

APPENDIX E

**PALEONTOLOGICAL
RESOURCES REPORT**

**PALEONTOLOGICAL ASSESSMENT
FOR THE CITY OF LA MESA GENERAL PLAN AND PROGRAMMATIC EIR
SAN DIEGO COUNTY, CALIFORNIA**

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August 2012

This document reports the results of the Phase I Paleontological Resources Assessment for the City of La Mesa as part of the La Mesa 2012 General Plan (Project) located in La Mesa, San Diego County, California (Figure 1). The purpose of the Project is to provide a long-term General Plan to guide the physical development of the incorporated city and any land outside the city boundaries that bears a relationship to its planning activities. The planning area for the City of La Mesa is comprised of 5,876 acres. This assessment was conducted to identify potential Project effects to paleontological resources in compliance with the California Environmental Quality Act (CEQA).

PROJECT LOCATION AND DESCRIPTION

The City of La Mesa (Project area) is located in central San Diego County, approximately 12 miles east of downtown San Diego, California. The Project area is bounded by the cities of San Diego to the west and north, El Cajon and the unincorporated communities of Mount Helix, Casa Del Oro and Spring Valley to the east, and Lemon Grove to the south. The Project area is located 1.6 miles north of the junction of Interstate 805 (I-805) and Interstate 5 (I-5), and 0.2 miles southeast of intersection State Route 56 (SR 56) and I-5 (Figure 2).

The 2012 La Mesa General Plan provides a basis for future growth and development for the city and will contain policies and programs that provide decision-makers with a solid basis for decisions related to land use, development and public investment in infrastructure and facilities. In addition, the plan addresses issues of sustainability, climate change, complete streets, water conservation and wellness. The 2012 General Plan includes inter-related policies and programs to reinforce and build on the City's visions for its future. Visions for the 2012 General Plan include:

1. A City that works together with the community to achieve common goals which include a safe and healthy environment, state-of-the-art resources and technology, unsurpassed quality of life and an efficient and effectively run government organization.
2. A City where local governmental services, including police, fire and recreation meet the needs of its citizens.
3. A City where municipal buildings, parks, streets and other public facilities are well maintained.
4. A City where sound economic development practices have retained and attracted many successful businesses providing jobs for its citizens and a sound revenue base for City operations.
5. A City which has maintained and improved its downtown as a focal point for community heritage as well as a place for operating a business, shopping, celebrating and living.

