ENVIRONMENTAL ASSESSMENT

MEMORIAL PARK RESERVOIR PROJECT

CITY OF SANTA MONICA
CALIFORNIA

August 2011

COVER SHEET

Project Title & Location:	Memorial Park Reservoir Project City of Santa Monica, Los Angeles County, California
NEPA Document:	Environmental Assessment (EA)
Lead Agency:	U.S. Environmental Protection Agency (EPA)
Responsible Official:	Jared Blumenfeld, Regional Administrator U.S. Environmental Protection Agency, Region 9
Point of Contact:	Ephraim Leon-Guerrero U.S. Environmental Protection Agency, Region 9 75 Hawthorne Street San Francisco, CA 94105
Cooperating Agencies:	None
Local Jurisdiction Contact:	Eric Bailey, Civil Engineer City of Santa Monica 1685 Main Street Santa Monica, CA 90401 (310) 458-8721
Date by Which Comments Must Be Received:	October 2**,** 2011. This date provides a comment period of 30 days.

ENVIRONMENTAL ASSESSMENT
Memorial Park Reservoir Project
City of Santa Monica, California

TABLE OF CONTENTS

EXECUTIVE SUMMARY 1
PROJECT SYNOPSIS 1
Project Proponent 1
Project Description 1
ALTERNATIVES 1
ENVIRONMENTAL FACTORS AFFECTED 2
SUMMARY OF IMPACTS AND MITIGATION MEASURES 3

1.0 PURPOSE AND NEED 1-1
1.1 INTRODUCTION 1-1
1.2 PURPOSE AND NEED 1-1
1.2.1 Scope of Environmental Assessment 1-2
1.2.2 Regulatory Drivers and Guidance 1-2

2.0 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES 2-1
2.1 INTRODUCTION 2-1
2.2 PROPOSED ACTION 2-1
2.2.1 Project Location 2-1
2.2.2 Facility Size and Design 2-4
2.2.3 Interagency Coordination and Consultation Activities 2-10
2.2.4 Public Participation 2-11
2.3 NO-ACTION ALTERNATIVE 2-11
2.4 ALTERNATIVE 1: NORTHEAST CORNER SITE ALTERNATIVE 2-11
2.5 ALTERNATIVE 2: EAST SIDE SITE ALTERNATIVE 2-12

3.0 PRESENT ENVIRONMENT 3-1
3.1 LOCATION AND GENERAL DESCRIPTION 3-1
3.2 AESTHETICS 3-1
3.3 AIR QUALITY 3-1
3.4 BIOLOGICAL RESOURCES 3-2
3.5 CULTURAL RESOURCES 3-2
3.6 GEOLOGY 3-3
3.7 HAZARDS/HAZARDOUS MATERIALS 3-4
3.8 HYDROLOGY/WATER QUALITY 3-5
3.9 NOISE 3-5
3.10 TRAFFIC/TRANSPORTATION 3-6
3.11 UTILITIES 3-7

4.0 ENVIRONMENTAL IMPACTS 4-1
4.1 EFFECTS OF THE PROPOSED ACTION 4-1
4.1.1 AESTHETICS 4-1
4.1.2 AGRICULTURAL RESOURCES 4-2
4.1.3 AIR QUALITY 4-2
4.1.4 BIOLOGICAL RESOURCES 4-3

4.1.5 CONSTRUCTION EFFECTS 4-4
4.1.6 CULTURAL RESOURCES 4-12
4.1.7 SOCIOECONOMIC IMPACTS 4-15
4.1.8 GEOLOGY AND SOILS 4-15
4.1.9 GREENHOUSE GAS EMISSIONS 4-17
4.1.10 HAZARDS AND HAZARDOUS MATERIALS 4-21
4.1.11 HYDROLOGY AND WATER QUALITY 4-22
4.1.12 LAND USE AND PLANNING 4-24
4.1.13 MINERAL RESOURCES 4-25
4.1.14 NEIGHBORHOOD EFFECTS 4-25
4.1.15 NOISE 4-25
4.1.16 POPULATION AND HOUSING 4-27
4.1.17 PUBLIC SERVICES 4-27
4.1.18 RECREATION 4-28
4.1.19 SHADOWS 4-28
4.1.20 TRANSPORTATION/TRAFFIC 4-28
4.1.21 UTILITIES AND SERVICE SYSTEMS 4-30
4.1.22 MANDATORY FINDINGS OF SIGNIFICANCE 4-32
4.2 SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION MEASURES 4-33
4.3 SHORT-TERM USE OF THE ENVIRONMENT VERSUS LONG-TERM PRODUCTIVITY 4-34

5.0 CUMULATIVE EFFECTS 5-1

6.0 REFERENCES AND PERSONS CONTACTED 6-1

7.0 LIST OF PREPARERS 7-1
7.1 AGENCY STAFF 7-1
7.1.1 U.S. Environmental Protection Agency 7-1
7.1.2 City of Santa Monica 7-1
7.2 CONSULTANT PERSONNEL 7-1
7.2.1 Rincon Consultants, Inc. 7-1
7.2.2 San Buenaventura Research Associates 7-1

APPENDICES

Appendix A – Air Quality/GHG: URBEMIS Results, GHG Calculations

Appendix B – Historic Resources Report, Native American Consultation, Cultural Resources Feasibility Study

LIST OF FIGURES

Number		Page
1	Regional Location	2-2
2	Project Site Location	2-3
3	Reservoir Site Plan	2-5
4	Pump Station Floor Plan	2-7
5	Pump Station Details	2-8
6	Northeast Corner Site Alternative Site Plan	2-13
7	East Side Site Alternative Site Plan	2-15

LIST OF TABLES

Number		Page
ES-1	Summary of Potentially Significant Environmental Impacts, Mitigation Measures, and Residual Impacts	E-3
1	Interagency Coordination and Consultation	2-10
2	Existing (2008) Intersection Levels of Service	3-7
3	SCAQMD LSTs for Construction	4-6
4	Peak Construction Emissions (lbs/day)	4-6
5	Mitigated Peak Construction Emissions (lbs/day)	4-7
6	Ambient Noise Measurement Summary	4-8
7	Exterior Noise Standards	4-8
8	Predicted Construction Maximum Noise Levels	4-9
9	Annual Anthropogenic GHG Emissions	4-18
10	Estimated Construction Emissions of Greenhouse Gases	4-26
11	Solid Waste Disposal Facilities	4-32

ACRONYMS AND ABBREVIATIONS

AEP	Association of Environmental Professionals
APCD	Air Pollution Control District
AQMD	Air Quality Management District
ARB	Air Resources Board
BMP	Best Management Practice
CalEPA	California Environmental Protection Agency
Cal-OSHA	California Occupational Safety and Health Agency
CAPCOA	California Air Pollution Control Officers Association
CBC	California Building Code
CDBG	Community Development Block Grant
CDE	Carbon Dioxide Equivalent
CEQ	Council on Environmental Quality
CEQA	California Environmental Quality Act
CERCLIS	Comprehensive Environmental Response Compensation, and Liability Information System
CFC	Chlorofluorocarbon
CFR	Code of Federal Regulations
CIWMB	California Integrated Waste Management Board
CNEL	Community Noise Equivalent Level
CRHR	California Register of Historical Resources
CUPA	Certified Unified Program Agency
CY	Cubic Yards
dB	Decibel
dBA	A-weighted Decibel Level
DG	Designated Park
DPF	Diesel Particulate Filter
DWSAP	Drinking Water Source Assessment Program
EA	Environmental Assessment
EID	Environmental Information Document
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
FONSI	Finding of No Significant Impact
GCC	Global Climate Change
GHG	Greenhouse Gas
GPD	Gallons Per Day
HP	Horsepower
IPCC	Intergovernmental Panel on Climate Change
Leq	Equivalent Noise Level
LDN	Day-Night Average Noise Level
LOS	Level of Service
LUCE	Land Use and Circulation Element
LUST	Leaking Underground Storage Tank
LRT	Light Rail Transit
LST	Localized Significance Threshold
MBTA	Migratory Bird Treaty Act
MG	Million Gallons
NAHC	Native American Heritage Commission
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NRHP	National Register of Historic Places
PAL	Santa Monica Police Activities League
PM_{10}	particulate matter <10 microns in diameter
$PM_{2.5}$	particulate matter <2.5 microns in diameter
RWQCB	Regional Water Quality Control Board
SRA	Source Receptor Area
SLIC	Spills, Leaks Investigations, and Cleanup
SMMUSD	Santa Monica-Malibu School District
SMPD	Santa Monica Police Department
SMURRF	Santa Monica Urban Runoff Recycling Facility
TUP	Temporary Use Permit
UBC	Uniform Building Code
UDAG	Urban Development Action Grant
WMP	Waste Management Plan

EXECUTIVE SUMMARY

This section summarizes the characteristics of the proposed project and the significant environmental impacts associated with the proposed project.

PROJECT SYNOPSIS

PROJECT PROPONENT

City of Santa Monica
1685 Main Street
Santa Monica, CA 90401

PROJECT DESCRIPTION

The project site is located in the western portion of Los Angeles County, in the City of Santa Monica. Memorial Park is located between Olympic Boulevard and Colorado Avenue, and between 14th and 16th streets. The project site is regionally accessible from Interstate 10 (the Santa Monica Freeway) and State Route 1 (Pacific Coast Highway). Memorial Park is a large community park that includes playfields, a playground, a skateboard park, tennis courts, a dog walk, a gymnasium, and a community center with meeting rooms. A surface parking lot is located in the western portion of the park along the east side of 14th Street. The park has 63 off street parking spaces. Immediately surrounding land uses include a mix of commercial, light industrial, and institutional uses.

The proposed project consists of a 1-million gallon MG non-potable water reservoir, a non-potable water pumping station and supporting pipelines at a site within Memorial Park and immediately adjacent the park to the west at the Fisher Lumber property. The water reservoir and supporting pipelines will be located underground so existing and/or improved park facilities can be located at grade above the buried reservoirs and pipelines. Within Memorial Park, the proposed underground reservoir would be located beneath the existing tennis courts along the northeast side of 14th Street. The pump station would be above ground in a masonry block building located immediately adjacent the park in an existing parking lot on the western most edge of the Fisher Lumber property.

ALTERNATIVES

As required by NEPA, the EA examines a range of alternatives to the proposed project. These alternatives are described in Section 4 and evaluated along with the proposed project for each impact area. Studied alternatives include:

- **"No-Action Alternative".** The No-Action alternative assumes that the reservoir and pumping facilities would not be constructed at Memorial Park. Memorial Park would remain in its current condition and the existing tennis courts, parking areas and existing uses would remain in place, unchanged.

- **"Northeast Corner Site Alternative".** This alternative would locate the reservoir at the northeast corner of Memorial Park bordered by the former Fisher Lumber property to the North, 16th Street to the East, and park land to the South and to the West. The required construction area would be 4.2 acres with the construction area dimensions. The four existing softball fields are located within the construction area and would need to be taken out of service during the estimated 2-year construction period. All other park facilities would remain in operation during construction. The estimated excavation to build this alternative would be approximately 26,000 cubic yards.

- **"East Side Site Alternative".** This alternative would locate the reservoir along the east side of Memorial Park bordered by the former Fisher Lumber property to the North, 16th Street to the East, Olympic Boulevard and park land to the South, and park land to the West. The required construction area is 4.3 acres with the construction area dimensions. The four existing softball fields and one existing little league field are located within the construction area and would need to be taken out of service during the estimated 2-year construction period. All other park facilities would remain in operation during construction. The estimated excavation to build this alternative is 26,000 cubic yards.

ENVIRONMENTAL FACTORS AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is "Potentially Significant" or "Potentially Significant Unless Mitigation Incorporated" as indicated by the checklist on the following pages.

☐ Aesthetics	☐ Agriculture Resources	☐ Air Quality
☒ Biological Resources	☒ Construction Effects	☒ Cultural Resources
☐ Socioeconomic Impacts	☐ Geology/Soils	☐ Greenhouse Gas Emissions
☐ Hazards & Hazardous Materials	☐ Hydrology/Water Quality	☐ Land Use/Planning
☐ Mineral Resources	☐ Neighborhood Effects	☐ Noise
☐ Population/Housing	☐ Public Services	☐ Recreation
☐ Shadows	☐ Transportation/Traffic	☐ Utilities/Service Systems
☐ Mandatory Findings of Significance		

Table ES-1 includes a brief description of those potentially significant impacts identified above, the proposed mitigation measures to reduce impacts, and the residual impacts.

SUMMARY OF IMPACTS AND MITIGATION MEASURES

The table below summarizes the potential environmental impacts of the proposed action, program alternatives, and the no action alternative.

Table ES-1. Summary of Potentially Significant Environmental Impacts, Mitigation Measures, and Residual Impacts.

Impact	Mitigation Measures	Significance After Mitigation
Biology		
The proposed project has the potential to impact nesting birds as a result of tree removal. The proposed project would remove three existing trees located south of the existing tennis courts within the public parking lot. The existing trees, a magnolia tree and two pine trees, may support birds that are protected by the MBTA and the Fish and Game Code of California (3503, 3503.5, 3511, 3513 and 3800). The impact to nesting birds as a result of tree removal would be potentially significant unless mitigation is incorporated.	**BIO-1 Nesting Bird Surveys and Avoidance.** Tree pruning and removal shall be conducted outside of the bird breeding season (February 15 through August 31). If vegetation clearing (including tree pruning and removal) or other project construction is to be initiated during the bird breeding season, pre-construction nesting bird surveys shall be conducted by a qualified biologist. To avoid the destruction of active nests and to protect the reproductive success of birds protected by MBTA and the Fish and Game Code of California, nesting bird surveys shall be performed twice per week during the three weeks prior to the scheduled felling of the trees on the site. The surveys shall be conducted by a qualified biologist approved by the Community Development Director. If any active non-raptor bird nests are found, the tree(s) or vegetation shall not be cut down and a suitable buffer area (varying from 25-300 feet) depending on the particular species found is established from the nest, and that area is avoided until the nest becomes inactive (vacated). If any active raptor bird nests are found, a suitable buffer area of typically 250-500 feet from the nest is established, and that area is avoided until the nest becomes inactive (vacated). Limits of construction to avoid a nest should be established in the field with flagging and stakes or construction fencing. Construction personnel shall be instructed on the sensitivity of the area.	With implementation of Mitigation Measure BIO-1, impacts to nesting birds would be reduced to a less than significant level.
The project has the potential to conflict with a local tree preservation policy. The project would removes three existing trees (one magnolia tree and two pine trees) located south of the tennis	**BIO-2 Temporary Relocation and Reestablishment.** During the demolition and excavation phase of the project, the three public trees currently located in the parking lot south of the tennis courts shall be temporarily removed from their existing	With implementation of Mitigation Measure BIO-2, impacts related to removal of trees onsite would be reduced to a less than significant level.

Table ES-1. Summary of Potentially Significant Environmental Impacts, Mitigation Measures, and Residual Impacts.

Impact	Mitigation Measures	Significance After Mitigation
courts in the public parking lot. Removal of existing public trees that are deemed to be site appropriate may conflict with policies contained in the City's pending Long Range Forest Master Plan. As such, impacts would be potentially significant unless mitigation is incorporated.	location, boxed according to standards approved by a certified arborist, and stored within a suitable location in Memorial Park. Upon completion of construction activities, the three trees shall be relocated and replanted in their current locations.	
Construction Effects		
The proposed project would have construction-period impacts due to the scope, or location of construction activities. The proposed project would result in temporary impacts to air quality, noise and traffic as a result of construction activities. The impacts would be potentially significant unless mitigation is incorporated.	**CON-1(a) Construction Impact Mitigation Plan.** The applicant shall prepare, implement and maintain a Construction Impact Mitigation Plan which shall be designed to: • Prevent material traffic impacts on the surrounding roadway network. • Minimize parking impacts both to public parking and access to private parking to the greatest extent practicable. • Ensure safety for both those constructing the project and the surrounding community. • Prevent substantial truck traffic through residential neighborhoods. • Coordinate with the Light Rail Transit (LRT) construction schedule The Construction Impact Mitigation Plan shall be subject to review and approval by the following City departments: Public Works, Fire, Planning and Community Development and Police to ensure that the Plan has been designed in accordance with this Mitigation Measure. This review shall occur prior to commencement of any construction staging for the project. It shall, at a minimum, include the following:	Implementation of mitigation measures CON-1(a-g) would ensure that impacts related to traffic, air quality, and noise impacts generated by construction of the proposed project would be less than significant.

Table ES-1. Summary of Potentially Significant Environmental Impacts, Mitigation Measures, and Residual Impacts.

Impact	Mitigation Measures	Significance After Mitigation
	<u>Ongoing Requirements Throughout the Duration of Construction</u> • A detailed traffic control plan for work zones shall be maintained. At a minimum, this shall include: parking and travel lane configurations; warning, regulatory, guide and directional signage; and area sidewalks, bicycle lanes and parking lanes. The plan shall include specific information regarding the project's construction activities that may disrupt normal pedestrian and traffic flow and the measures to address these disruptions. Such plans shall be reviewed and approved by the Transportation Management Division prior to commencement of construction and implemented in accordance with this approval. • Work within the public right-of-way shall be performed between 9:00 a.m. and 4:00 p.m. This work includes dirt and demolition material hauling and construction material delivery. Work within the public right-of-way outside of these hours shall only be allowed after the issuance of an after-hours construction permit. • Streets and equipment shall be cleaned in accordance with established Public Works requirements. • Trucks shall only travel on a City-approved construction route. Truck queuing/staging shall not be allowed on Santa Monica streets. Limited queuing may occur on the construction site itself. • Materials and equipment shall be minimally visible to the public; the preferred location for materials is to be onsite, with a minimum amount of materials within a work area in the public right-of-way, subject to a current Use of Public Property Permit.	

Table ES-1. Summary of Potentially Significant Environmental Impacts, Mitigation Measures, and Residual Impacts.

Impact	Mitigation Measures	Significance After Mitigation
	• Any requests for work before or after normal construction hours within the public right-of-way shall be subject to review and approval through the After Hours Permit process administered by the Building and Safety Division. • Provision of off-street parking for construction workers, which may include the use of a remote location with shuttle transport to the site, if determined necessary by the City of Santa Monica. <u>Project Coordination Elements That Shall Be Implemented Prior to Commencement of Construction</u> • The City shall advise the traveling public of impending construction activities (e.g., information signs, portable message signs, media listing/notification, implementation of an approved traffic control plan). • The City shall obtain a Use of Public Property Permit, Excavation Permit, Sewer Permit or Oversize Load Permit, as well as any Caltrans Permits required, for any construction work requiring encroachment into public rights-of-way, detours or any other work within the public right-of-way. • The City shall provide timely notification of construction schedules to all affected agencies (e.g., Big Blue Bus, Police Department, Fire Department, Public Works Department, and Planning and Community Development Department) and to all owners and residential and commercial tenants of property within a radius of 500 feet. • The City shall coordinate construction work with affected agencies in advance of start of work. Approvals may take up to two weeks per each submittal. • Transportation Management Division approval of any haul routes for earth,	

Table ES-1. Summary of Potentially Significant Environmental Impacts, Mitigation Measures, and Residual Impacts.

Impact	Mitigation Measures	Significance After Mitigation
	concrete or construction materials and equipment hauling shall be obtained. **CON-1(b) Diesel Equipment Mufflers.** All diesel equipment shall be operated with closed engine doors and shall be equipped with factory-recommended mufflers. **CON-1(c) Electrically-Powered Tools.** Electrical powered shall be used to run air compressors and similar power tools. **CON-1(d) Restrictions on Excavation, Pile Driving and Foundation/Conditioning.** Excavation, pile driving, foundation-laying, and conditioning activities (the noisiest phases of construction) shall be restricted to between the hours of 10:00 a.m. and 3:00 p.m., Monday through Friday, in accordance with Section 4.12.110(d) of the Santa Monica Municipal Code. Pile driving activities at the site shall not cause a peak particle velocity exceedance of more than 0.05 in/s at the nearby sensitive receptors. This level of vibration may be achieved using equipment that produces a peak particle velocity of less than 0.1 in/s at a distance of 25 feet. The compaction roller used at the site shall not cause a peak particle velocity exceedance of more than 0.05 in/s at the nearby sensitive receptors. This level of vibration may be achieved using equipment that produces a peak particle velocity of less than 0.1 in/s at a distance of 25 feet. **CON-1(e) Additional Noise Attenuation Techniques.** For all noise- generating construction activity on the project site, additional noise attenuation techniques shall be employed as necessary to reduce noise levels to City of Santa Monica noise standards. Such techniques may include the use of sound blankets on noise generating	

Table ES-1. Summary of Potentially Significant Environmental Impacts, Mitigation Measures, and Residual Impacts.

