a case by case basis for their potential impact to cultural resources. There are a number of reasons for this recommendation. First of all, the information on the maps that we have enclosed will be out of date very quickly. Every month we receive numerous archaeological reports, assign new site numbers, and file supplemental site information. We have to maintain our records and maps on a daily basis, and all archaeologists working in L.A., Orange, and Ventura Counties are required to file information with our office. In addition, it is difficult for a non-archaeologist to assess the maps and make a recommendation, especially without the site records and reports. To avoid problems with interpreting the data, specific development plans should be submitted to the California Archaeological Information Center for review at the initial study phase using our Quick-check form, which is enclosed. Our recommendations and comments may be included as conditions for project approvals, thereby assuring compliance with CEQA legislation. In areas where substantial grading has occurred in the past, archaeological survey may not be necessary. For these projects, a halt work condition should be in effect in the event that unanticipated cultural materials (arrow points, grinding stones, features, etc.) are encountered. Additionally, areas with no recorded archaeological sites can be considered archaeologically sensitive. Most of the City of Los Angeles has not been surveyed by a professional archaeologist. Many areas within this unsurveyed area can be considered archaeologically sensitive. Again, we strongly urge the city to contact our office on a per project basis to determine whether or not archaeological work will be necessary prior to approval of permits.

Our office also has other concerns about the use of the information in this Record Search. Our records are confidential and there needs to be some control over who has access to the Record Search that we have enclosed. Obviously, the public should not have access to any of the information that we are sending. It would be most appropriate if just yourself and a few other individuals involved in planning decisions use the information we are enclosing. In conclusion, we want to make it very clear that this record search is a general one for the City of Los Angeles right now. Because of the changing nature of the data, any work after three months needs to be updated with a site specific record search or a quick-check. If you have any questions regarding our results or the recommendations presented herein, please feel free to contact our office at (310) 825-1980.

Invoices are mailed approximately two weeks after records searches. This will allow your firm the opportunity to request further information under the same invoice number. Please reference the invoice number listed below when making inquiries. Requests made after invoicing will necessitate a separate invoice with a $15.00 handling fee.

Sincerely,

Lynn H. Gamble, Ph. D.
Coordinator

Tarquin D. Preziosi
Staff Archaeologist

Sarah E. Peltzie
Staff Archaeologist

Enclosures:

(X) Quick Check Form
(X) Map
(X) Bibliography
( ) Site list
( ) Site records
( ) Survey reports
( ) SOPA list
( ) Invoice#4628