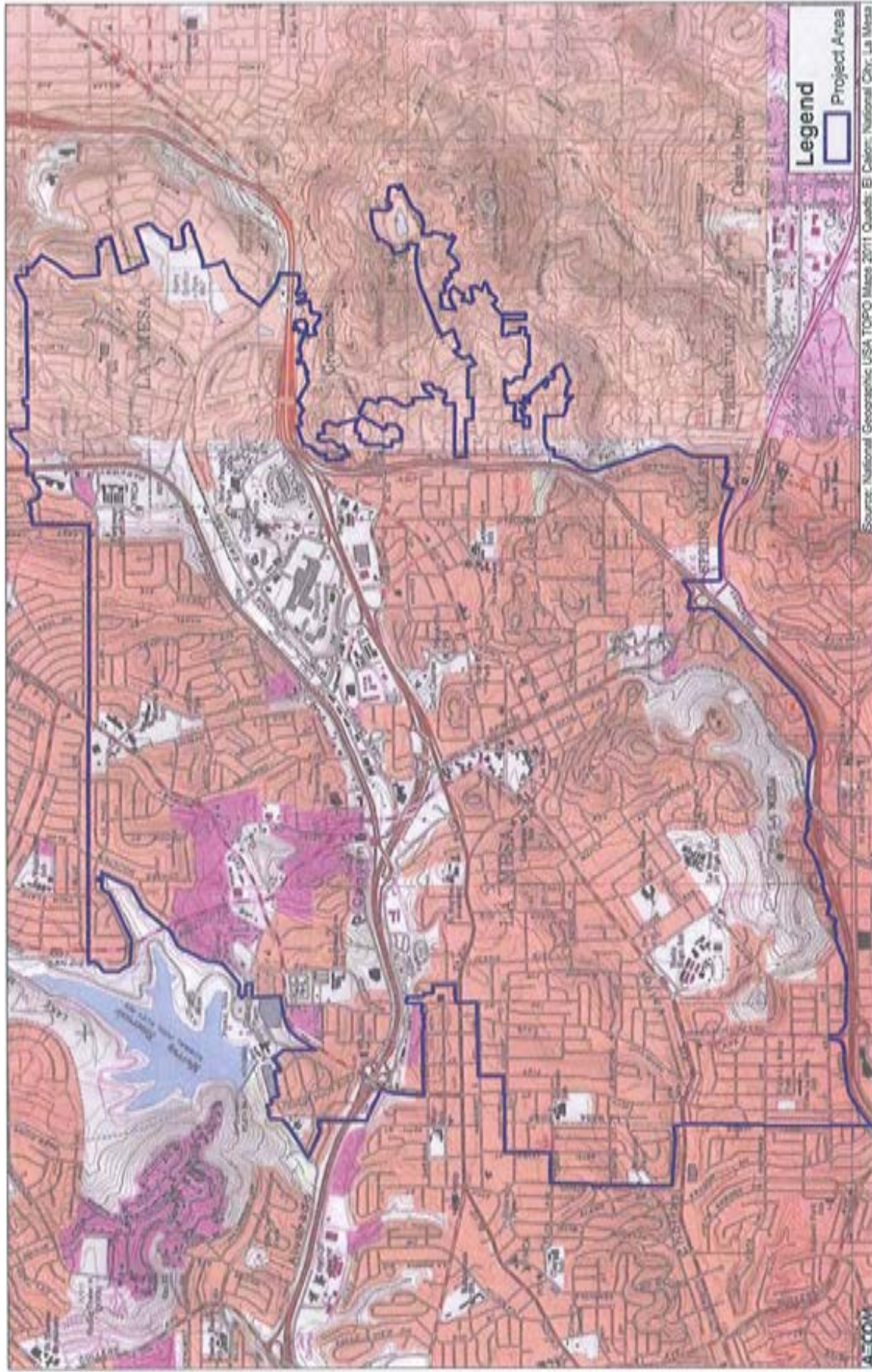
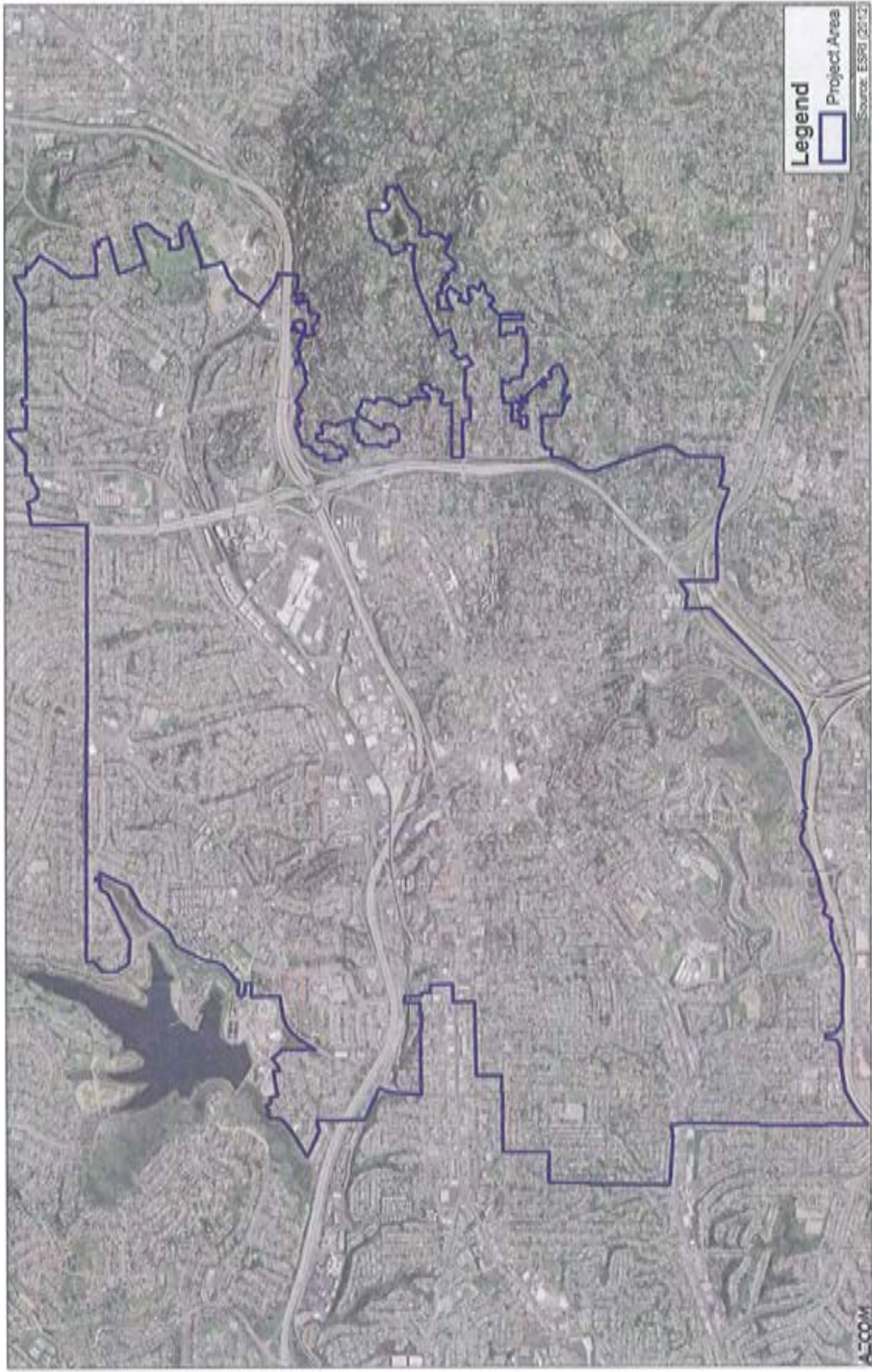