Impact	Mitigation Measures	Significance After Mitigation
	equipment and the construction of temporary sound barriers between construction sites and nearby sensitive receptors. This may include the installation of temporary walls or panels, enclosures and/or sound absorbing and barriering materials to reduce the noise levels experienced at the gym/PAL center and baseball fields. **CON-1(f) Construction Sign Posting.** In accordance with Municipal Code Section 4.12.120, the project applicant shall post a sign informing all workers and subcontractors of the time restrictions for construction activities. The sign shall also include the City telephone numbers where violations can be reported and complaints associated with construction noise can be submitted. **CON-1(g) Fugitive Dust Control Measures.** The following shall be implemented during construction to minimize fugitive dust and associated particulate emissions: • All material excavated or graded should be sufficiently watered to prevent excessive amounts of dust. Watering should occur at least three times daily with complete coverage, preferably at the start of the day, in the late morning and after work is done for the day • All grading, earth moving or excavation activities shall cease during periods of high winds (i.e., greater than 20 mph measured as instantaneous wind gusts) so as to prevent excessive amounts of dust • All material transported on and off-site should be securely covered to prevent excessive amounts of dust • Soils stockpiles shall be covered • Onsite vehicle speeds shall be limited to 15 mph • All haul roads shall be paved to reduce	

Table ES-1. Summary of Potentially Significant Environmental Impacts, Mitigation Measures, and Residual Impacts.

Impact	Mitigation Measures	Significance After Mitigation
	dust when vehicles and equipment is transported on and off site • Install wheel washers where vehicles enter and exit the construction site onto paved roads or wash off trucks and any equipment leaving the site each trip • All off road grading equipment including graders, rubber tired dozers, tractors/loaders/backhoes, and water trucks shall be installed with a Diesel Particulate Filter (DPF) to reduce diesel particulate matter during grading activities. • Appoint a construction relations officer to act as a community liaison concerning onsite construction activity including resolution of issues related to PM10 generation • Sweep streets at the end of the day using SCAQMD Rule 1186 certified street sweepers or roadway washing trucks if visible soil is carried onto adjacent public paved roads (recommend water sweepers with reclaimed water) • All active portions the construction site shall be sufficiently watered three times a day to prevent excessive amounts of dust.	
Cultural Resources		
Excavation and grading activities has the potential to impact as-yet-discovered paleontological resources. Therefore, the impacts are potentially significant unless mitigation is incorporated.	**CR-1 Paleontological Monitoring.** The following general guidelines for paleontological monitoring set by the Society of Vertebrate Paleontologists (1991) shall be implemented during grading and excavation activities: • During an excavation project of greater than 5 feet of depth the project shall retain a qualified project paleontological manager. • In areas of known or potential paleontological resources a qualified paleontological monitor shall be present during excavation of greater than 5 feet of depth into previously undisturbed soil during 100% of the earth-moving activities.	Implementation of mitigation measures CR-1 would ensure that potential paleontological resources uncovered during construction activities are not damaged but rather collected and assessed by a certified paleontologist. This mitigation would also apply to the project alternatives. Impacts would be less than significant with mitigation incorporated.

Table ES-1. Summary of Potentially Significant Environmental Impacts, Mitigation Measures, and Residual Impacts.

Impact	Mitigation Measures	Significance After Mitigation
	• If after 50% of the grading or excavation is completed, it can be demonstrated that the level of monitoring should be reduced, the project paleontological manager may amend the monitoring and mitigation schedule. • A paleontologist who monitors excavation must be qualified and experienced in interpreting geological formations, in salvaging fossils and have the authority to temporarily divert equipment while removing fossils. • Removal of fossils specimens should be done using the proper equipment and supplies and in such a manner that excavation work can be resumed as quickly as possible.	

1.0 PURPOSE AND NEED

1.1 INTRODUCTION

This Environmental Assessment (EA) was prepared using Council of Environmental Quality (CEQ) regulations 40 CFR Parts 1500-1508 and EPA regulations (40 CFR Part 6) as guidance. This EA documents the environmental consequences of the proposed federal action. This EA is extensively based on information contained in the Environmental Information Document (EID) under NEPA and Initial Study under CEQA for the Memorial Park Reservoir Project located in the City of Santa Monica, California. The information contained in the EID is incorporated by reference into this EA.

As described further in Section 2, the proposed project consists of a 1 million gallon (MG) non-potable water reservoir, a non-potable water pumping station and supporting pipelines at a site within Memorial Park and immediately adjacent the park to the west at the Fisher Lumber property. The water reservoir and supporting pipelines will be located underground so existing and/or improved park facilities can be located at grade above the buried reservoirs and pipelines. The pumping station would be above ground in a masonry block building located immediately adjacent the park in an existing parking lot on the western most edge of the Fisher Lumber property.

1.2 PURPOSE AND NEED

The project is intended to fit within the goals and strategy framework of the City's Land Use and Circulation Element (LUCE), the Open Space Element and the Parks and Recreation Master Plan. The proposed reservoir project is intended to preserve the uses in the existing park and fit within planned new uses while enhancing the reliability of the City's reclaimed water supply.

The City owns and operates a non-potable water treatment and distribution system that includes an urban runoff treatment plant, supply pumps, distribution mains, and appurtenant equipment. As a means for preventing urban runoff from polluting Santa Monica Bay, an urban runoff treatment plant, the Santa Monica Urban Runoff Recycling Facility (SMURRF), was constructed and placed in operation in 2001 to intercept and treat up to 500,000 gallons per day (GPD) of dry-weather runoff with the capability to also treat small first flush storm events up to 750,000 GPD.

The City is currently experiencing periodic problems delivering recycled water from the SMURRF Project to users. The project has pumps and limited storage at the plant, but no facilities in the delivery system and pumping facilities in a central area of the City.

The overall public benefit of this project will be to provide more reliability for the City's non-potable water supply systems. The City's non-potable water supply system would be provided with more flexibility and reliability. Currently, the City has a greater need for additional recycled water storage than for potable water storage. Providing additional storage for non-potable water will make it possible to more efficiently serve existing and new customers.

Due to design limitations, neither the raw water reservoir nor the finished water reservoir at SMURRF can be taken out of service for routine maintenance without shutting down the entire treatment plant. This

presents customer delivery interruptions since dual plumbing demands and some other non-potable water demands require continuous supply. These operational and reliability issues have made potential customers hesitant to commit to the non-potable water system.

Constructing a centrally-located storage reservoir and booster pump station at Memorial Park would allow for system redundancy as supply could then be delivered from two locations in the system. It would also provide additional storage in the system to meet potential peak system demands and would eliminate existing pressure problems. It would also allow for the SMURRF plant to be taken out of service as required for routine maintenance for the raw and finished reservoirs at the plant. Improving the operational flexibility, reliability, and performance of the system will make the system more attractive for potential customers.

1.2.1 SCOPE OF ENVIRONMENTAL ASSESSMENT

The purpose of this EA is to document and make public the potential direct, indirect, and cumulative environmental impacts that may arise from the implementation of the Proposed Action, the no action, or any other action alternative considered by the City of Santa Monica for a non-potable water reservoir, a non-potable water pumping station and supporting pipelines at a site within Memorial Park and immediately adjacent the park to the west at the Fisher Lumber property in the City of Santa Monica, California. As defined in CEQ regulations (§1508.25), the scope of this EA is limited to the environmental resources and services within the area of interest in the U.S. that may be affected by the no action alternative or one of the action alternatives.

1.2.2 REGULATORY DRIVERS AND GUIDANCE

The U.S. has regulations to protect the environmental and improve environmental quality. Please see the Environmental Information Document under NEPA and Initial Study under CEQA for the Memorial Park Reservoir Project located in the City of Santa Monica, California for the International and U.S. laws and regulations as they apply to the proposed project.

2.0 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

2.1 INTRODUCTION

This section describes the facility owner/proponent, project location and physical characteristics, including cost, funding status of the project, and alternatives to the proposed action. NEPA requires that federal agencies "study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources." [1] Under CEQ Regulations, the comparison of alternatives including the proposed action is recognized as the "heart" of an environmental impact statement (EIS), [2] and, in an EIS, rigorous evaluation of a reasonable range of alternatives is required.

Regarding requirements for the treatment of alternatives in an EA, CEQ regulations [3] state that an EA shall include a brief discussion of alternatives as required by the above-cited section of NEPA – i.e., for "any proposal that involves unresolved conflicts concerning alternative uses of available resources." The CEQ regulations do not specifically require that an EA address the "no action alternative." These requirements have had varying interpretations; generally, however, agencies do not address alternatives in an EA in as much detail or to the same level of analysis as in an EIS.

As required by NEPA, the EA examines a range of alternatives to the proposed project. These alternatives are described below and evaluated along with the proposed project for each impact area. Studied alternatives include:

- No Action Alternative
- Northeast Corner Site Alternative
- East Side Site Alternative

2.2 PROPOSED ACTION

2.2.1 PROJECT LOCATION

The proposed reservoir would be located at Memorial Park in the City of Santa Monica, California. Santa Monica is located in western Los Angeles County, about 10 miles west of downtown Los Angeles. Memorial Park is located between Olympic Boulevard and Colorado Avenue, and between 14th and 16th streets. The location of the park within the region and within the neighborhood is shown on Figures 1 and 2.

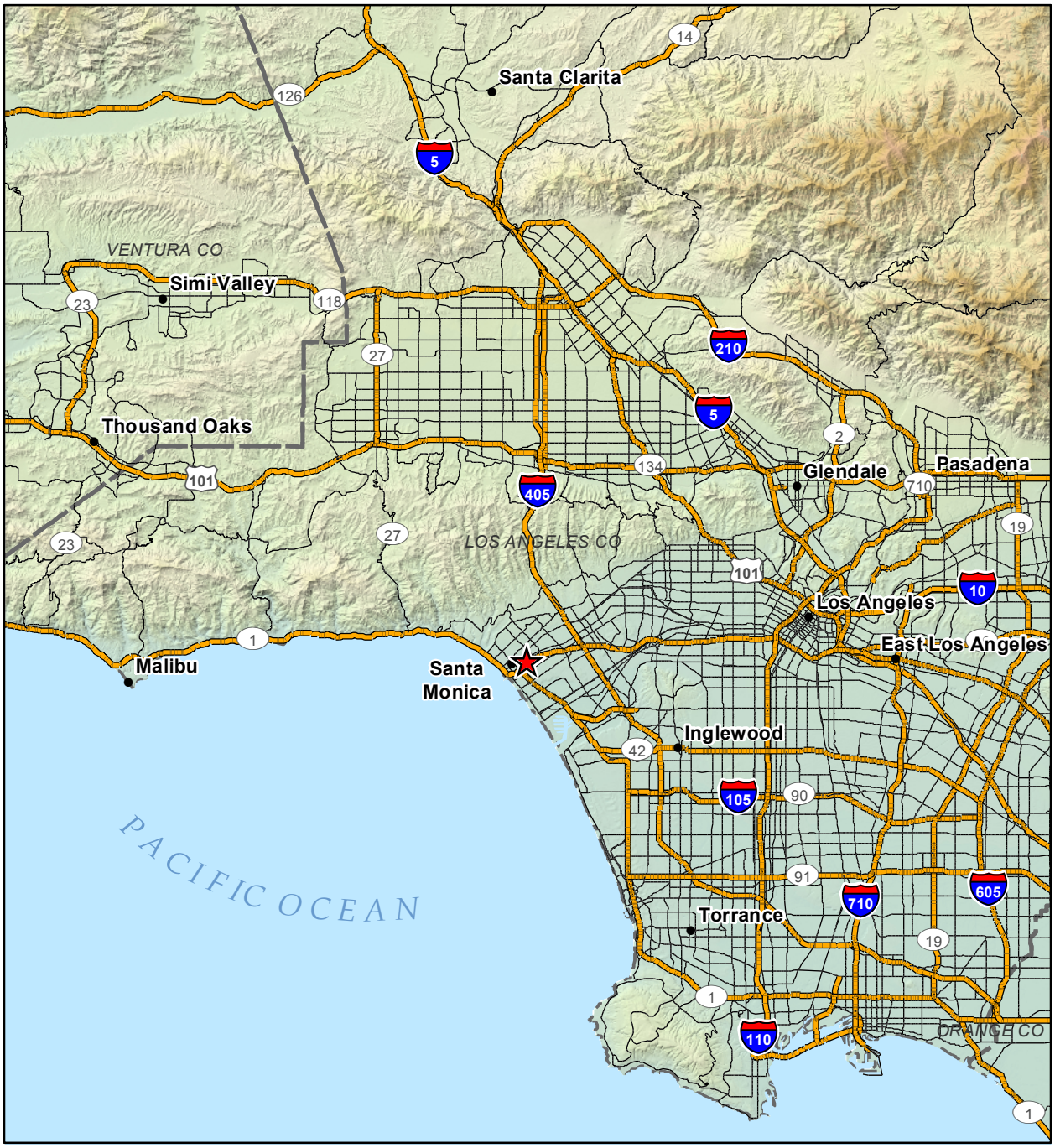
Memorial Park was chosen as the strategic location to construct new potable and non-potable water storage facilities for the following reasons:

---

1 NEPA (42 U.S.C. 4321– 4347); Sec. 102(2)(E).

2 CEQ Regulations Implementing NEPA (40 CFR Part 1500 et seq.) at Sec. 1502.14.

3 CEQ Regulations Implementing NEPA (40 CFR Part 1500 et seq.) at Sec. 1508.9.



Basemap Sources: ESRI data, 2004 and USGS, 2002.

★ Project Location

N

0 5 10 Miles

Regional Location

Figure 1

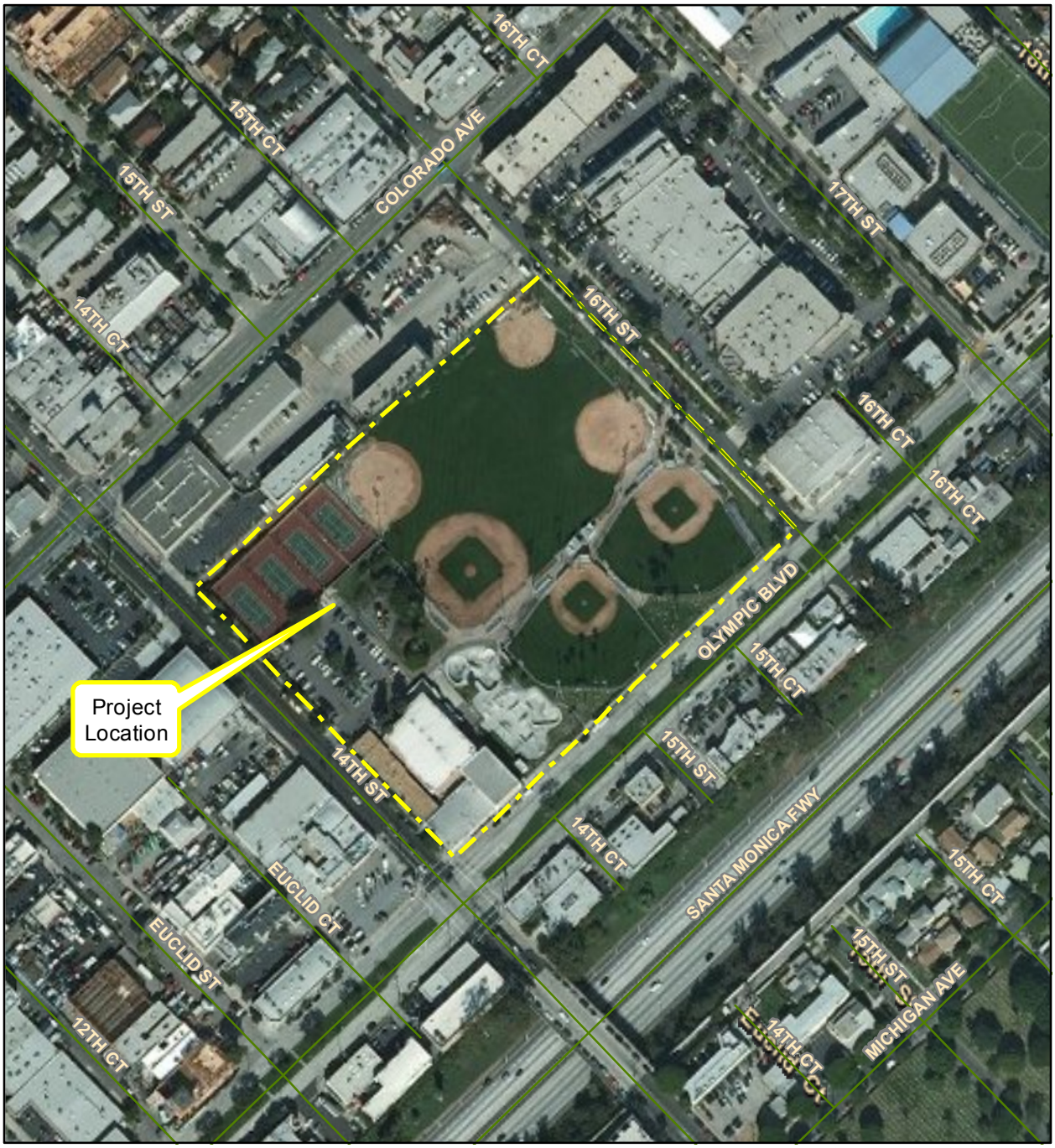


Image Source: TerraServer, 2009.

N

0 200 400 Feet

Project Site Location

Figure 2

- The park is centrally located within the City's potable water and non-potable water systems providing system-operating efficiency.
- As the park is strategically located adjacent to a primary SMURRF non-potable water distribution pipeline in Olympic Boulevard, only short pipelines need be constructed to connect the new facilities to the existing non-potable water system.
- Other suitable sites in the City where these types of facilities can be constructed are limited as the City is nearly fully developed.
- At a park site, the proposed facilities can be constructed underground with the existing recreational facilities relocated at grade above the buried facilities. Thus, the land use is more effective as it provides dual usages. Buildings or parking structures associated with other types of land use are typically not recommended for relocation above reservoirs as they have high static and/or dynamic loads that would be difficult for a reservoir to withstand.

Within Memorial Park, the proposed underground reservoir would be located beneath the existing tennis courts along the northeast side of 14th Street. A pump station would be located west of the reservoir on the western most edge of the Fisher Lumber property within an above ground masonry block building.

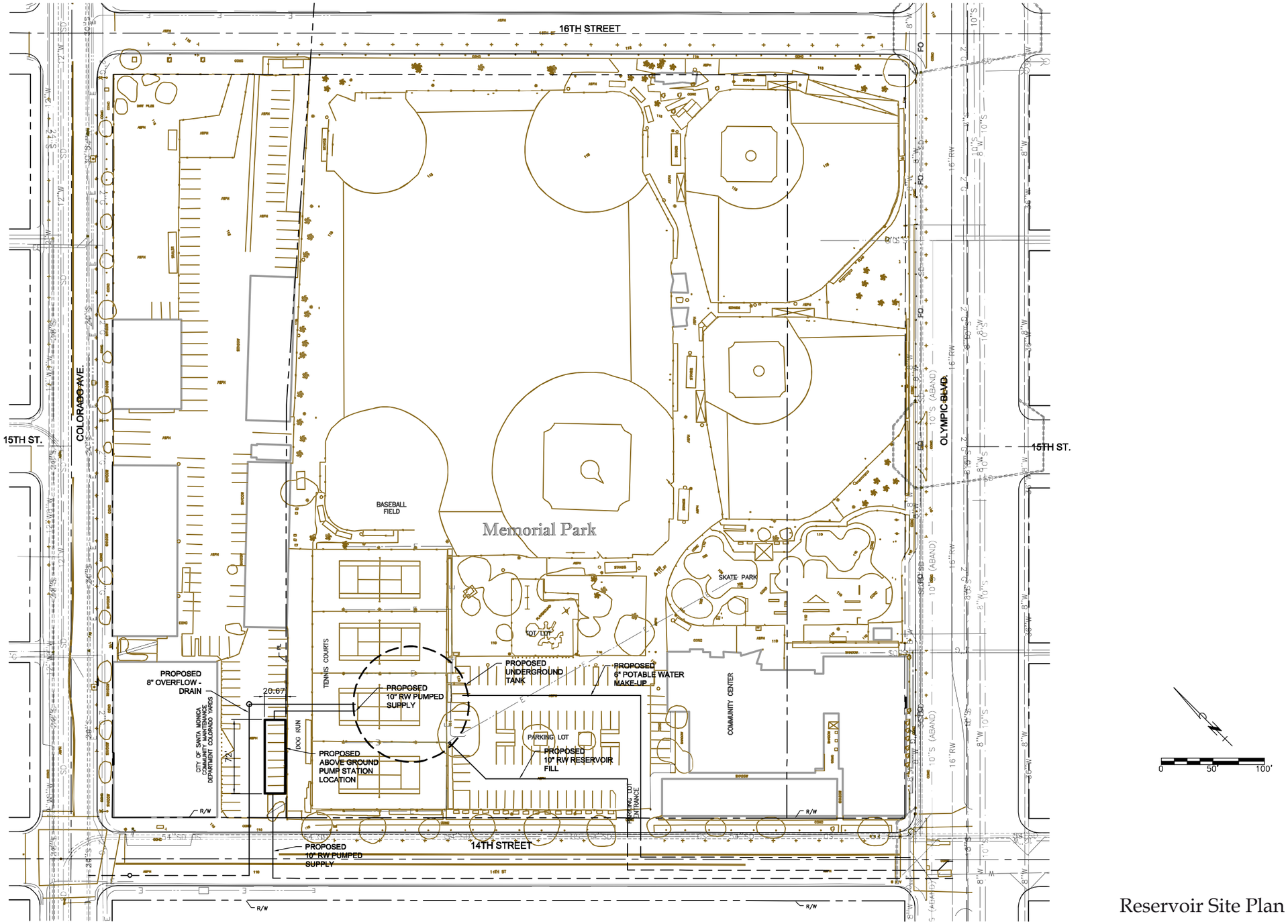
2.2.2 FACILITY SIZE AND DESIGN

Reservoir

The City currently has 0.5 MG of non-potable water reservoir storage at the treatment plant. By constructing additional non-potable water storage and pumping capacity at a central location such as Memorial Park, the City will be able to meet existing and future water demands more efficiently and with better operational flexibility. Considering existing and future non-potable water demands with the limited availability of storage and pumping capacity at the treatment plant the City estimates the non-potable water storage requirements at Memorial Park at 1 MG.