Figure 1
Project Location Map
 La Mesa Project



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Source: ES&J (2012)

Legend
Project Area

Figure 2

Project Location Map

La Mesa Project

6. A City where the important travel corridors are tree line boulevards serving a rich mix of residential and commercial land uses, with infrastructure and amenities that support all modes of travel.
7. A City where travel is safe and easily accommodated whether by car or transit, on a bike or as a pedestrian.
8. A City where a natural landscape of rolling hills and canyons has provided a beautiful setting for its many well maintained residential neighborhoods, parks and open spaces.
9. A City which has taken steps to conserve and enhance its local resources, safeguard human health and the environment, maintain a healthy and diverse economy, and improve the livability for all community members.
10. A City that is an environmental leader in the region through implementation of sustainable principles that maintain and enhance quality of life in the City.
11. A City that encourages active and healthy lifestyles by offering a diverse range of recreational activities and facilities in La Mesa.
12. A City which recognizes the value of its natural assets and has taken steps to conserve the quality of its environment.
13. A City that recognizes its own history, and preserves and integrates its history in a variety of residential and commercial settings.
14. A City that creates a future for La Mesa that incorporates tangible and intangible aspects of our past.
15. A City that is a quiet and safe place to live, work, play or go to school.
16. A City where the public is protected from both natural hazards and hazards created by human activities.
17. A City where the citizens are prepared for disasters and emergency situations.
18. La Mesa is the healthiest and most livable City in the San Diego region. It is a City that promotes an active lifestyle, social interaction, and healthy eating for all citizens, and where gardening and other types of urban farming are encouraged.
19. A City where every day trips can be accomplished by walking, biking, or taking transit.
20. A City where children are safe to play in their neighborhoods, and where parks and recreational programming for all ages are available for all residents.
21. A City that encourages sustainable development principles to foster economic vitality, the health of the community and the natural environment.

22. A City that provides safe and decent housing opportunities for all its residents, offering a range of housing options.

The adoption and implementation of the 2012 General Plan will meet the demands of future goals while maintaining the policies and regulations established by the City of La Mesa.

REGULATORY STANDARDS

Paleontological resources are limited, nonrenewable resources of scientific, cultural, and educational value and are afforded protection under state (California Environmental Quality Act, or CEQA), and local (San Diego County) laws and regulations. This study satisfies project requirements in accordance with CEQA (13 PRC, 2100 et seq.) and Public Resources Code Section 5097.5 (Stats 1965, c 1136, p. 2792).

In general terms, for geologic units with high potential, full-time monitoring typically is recommended during any project-related ground disturbance. For geologic units with low potential, protection or salvage efforts typically are not required. For geologic units with undetermined potential, field surveys by a qualified vertebrate paleontologist are usually recommended to specifically determine the paleontological potential of the rock units present within the study area.

CEQA Guidelines

The Guidelines for the Implementation of CEQA, as amended March 29, 1999 (Title 14, Chapter 3, California Code of Regulations: 15000 et seq.) define procedures, types of activities, persons, and public agencies required to comply with CEQA, and include as one of the questions to be answered in the Environmental Checklist (§15023, Appendix G, Section XIV, Part a) the following: "Will the proposed project directly or indirectly destroy a significant paleontological resource or unique geologic feature?"