Circular reservoirs are preferable to rectangular shapes due to economical construction and a circular reservoir provides effective water circulation to maintain water quality. Water circulation in rectangular reservoirs can have stagnant areas causing poor water quality. However, methods such as inlet/outlet configurations; baffles and circulation pumps can be employed to eliminate this problem.

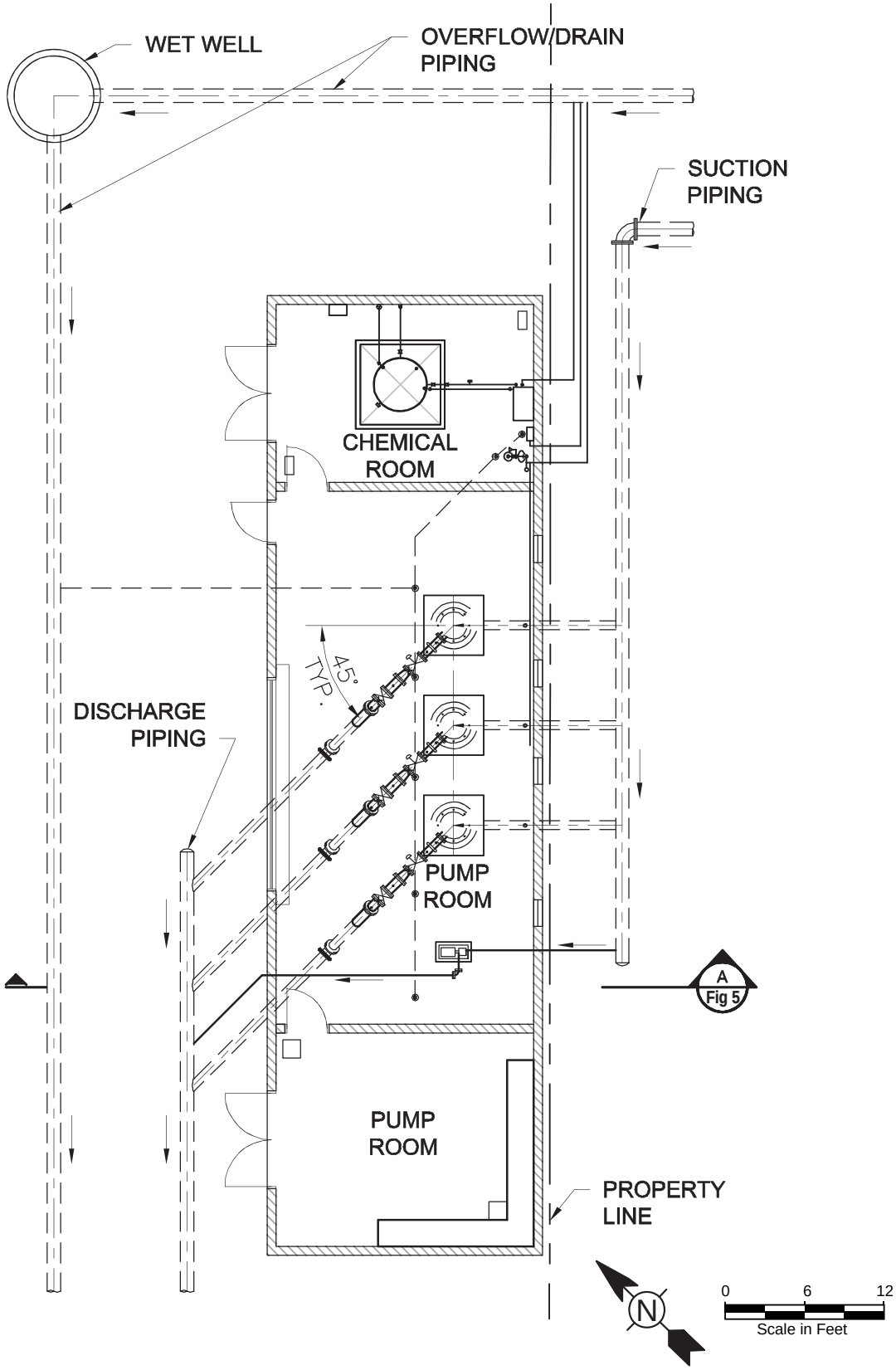
It is estimated that a reservoir depth of 15 feet would be most appropriate for the reservoir as it would result in: 1) reasonable reservoir diameters (assuming a circular shape); 2) a reasonable excavation in the range of 30 feet that would allow for water depth, freeboard, roof, foundation and soil cover over the buried tank. Assuming a circular shape and a 15-foot depth, the 1 MG nonpotable water reservoir would have a diameter of 110 feet. This diameter is very constructible in the proposed location in Memorial Park and has an excellent performance record at similar installations throughout Southern California. Project construction is estimated to be completed within approximately 16 months. During construction activity of the reservoir, the existing tennis courts and adjacent public parking area would be temporarily closed to the public. However, upon completion of construction activities, the courts and the parking area would be rebuilt and reopened for use. Figure 3 shows the proposed site plan within the park. Figure 4 and 5 provide additional reservoir/pump station details.



Reservoir Site Plan

Figure 3

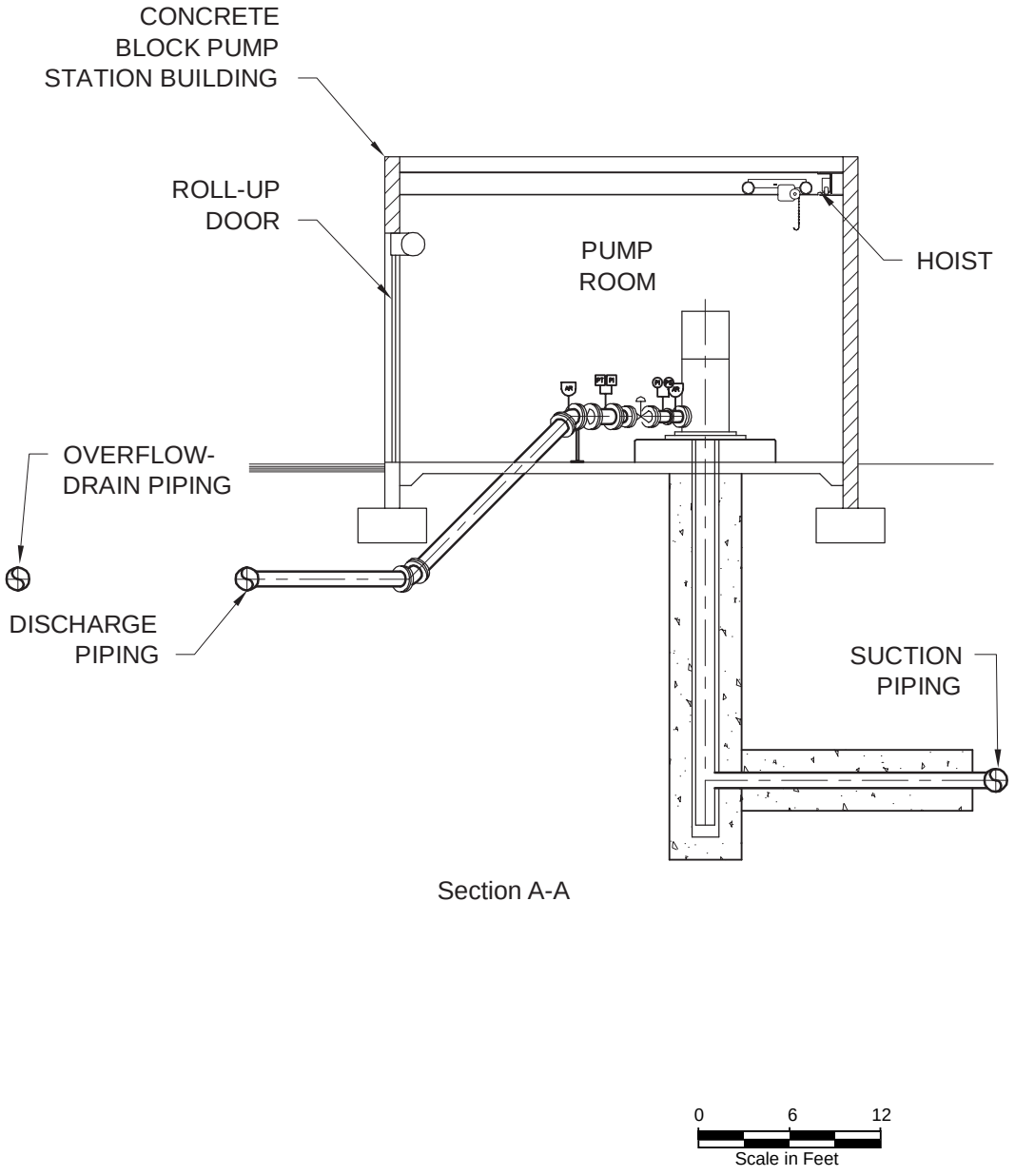
Source: Tetra Tech, Inc., May, 2011.



Drawing Source:
Tetra Tech, Inc., May 2011.

Pump Station Floor Plan

Figure 4



Drawing Source:
Tetra Tech, Inc., May 2011.

Pump Station Details

Figure 5

Pumping Facilities

The recommended non-potable water pumps at the treatment plant include one 20-gpm pump driven by a constant-speed motor and two 550-gpm pumps, one for duty use and one for standby use, both driven by variable speed motors. A spare pump barrel will be provided within the station for installation of a future pump. The new non-potable pumps at Memorial Park will be identical to the existing pumps at the SMMURF treatment plant in terms of supply capacities and drives in order toprovide similar operation and capacities from two separate sites in the non-potable water system. This will allow for more efficient station operations and will provide complete supply redundancy.

An approximately 1,488 pump station would be located above ground (approximately 14 feet tall) in an enclosed masonry building at the existing parking area on the western most portion of the Fisher Lumber property (adjacent to the northwest of the tennis courts). The pump station will be provided with pump control discharge valves, air release valves, pressure sensing and gauge devices, and isolation valves on each discharge line with the flows from the pumps to be monitored by a flow meter. A surge relief valve and line will be provided on the discharge header from the pumps.

Pipelines

Reservoir supply will be via a new 10-inch supply pipeline connected to the existing 12-inch SMURRF line in Olympic Boulevard. A 10-inch discharge pipeline back to the existing 12-inch SMURRF line in Olympic Boulevard will be needed to supply non-potable water from the new 1.0 MG reservoir to the system. The approximate length of each pipeline is 600 feet.

The reservoir will require an overflow and drain pipeline. Each pipeline will convey overflows into the Los Angeles County's large Kentor Canyon Storm drain in Colorado Avenue. The alignment route for the overflow and drain pipeline is directly north of the site to a point in Colorado Avenue being approximately 450 lineal feet. The alignment lengths vary depending on the site alternative selected. The preliminary alignment of the drain and overflow pipelines is shown on Figure 3. Figures 4 and 5 provide the pump station floor plan and additional pump station details.

Construction Excavation

In order to construct the reservoirs a large excavation will be required below the area of the existing tennis courts and a portion of the adjacent parking lot at Memorial Park. The material generated by the excavation would approximate a 15-foot tall stockpile around the excavation. The City will not temporarily stockpile at the park site and will leave as much open space for the park available and unaffected during project construction. The depth of the reservoir excavation would be approximately 30 feet deep. Excavation will require shoring to protect the internal work area as well as the outside perimeter of the excavation. The type of shoring required will be a combination of cantilevered and tie back type. The excavation will generate approximately 26,000 cubic yards of material that will need to be removed. A portion of the material (about 16,500 cubic yards) will need to be brought back to the site to backfill and restore the park to the original condition. As required by the Santa Monica Municipal Code, drilled cast-in-place foundations shall be used instead of pile driving. The remaining 9,500 CY portion of the material will need to be disposed of at another site (Tetra Tech, April 2010).

Depending on when the project is built, the City will look at all project permits in Santa Monica and Los Angeles that may be able to use the fill prior to exporting it. If conditions warrant, the City may look at possible storage sites within Santa Monica for City projects. Possible leasing of a property is also an option to stockpile the dirt for a period of time.

Project Costs and Funding

The City recently approved Measure "V," which provides $3 million in funding for the non-potable water reservoir. Additionally, the City believes that additional grant funding could be obtained for non-potable water system improvements.

The costs associated with construction excavation work are: excavating the material and placing in a truck, hauling the material to a viable site either to stockpile or waste, recapturing the material (16,500 cubic yards) in trucks and bringing it back to the site to restore the Park. The material brought back will require placing and re-compaction. Costs associated with this work vary depending on how far away the haul site is from the project. A typical cost for the excavation is $8/cubic yard to haul away for a 1-hour trip and $11/cubic yard to bring the material back from a site 1 hour away.

2.2.3 INTERAGENCY COORDINATION AND CONSULTATION ACTIVITIES

Agencies involved in the coordination and consultation for the Memorial Park reservoir project include the City of Santa Monica, the California Occupational Safety and Health Agency (Cal-OSHA), the California Department of Health Services, the South Coast Air Quality Management District (SCAQMD), the Environmental Protection Agency, U.S Army Corps of Engineers.

Coordination or consultation activities for each agency are summarized in Table 1 below.

Table 1. Interagency Coordination and Consultation

Agency	Action/Involvement

City of Santa Monica	• Project Application
	  ○ Planning and Community Development Department: Planning/Architectural Review Board approvals
	  ○ Building and Safety plan check/permits
	  ○ Transportation Management Department: Traffic control plans (streets and bikeways)
	  ○ Temporary Use Permit (TUP) (interim parking area)
	• Project Funding
	  ○ City's Measure V providing for $3 million in funding for the non-potable reservoir

City of Santa Monica Fire Department	• CUPA Permit (Hazardous Materials Disclosure) • Fire Protection System Permit • Fire Miscellaneous Permit (chemical/fuel tanks, etc.)
Cal-OSHA	• Design requirements • Health and Safety permits • Excavation Permit for >5 feet deep • Tunneling safety • Underground classification for HDD

Table 1. Interagency Coordination and Consultation

Agency	Action/Involvement
Department of Health Services	• Application for DHS Drinking Water Permit Amendment including Drinking Water Source Assessment Program (DWSAP) to be prepared by City
EPA	• Environmental Impact Analysis • Grant for feasibility study, project design, and some construction costs.
US Army Corps of Engineers	• Application for Grant Funding
Regional Water Quality Control Board (RWQCB)	• Storm Water Pollution Prevention Plan – SWPPP
Native American Heritage Commission	• Request for a Sacred Lands File search • Native American Contacts list

2.2.4 PUBLIC PARTICIPATION

The City of Santa Monica has not undertaken any specific public participation process for the proposed Memorial Park reservoir. The environmental documents required for the National Environmental Policy Act and the California Environmental Quality Act (CEQA) will undergo the required public review processes.

The City of Santa Monica is not aware of any public opposition to any aspect of the project. It is anticipated that temporary limitations on access to park facilities during construction may cause some concerns among park users, but the City will attempt to minimize disruptions during construction.

2.3 NO-ACTION ALTERNATIVE

The No-Action alternative assumes that the reservoir and pumping facilities would not be constructed at Memorial Park. Memorial Park would remain in its current condition and the existing tennis courts, parking areas and existing uses would remain in place, unchanged.

It should be noted that implementation of the No-Action alternative at this time would not preclude future construction activities at the park, including projects that may be exempt from environmental review under NEPA, nor would it meet the project objectives to provide more reliability for the City's non-potable water supply system.

2.4 ALTERNATIVE 1: NORTHEAST CORNER SITE ALTERNATIVE

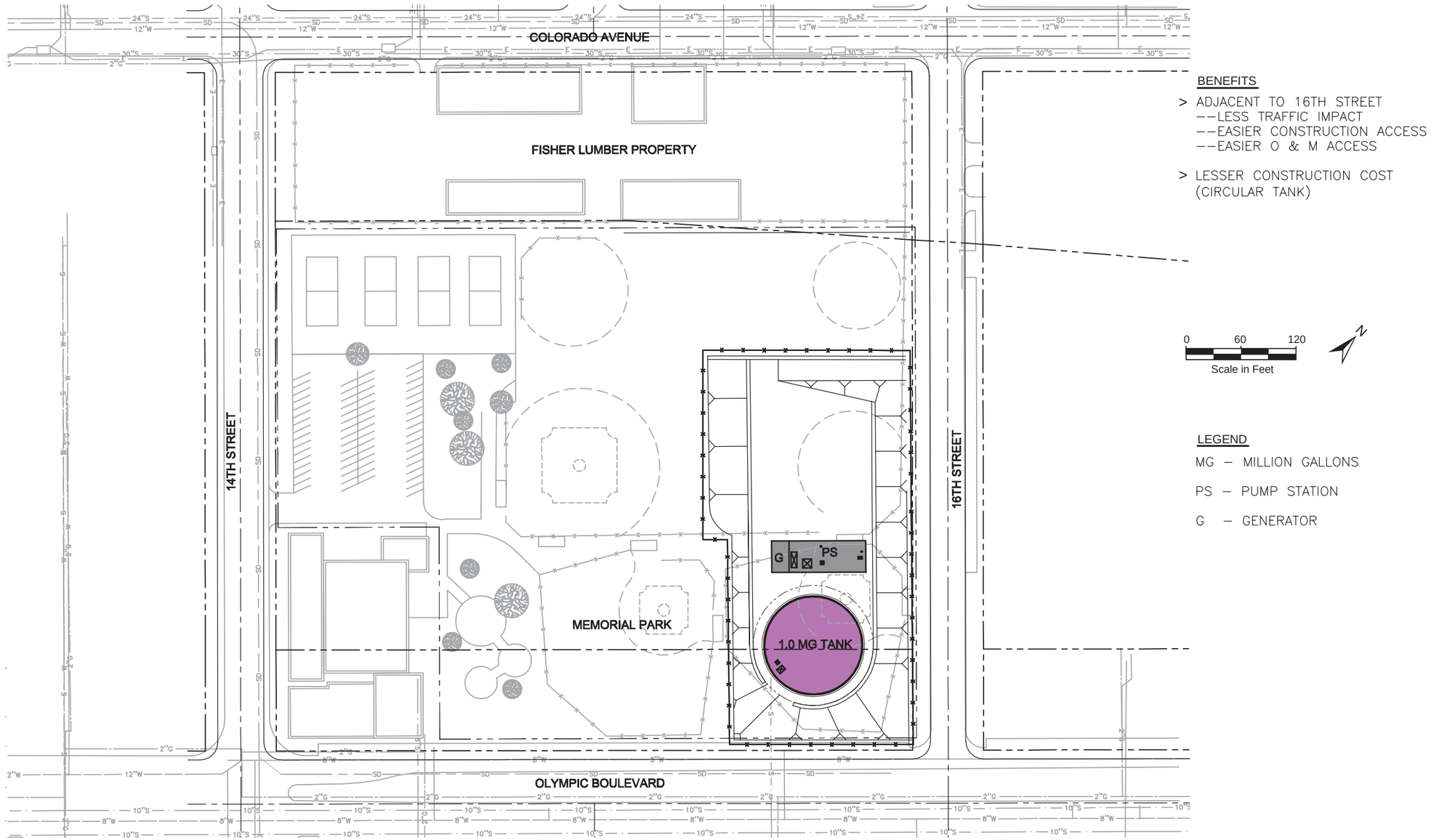
This alternative would locate the reservoir at the northeast corner of Memorial Park bordered by the former Fisher Lumber property to the North, 16th Street to the East, and park land to the South and to the West. The required construction area would be 4.2 acres with the construction area dimensions. The four existing softball fields are located within the construction area and would need to be taken out of service during the estimated 2-year construction period. All other park facilities would remain in operation during construction. The estimated excavation to build this alternative would be approximately 26,000 cubic yards.

The advantage of this site is that it is adjacent to the less congested 16th Street when compared to 14th Street making less impact to traffic, easier construction access, and easier operation and maintenance access. Being a circular tank design, it is less costly than a rectangular concrete reservoir to construct. Figure 6 shows the site plan for the Northeast Corner Site Alternative.