Other state requirements for paleontological resources management are included in the Public Resources Code (Chapter 1.7), §5097.5 and §30244. These statutes prohibit the removal of any paleontological site or feature on public lands without permission of the jurisdictional agency, define the removal of paleontological sites or features as a misdemeanor, and require reasonable mitigation of adverse impacts to paleontological resources from developments on public (state) lands.

The loss of any identifiable fossil that could yield information important to prehistory, or that embodies the distinctive characteristics of a type of organism, environment, period of time, or geographic region, would be a significant environmental impact. Direct impacts on paleontological resources primarily concern the potential destruction of non-renewable paleontological resources and the loss of information associated with these resources. This includes the unauthorized collection of fossil remains. If potentially fossiliferous bedrock or surficial sediments are disturbed, the disturbance could result in the destruction of paleontological resources and subsequent loss of information (significant impact). At the project-specific level, direct impacts can be mitigated to below a significant level through the implementation of paleontological mitigation.

The CEQA threshold of significance for a significant impact to paleontological resources is reached when a project is determined to “directly or indirectly destroy a significant paleontological resource or unique geologic feature.” In general, for project areas which are underlain by paleontologically sensitive geologic units, the greater the amount of ground disturbance, the higher the potential for significant impacts to paleontological resources. For project areas that are directly underlain by geologic units with no paleontological sensitivity, there is no potential for impacts on paleontological resources unless sensitive geologic units which underlie the non-sensitive unit are also impacted.

PROJECT SETTING

Environmental and Geologic Setting

The City of La Mesa is located in the central portion of San Diego County and is approximately 12-miles east of the Pacific Ocean, covering 5,876 acres. La Mesa has a Semi-arid Steppe climate and as a result, experiences hot, dry summers and warm winters with annual precipitation occurring between the months of November and March.

The Project area is located in areas underlain by very old paralic (deposits laid down on the landward side of a coast in shallow fresh water subject to marine invasions resulting in marine and nonmarine sediment interbedding) deposits of Pleistocene-age (approximately 0.5 to 1 million years old) and three middle Eocene-age formations; the Stadium Conglomerate (approximately 44 million years old), Mission Valley Formation (43 million years old), and the Pomerado Conglomerate (37 million years old) (Kennedy and Tan 2008 and Kennedy and Tan 2005; and Adli 2012).

PALEONTOLOGICAL RECORDS SEARCH RESULTS

A paleontological records search was conducted by Joe El Adli, Fossil Preparation Lab Manager for the Department of Paleontological Services of the San Diego Natural History Museum (SDNHM) on June 29, 2012. The SDNHM records check indicated that a total of 34 fossil localities (Table 1) exist within a 1-mile radius of the Project area and of the 34, two localities occur within the boundaries of the Project area itself. There are 16 localities that occur within the marine deposits of the Pliocene-Pleistocene-age San Diego Formation which is approximately 2 to 4 million years old. The San Diego Formation produced fossil remains of shells (e.g. sponges, clams, snails, crabs, and shrimp) and marine invertebrates (e.g. great white sharks, fish, baleen whales, sea lions, and walruses). The remaining 18 localities were discovered in the fluvial, lagoonal, estuarine, terrestrial, and shallow marine deposits of the Mission Valley Formation. This formation contained localities that produced leaf impressions of plants, shells and impressions of marine invertebrates, impressions of terrestrial invertebrates, mineralized bones of marine vertebrates, and mineralized bones of terrestrial vertebrates.

Table 1. Previously Recorded Paleontological Localities within 1-Mile of the Project Area