2.5 ALTERNATIVE 2: EAST SIDE SITE ALTERNATIVE

This alternative would locate the reservoir along the east side of Memorial Park bordered by the former Fisher Lumber property to the North, 16th Street to the East, Olympic Boulevard and park land to the South, and park land to the West. The required construction area is 4.3 acres with the construction area dimensions. The four existing softball fields and one existing little league field are located within the construction area and would need to be taken out of service during the estimated 2-year construction period. All other park facilities would remain in operation during construction. The estimated excavation to build this alternative is 26,000 cubic yards.

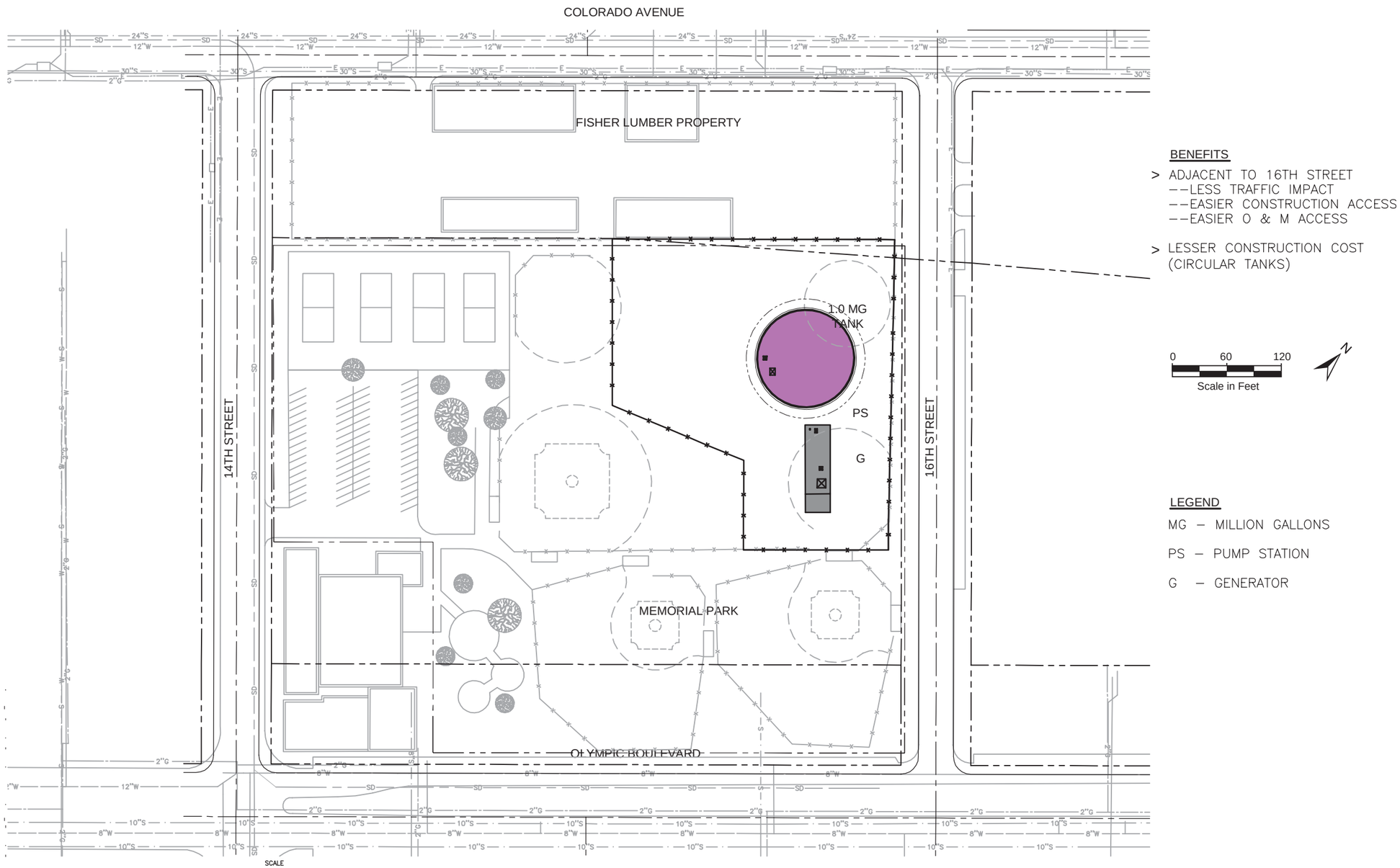
The advantage of this site is that it is adjacent to the less congested 16th Street when compared to 14th Street making less impact to traffic, easier construction access, and easier operation and maintenance access. Being a circular tank design, it is less costly than a rectangular alternative to construct. Figure 7 shows the site plan for the East Side Site Alternative.



Northeast Corner Site
Alternative Site Plan

Figure 6

Source: Tetra Tech, Inc., April 22, 2010.



East Side Site
Alternative Site Plan

Figure 7

Source: Tetra Tech, Inc., April 22, 2010.

3.0 PRESENT ENVIRONMENT

3.1 LOCATION AND GENERAL DESCRIPTION

This section of the EA describes the current environmental and cultural resources in the planning area that may be affected by the project as well as areas that may be affected by proposed alternatives. The section is organized by topical area.

The proposed reservoir would be located at Memorial Park in the City of Santa Monica, California. Memorial Park is located between Olympic Boulevard and Colorado Avenue, and between 14th and 16th streets. The location of the park within the region and within the neighborhood is shown on Figures 1 and 2, above. Within Memorial Park, the proposed underground reservoir would be located beneath the existing tennis courts along the northeast side of 14th Street. A pump station would be located west of the reservoir on the western most edge of the Fisher Lumber property within an above ground masonry block building.

3.2 AESTHETICS

The project site is located within an urbanized community characterized by relatively intense urban/suburban development. Immediately surrounding land uses include a mix of commercial, light industrial, and institutional uses. Development is primarily 1-2 stories in height and is characterized by a mix of architectural styles.

The park itself is a large community park that includes playfields, a playground, a skateboard park, tennis courts, a dog walk, a gymnasium, and a community center with meeting rooms. A surface parking lot is located in the western portion of the park along the east side of 14th Street. The park has 63 off street parking spaces.

3.3 AIR QUALITY

The project site is located within the South Coast Air Basin, which is under the jurisdiction of the South Coast Air Quality Management District (SCAQMD). As a result of the climate and meteorology in the South Coast Air Basin, two types of temperature inversions (warmer air on top of colder air) are created in the area: subsidence and radiational (surface). Both types of inversions limit the dispersal of air pollutants within the regional airshed, with the more stable the air (low wind speeds, uniform temperatures), the lower the amount of pollutant dispersion. The primary air pollutant of concern during the subsidence inversions is ozone, while the greatest pollutant problems during winter inversions are carbon monoxide and nitrogen oxides.

The SCAQMD is required to monitor air pollutant levels to ensure that air quality standards are met and, if they are not met, to develop strategies to meet the standards. Depending on whether the standards are met or exceeded, the local air basin is classified as being in “attainment” or “non-attainment.” The South Coast Air Basin (Basin) is in attainment of the State and Federal standards for nitrogen dioxide and

carbon monoxide. However, the Basin is a non-attainment area for both the federal and state standards for ozone and particulate matter (PM_{10} and $PM_{2.5}$). Thus, the SCAQMD is required to implement strategies that would reduce the pollutant levels to recognized acceptable standards. The non-attainment status is a result of several factors, the primary ones being the naturally adverse meteorological conditions that limit the dispersion and diffusion of pollutants, the limited capacity of the local air shed to eliminate pollutants from the air, and the number, type, and density of emission sources within the Basin.

The SCAQMD has adopted an Air Quality Management Plan (AQMP) that provides a strategy for the attainment of state and federal air quality standards. The SCAQMD has adopted the following thresholds for temporary construction-related pollutant emissions:

- 75 pounds per day ROC
- 100 pounds per day NO_X
- 550 pounds per day CO
- 150 pounds per day of SO_X
- 150 pounds per day of PM_{10}
- 55 pounds per day of $PM_{2.5}$

The SCAQMD also has established the following significance thresholds for project operations within the South Coast Air Basin:

- 55 pounds per day of ROC
- 55 pounds per day of NO_X
- 550 pounds per day of CO
- 150 pounds per day of SO_X
- 150 pounds per day of PM_{10}
- 55 pounds per day of $PM_{2.5}$

Sensitive receptors within the vicinity of the project site include the users of the recreation areas in the park and the Santa Monica Police Activities League (PAL) which is located approximately 200 feet south of the project site (1401 Olympic Boulevard). The nearest residences are northwest of Colorado Avenue, more than 500 feet away.

3.4 BIOLOGICAL RESOURCES

The project site is within a highly urbanized area lacking native biological habitats. Vegetation onsite and on adjacent properties is limited to various landscape tree specimens and shrubs, and turf for playfields. Sensitive flora, fauna, and habitats are not present. No wetlands, wildlife preserves, or other environments of special interest are located where they could be affected by implementation of the project (City of Santa Monica, January 2010).

3.5 CULTURAL RESOURCES

A Cultural Resource Feasibility Study was completed for the project, entitled "Water Infrastructure- Santa Monica Reliability Improvement Project, XP-96945401-0 Memorial Park City of Santa Monica, Los Angeles County, California – May 2008." The report was prepared by ArcheoPaleo Resource Management Inc. of Marina del Rey, California.

The project area is primarily comprised of modern-era buildings and structures, as well as municipal park facilities (ball fields, bleachers, skate-park, playground), and ornamental landscaping. By 1950 the northern end of the block between 14th Street and Colorado Avenue was the location of the John W. Fisher Lumber Company, consisting of an office building and three lumber sheds dating from circa 1923. During the 1930s, Santa Monica Municipal Stadium was established at the site on the portion of the park near Olympic Boulevard. The stadium was removed and Memorial Park was established on the site between 1950 -1952. As part of the Cultural Feasibility Study, a records search was conducted at the South Central Coastal Information Center on the campus of California State University Fullerton. The search determined that no archaeological sites or previous cultural studies had been conducted at the project site. During an informal site visit as part of the feasibility study, five resources were identified, all of which are historic in age and all pertain to the built environment and are comprised of structures. The five structures of historic interest are located in the northern portion of the preferred Project property within the confines of the City Yard facility:

- Two (circa 1923) lumber barns associated with the John W. Fisher Lumber Company at 14th Street and Colorado Avenue,
- A remnant set of PE tracks,
- A modal scale, and
- A foundation slab.

The lumber barns are located in northwestern portion of the City Yard facility, and the PE track, modal scale, and foundation slab are in the eastern portion of the City Yard facility. The historical significance of these structures will be investigated per the compliance protocols set forth in CEQA (§15064.5), NEPA (36 CFR 800 (CDBG) and 36 CFR 801 (UDAG)), Section 106 of NHPA, and the ordinances and statutes of the City of Santa Monica.

A Native American Heritage Commission (NAHC) Sacred Lands File search indicated the presence of Native American cultural resources within one-half mile of the proposed project site. Therefore, culturally affiliated tribes and individuals were contacted as part of this study to determine if any known cultural resources exist on the project site.

The regional geology shows that it is possible that the project area may contain Pleistocene fossils. Therefore, a Vertebrate Paleontologic Records check will be conducted as part of any environmental study.

3.6 GEOLOGY

Leighton Consulting, Inc. conducted a Geotechnical Study (April, 2010). As part of the Geotechnical Study, readily available and relevant geotechnical reports, literature, and aerial photographs pertinent to this site were reviewed. A field exploration included three borings where soil samples were collected.

Geotechnical laboratory tests were performed on the soil samples. And engineering analysis for the proposed project was performed to develop conclusions and recommendations for the tank and pump station. In addition, the Geotechnical Study included a site-specific probabilistic seismic hazard analyses.

The pertinent findings of the Geotechnical Study are summarized below.

- The site is underlain by young alluvial fan deposits (Qya2) consisting of alternating layers of clay, silt and sandy soils. Regional groundwater data also shows that historically highest groundwater level in the vicinity of this site was approximately 40 feet or deeper. Due to the depth of groundwater, and that the site earth materials consist of stiff clay overlying very dense sand, liquefaction, which is the loss of soil strength due to a buildup of pore-water pressure during severe ground shaking (i.e., a seismic event), is unlikely at the project site.
- Less settlement is expected in the denser, deeper alluvium at the park, and little to no seismically induced settlement is expected in dense alluvium, likely to be encountered under a buried reservoir.
- The park and vicinity is relatively flat, roughly 110 feet above mean sea level. Therefore, neither slope instability nor lateral spreading relating to seismically induced landsliding is expected to be a concern.
- In geotechnical characteristics, the entire park is similar, and no one portion of the park is more desirable for the location of a reservoir and pump station facilities than another.
- Memorial Park is not within a designated Alquist-Priolo zone for surface faulting, but the Newport-Inglewood Fault is less than six miles (10 kilometers) east of the park. Strong ground shaking can be expected at this site during moderate to severe earthquakes.

3.7 HAZARDS/HAZARDOUS MATERIALS

Memorial Park provides a number of recreation amenities including baseball and softball fields, tennis courts, a skate park, a gymnasium, restroom, concession building, meeting rooms, a children's playground and also includes the Police Activities League (PAL) center. Hazards and hazardous materials are not currently utilized onsite. Various industrial and commercial businesses located in close proximity to the project site may use or have used hazardous materials. These include automotive repair shops, dry cleaners, and a lumber company. In addition, the Pacific Electric Railway route once passed near the site's northern border (San Buenaventura Research Associates, 2010).

The site is located in a highly urbanized area of Santa Monica. As part of this EA, Rincon Consultants, Inc. completed an analysis of potential hazards and possible conflicts associated with historic or current activity in the vicinity of the project site. The hazards analysis included: a general environmental database search in the vicinity of the project site; a reconnaissance of the project site to identify recognized environmental hazards; and review of available environmental reports in the vicinity of the project site.

The environmental database search found that the project site was listed as a HAZNET site. According to the report, 33.71 tons of organic solids are disposed from the site by the City of Santa Monica. The disposal method was not listed. One adjacent property was listed as release site (LUST) in the databases searched, the adjacent property to the south across the intersection of Olympic Boulevard and 14th Street

(Snyder & Diamond-1399 Olympic Boulevard). Based on a file review, a release from a UST or USTs on this adjacent property potentially impacted soil and groundwater on the adjacent property with hydrocarbons. The case is currently open and in the site assessment phase. Based on the anticipated groundwater flow direction beneath the site to the southwest, south, or southeast, the adjacent property would not likely impact the project site.

One adjacent property was listed as a UST site in the databases searched, the adjacent property to the northeast across 16th Street (Santa Monica-Malibu Unified School District-1651 16th Street). However, this listing is not indicative of a hazardous materials release.

Rincon Consultants performed an unaccompanied reconnaissance of the site on March 26, 2010. The purpose of the reconnaissance was to observe existing site conditions and to obtain information indicating the possible presence of recognized environmental conditions in connection with the property. Rincon did not identify any environmental concerns during the site reconnaissance.

3.8 HYDROLOGY/WATER QUALITY

Memorial Park is located in an urbanized area in Santa Monica. The site of the proposed reservoir and pump station consists of tennis courts and a parking lot adjacent to 14th Street. The site does not contain, nor is it adjacent to any streams or rivers. In addition, the site is not located within a flood hazard area (FEMA FIRM #06037C1590F, September 2008).

The overall drainage flow pattern of the project site is from the north and east to the south and west and eventually enters the County's Kenter Canyon Storm Drain system located on Colorado Avenue. The underground storm drain system collects surface runoff through a series of catch basins and carries the majority of the storm water west to the Santa Monica Urban Runoff Recycling Facility (SMURRF). The SMURRF was constructed and placed in operation by the City in 2001 to intercept and treat up to 500,000 GPD of dry-weather runoff with the capability to also treat small first flush storm events up to 750,000 GPD (Tetra Tech, 2008).

Surface water runoff at Memorial Park and the adjacent parking lot at the Fisher Lumber Site has the potential to contain urban pollutants that may affect water quality. Pollutants may include deposits of oil, grease, and other vehicle fluids and hydrocarbons from parking areas and pesticides and herbicides from landscaping at the park. During storm events, these urban pollutants may be deposited into the storm drain system, affecting water quality.

3.9 NOISE

Noise level (or volume) is generally measured in decibels (dB) using the A-weighted sound pressure level (dBA). The A-weighting scale is an adjustment to the actual sound power levels to be consistent with that of human hearing response, which is most sensitive to frequencies around 4,000 Hertz (about the highest note on a piano) and less sensitive to low frequencies (below 100 Hertz). In addition to the actual instantaneous measurement of sound levels, the duration of sound is important since sounds that occur over a long period of time are more likely to be an annoyance or cause direct physical damage or

environmental stress. One of the most frequently used noise metrics that considers both duration and sound power level is the equivalent noise level (Leq).

The Leq is defined as the single steady A-weighted level that is equivalent to the same amount of energy as that contained in the actual fluctuating levels over a period of time. Typically, Leq is summed over a one-hour period. The actual time period in which noise occurs is also important since noise that occurs at night tends to be more disturbing than that which occurs during the daytime. The Day-Night average level (LDN) recognizes this characteristic by weighting the hourly Leqs over a 24-hour period. The weighting involves the addition of 10 dBA to actual nighttime (10 PM to 7 AM) noise levels, accounting for the greater amount of disturbance associated with noise during that time period. The Community Noise Equivalent Level (CNEL) is also commonly used to specify noise standards. The CNEL is identical to the LDN except that it also adds 5 dB to sound levels occurring from 7 PM to 10 PM. The two measures of noise exposure, Ldn and CNEL, are basically equivalent; there is generally less than 1 dBA difference between their values. Noise-sensitive locations include areas where an excessive amount of noise would interfere with normal operations or activities and where a high degree of noise control may be necessary. Examples include schools, hospitals, and residential areas.

Memorial Park is within an urbanized area that is subject to noise from a variety of sources, including motor vehicles, construction activity, and commercial and industrial operations. The primary noise source affecting the park is traffic noise from Olympic Boulevard, Colorado Avenue, 14th Street, and 16th Street. Noise along Olympic Boulevard and Colorado Avenue is in the 65-70 decibels (dBA) range. Noise levels along 14th and 16th streets are likely somewhat lower because of the lower traffic levels on these streets. Noise levels in the interior portion of the park are lower (likely under 60 dBA) due to the increased distance from roadway noise sources.

The site of the proposed reservoir and pump station consists of tennis courts and a parking lot adjacent to 14th Street. Land uses in the site vicinity include the park itself, including a children's play area, and commercial/light industrial uses about 100 feet to the southwest across 14th Street. Other than the park itself, land uses in the immediate vicinity of the planned construction site are not noise-sensitive. The nearest residences are northwest of Colorado Avenue, more than 500 feet away.

3.10 TRAFFIC/TRANSPORTATION

Memorial Park is within an urbanized area with relatively high traffic levels. The park is bounded by Olympic Boulevard, Colorado Avenue, 14th Street, and 16th Street. The Land Use and Circulation Element Draft Environmental Impact Report (EIR) identifies current traffic levels of service at major intersections in the vicinity of the park, including:

- Lincoln Boulevard/Santa Monica Boulevard
- Lincoln Boulevard/I-10 WB Off-Ramp
- Lincoln Boulevard/I-10 EB Off-Ramp
- Twentieth Street/Santa Monica Boulevard
- Twentieth Street/Olympic Boulevard

Current service levels for major intersections in the vicinity of Memorial Park are shown in Table 2.

As indicated, all of the intersections operate at level of service (LOS) B or C during both the AM and PM peak traffic hours. Based on City of Santa Monica standards, the LOS is unacceptable if it falls to E or F. Therefore, intersections in the vicinity of Memorial Park currently operate at acceptable levels.

Table 2. Existing (2008) Intersection Levels of Service.

Intersection	Existing AM			Existing PM		
	Delay	V/C	LOS	Delay	V/C	LOS
Lincoln Blvd/ Santa Monica Blvd	15.3	0.742	B	17.8	0.724	B
Lincoln Blvd/I-10 WB Off-Ramp	25.4	0.847	C	27.2	0.876	C
Lincoln Blvd/I-10 EB Off-Ramp	20.7	0.738	C	22.7	0.799	C
Twentieth St/ Santa Monica Blvd	20.0	0.856	C	19.3	0.866	B
Twentieth St/ Olympic Blvd	33.9	0.950	C	22.3	0.828	C

Source: City of Santa Monica, Land Use and Circulation Element Draft EIR, January 2010.
Delay = seconds; V/C = volume to capacity ratio, which is a measure of the volume of the intersection relative to the intersection capacity; LOS = level of service. LOS is a measure of the operation of the intersection, with A being the best and F being the worst. LOS E or F is considered unacceptable based on City of Santa Monica standards.