Locality No.	Locality Name	Rock and Time Units	Date(s) of Collection
462	East San Diego, 58 th & University	San Diego Formation; Cenozoic Neogene late Pliocene Blancan; sdst-	09/01/76; 07/19/78; 01/13/95
3265	Central Avenue & Federal Avenue	San Diego Formation lower member; Cenozoic Neogene Pliocene Blancan; sdstm congl-	04/85; 07/29/87; 05/18/95
3383	Aqueduct Tower	Poway Group Mission Valley Formation; Cenozoic Paleogene middle Eocene late Uintan; slst	12/21/85; 01/16/88; 03/08/95
*3428	Jackson Off Ramp	Poway Group Mission Valley Formation; Cenozoic Paleogene middle Eocene late Uintan; mdst-fluvial	10/02/88; 10/24/96; 10/26/96
*3539	Briarcrest Park	Poway Group Mission Valley Formation; Cenozoic Paleogene middle Eocene late Uintan; mdst-fluvial	02/18/91; 04/24/92; 05/28/93
3638	Witherspoon Way	Poway Group Mission Valley Formation; Cenozoic Paleogene middle Eocene late Uintan; sdst-fluvial	1962; 08/22/97
3746	Alvarado Water Filtration Plant	Poway Group Mission Valley Formation; Cenozoic Paleogene middle Eocene late Uintan; mdst-marine	03/03/99; 03/04/00; 03/07/00
4020	SR 125 North (Unit I) Grossmont Summit	Poway Group Mission Valley Formation; Cenozoic Paleogene middle Eocene late Uintan; mdst-fluvial	07/15/97; 10/11/99
4036	SR 125 North (Unit III) Fletcher Parkway	Poway Group Mission Valley Formation; Cenozoic Paleogene middle Eocene late Uintan; slst-nonmarine	04/16/99; 10/11/99
4038	SR 125 (Unit I) Grossmont Summit	Poway Group Mission Valley Formation; Cenozoic Paleogene middle Eocene late Uintan; sdst-fluvial	12/17/96; 10/15/99
4604	SR 125 South Stage 3, Lower Red Sdst Bed	Poway Group Mission Valley Formation; Cenozoic Paleogene middle Eocene late Uintan; sdst-fluvial-estuarine	07/21/00; 11/27/01

Locality No.	Locality Name	Rock and Time Units	Date(s) of Collection
4605	SR 125 South Stage 3, Potamides Bed	Poway Group Mission Valley Formation; Cenozoic Paleogene middle Eocene late Uintan; sdst shallow marine estuary	05/22/00; 01/10/02
4606	SR 125 South Stage 3, Protoreodon Quarry	Poway Group Mission Valley Formation; Cenozoic Paleogene middle Eocene late Uintan; sdst-shallow marine estuary	07/12/00; 11/20/01; 12/31/00
4607	SR 125 South Stage 3, Lower Green Mudstone	Poway Group Mission Valley Formation; Cenozoic Paleogene middle Eocene late Uintan; mudst-shallow marine estuary	05/02/00; 02/05/04; 05/02/00
4718	SR 125 South (Stages 4 & 5) Broadway Site 1	Poway Group Mission Valley Formation; Cenozoic Paleogene middle Eocene late Uintan; mdst-floodplain/estuarine?	11/03/99; 08/05/02; 11/03/99
4719	SR 125 South (Stages 4 & 5) Broadway Site 2	Poway Group Mission Valley Formation; Cenozoic Paleogene middle Eocene late Uintan; mdst-floodplain/estuarine?	12/22/99; 12/22/99
4974	SR 125 South Stage 3 Mid. Green Mds[t]	Poway Group Mission Valley Formation; Cenozoic Paleogene middle Eocene late Uintan; mdst-estuarine	05/16/00; 02/05/04; 05/16/00
4988	SR 125 South Stage 3, Red Mudstone	Poway Group Mission Valley Formation; Cenozoic Paleogene middle Eocene late Uintan; mdst-fluvial-lagoonal	05/22/00; 02/05/04
5070	La Mesa – Olympic Street	San Diego Formation; Cenozoic Neogene Pliocene; sdst-marine	1964; 04/02/02; 06/2001
5071	La Mesa – Olympic Street	San Diego Formation; Cenozoic Neogene Pliocene; sdst-marine	1964; 04/02/02; 06/2001
5072	La Mesa – Olympic Street	San Diego Formation; Cenozoic Neogene Pliocene; sdst-marine	1964; 04/02/02; 06/2001
5073	La Mesa – Olympic Street	San Diego Formation; Cenozoic Neogene Pliocene; sdst-marine	1964; 04/02/02; 06/2001
5502	SDSU Sorority Row	San Diego Formation; Cenozoic Neogene Pliocene; sdst-marine, shallow inner sublittoral	05/25/05; 11/30/05; 12/15/05; 12/02/05
5523	Alvarado WTP	Poway Group Mission Valley Formation;	07/19/04; 01/20/05;