3.11 UTILITIES

Wastewater

Wastewater from Memorial Park connects to the local sewer collection system which is owned by the City of Santa Monica and is managed, operated, and maintained by the Water Resources Division of the City's Public Works Department. Sewer flow is treated at the City of Los Angeles' Hyperion Treatment Plant located approximately seven miles southeast of Santa Monica, along the Santa Monica Bay coastline. Wastewater in the City flows primarily by gravity in a southerly direction, and is delivered to the treatment plant via the Coastal Interceptor Sewer. The City has an agreement with the City of Los Angeles for Wastewater Disposal services and pays fees to Los Angeles based on monthly effluent flows to the treatment plant (City of Santa Monica Official Homepage, 2010).

Storm Drains

As discussed above in 3.7 Hydrology/Water Quality, storm water runoff at Memorial Park primarily flows from the north and east to the south and west and eventually enters the County's Kenter Canyon Storm Drain system located on Colorado Avenue (Tetra Tech, 2008). The underground storm drain system collects surface runoff through a series of catch basins and carries the majority of the storm water west to the Santa Monica Urban Runoff Recycling Facility (SMURRF).

Water Supply

Water for the Santa Monica service area is supplied from both groundwater and imported sources. Presently, the City owns and operates 11 water wells. Six wells are in the Santa Monica Subbasin, and the remaining five wells are in the Charnock Subbasin. The Metropolitan Water District (MWD) of Southern California delivers imported water from the Colorado River and State Water Project to the City (City of Santa Monica Water Efficiency Strategic Plan, 2002). Water at the project site is primarily used for restroom facilities, drinking water fountains and kitchen facilities on the community meeting rooms. The potable water supply for Memorial Park is delivered by the City of Santa Monica water system.

Solid Waste

The City of Santa Monica provides refuse collection service at Memorial Park. The Solid Waste Management Division of the Public Works Department operates the solid waste management system. Solid waste from Santa Monica is disposed at the following facilities on a regular basis: Puente Hills Landfill, Sunshine Canyon Landfill, Simi Valley Landfill, and City of Commerce's Waste to Energy Incinerator (City of Santa Monica 2919 Wilshire Mixed Use EIR, 2009). Solid waste at Memorial Park is generated as a result of visitors using the park for recreation purposes.

4.0 ENVIRONMENTAL IMPACTS

In this section, the EA assesses, describes, and documents all environmental impacts of each of the reasonable alternatives on each of the different environmental and cultural resources discussed in the Existing Environment section of the EA. This section also describes any potential impacts, both beneficial and adverse.

4.1 EFFECTS OF THE PROPOSED ACTION

4.1.1 AESTHETICS

4.1.1.1 Scenic Resources and Visual Character

The site for the proposed project and the alternatives is an existing public park and adjacent parking lot, which is located in a highly urbanized setting. For the proposed project the site of the proposed construction activity is flat and is currently occupied by tennis courts and surface parking lots (one lot adjacent the tennis courts to the southeast at Memorial Park, one lot adjacent the tennis courts to the northwest at the Fisher Lumber property). Three existing public trees (one magnolia tree and two pine trees) are located south of the tennis courts within the public parking lot. During construction, the trees would be removed in accordance with Section 7.40.100 of the Santa Monica Municipal Code. However as discussed below in Section 4.1.4, *Biological Resources*, Mitigation Measure BIO-2 would require that these trees be boxed and stored onsite during construction activities prior to being replanted in their existing location following construction activity. The construction area can be viewed from 14th Street, but does not contain any identified scenic resources. For the Northeast Corner and the East Side Site Alternatives, the site of the proposed construction activity is flat and is currently occupied by softball fields. The construction area for these alternatives can be viewed from 16th Street and Olympic Boulevard, but like the proposed project, the alternative sites do not contain any identified resources. For the North Side Site Alternative, the site of proposed construction activity is flat but currently occupied by the former Fisher Lumber property which contains four buildings and associated parking area. The construction area for the North Side Site Alternative can be viewed from 16th Street and Colorado Avenue, but like the proposed project, the North Side site does not contain any identified resources.

Construction activity for the proposed project and each of the project alternatives would temporarily disturb each of the sites; however, upon the completion of construction activity, the sites would be returned to its current condition as the proposed reservoir would be located underground. For the proposed project, the pump station would be located above ground in a masonry building at the existing parking area on the western most portion of the Fisher Lumber property (adjacent to the northwest of the tennis courts). However, the pump station would not be located in an area that would impact any public views or scenic resources and would not substantially alter the visual character of the parking area. In addition, although construction would remove the existing trees located between the tennis courts and the parking lot, a new tree would be replanted according to Section 7.40.070 of the Santa Monica Municipal Code. Consequently, none of the alternatives would have any long-term effect on public views, adversely affect scenic resources, or degrade the visual character of the site. No impact related to these issues would occur.

4.1.1.2 Light or Glare

The proposed reservoir would be underground and would not alter light or glare conditions in the site vicinity. The pump station for the proposed project would be located above ground in a masonry building at the existing parking area on the western most portion of the Fisher Lumber property (adjacent to the northwest of the tennis courts). However, this building would not be expected to have outdoor lighting beyond low-level security lighting (similar to existing buildings at Memorial Park). In addition, the masonry building would not contain any material that would be expected to result in significant glare. No impact would occur with respect to light or glare.

4.1.2 AGRICULTURAL RESOURCES

Memorial Park is within a highly urbanized neighborhood of the City of Santa Monica. No agricultural land is present onsite or in the site vicinity, and no lands in the area has agricultural zoning or are under Williamson Act contract. No impact to agricultural resources would occur.

4.1.3 AIR QUALITY

The project site is within the South Coast Air Basin, which is under the jurisdiction of the South Coast Air Quality Management District (SCAQMD). The local air quality management agency is required to monitor air pollutant levels to ensure that the air quality standards are met and, if they are not met, to develop strategies to meet the standards.

Depending on whether or not the standards are met or exceeded, the air basin is classified as being in "attainment" or "nonattainment." The South Coast Air Basin is in nonattainment for both the federal and state standards for ozone and particulate matter (PM_{10} and $PM_{2.5}$). In addition, the South Coast Air Basin is in nonattainment for the state standards for nitrogen dioxide (NOx). Thus, the basin currently exceeds several state and federal ambient air quality standards and is required to implement strategies that would reduce the pollutant levels to recognized acceptable standards. This non-attainment status is a result of several factors, the primary ones being the naturally adverse meteorological conditions that limit the dispersion and diffusion of pollutants, the limited capacity of the local airshed to eliminate pollutants from the air, and the number, type, and density of emission sources within the South Coast Air Basin. The SCAQMD has adopted an Air Quality Management Plan (AQMP) that provides a strategy for the attainment of state and federal air quality standards.

Certain population groups are considered more sensitive to air pollution than others. Sensitive population groups include children, the elderly, the acutely ill and the chronically ill, especially those with cardio-respiratory diseases. Residential uses are also considered sensitive to air pollution because residents (including children and the elderly) tend to be at home for extended periods of time, resulting in sustained exposure to any pollutants present. Sensitive receptors within the vicinity of the project site include the users of the recreation areas in the park and the Santa Monica Police Activities League (PAL) which is located approximately 200 feet south of the project site (1401 Olympic Boulevard). The nearest residences are northwest of Colorado Avenue, more than 500 feet away.

The proposed project and the project alternatives involve the construction of an underground reservoir and an above ground pump station. Temporary emissions generated during construction are discussed under Item V, Construction Effects.

In the long-term, the project and each of the alternatives would not generate population growth and, therefore, would not conflict with the AQMP. The City would be required to obtain and maintain a SCAQMD permit for the pump located within the enclosed masonry building. With adherence to the permit requirement, daily emissions would be within SCAQMD standards for operating equipment and would not exceed SCAQMD thresholds. Energy use associated with the pump station would generate a minor amount of emissions, but such emissions are expected to be more than offset by the energy savings associated with the increased storage capacity and use of reclaimed water and reducing the demand for imported water, the delivery of which generates demand for energy. The project and alternatives would not expose sensitive receptors to air pollutant emissions or odors. Long-term impacts to local and regional air quality would not be significant.

4.1.4 BIOLOGICAL RESOURCES

4.1.4.1 Sensitive Species and Wetlands

Memorial Park is a city park located within a highly urbanized area. The site of the proposed construction consists of tennis courts and surface parking lots. For the Northeast Corner and the East Side Site Alternatives, the site of the proposed construction activity is currently occupied by softball fields. For the North Side Site Alternative, the site of proposed construction activity is currently occupied by the former Fisher Lumber property which contains four buildings and associated parking area. The area for the proposed project and each of the alternatives is not subject to an adopted conservation plan and does not contain special status species or their habitats. As such, project implementation would have no impact to sensitive plant or animal species, or wetlands.

4.1.4.2 Nesting Birds

The proposed project would remove three existing trees located south of the existing tennis courts in the public parking lot. These trees, one magnolia tree and two pine trees may support birds that are protected by the MBTA and the Fish and Game Code of California (3503, 3503.5, 3511, 3513 and 3800). These regulations protect almost all native nesting birds, not just special-status birds. Although no nesting birds were observed on the site during the site survey (Rincon Consultants, 2010), if any bird species are nesting in the existing trees at the time of tree removal, a significant impact could occur as a result of harm to the reproductive success of species protected by the MBTA and the Fish and Game Code of California. The impact to nesting birds as a result of tree removal would be potentially significant unless mitigation is incorporated. Mitigation Measure BIO-1 therefore requires that tree removal be either conducted outside of the bird breeding season or after pre-construction nesting bird surveys to determine appropriate buffer distances from nests.

BIO-1 **Nesting Bird Surveys and Avoidance**. Tree pruning and removal shall be conducted outside of the bird breeding season (February 15 through August 31). If vegetation clearing (including tree pruning and removal) or other project construction is to be initiated during the bird breeding season, pre-construction nesting bird surveys shall be

conducted by a qualified biologist. To avoid the destruction of active nests and to protect the reproductive success of birds protected by MBTA and the Fish and Game Code of California, nesting bird surveys shall be performed twice per week during the three weeks prior to the scheduled felling of the trees on the site. The surveys shall be conducted by a qualified biologist approved by the Community Development Director. If any active non-raptor bird nests are found, the tree(s) or vegetation shall not be cut down and a suitable buffer area (varying from 25-300 feet) depending on the particular species found is established from the nest, and that area is avoided until the nest becomes inactive (vacated). If any active raptor bird nests are found, a suitable buffer area of typically 250-500 feet from the nest is established, and that area is avoided until the nest becomes inactive (vacated). Limits of construction to avoid a nest should be established in the field with flagging and stakes or construction fencing. Construction personnel shall be instructed on the sensitivity of the area.

With implementation of Mitigation Measure BIO-1, impacts to nesting birds would be reduced to a less than significant level.

4.1.4.3 Local Policies or Ordinances Protecting Biological Resources

The project would removes three existing trees (one magnolia tree and two pine trees) located south of the tennis courts in the public parking lot. Removal of existing public trees that are deemed to be site appropriate may conflict with policies contained in the City's pending Long Range Forest Master Plan. As such, impacts would be potentially significant unless mitigation is incorporated.

Mitigation Measure BIO-2 requires that the three existing public trees be temporarily boxed onsite during construction activity and then replanted in their existing location in order to be consistent with the policies contained in the City's pending Long Range Forest Master Plan that require tree protection during construction of public improvement projects.

BIO-2 **Temporary Relocation and Restablishment.** During the demolition and excavation phase of the project, the three public trees currently located in the parking lot south of the tennis courts shall be temporarily removed from their existing location, boxed according to standards approved by a certified arborist, and stored within a suitable location in Memorial Park. Upon completion of construction activities, the three trees shall be relocated and replanted in their current locations.

With implementation of Mitigation Measure BIO-2, impacts related to removal of trees onsite would be reduced to a less than significant level.

4.1.5 CONSTRUCTION EFFECTS

4.1.5.1 Construction Traffic

Construction activity for the proposed project may temporarily re-route traffic on 14th Street and/or Olympic Boulevard. During construction, the temporary removal of the existing parking lots and the

storage of construction equipment may require the use of alternate street parking and temporary closure of a portion of the abovementioned streets. Construction activity may also require the temporary closure of sidewalks adjacent to the site, disrupting pedestrian activity in the area. In addition to the reduction of the on-street parking during construction of the proposed project, construction site workers would temporarily compete with other users for parking facilities, temporarily reducing the available supply of public parking. Similar impacts would be associated with each of the alternatives. Construction activity for the Northeast Corner and East Side Site Alternatives may temporarily re-route traffic, require the use of alternate street parking and temporary closure on 16th Street and Olympic Boulevard. Construction activity for the North Side Site Alternative Mitigation may temporarily re-route traffic, require the use of alternate street parking and temporary closure on 16th Street, 14th Street and Colorado Avenue. Mitigation measures CON-1 (a-g) are required to ensure that traffic and parking impacts due to construction activities would be reduced to a less than significant level.

4.1.5.2 Construction Air Quality

Sensitive receptors within the vicinity of the construction area for the proposed project and each of the project alternatives include the users of the recreation areas in the park and the Santa Monica Police Activities League (PAL) which is located approximately 200 feet south of the project site (1401 Olympic Boulevard). The nearest residences are northwest of Colorado Avenue, more than 500 feet away. The SCAQMD has adopted the following thresholds for temporary construction-related pollutant emissions:

- *75 pounds per day ROG*
- *100 pounds per day* NO_X
- *550 pounds per day CO*
- *150 pounds per day of* PM_{10}
- *55 pounds per day of* $PM_{2.5}$

In addition to the regional air quality thresholds shown above, the SCAQMD has developed Localized Significance Thresholds (LSTs) in response to the Governing Board's Environmental Justice Enhancement Initiative (1-4), which was prepared to update the CEQA Air Quality Handbook. LSTs were devised in response to concern regarding exposure of individuals to criteria pollutants in local communities. LSTs represent the maximum emissions from a project that will not cause or contribute to an air quality exceedance of the most stringent applicable federal or state ambient air quality standard at the nearest sensitive receptor, taking into consideration ambient concentrations in each source receptor area (SRA), project size, distance to the sensitive receptor, etc. However, LSTs only apply to emissions within a fixed stationary location, including idling emissions during both project construction and operation. LSTs have been developed for NO_X, CO, PM_{10} and $PM_{2.5}$. LSTs are not applicable to mobile sources such as cars on a roadway (Final Localized Significance Threshold Methodology, SCAQMD, June 2003). As such, only LSTs for construction emissions would apply to the proposed project since the project would not include any fixed stationary sources of emissions as part of the proposed site improvements.

LSTs have been developed for emissions within areas up to 5 acres in size, with air pollutant modeling recommended for activity within larger areas. The SCAQMD provides lookup tables for project sites that measure 1, 2 or 5 acres. The project site is 1.78 acres and is located in Source Receptor Area 2 (SRA-2) which is designated by the SCAQMD as the Northwest Coastal LA County and includes the City of Santa

Monica. The closest sensitive receptors are users of the recreation areas in the park (approximately 100 feet from the project site) and the Santa Monica Police Activities League (PAL) which is located approximately 200 feet south of the project site. Table 3 provides the SCAQMD's LSTs for construction at the project site.

Table 3. SCAQMD LSTs for Construction

Pollutant	Allowable emissions as a function of receptor distance in meters from a two acre site (lbs/day)				
	25	**50**	**100**	**200**	**500**
Gradual conversion of NO_X to NO_2	147	143	156	186	262
CO	827	1,213	1,695	2,961	8,446
PM_{10}	6	19	34	64	154
$PM_{2.5}$	4	5	10	21	82

Source: http://www.aqmd.gov/CEQA/handbook/LST/appC.pdf, accessed online April 2010.

Table 4 shows the maximum daily emissions that would occur during construction of the proposed project. As indicated in Table 4, emissions generated by construction of the proposed project would be below SCAMD thresholds. However, emissions generated by construction of the proposed project would exceed the LST thresholds for PM10 and PM2.5. For this analysis, since users of the recreation areas in the park may be within 100 feet of the construction area, the LST thresholds for a distance of 25 meters from the source of emissions was used.

Table 4. Peak Construction Emissions (lbs/day)

Pollutant	ROC	NO_X	CO	PM_{10}	$PM_{2.5}$	SO_X
Project Emissions	4.49	38.66	23.21	98.55	21.84	0.03
SCAQMD Threshold	75	100	550	150	55	150
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**
Local Significant Thresholds* (LSTs)	n/a	147	827	6	4	n/a
Threshold Exceeded?	**n/a**	**No**	**No**	**Yes**	**Yes**	**n/a**

Source: California Air Resources Board's (ARB's) URBEMIS 2007 (Version 9.2.4) computer model. See Appendix A for complete results.

** LSTs are for a two-acre project in SRA-2 within a distance of 25 meters (82 feet) from the site boundary.*

Mitigation measure CON-1(g) is required to ensure that air quality impacts associated with particulate emissions during construction activities would be reduced to a less than significant level. In addition, during construction activity, the excavated soil stockpiled onsite would be required to adhere to SCAQMD Rule 403 ("Fugitive Dust") and specifically the "Best Available Control (BAC) Measures"

related to stockpiles. This would include stabilizing stockpiled material by adding or removing material from the downwind portion of the storage pile (BAC Measure 14-1) and limiting the stockpile to eight feet in height or watering the stockpile by either water truck or through an irrigation system (BAC Measure 14-2). As shown in Table 5, implementation of mitigation measure CON-1(g) which requires fugitive dust control measures such as soil stabilizers, paving haul roads, and installation of Diesel Particulate Filters (DPF) on off-road construction equipment, would reduce emissions to below LST thresholds.

Table 5. Mitigated Peak Construction Emissions (lbs/day)

Pollutant	ROC	NO_X	CO	PM_{10}	$PM_{2.5}$	SO_X
Mitigated Project Emissions	4.49	38.66	23.21	5.77	1.68	0.03
SCAQMD Threshold	75	100	550	150	55	150
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**
Local Significant Thresholds * (LSTs)	n/a	147	827	6	4	n/a
Threshold Exceeded?	**n/a**	**No**	**No**	**No**	**No**	**n/a**

Source: California Air Resources Board's (ARB's) URBEMIS 2007 (Version 9.2.4) computer model. See Appendix A for complete results.
** LSTs are for a two-acre project in SRA-2 within a distance of 25 meters (82 feet) from the site boundary.*

It is anticipated that construction emissions associated with the proposed project would be similar to construction emissions for each of the alternatives. As such, similar mitigation measures would be required to reduce impacts associated with construction emissions to below a level of significance.

4.1.5.3 Construction Noise

Temporary construction activities could create noise in excess of established noise standards. A Noise Study for the proposed project was conducted by Behrens and Associates, Inc. (2010). Two 24-hour noise measurements and three 15 minute noise measurements were taken at the project site. Table 6 summarizes the noise measurement results.

Temporary noise impacts due to construction activities could occur as a result of the proposed project. Construction activities for the reservoir, pump station and pipelines will take place over a 16-month period and will be divided into seventeen phases. Noise impact models were created for the excavation, construction/installation, restoration, and pipeline construction activities planned at the site. Table 7 provides the City of Santa Monica's Exterior Noise Standards. The allowable noise levels in Table 7 are reduced by 5 dB for impulsive or simple tone noise, or for noises consisting of speech or music. If the ambient noise level exceeds the standard, then the ambient becomes the standard. The maximum instantaneous sound level may not exceed the noise limits in Table 7 plus 20 dB. The closest sensitive receptors to the project site include the baseball fields and the gym/PAL center which are adjacent to the site.

Table 6. Ambient Noise Measurement Summary

Location #	Description	Measurement Period	Measured 15-minute Average Noise Level (dBA)	Measured Maximum Noise Level (dBA)	CNEL (dBA)
1	Sidewalk of 14th St.	May 3 – 4, 2010	Day (7 am – 10 pm): 56.3 to 70.1 Night (10 pm - 7 am): 45.7 to 64.1	Day (7 am – 10 pm): 71.3 to 83.2 Night (10 pm - 7 am): 60.5 to 84.9	63.1
2	City yard building at edge of Memorial Park	2:03 pm to 2:18 pm	53.4	64.3	N/A
3	At rear of Gymnasium at 1401 Olympic Blvd.	12:13 pm to 12:28 pm	59.2	73.4	N/A
4	Adjacent to 1430 Olympic Blvd.	12:55 pm to 1:10 pm	67.5	83.9	N/A
5	Adjacent to Storage Facility at 1620 14th St.	May 3 to May 4, 2010	Day (7 am – 11 pm): 62.7 to 74.4 Night (11 pm - 7 am): 46.3 to 66.5	Day (7 am – 10 pm): 79.8 to 96.5 Night (10 pm - 7 am): 73.8 to 83.4	69.3

Source: Behrens and Associates, Inc. Environmental Noise Study for the Memorial Park Reservoir, May 2010.

Table 7. Exterior Noise Standards

Noise Zone	Time Interval	Allowable Leq	
		15-Minute Continuous Measurement Period	5-Minute Continuous Measurement Period
I	Monday – Friday 10 PM – 7 AM 7 AM – 10 PM	50 dBA 60 dBA	55 dBA 65 dBA
	Saturday and Sunday 10 PM – 8 AM 8 AM – 10 PM	50 dBA 60 dBA	55 dBA 65 dBA
II	All Days of Week 10 PM – 7 AM 7 AM – 10 PM	60 dBA 65 dBA	65 dBA 70 dBA
III	Anytime	70 dBA	75 dBA

Source: City of Santa Monica Municipal Code §4.12.060(a).

Table 8 provides the results of noise modeling analysis provided in the project's noise study (Behrens and Associates, Inc., 2010). The results of modeling analysis performed by Behrens and Associates, Inc. indicate that the maximum noise level of the excavation activities will exceed the existing maximum noise levels by up to 31 dB at the gym/PAL center; by up to 27 dB at the baseball fields; by up to 9 dB at the buildings northeast of 16th Street and by up to 3 dB at the buildings southeast of Olympic Boulevard.

These exceedances would be caused during the use of the pile driver. For construction/installation, restoration and pipeline construction activities, the modeling analysis determined that existing maximum noise levels would be exceeded by up to 21 dB at the gym/PAL center; by up to 20 dB at the baseball fields and by up to 2 dB at the buildings southeast of Olympic Boulevard. Based on the City of Santa Monica Exterior Noise Standards contained in Table 7, a potentially significant but mitigable impact at the baseball fields and at the gym/PAL center would occur since instantaneous noise levels would exceed the standards by more than 20 dB. Mitigation measures would be required to reduce impacts associated with construction noise to a less than significant level.

Table 8. Predicted Construction Maximum Noise Levels

Location	Maximum Noise Level (dBA)			
	Mobilization/ Excavation	**Construction/ Installation**	**Restoration Phase**	**Pipeline Construction**
City Yard	111	89	96	86
Baseball Fields	100	85	93	79
Gym/Police Activity Center	104	88	94	91
Industrial Building SW of 14th St	105	84	89	96
Buildings SE of Olympic Blvd.	87	68	71	86
Building NE of 16th St.	80	66	69	62
Building NW on Colorado Ave	84	66	69	87
Nearest Residence	72	61	58	56

Source: Behrens and Associates, Inc. Environmental Noise Study for the Memorial Park Reservoir, May 2010

Implementation of mitigation measures CON-1(a-g) would ensure that impacts related to traffic, air quality, and noise impacts generated by construction of the proposed project would be less than significant.

CON-1(a) **Construction Impact Mitigation Plan**. The applicant shall prepare, implement and maintain a Construction Impact Mitigation Plan which shall be designed to:

- *Prevent material traffic impacts on the surrounding roadway network.*
- *Minimize parking impacts both to public parking and access to private parking to the greatest extent practicable.*
- *Ensure safety for both those constructing the project and the surrounding community.*
- *Prevent substantial truck traffic through residential neighborhoods.*
- *Coordinate with the Light Rail Transit (LRT) construction schedule*

The Construction Impact Mitigation Plan shall be subject to review and approval by the following City departments: Public Works, Fire, Planning and Community Development and Police to ensure that the Plan has been designed in accordance with this Mitigation

Measure. This review shall occur prior to commencement of any construction staging for the project. It shall, at a minimum, include the following:

Ongoing Requirements Throughout the Duration of Construction

- *A detailed traffic control plan for work zones shall be maintained. At a minimum, this shall include: parking and travel lane configurations; warning, regulatory, guide and directional signage; and area sidewalks, bicycle lanes and parking lanes. The plan shall include specific information regarding the project's construction activities that may disrupt normal pedestrian and traffic flow and the measures to address these disruptions. Such plans shall be reviewed and approved by the Transportation Management Division prior to commencement of construction and implemented in accordance with this approval.*
- *Work within the public right-of-way shall be performed between 9:00 a.m. and 4:00 p.m. This work includes dirt and demolition material hauling and construction material delivery. Work within the public right-of-way outside of these hours shall only be allowed after the issuance of an after-hours construction permit.*
- *Streets and equipment shall be cleaned in accordance with established Public Works requirements.*
- *Trucks shall only travel on a City-approved construction route. Truck queuing/staging shall not be allowed on Santa Monica streets. Limited queuing may occur on the construction site itself.*
- *Materials and equipment shall be minimally visible to the public; the preferred location for materials is to be onsite, with a minimum amount of materials within a work area in the public right-of-way, subject to a current Use of Public Property Permit.*
- *Any requests for work before or after normal construction hours within the public right-of-way shall be subject to review and approval through the After Hours Permit process administered by the Building and Safety Division.*
- *Provision of off-street parking for construction workers, which may include the use of a remote location with shuttle transport to the site, if determined necessary by the City of Santa Monica.*

Project Coordination Elements That Shall Be Implemented Prior to Commencement of Construction

- *The City shall advise the traveling public of impending construction activities (e.g., information signs, portable message signs, media listing/notification, implementation of an approved traffic control plan).*
- *The City shall obtain a Use of Public Property Permit, Excavation Permit, Sewer Permit or Oversize Load Permit, as well as any Caltrans Permits required, for any construction work requiring encroachment into public rights-of-way, detours or any other work within the public right-of-way.*

- *The City shall provide timely notification of construction schedules to all affected agencies (e.g., Big Blue Bus, Police Department, Fire Department, Public Works Department, and Planning and Community Development Department) and to all owners and residential and commercial tenants of property within a radius of 500 feet.*
- *The City shall coordinate construction work with affected agencies in advance of start of work. Approvals may take up to two weeks per each submittal.*
- *Transportation Management Division approval of any haul routes for earth, concrete or construction materials and equipment hauling shall be obtained.*

CON-1(b) **Diesel Equipment Mufflers**. All diesel equipment shall be operated with closed engine doors and shall be equipped with factory-recommended mufflers.

CON-1(c) **Electrically-Powered Tools**. Electrical powered shall be used to run air compressors and similar power tools.

CON-1(d) **Restrictions on Excavation, Pile Driving and Foundation/Conditioning**. Excavation, pile driving, foundation-laying, and conditioning activities (the noisiest phases of construction) shall be restricted to between the hours of 10:00 a.m. and 3:00 p.m., Monday through Friday, in accordance with Section 4.12.110(d) of the Santa Monica Municipal Code.

Pile driving activities at the site shall not cause a peak particle velocity exceedance of more than 0.05 in/s at the nearby sensitive receptors. This level of vibration may be achieved using equipment that produces a peak particle velocity of less than 0.1 in/s at a distance of 25 feet.

The compaction roller used at the site shall not cause a peak particle velocity exceedance of more than 0.05 in/s at the nearby sensitive receptors. This level of vibration may be achieved using equipment that produces a peak particle velocity of less than 0.1 in/s at a distance of 25 feet.

CON-1(e) **Additional Noise Attenuation Techniques**. For all noise- generating construction activity on the project site, additional noise attenuation techniques shall be employed as necessary to reduce noise levels to City of Santa Monica noise standards. Such techniques may include the use of sound blankets on noise generating equipment and the construction of temporary sound barriers between construction sites and nearby sensitive receptors. This may include the installation of temporary walls or panels, enclosures and/or sound absorbing and barriering materials to reduce the noise levels experienced at the gym/PAL center and baseball fields.

CON-1(f) **Construction Sign Posting**. In accordance with Municipal Code Section 4.12.120, the project applicant shall post a sign informing all workers and subcontractors of the time restrictions for construction activities. The sign shall also include the City telephone numbers where violations can be reported and complaints associated with construction noise can be submitted.

CON-1(g) Fugitive Dust Control Measures. The following shall be implemented during construction to minimize fugitive dust and associated particulate emissions:

- *All material excavated or graded should be sufficiently watered to prevent excessive amounts of dust. Watering should occur at least three times daily with complete coverage, preferably at the start of the day, in the late morning and after work is done for the day*
- *All grading, earth moving or excavation activities shall cease during periods of high winds (i.e., greater than 20 mph measured as instantaneous wind gusts) so as to prevent excessive amounts of dust*
- *All material transported on and off-site should be securely covered to prevent excessive amounts of dust*
- *Soils stockpiles shall be covered*
- *Onsite vehicle speeds shall be limited to 15 mph*
- *All haul roads shall be paved to reduce dust when vehicles and equipment is transported on and off site*
- *Install wheel washers where vehicles enter and exit the construction site onto paved roads or wash off trucks and any equipment leaving the site each trip*
- *All off road grading equipment including graders, rubber tired dozers, tractors/loaders/backhoes, and water trucks shall be installed with a Diesel Particulate Filter (DPF) to reduce diesel particulate matter during grading activities.*
- *Appoint a construction relations officer to act as a community liaison concerning onsite construction activity including resolution of issues related to* PM_{10} *generation*
- *Sweep streets at the end of the day using SCAQMD Rule 1186 certified street sweepers or roadway washing trucks if visible soil is carried onto adjacent public paved roads (recommend water sweepers with reclaimed water)*
- *All active portions the construction site shall be sufficiently watered three times a day to prevent excessive amounts of dust.*

Implementation of mitigation measures CON-1 (a-g) would ensure that traffic, air quality, and noise impacts generated by construction of the proposed project would not significantly affect sensitive receptors in the vicinity of the project site, pedestrians and nearby residents. This mitigation would also apply to the project alternatives. Impacts related to construction activity would be less than significant with mitigation incorporated.

4.1.6 CULTURAL RESOURCES

4.1.6.1 Historic Resources

As part of this EA, a Historic Resources Report was prepared by San Buenaventura Research Associates (May 2010, see Appendix B). The report was prepared in response to the Feasibility Report prepared by

Tetra Tech (September 2008) which identified five structures of potential historic interest that are located in the northern portion of the project site within the confines of the City Yard facility.

Historic designation may be given to a property by National, State, or local authorities. In order for a property or building to qualify for listing in the National Register of Historic Places (NRHP), the California Register of Historical Resources (CRHR), or as a locally significant property in the City of Santa Monica, it must meet one or more identified criteria of significance. The property must also retain sufficient architectural integrity to continue to evoke the sense of place and time with which it is historically associated.

As identified in the Historic Resources Report (May 2010), the project site does not meet any of the criteria for designation as an individual landmark, nor does it appear to be a contributor to any potential historic district. The project site is not listed in the Santa Monica Historic Resources Inventory (San Buenaventura Research Associates, 2010).

None of the existing structures or the project site, including those structures at the City Yard that were identified in the Preliminary Report, appear to be eligible for listing on the National Register of Historic Places, the California Register of Historic Resources, or the City of Santa Monica historic landmarks or districts list (accessed April 2010). Therefore, the property should not be regarded as a significant historical resource for purposes of CEQA and the proposed project would not result in a significant impact to historic resources. No impact would occur.

4.1.6.2 Archaeological Resources and Human Remains

There is no evidence to suggest presence of either archaeological resources or human remains on the project site. As part of the Cultural Feasibility Study (performed by ArcheoPaleo Resource Management Inc., 2008, see Appendix for full report), a records search was conducted at the South Central Coastal Information Center on the campus of California State University Fullerton. The search determined that no archaeological sites or previous cultural studies had been conducted at the project site. A records search (Native American Heritage Commission Sacred Lands File) indicated that the presence of Native American cultural resources exist within one-half mile of the project site. Therefore, as part of this environmental study, culturally-affiliated tribes and individuals who may have knowledge of the religious and cultural significance of historic properties in the project area were contacted and consulted. Based on this consultation, it was indicated that throughout Santa Monica there is a potential to discover cultural resources related to Native Americans. However, no cultural resources were determined to be on site. The project site is highly disturbed due to existing development on and around the site. Therefore the likelihood of finding intact significant archaeological resources is low. Nevertheless, Section 9.04.16.01.030(p) of the Santa Monica Municipal Code states that "If any archaeological remains are uncovered during excavation or construction work in the affected area shall be suspended and a recognized specialist shall be contacted to conduct a survey of the affected area at the project owner's expense. A determination shall then be made by the Director of Planning to determine the significance of the survey findings and appropriate actions and requirements, if any, to address such findings." In addition, Health and Safety Code § 7050.5, Public Resources Code § 5097.98 and § 15064.5 of the California Code of Regulations (CEQA Guidelines) mandate procedures to be followed, including that construction or excavation be stopped in the event of an accidental discovery of any human remains in a location other than a dedicated cemetery until the County coroner or medical examiner can determine

whether the remains are those of a Native American. Therefore, the project would have a less than significant impact on archaeological resources or disturbance of human remains.

4.1.6.3 Paleontological Resources

Surficial formations at the project site include Quaternary (Holocene to Pliocene) recent alluvium, older alluvium and non-marine coastal terrace deposits primarily derived from the Santa Monica Mountains. These sedimentary deposits overlay upper and lower Pliocene (Tertiary) sedimentary marine deposits known to contain both macro- and micro-fossils include pholads. This formation deposit has been correlated to the San Diego Formation which is rich in invertebrate fossils, such as mollusks, echinoderms, and crustaceans (San Diego Museum of Natural History fossil holding search performed on May 6, 2010). Underlying the Tertiary formation is a series of Cretaceous sandstone and pebbly-conglomerate deposits containing known fossil resources including mollusks and foraminifera.

The Pliocene marine and the Cretaceous deposits are exposed at rivercuts extending from the Santa Monica Mountains to the Pacific. Additionally due to the high number of geologic offsets and the close proximity of the Santa Monica Fault actual depth of fossil-bearing deposits is unknown. Excavation and grading activities has the potential to impact as-yet-discovered paleontological resources. Therefore, the impacts are potentially significant unless mitigation is incorporated.

CR-1 **Paleontological Monitoring**. The following general guidelines for paleontological monitoring set by the Society of Vertebrate Paleontologists (1991) shall be implemented during grading and excavation activities:

- *During an excavation project of greater than 5 feet of depth the project shall retain a qualified project paleontological manager.*
- *In areas of known or potential paleontological resources a qualified paleontological monitor shall be present during excavation of greater than 5 feet of depth into previously undisturbed soil during 100% of the earth-moving activities.*
- *If after 50% of the grading or excavation is completed, it can be demonstrated that the level of monitoring should be reduced, the project paleontological manager may amend the monitoring and mitigation schedule.*
- *A paleontologist who monitors excavation must be qualified and experienced in interpreting geological formations, in salvaging fossils and have the authority to temporarily divert equipment while removing fossils.*
- *Removal of fossils specimens should be done using the proper equipment and supplies and in such a manner that excavation work can be resumed as quickly as possible.*

Implementation of mitigation measures CR-1 would ensure that potential paleontological resources uncovered during construction activities are not damaged but rather collected and assessed by a certified paleontologist. This mitigation would also apply to the project alternatives. Impacts would be less than significant with mitigation incorporated.

4.1.7 SOCIOECONOMIC IMPACTS

The proposed project involves the construction of an underground reservoir and an above ground pump station at an existing city park and immediately adjacent the park. Upon project completion, the site of the proposed construction activity at Memorial Park would be returned to its current condition. The above ground pump station would be located adjacent the park site in an area currently used as a parking lot. However, following construction the pump station would not disrupt the use of the parking lot. This activity would not result in any long-term economic or social changes. No impact would occur.

4.1.8 GEOLOGY AND SOILS

4.1.8.1 Faults and Seismic Ground Shaking

There are no Alquist-Priolo Earthquake Fault Zones within Santa Monica (General Plan Safety Element, 1995). The closest significant fault to the project site is the Newport-Inglewood Fault, which is located about 6 miles to the east of the project site. Consequently, the potential for surface rupture at the project site is considered low. Design and construction of the pump station and reservoir would be required to be engineered to withstand the expected ground acceleration that may occur at the site, pursuant to local building regulations and applicable provisions of the Uniform Building Code (UBC) and the California Building Code (CBC).

Although surface rupture is considered low for the site, like most of Southern California, the project site could be subject to significant ground shaking due to seismic activity of the region. Known regional active and potentially active faults that could produce significant ground shaking at this site include the Santa Monica, Palos Verdes, Malibu Coast, Hollywood, Puente Hills Blind Thrust, Upper Elysian Park Blind Thrust and the San Andreas. The City requires preparation of a design level geotechnical report as part of the building permit review and approval process. A geotechnical report (Leighton Consulting, 2010) was prepared for the project to determine the adequacy of the foundation, effects of any possible fault rupture and liquefaction. The report includes recommendations to alleviate the potential for ground shaking including implementation of either 2007 California Building Code site specific seismic parameters, and/or use of a vertical to horizontal acceleration ratio of unity (1) (Leighton, 2010).

The geotechnical report would be reviewed as part of the Building and Safety Permitting Process. Technical review is conducted by appropriately licensed professionals, either a direct City employee or a geotechnical consultant under contract with the City (Guidelines for Geotechnical Reports, City of Santa Monica Building and Safety, July 2005). Recommendations for design including 2007 California Building Code specific seismic parameters and/or use of a vertical to horizontal acceleration ratio of unity (1) to alleviate the potential for adverse effects due to seismic ground shaking would be incorporated subject to the review and approval of the City Building and Safety Division. With implementation of the recommendations contained in the geotechnical report any potential for adverse effects due to ground shaking potential would not be significant.

4.1.8.2 Liquefaction

Liquefaction describes the phenomenon in which groundshaking works less cohesive soil particles into a tighter packing, which induces excess pore pressure. These soils may acquire a high degree of mobility,

leading to structurally damaging deformations. Liquefaction begins below the water table, but after liquefaction has developed, the groundwater table rises and causes the overlying soil to mobilize. Liquefaction typically occurs in areas where the groundwater is less than 30 feet from the surface and where the soils are composed of poorly consolidated fine to medium sand.

The proposed project and the project alternatives would involve the construction of an underground reservoir and an above ground pump station. According to the City of Santa Monica's Geologic Hazards Map (Geographic Information Systems, 2001), Memorial Park is not located in an area that has potential for liquefaction. Moreover, as discussed in the geotechnical report, groundwater has historically been 40 feet or more below the ground surface in the vicinity, and the site earth materials consist of stiff clay overlying very dense sand. Therefore, liquefaction potential at the site is low (Leighton, 2010). Impacts would not be significant.

4.1.8.3 Landslides

The geologic character of an area determines its potential for landslides. Steep slopes, the extent of erosion, and the rock composition of a hillside all contribute to the potential for slope failure and landslide events. Common triggering mechanisms of slope failure include undercutting slopes by erosion or grading, saturation of marginally stable slopes by rainfall or irrigation, and shaking of marginally stable slopes during earthquakes.

The project site is relatively flat, without significant slopes on or adjacent to the park. The proposed project and the project alternatives involve the construction of an underground reservoir and an above ground pump station. However, the project site does not have potential for landslides according to the City of Santa Monica's Geologic Hazards Map (Geographic Information Systems, 2001). In addition, the project site does not have a potential for seismically induced landslides according to the California Seismic Hazard Zones Map (Department of Conservation, Beverly Hills Quadrangle, 1999). Therefore impacts related to landslides would be less than significant.

4.1.8.4 Soil Erosion

Construction activities would involve excavation at the project site, which would cause disruption and displacement of onsite soils. The construction area would be confined by the surrounding developed area, and would be further confined by fencing; nevertheless, construction activities could result in increased erosion and sedimentation due to soil transport by wind and water. Implementation of standard City-required erosion control techniques and construction Best Management Practices (BMPs) as identified in Section 7.10.060 of the Municipal Code (e.g., the use of silt fencing, and plastic covering) would reduce the potential for soil erosion from water. Impacts would not be significant.

4.1.8.5 Unstable Geologic Unit or Soil

As describe above liquefaction potential at the site is low (Leighton, 2010) and the project site does not have a potential for landslides.

Lateral spreading is the movement of ground surface down slope or toward an unrestrained open slope face due to liquefaction of the underlying soil layers. Lateral spreading usually develops on ground

surface less than three degrees slope and may cause damages to near surface structures. Because the liquefaction potential for the project site is considered low and the site topography is relatively flat, the potential for lateral spreading at the project site is also considered low (Leighton, 2010). The proposed project would not be located on a geologic unit or soil that is unstable. Impacts would not be significant.

4.1.8.6 Expansive Soil

Due to the existing urban environment of the project site and surrounding areas, soils on the project site are likely suitable for construction of the proposed reservoir and pump station. As required by the City, a geotechnical report was prepared to provide recommendations for design and construction of the project based on the existing geologic conditions at the project site. This includes recommendation for earthwork and grading activities, seismic design parameters, foundation design of the tank and vault, and design of the retaining wall. Any potential for adverse effects related to soil stability would be alleviated with adherence to the recommendations contained in the geotechnical report and through the Building and Safety permit and review process. Impacts would not be significant.

4.1.8.7 Septic Tanks

The proposed project and the project alternatives involve the construction of an underground reservoir and an above ground pump station. The proposed project would not utilize septic tanks or alternative wastewater disposal systems. No impact would occur.

4.1.9 GREENHOUSE GAS EMISSIONS

Gases that trap heat in the atmosphere are often called greenhouse gases (GHG), analogous to the way in which a greenhouse retains heat. Common GHG include water vapor, carbon dioxide (CO_2), methane (CH_4), nitrous oxides (N_2O), fluorinated gases, and ozone. GHG are emitted by both natural processes and human activities. Of these gases, CO_2 and CH_4 are emitted in the greatest quantities from human activities.