Locality No.	Locality Name	Rock and Time Units	Date(s) of Collection
		Cenozoic Paleogene middle Eocene late Uintan; mdst-shallow marine, estuarine	01/21/05; 07/19/04
5621	College Grove Drive -- Bed A	San Diego Formation; Cenozoic Neogene Pliocene; sdst-marine shelf	02/24/99; 06/02/05; 06/03/05
5622	College Grove Drive -- Bed B	San Diego Formation; Cenozoic Neogene Pliocene; sdst-marine shelf	02/17/05; 06/02/05; 06/03/05
5623	College Grove Drive -- Bed C	San Diego Formation; Cenozoic Neogene Pliocene; sdst-marine shelf	01/13/99; 06/02/05; 06/03/05
5892	SDG&E Chollas Substation	San Diego Formation; Cenozoic Neogene Pliocene; sdst-marine sand bottom	06/07/06; 09/11/06; 09/19/06; 06/07/06
6037	Serenata Town Homes -- Upper Concreted Bed	San Diego Formation; Cenozoic Neogene Pliocene; sdst -- marine shelf	05/10/07; 07/26/07; 08/29/07; 05/10/07
6038	Serenata Town Homes -- Friable Sandstone Bed	San Diego Formation; Cenozoic Neogene Pliocene; sdst -- marine	05/18/07; 07/26/07; 08/29/07; 05/18/07
6039	Serenata Town Homes -- Crystallized Concreted [Bed]	San Diego Formation; Cenozoic Neogene Pliocene; sdst -- marine	04/30/07; 07/26/07; 08/29/07; 04/30/07
6040	Serenata Town Homes -- Lower Concreted Bed	San Diego Formation; Cenozoic Neogene Pliocene; sdst -- marine	06/05/07; 07/26/07; 08/29/07; 06/05/07
6058	SDG&E Chollas Substation	Poway Group Mission Valley Formation; Cenozoic Paleogene Middle Eocene; sdst -- marine	09/20/06; 10/29/07
6187	Sewer & Water Group 796 (College Avenue)	San Diego Formation; Cenozoic Neogene Pliocene; sdst -- marine continental shelf	12/09/08; 08/20/09; 08/26/09; 12/09/08

*Overlaps with Project Area

Previously Recorded Paleontological Localities

The paleontological records search identified a total of 34 fossil localities. Of the 34 resources, there were three localities (3428, 3539, and 4036), that fall within the northern portion of the Project area. The fossil localities 3428 (Briarcrest Park) and 3539 (Jackson off-Ramp), both produced fossil impressions from the Mission Valley Formation. The fossil impressions found in the Mission Valley Formation consists of leaf impressions of plants (e.g. vascular plants), shells and impressions of marine invertebrates (e.g. clams, oysters, snails, segmented worms, and

crabs), impressions of terrestrial invertebrates (e.g. insects), mineralized bones of marine vertebrates (e.g. fish, turtle, and crocodiles), and mineralized bones of terrestrial vertebrates (e.g. amphibians, lizards, snakes, boas, opossums, rodents and ancestral carnivorans).

Results

The Mission Valley Formation and San Diego Formation in San Diego County are of high paleontological sensitivity. Therefore, it is possible that any ground disturbance activity that extends to undisturbed deposits of the Mission Valley Formation and/or the San Diego Formation (which was not determined to occur within the Project area, but does occur in the vicinity) have the potential to cause significant impacts to the paleontological resources preserved within these deposits. Moreover, the Pomerado Conglomerate and the Stadium Conglomerate is also of high paleontological sensitivity and the old paralic deposits are of moderate sensitivity. Because the Project area is underlain with these deposits, any proposed ground disturbance that extends deep enough to encounter these previously undisturbed deposits, have a high potential to cause impacts to paleontological resources preserved in these deposits. Prior to development within the Project area, a comprehensive pedestrian survey should be conducted by a qualified paleontologist in all areas underlain by geologic units determined to have a high paleontological resource potential. Based on the results of surveys in specific development areas, additional paleontological mitigations (such as construction monitoring) may be recommended.

References Cited

El Adli, Joe

2012 *Paleontological Locality Search for the La Mesa City Project*. Report on file: AECOM, Los Angeles, California

Kennedy, Michael P. and Siang S. Tan

2005. Geologic Map of the Oceanside 30' x 60' Quadrangle, California. U. S. Geological Survey, Denver, CO.

2008 *Geologic Map of the San Diego 30' x 60' Quadrangle, California*. Digital file accessed August 7, 2012. http://ngmdb.usgs.gov/ngm-bin/II.View.pl?sid=84173_1.sid&vtype=b&sfact=1.5