The accumulation of GHG in the atmosphere regulates the earth's temperature. However, it is believed that emissions from human activities, particularly the consumption of fossil fuels for electricity production and transportation, have elevated the concentration of these gases in the atmosphere beyond the level of naturally occurring concentrations. The rate of Global Climate Change (GCC) has typically been incremental, with warming or cooling trends occurring over the course of thousands of years. However, scientists have observed an unprecedented acceleration in the rate of warming during the past 150 years likely due to the observed increase in anthropogenic GHG concentrations (United Nations Intergovernmental Panel on Climate Change (IPCC), November 2007).

Current annual anthropogenic GHG emitted from the world, United States, and California is listed in Table 9 below.

Table 9. Annual Anthropogenic GHG Emissions

Worldwide	United States	California
40,000 MM CDE	7,054 MM CDE	492 MM CDE

MM = million metric tons
CDE = carbon dioxide equivalent
Source: IPPC, 2007; USEPA, April 2008; CEC, December 2006

California is the second largest emitter of GHGs among states and, if California were a country, it would be the sixteenth highest emitter among countries (AEP, 2007). Out of the 492 million metric tons of carbon dioxide equivalent (CDE[4]) produced in California (7% of US total), 41% is associated with transportation. Electricity generation is the second largest source, contributing 22% of the state's GHG emissions (CEC, December 2006). Most, 81%, of California's 2004 GHG emissions (in terms of CDE) were CO_2 produced from fossil fuel combustion, with 2.8% from other sources of CO_2, 5.7% from methane, and 6.8% from nitrous oxide (CEC, December 2006).

Local Regulations and CEQA Requirements. GHG emissions and their contribution to GCC have only recently been addressed in CEQA documents, such that CEQA and case law does not provide guidance relative to their assessment. Quantitative significance thresholds have been proposed by CARB. Quantitative significance thresholds have not been adopted by the State of California, or any particular air pollution control district (APCD). Pursuant to the requirements of SB 97, the Resources Agency adopted amendments to the State CEQA Guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions. The adopted CEQA Guidelines provide regulatory guidance on the analysis and mitigation of GHG emissions in CEQA documents, while giving lead agencies the discretion to set quantitative or qualitative thresholds for the assessment and mitigation of GHG and GCC impacts. In addition, in an effort to guide professional planners, land use officials and CEQA practitioners, OPR prepared CEQA and Climate Change: Addressing Climate Change through California Environmental Quality Act (CEQA). This document offers informal guidance regarding the steps lead agencies should take to address climate change in CEQA documents. This guidance was developed in cooperation with the Resources Agency, Cal EPA, and the ARB.

The City of Santa Monica has developed a Sustainable City Plan (revised 2006). A Sustainable City Progress Report is used to measure the success and performance in achieving the goals set forth in the Sustainable City Plan. The Progress Report uses a range of indicators to measure the City's progress toward a more sustainable city. The City has included a measure of GHG emissions among its indicators because it recognizes the physical and socio-economic disruptions that climate change could cause if unabated. The target for this indicator is to reduce emissions to 30% below 1990 levels by 2015 for City operations and to reduce emissions to 15% below 1990 levels by 2015 for the City as a whole. As part of the Progress Report, beginning in 1990, the City has maintained a GHG emissions inventory (last updated November 2009), which allows the City to measure its progress toward achieving the goals contained in the Sustainable City Plan. According to the 2009 GHG Emissions Report, there was a reduction in GHG emissions from 1990 to 2007. Overall, GHG emissions in 2007 declined by less than 7% as compared to

[4] *Carbon dioxide equivalent (CDE or CO_2E) is a quantity that describes, for a given mixture and amount of GHGs, the amount of CO_2 (usually in metric tons; million metric tons [megatonne] = $MMTCO_2E$ = terragram [Tg] CO_2 Eq; 1,000 MMT = gigatonne) that would have the same global warming potential (GWP) when measured over a specified timescale (generally, 100 years).*

1990 levels. The majority of the reduction in GHG emissions occurred in the waste sector, in which emissions fell by 48%. In addition, the City's Renewable Energy Portfolio and use of green power energy sources has also reduced community emissions (reduced by 8%) and the corporate emissions (reduced by 36%).

Impact Analysis Methodology. The information provided in this section is based on recently established California goals for reducing GHG emissions, as well as a project-specific emissions inventory developed for the proposed project. How a proposed project might contribute to GCC and the overall effect of an individual project based on that contribution are still being debated. As previously discussed, no statewide thresholds or methodologies for determining the significance of a project's potential cumulative contribution to GCC have been adopted to date. An individual project (unless it is a massive construction project, such as a dam or a new freeway project, or a large fossil-fuel fired power plant) does not generate sufficient GHG emissions to directly influence GCC; therefore, the issue of global climate change typically involves an analysis of whether a project's contribution towards a cumulative impact is cumulatively considerable. "Cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.

This analysis is based on the methodologies recommended by the California Air Pollution Control Officers Association [CAPCOA] (January 2008) CEQA and Climate Change white paper. The basic concepts for the various approaches suggested by CAPCOA are used herein to determine whether or not the proposed project's GHG emissions are "cumulatively considerable."

Calculations of CO_2, CH_4, and N_2O are provided for full disclosure of the magnitude of potential project effects. The analysis focuses on CO_2, N_2O, and CH_4 as GHG emissions that the project would emit in the largest quantities, as compared to other GHGs (such as chlorofluorocarbons [CFCs]). Calculations were based on the methodologies discussed in the CAPCOA white paper (January 2008) and included the use of the California Climate Action Registry General Reporting Protocol (March 2007). This analysis focuses on construction emissions since long term emissions (operational and mobile emissions) as discussed in Section 4.1.3, *Air Quality*, would generate a minor amount of emissions and would be expected to be more than offset by the energy savings associated with the increased storage capacity and use of reclaimed water and reducing the demand for imported water, the delivery of which generates demand for energy. Therefore only temporary construction emissions are quantified in this analysis.

Construction Emissions. Although construction activity is addressed in this analysis, CAPCOA does not discuss whether any of the suggested threshold approaches (as discussed below in GHG Cumulative Significance) adequately address impacts from temporary construction activity. As stated in the CEQA and Climate Change white paper, "more study is needed to make this assessment or to develop separate thresholds for construction activity" (CAPCOA, 2008). GHG emissions associated with construction activity for the proposed project are quantified and reported in the analysis. However, it should be noted that construction emissions would be temporary in nature (approximately one year).

Construction of the proposed project would generate temporary GHG emissions primarily due to the operation of construction equipment and truck trips. The estimated amount of excavation for the project is 26,000 cubic yards of material that will need to be removed. A portion of the material (about 16,500 cubic yards) will need to be brought back to the site to backfill and restore the park to the original

condition. Site excavation typically generates the greatest amount of emissions due to the use of grading equipment and soil hauling. Project construction is assumed to be completed within approximately 16 months. The proposed Construction Schedule (Tetra Tech April 2010) used for this analysis proposes that construction would commence in Marchof 2012 and be completed in July of 2013 (approximately 345 work days). Emissions associated with the worst-case day of construction were estimated using the California Air Resources Board's URBEMIS 2007 (Version 9.2.4) computer model, based on the projected maximum amount of equipment that would be used onsite at one time. Complete URBEMIS results and assumptions can be viewed in the Appendix A.

Based on the URBEMIS output the worst-case day of construction would generate approximately 5,127 pounds of CO_2 which would occur during the building and paving phase of project construction. Assuming this worst-case day of construction occurred for the entire construction period (345 days), the construction activity for proposed project would generate an estimated 806 metric tons of CDE units (as shown in Table 10).

Table 10. Estimated Construction Emissions of Greenhouse Gases

Emission Source	Annual Emissions	
	Emissions	**Carbon Dioxide Equivalent (CDE)**
Carbon Dioxide (CO_2)[1]	884 (short tons, US)	802 metric tons
Methane (CH_4)[2]	0.0135	0.28 metric tons
Nitrous Oxide (N_2O)[2]	0.013	4.48 metric tons
	Total	**806 metric tons**

1. See Appendix A for calculations.
2. California Climate Action Registry General Reporting Protocol, Reporting Entity-Wide Greenhouse Gas Emissions, Version 2.2,March 2007, page 30-35.
See Appendix A for GHG emission factor assumptions.

Although the proposed project would contribute GHG emissions as a result of construction activity, construction emissions would be temporary in nature (approximately one year) and would not contribute to long term emissions. Global climate change impacts related the two project alternatives are anticipated to be the same as the proposed project. As discussed in Section 4.1.3, *Air Quality*, the proposed project would generate a minor amount of emissions and would be expected to be more than offset by the energy savings associated with the increased storage capacity and use of reclaimed water and reducing the demand for imported water, the delivery of which generates demand for energy. Therefore, the contribution of onsite development to cumulative global climate change impacts would be less than significant.

4.1.10 HAZARDS AND HAZARDOUS MATERIALS

4.1.10.1 Transport, Use, or Disposal of Hazardous Materials

The proposed project and the project alternatives involve the construction of an underground reservoir and an above ground pump station. Neither the construction nor the operation of the underground reservoir and above ground pump station would involve the routine transport, use or disposal of hazardous substances, other than minor amounts typically used for maintenance. Thus, the project would have a less than significant impact and no mitigation is necessary.

4.1.10.2 Hazardous Site

A site reconnaissance of the project site was conducted by Rincon Consultants, Inc. to observe existing site conditions and to obtain information indicating the possible presence of recognized environmental conditions in connection with the property. The site reconnaissance did not produce any evidence of environmental concerns for the property (Rincon Consultants, Inc., 2010). In addition, Environmental Data Resources, Inc. (EDR) was contracted to provide a database search of public lists of sites that generate, store, treat or dispose of hazardous materials or sites for which a release or incident has occurred. The project site does not appear on any hazardous material site list compiled pursuant to Government Code Section 65962.5. The following databases were checked (May 7, 2010) for known hazardous materials contamination at the project site:

- *Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) database;*
- *Geotracker search for leaking underground fuel tanks;*
- *Investigations- Cleanups (SLIC) and Landfill sites, Cortese list of Hazardous Waste and Substances Sites; and*
- *The Department of Toxic Substances Control's Site Mitigation and Brownfields Database.*

The project site does not appear on any of the above lists. As part of the EDR database search, the subject property was listed as a HAZNET site in the databases searched by EDR. According to the EDR report, 33.71 tons of organic solids are disposed from the site by the City of Santa Monica. The disposal method was not listed. However, based on the nature of the environmental listing for the project site (non-release, spill or leak), the HAZNET listing does not appear to pose an environmental concern (Rincon Consultants, Inc., May, 2010).

One adjacent property was listed as a release site (LUST) in the databases searched by EDR. The adjacent property to the south across the intersection of Olympic Boulevard and 14th Street (Snyder & Diamond-1399 Olympic Boulevard) was listed as a leaking UST site in the databases searched by EDR. According to the EDR report, a release from a UST or USTs on this adjacent property potentially impacted soil and groundwater on the adjacent property with hydrocarbons. The case is currently open and in the site assessment phase. Based on the reported distance of the adjacent property to the project site and the reported groundwater flow direction beneath the site to the southwest, south, or southeast, the adjacent property does not appear to pose an environmental concern to the project site.

One adjacent property was listed as a UST site in the databases searched by EDR. The adjacent property to the northeast across 16th Street (Santa Monica-Malibu Unified School District-1651 16th Street) was listed as a UST site in the database searched by EDR. However, this listing is not indicative of a hazardous materials release.

There are no records or evidence of the presence of underground storage tank installation or removal on the project site. Presence of leaking underground storage tanks, or other potentially known and unknown impacted sites and hazardous waste generators within a one-mile radius of the project site do not appear to pose a significant environmental concern or liability because of their distance, the direction of groundwater flow and their status (Rincon Consultants, Inc., 2010).

Therefore, the proposed project would result in a less than significant impact and no mitigation is necessary.

4.1.10.3 Hazardous Materials Near Schools

The nearest school to the project site is PS #1 Elementary School (.25 miles northwest). As there is no evidence that the project would emit, release, or upset hazardous material or handle hazardous materials, there would be no impacts with respect to hazardous materials near schools.

4.1.10.4 Airport Related Safety Hazards

The project site is located more than a mile northwest of Santa Monica Municipal Airport. The project site is not within an area covered by an airport land use plan, nor is it located in the vicinity of a private air strip (City of Santa Monica, Map Catalog, Airport Influence Area). The project would not create any airport-related safety hazards. There would be no impact.

4.1.10.5 Conflict with Emergency Response or Evacuation Plan

The proposed project and the project alternatives involve the construction of an underground reservoir and an above ground pump station. Neither the proposed project nor the alternatives would conflict with an adopted emergency response plan or emergency evacuation plan. Impacts would be less than significant.

4.10.6 Wildland Fire Hazards

The project site is located in a developed area in Santa Monica with both retail/commercial, industrial and residential uses in the immediate site vicinity. The project site and surrounding area are entirely urbanized. The proposed project would not expose persons or structures to wildfire hazard risks. No impact would occur.

4.1.11 HYDROLOGY AND WATER QUALITY

4.1.11.1 Water Quality

Construction for the proposed project and each of the alternatives would involve removal of the existing tennis courts and parking lot and approximately 26,000 cubic yards of excavation for the underground reservoir. This, in conjunction with other onsite construction activities, has the potential to result in temporary water quality impacts. The City of Santa Monica's Urban Runoff Mitigation Ordinance (Municipal Code Section 7.10.060) requires implementation of Best Management Practices (BMPs) for all construction sites in the City. Such BMPs include, but are not limited to, use of plastic coverings on unprotected areas to eliminate erosion; removal of any sediments tracked offsite by construction vehicles; and use of temporary sediment barriers where necessary. Pursuant to the ordinance, polluted runoff (runoff containing sediments and/or construction wastes) from construction sites shall not leave the site. The ordinance requiring these standard construction and erosion control practices would reduce the potential for significant water quality impacts from excavation and general construction. Impacts related to water quality standards and waste discharge requirements would be less than significant.

4.1.11.2 Groundwater

The proposed project would temporarily remove the existing tennis courts and parking lots during construction activities. However, after the proposed underground reservoir and above ground pump station have been installed, the tennis courts and parking lots would be repaved in a similar manner as currently exists. Neither the proposed project nor the alternatives would increase the amount of impervious surface area at the site. Therefore, the proposed project would not substantially interfere with groundwater recharge. Therefore, impacts would be less than significant.

4.1.11.3 Drainage, Erosion and Flooding

The project site is in an urbanized area of Santa Monica. The project site is currently developed as a recreational park. No streams or rivers are present on the project site. The proposed project and the project alternatives involve the construction of an underground reservoir and an above ground pump station. Temporary sedimentation impacts could occur if bare ground is exposed during winter rains. The City of Santa Monica's Urban Runoff Mitigation Ordinance (Municipal Code § 7.10) requires implementation of Best Management Practices (BMPs) for all construction sites in the City. Such BMPs include use of plastic coverings on unprotected areas to eliminate erosion; removal of any sediments tracked offsite by construction vehicles; and use of temporary sediment barriers where necessary. These standard construction and erosion control practices would reduce the potential for significant water quality impacts from grading and other construction activities to a less than significant level.

4.1.11.4 Stormwater Drainage

The City of Santa Monica has an Urban Runoff Mitigation Ordinance that requires applicants for all new development proposals to submit an Urban Runoff Mitigation Plan to the Public Works Department for approval (Municipal Code § 7.10.050). This plan would include design elements that would infiltrate or treat project-generated runoff by an amount equal to or greater than the volume of runoff produced by a 0.75-inch storm event. The design elements must meet one or more of the following goals:

- *Maximize permeable areas to allow for more percolation of runoff into the ground;*
- *Maximize the amount of runoff directed to permeable areas and/or maximize stormwater storage for reuse or infiltration; or*

- *Remove pollutants through installation of treatment control BMPs.*

Examples of design elements that could be incorporated into the project to achieve these goals include the following: biofilters, swales, and green strips; orienting roof runoff to permeable areas; grading the site to divert runoff to permeable areas; and using cisterns or other retention structures to capture runoff for reuse. The plan must also include steps for ongoing maintenance of BMPs throughout the life of the project.

Although it is anticipated that the proposed project would have a similar drainage patterns as currently exists onsite, as discussed above, in accordance with the City's Ordinance, the proposed project would need to include engineering design measures to ensure that stormwater runoff would be contained on site for a 0.75-inch storm event. If such design measures are infeasible at this site, an in lieu fee would be charged. As the proposed project or any of the alternatives would be required to meet the 0.75 inch reduction goal (or pay an in lieu fee), impacts to the City storm drain system would be less than significant.

4.1.11.5 Flooding, Seiche and Tsunamis

According to the Federal Emergency Management Agency (FEMA), the project site is located in Zone "X," defined as "other flood area." Other flood areas include areas of 0.2% annual chance of floods; areas of 1% annual chance of flood with average depths of less than one foot or with drainage areas less than one square mile; and areas protected by levees from 1% annual chance of flood (FEMA, 2008). The project site is not located in an inundation area. No dams or levees are located in the vicinity of Santa Monica; thus, the potential for flooding due to dam failure is low. Santa Monica is not located near any major bodies of surface water; therefore, impacts from seiches are not expected. In addition, the project site is located approximately 113 feet above sea level (Google Earth, 2010) and therefore would not be located in a tsunami hazard zone. Impacts would be less than significant.

4.1.12 LAND USE AND PLANNING

4.1.12.1 Divide an Established Community

The project site is located in an urbanized area of Santa Monica. The proposed project and the project alternatives involve the construction of an underground reservoir and an above ground pump station. Post-construction the park amenities and parking areas would be restored to their existing use. Implementation of the project would not physically divide an established community. There would be no impact.

4.1.12.2 Consistency with Land Use Plan, Policy or Regulation

The proposed project site has a General Plan Land Use Designation of Parks and Open Space and zoning designation of Designated Park (DG). The proposed project and the project alternatives involve the construction of an underground reservoir and an above ground pump station. After construction of the reservoir and pump station, all park amenities including the tennis courts and parking lots for the proposed project and the softball fields for the two project alternatives would be rebuilt similar to existing conditions. The project is intended to fit within the goals and strategy framework of the City's Land Use

and Circulation Element (LUCE). The proposed reservoir project is intended to preserve the uses in the existing park and fit within planned new uses while enhancing the reliability of the City's water supply. The project and alternatives would be consistent with applicable land use designations and zoning. Impacts would be less than significant.

4.1.12.3 Consistency with Habitat Conservation Plans

The project site is located in an entirely urbanized area of Santa Monica. There are no natural communities or habitats at the project site, and no habitat conservation or natural community plans apply to the site. Therefore, the project would not conflict with any habitat/natural communities conservation plans. In addition, as described above in Section 4.1.4, *Biological Resources*, no areas within Santa Monica are included within any natural community conservation plans or other habitat conservation plans (California Department of Fish and Game Homepage "Habitat Conservation Programs", 2010). Therefore, the project would not conflict with any habitat/natural community conservation plans. No impact would occur.

4.1.13 MINERAL RESOURCES

The project site is located in the City of Santa Monica, which is a developed urban area that does not provide any mineral resource value (U.S. Geological Survey, 2010). As such, neither the proposed project nor the project alternatives would result in the loss of the availability of a known mineral resource that would be of value locally, regionally, or to the State. No impact to mineral resources would occur.

4.1.14 NEIGHBORHOOD EFFECTS

Construction of the proposed project would create temporary air quality, noise and traffic impacts. As described in Section V, Construction Effects, construction activities would increase the emissions related to particulate matter beyond LST thresholds. In addition, construction equipment could increase the noise level on the project site and traffic generated as a result of construction could temporarily disrupt traffic patterns in the area and could decrease parking and/or access temporarily. However, mitigation measures CON-1(a-g) identified in Section 4.1.5, *Construction Effects*, would mitigate neighborhood impacts to a less than significant level. In addition, the proposed project would not result in long-term noise, air quality, or traffic impacts that could have significant effects on the surrounding neighborhood since construction effects would only be temporary and the park amenities would be returned to existing conditions post-construction of the underground reservoir and above ground pump station. Impacts would be less than significant.

4.1.15 NOISE

4.1.15.1 Operational Noise Levels

The proposed project involves the construction of an underground reservoir and an above ground pump station. As discussed in Section 4.1.20, *Traffic*, the proposed project would not result in an increase in traffic volumes, and therefore noise on the project site would be expected to be similar to existing conditions. The only new noise source as a result of the project would be associated with the above ground pump station. The pump station would include separate rooms for various pieces of equipment

and would be enclosed in a block masonry building. The equipment to be installed within the station includes three 40 horse-power (HP) variable speed pumps, a 2 HP jockey pump, two chemical feed pumps and two 10 HP submersible pumps. The architectural drawings for the station indicate that the rooms containing the pumps would not have significant penetrations outside the masonry building. Masonry block walls (approximately 4 inches thick) have an estimated Sound Transmission Class (STC) rating of 44 (STC for masonry block walls available at http://www.stcratings.com/masonry.html). With a maximum noise level inside the pump station estimated at 69.5 dBA (Behrens and Associates, Inc., 2010), the estimated noise at approximately 50 feet from the pump station would be 25 dBA. With implementation of masonry walls containing the pumps and other noise sources associated with the pump station, noise impacts generated by the project would not significantly affect sensitive receptors in the vicinity of the project site, including visitors at the park and the gym/PAL center since 25 dBA would not exceed any City noise standards. Therefore, impacts would be less than significant.

4.1.15.2 Groundborne Vibration or Noise

The proposed project and the project alternatives involve the construction of an underground reservoir and an above ground pump station. Operation of the project would not increase groundborne vibration or groundborne noise on the project site above existing conditions. Construction of the proposed project could potentially increase groundborne vibration or noise on the project site, but construction effects would be temporary. In addition, mitigation measure CON-1(d) would require vibration reduction techniques during pile driving and compact rolling activities that would reduce groundborne vibration. Therefore, impacts would be less than significant.

4.1.15.3 Temporary Noise

Construction noise impacts are discussed in Section 4.1.5, *Construction Effects*. Impacts related to noise generated by the proposed project during construction would be less than significant with mitigation incorporated.

4.1.15.4 Airport Noise

The closest airport is Santa Monica Municipal Airport, located approximately 1.5 miles southeast of the project site. The project site is located in an urban area of Santa Monica. The project site is not within the aircraft takeoff and landing flight paths (City of Santa Monica, Airport Influence Area Map, 2003). In addition, minimum altitude over any congested area of a city, town, or settlement, or over any open air assembly of persons, is an altitude of 1,000 feet above the highest obstacle within a horizontal radius of 2,000 feet of the aircraft (http://santa-monica.org/airport/n_flight_paths.aspx). Because the project site is not within the normal takeoff and landing paths and because the minimum altitude is 1,000 feet above the highest obstacle in the vicinity of the project site, air traffic associated with the Santa Monica Municipal Airport would not expose workers during construction to excessive noise from air traffic. In addition, the project is outside of the 65 CNEL Airport Land Use Plan Noise Contour (City of Santa Monica, Airport Influence Area Map, 2003). There would be no impact.

4.1.16 POPULATION AND HOUSING

The proposed project and the project alternatives involve the construction of an underground reservoir and an above ground pump station. The proposed project would not include construction of residential units. As such, the project would not substantially induce population growth, displace existing housing, or displace existing residents. There would be no impact related to population and housing.

4.1.17 PUBLIC SERVICES

4.1.17.1 Fire Protection

The City of Santa Monica Fire Department provides fire protection services in the City of Santa Monica and maintains an Automatic Aid Agreement with the City of Los Angeles Fire Department, as well as a Mutual Aid Agreement with other fire departments in the region. Memorial Park is located within approximate one-half mile of Fire Station 3, located at 1302 19th Street. Fire Station 3 has two paramedic engines, a hazardous materials response vehicle, and one reserve engine.

The proposed project and the project alternatives involve the construction of an underground reservoir and an above ground pump station. The park amenities and parking areas would be returned to existing conditions post-construction of the underground reservoir and above ground pump station. Therefore the proposed project would not increase the demand for fire protection services. Therefore, the proposed project would not result in the need to construct new or altered fire protection facilities. There would be no impact.

4.1.17.2 Police Protection

The City of Santa Monica Police Department (SMPD) provides police protection services in the City and maintains mutual assistance programs with the Los Angeles County Sheriff's Department and the City of Los Angeles Police Department. The SMPD is located at 333 Olympic Drive, approximately 0.8-miles southwest of the project site. The project site is in Beat A-4.

The proposed project and the project alternatives involve the construction of an underground reservoir and an above ground pump station. The project would not increase the population or increase the demand for police services. Therefore, the proposed project would not result in the need to construct new police facilities. There would be no impact.

4.1.17.3 Schools

The Santa Monica-Malibu Unified School District (SMMUSD) provides primary and secondary public education services to students living in Santa Monica. In the District, there are currently 10 elementary schools, two middle schools, two high schools, one alternative school, one continuation school, and a community day school. The District has a total enrollment (2008-2009) of about 11,591 students (California Department of Education from 2008-2009 School Year).

The proposed project would not involve residential development. Therefore, the proposed project would not result in the need for new or altered public schools. There would be no impact.

4.1.17.4 Parks

The City of Santa Monica contains 26 public park facilities located throughout the city providing a variety of recreational opportunities for residents and visitors (City of Santa Monica Homepage, May 2010). The proposed project would not involve the construction of residences; therefore, the project would not increase the demand for parks in the City. As described in Section 4.1.5, *Construction Effects*, the proposed project and the alternatives would temporarily remove existing park amenities. For the proposed project the existing tennis courts and parking lots would be removed during construction of the underground reservoir and above ground pump station. For each of the alternatives, the existing softball fields would be removed temporarily during construction. However, these impacts would be temporary in nature as the park amenities and parking areas would be restored to existing conditions post-construction. Therefore, the proposed project would not result in the need for new or altered parks. There would be no impact. (See Section 4.1.18, *Recreation*, for further discussion of this issue.)

4.1.17.5 Other Public Facilities

The proposed project and alternatives would be intended to improve the City's non-potable water supply systems. No significant impacts to other public facilities would occur with project implementation.

4.1.18 RECREATION

As discussed in Section 4.1.5, *Construction Effects*, project-related construction activity would involve temporary disruption of certain activities at Memorial Park. However, the affected facilities for the proposed project (tennis courts and surface parking lots) would be returned to their current condition. Each of the project alternatives would temporarily disrupt the softball fields located along 16th Street during construction. However, the fields would be returned to their current condition. As such, the proposed reservoir and ancillary facilities would not increase the use of existing parks or require the expansion of recreational facilities. Impacts would be less than significant.

4.1.19 SHADOWS

The proposed project involves the construction of an underground reservoir and an above ground pump station. The underground reservoir would not create any shadows. The above ground pump station may create some shadows. However, the pump station would be located in an area currently used as a surface parking lot. There are no shadow-sensitive uses adjacent to the proposed pump station location. Therefore, the pump station would not produce shadows that would affect adjacent uses or property. Each of the project alternatives would also involve construction of underground facilities and would not create any shadows. No impact would occur.

4.1.20 TRANSPORTATION/TRAFFIC

4.1.20.1 Increase of Traffic Levels

The proposed project involves the construction of an underground reservoir and an above ground pump station. Once the underground reservoir and pump station are fully operational, the proposed project would have the same traffic volume compared to existing conditions. However, traffic volumes on

surrounding streets may be impacted during construction activities. As described in Section 4.1.5, *Construction Effects*, construction activity for the proposed project may temporarily re-route traffic on 14th Street and/or Olympic Boulevard. During construction, the temporary removal of the existing parking lots and the storage of construction equipment may require the use of alternate street parking and temporary closure of a portion of the abovementioned streets.

Similar impacts would be associated with each of the alternatives. Construction activity for the Northeast Corner and East Side Site Alternatives may temporarily re-route traffic, require the use of alternate street parking and temporary closure on 16th Street and Olympic Boulevard. However, implementation of CON-1(a) would require the applicant to prepare, implement and maintain a Construction Impact Mitigation Plan which would be designed to prevent material traffic impacts on the surrounding roadway network and prevent substantial truck traffic through residential neighborhoods. With implementation of a Construction Impact Mitigation Plan as required by mitigation measure CON-1(a), impacts would be less than significant.

4.1.20.2 Air Traffic Patterns

The proposed project would not affect air traffic patterns. No impact would occur.

4.1.20.3 Traffic Hazards

The proposed project would not include any design features that could present traffic hazards. As described in Section 4.1.5, *Construction Effects*, construction activity for the proposed project may result in the temporary closure of sidewalks adjacent to the site, disrupting pedestrian activity in the area. However, these impacts would be temporary in nature and would be reduced to a less than significant level with the implementation of mitigation measure CON-1(a) which would require a Construction Impact Mitigation Plan to ensure safety for both those constructing the project and the surrounding community. With implementation of CON-1(a), impacts would be less than significant.

4.1.20.4 Emergency Access, Parking Capacity and Site Access

Construction activity may require the temporary closure of a portion of the streets surrounding Memorial Park, potentially disrupting emergency access and affecting access for other properties and parcels. In addition, the temporary removal of the existing parking lots and the storage of construction equipment may require the use of alternate street parking and would cause construction site workers to temporarily compete with other users for parking facilities, temporarily reducing the available supply of public parking. However, these impacts would be temporary in nature and would be reduced to a less than significant level with the implementation of mitigation measure CON-1(a) which would require a Construction Impact Mitigation Plan. The Mitigation Plan would include a provision of off-street parking for construction workers, minimize parking impacts both to public parking and access to private parking to the greatest extent practicable, and ensure safety for both those constructing the project and the surrounding community. With implementation of CON-1(a), impacts would be less than significant.

4.1.20.5 Alternative Transportation

The Santa Monica Big Blue Bus lines provide public transportation throughout Santa Monica. In addition, bike routes/lanes are located throughout the City (City of Santa Monica Information Systems Division, 2007). The proposed project and alternatives would not conflict with any programs, policies or plans supporting alternative transportation. There would be no impact.

4.1.20.6 Reduced Lot Area

The proposed project and proposed alternatives would not include a right-of-way dedication that would reduce lot area. No impact would occur.

4.1.20.7 Grade Differential

The proposed project and proposed alternatives would not create a substantial grade differential between public and private property. The project site is flat and would not be substantially altered due to construction of the proposed project. No impact would occur.

4.1.21 UTILITIES AND SERVICE SYSTEMS

4.1.21.1 Wastewater

The local sewer collection system is owned by the City of Santa Monica and is managed, operated, and maintained by the Water Resources Division of the City's Public Works Management Department. Sewer flow is treated at the City of Los Angeles' Hyperion Treatment Plant located approximately seven miles southeast of Santa Monica, along the Santa Monica Bay coastline. Wastewater in Santa Monica flows primarily by gravity in a southerly direction, and is delivered to the treatment plant via the Coastal Interceptor Sewer. The City has an agreement with the City of Los Angeles for wastewater disposal services and pays fees to Los Angeles based on monthly effluent flows to the treatment plant (City of Santa Monica Official Homepage, 2010; RAND Corporation Headquarters EIR, 2000).

The proposed project involves the construction of an underground reservoir and an above ground pump station. The proposed project and each of the alternatives would not involve any new buildings or development that would be occupied by people and, therefore, would not cause an increase in the amount of wastewater generated onsite. The reservoir's main drain line would connect to the City's 30 inch sewer line located on Colorado Boulevard. However, the amount of wastewater from the drain line discharge would not be expected to significantly affect the City's wastewater conveyance system. Impacts related to wastewater conveyance and treatment would be less than significant.

4.1.21.2 Stormwater Drainage

The proposed project involves the construction of an underground reservoir and an above ground pump station. As described above in Section 4.1.11, *Hydrology and Water Quality*, although it is anticipated that the proposed project would have a similar drainage patterns as currently exists onsite, in accordance with the City's Urban Runoff Mitigation Ordinance, the proposed project would need to include engineering design measures to ensure that stormwater runoff would be contained on site for a 0.75-inch

storm event. If such design measures are infeasible at this site, an in lieu fee would be charged. As the proposed project or any of the alternatives would be required to meet the 0.75 inch reduction goal (or pay an in lieu fee), impacts to stormwater quality conveyance facilities would be less than significant.

4.1.21.3 Water Supplies

Water for the Santa Monica service area is supplied from both groundwater and imported sources. Presently, the City owns and operates 11 water wells. Six wells are in the Santa Monica Subbasin, and the remaining five wells are in the Charnock Subbasin. The Metropolitan Water District (MWD) of Southern California delivers imported water from the Colorado River and State Water Project to the City.

The proposed project consists of a 1-million gallon MG non-potable water reservoir, a non-potable water pumping station, power supply and supporting pipelines at a site within Memorial Park and immediately adjacent to the park on the western most portion of the Fisher Lumber property. The project or the alternatives would not require the use of potable water at the site and would not increase the demand for potable water supplies. Therefore the project and alternatives would have sufficient water supplies and would not require new or expanded entitlements. There would be no impact to water supplies.

4.1.21.4 Solid Waste

The City of Santa Monica provides refuse collection service. The Solid Waste Management Division of the Public Works Department operates the solid waste management system. Solid waste from Santa Monica is disposed at the following facilities on a regular basis: Puente Hills Landfill, Sunshine Canyon Landfill, Simi Valley Landfill, and City of Commerce's Waste to Energy Incinerator. In addition, the City recycles electronics equipment through Electronics Partners Corporation (ePC) and recycles tires through CRM Co. LLC (City of Santa Monica Official Website). Table 11 summarizes the permitted throughput, estimated capacity, and estimated closure date for these facilities.

While the proposed project would not generate waste during the operational phase, during construction activities, approximately 10,000 cubic yards of cut material and approximately 178,902 cubic yards of demolition debris (pavement and asphalt from the existing tennis courts and parking lots) would be removed from the project site.

The City has completed a comprehensive waste reduction and recycling plan in compliance with State Law AB 939, which required every city in California to reduce the waste it sends to landfills by 50% by the year 2000. As of 2006, the City was recycling or otherwise diverting 68% of its solid waste, thereby complying with the standards established by AB 939 (Santa Monica Waste Stream Profile, CIWMB, 2010). The City has also set a goal of increasing the amount of solid waste diverted from landfills to 70% by the year 2010 (City of Santa Monica Sustainable City Plan, 2003).

Table 11. Solid Waste Disposal Facilities

Facility	Permitted Daily Throughput (tons/day)	Estimated Remaining Capacity (CY)*	Estimated Closure Date
Puente Hills Landfill	13,200	49,348,500	2013
Sunshine Canyon SLF County Extension	12,100	111,200,000	2037
Simi Valley Landfill and Recycling Center	3,000	23,201,173	2033
Commerce Refuse-to-Energy Facility	1,000	---	---

Source: California Integrated Waste Management Board Website, http://www.ciwmb.ca.gov/swis/Search.asp, accessed on May 10, 2010.
** Remaining capacity estimates are based on reported estimated closure date minus the annual average throughput since date of reported remaining capacity.*
cy=cubic yards

The project would be required to complete a Waste Management Plan (WMP) in accordance with Municipal Code Section 8.108.130. The WMP would require that at least 65% of all construction and demolition material generated by the project will be diverted or an exemption has been approved pursuant to Section 8.108.170. With implementation of a WMP, the proposed project would divert approximately 122,786 cubic yards of cut and asphalt/pavement debris and would generate 66,116 cubic yards of waste that would be sent to a landfill. 66,116 cubic yards of construction waste represents 0.13% of the remaining capacity at the Puente Hills Landfill, 0.06% of the remaining capacity at the Sunshine Canyon landfill, and 0.28% of the remaining capacity at the Simi Valley Landfill and Recycling Center. Therefore, the project would be served by landfills with sufficient capacity to accommodate the project's solid waste disposal needs. Impacts to the City's solid waste collection and disposal system would be less than significant.

4.1.22 MANDATORY FINDINGS OF SIGNIFICANCE

4.1.22.1 Examples of the Major Periods of California History or Prehistory

As discussed in Section 4.1.6, *Cultural Resources*, although there are numerous historic resources located throughout Santa Monica, the proposed underground reservoir and above ground pump station would not involve any demolition, destruction, relocation, or alteration of historical resources. While the proposed project would involve ground-disturbing activities such as excavation and grading activities, with adherence to Section 9.04.16.01.030(p) of the Santa Monica Municipal Code, Health and Safety Code § 7050.5, Public Resources Code § 5097.98 and § 15064.5 of the California Code of Regulations (CEQA Guidelines), the project would have a less than significant impact upon archaeological resources and human remains. In addition, with implementation of mitigation measure CR-1, the proposed project would not destroy unique paleontological or geological features. Therefore, the project would have a less than significant impact on cultural resources .

4.1.22.2 Sensitive Species/Communities

As discussed in Section 4.1.4, *Biological Resources*, Santa Monica is an urbanized area and generally lacks sensitive animal species or associated habitat. Although the Pacific Ocean is located adjacent to the city, the lack of large-scale contiguous native habitats and the ease of public access to the shoreline have resulted in little opportunity for sensitive plant and animal species to remain in the City of Santa Monica. The limited wildlife that exists in the area has adapted to the urban environment and there are no known migratory wildlife corridors. The project does not involve development in a federally protected wetland and does not involve improvements that would impair or interrupt hydrological flow into a wetland. The limited wildlife that exists in the area has adapted to the urban environment and there are no known migratory wildlife corridors. With implementation of mitigation measures BIO-1 and BIO-2, impacts related to nesting birds and removal of trees onsite would be reduced to a less than significant level. As such, impacts to biological resources would be less than significant.

4.1.22.3 Cumulative Impacts

The proposed project could result in cumulative impacts to biological resources, construction effects, and cultural resources. However, Mitigation Measure BIO-1 and BIO-2 contained in Section 4.1.4, *Biological Resources*, mitigation measures CON-1(a-g) in Section 4.1.5, *Construction Effects*, and Mitigation Measure CR-1 contained in Section 4.1.6, *Cultural Resources* would reduce these impacts to less than significant levels. Cumulative impacts are further discussed in Section 5.0.

4.1.22.4 Effects on Human Beings

As discussed in Section 4.1.5, *Construction Effects*, the proposed project may cause temporary air quality, traffic, and noise impacts that may affect sensitive receptors located in the vicinity of Memorial Park. However, implementation of mitigation measures CON-1(a-g) would reduce potential adverse effects to human safety to a less than significant level.

4.2 SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION MEASURES

According to the CEQ NEPA Regulations, "significantly," as used in NEPA, requires considerations of both context and intensity.[5] Under NEPA, significance varies with the setting of the proposed action and the severity of impact; significance is primarily used to determine whether an EIS is required or a Finding of No Significant Impact (FONSI) may be issued. Some impacts determined to be significant under CEQA may not be of sufficient magnitude to be determined to be significant under NEPA.

In the project Mitigated Negative Declaration, the City concludes that all potentially significant effects of the Proposed Project can be reduced to less-than-significant levels by identified mitigation measures. The environmental factors listed below would be potentially affected by this project, involving at least one impact that is "Potentially Significant Unless Mitigation Incorporated," and would require mitigation, as indicated by the checklist above:

Biological Resources. Mitigation Measure BIO-1 requires that tree removal be either conducted outside of the bird breeding season or after pre-construction nesting bird surveys to determine appropriate buffer

[5] CEQ Regulations Implementing NEPA (40 CFR Part 1500 et seq.) at Section 1508.27.

distances from nests. With implementation of Mitigation Measure BIO-1, impacts to nesting birds would be reduced to a less than significant level. Mitigation Measure BIO-2 requires that the three that would require removal during construction activity be boxed and stored onsite during construction activities prior to being replanted in their existing location following construction activity. Refer to Section 4.1.4.

Construction Effects. Mitigation measures CON-1(a-g) require the applicant to prepare and implement a Construction Impact Mitigation Plan, as well as fugitive dust control measures and noise –reduction techniques, including:

- Diesel equipment mufflers;
- Electrically-powered tools;
- Restrictions on timing for excavation, pile driving and foundation/conditioning;
- Construction sign posting of the time restrictions for construction activities; and
- Additional noise attenuation techniques, as required.

Implementation of mitigation measures CON-1 (a-g) would ensure that traffic, air quality, and noise impacts generated by construction of the proposed project would not significantly affect sensitive receptors in the vicinity of the project site, pedestrians and nearby residents. This mitigation would also apply to the project alternatives. Impacts would be less than significant with mitigation incorporated. Refer to Section 4.1.5.

Cultural Resources. Mitigation Measure CR-1 requires paleontological monitoring during project grading and excavation. Implementation of mitigation measure CR-1 would ensure that potential paleontological resources uncovered during construction activities are not damaged but rather collected and assessed by a certified paleontologist. This mitigation would also apply to the project alternatives. Impacts would be less than significant with mitigation incorporated. Refer to Section 4.1.6.

4.3 SHORT-TERM USE OF THE ENVIRONMENT VERSUS LONG-TERM PRODUCTIVITY

NEPA requires federal agencies to include in "every recommendation or report on proposals for legislation and other major Federal actions significantly affecting the quality of the human environment" a "detailed statement" on several broad environmental topics, including "the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity."[6] This topic is required in an environmental impact statement (EIS); in practice, whether this topic is addressed in an EA is at the discretion of the lead agency.

Construction of the Memorial Park Reservoir Project will have a number of effects on the environment, as discussed in this EA and in the project MND. However, the potential impacts identified in this EA and in the project MND, and summarized above in Section 4.2, are short-term impacts that would occur (and be mitigated) during project construction. Construction-related effects are generally and appropriately considered to be short-term "uses" of the environment; for this project, mitigation measures have been

[6] NEPA, Section 102 (42 U.S.C. Section 4332).

identified for all identified potentially significant effects, and these measures will be implemented as requirements in construction documents.

In the longer term, the project would not contribute to potentially significant environmental effects. In addition, the project would result long-term benefits. The overall public benefit of this project will be to provide more reliability for the City's non-potable water supply systems. The City's non-potable water supply system would be provided with more flexibility and reliability. Currently, the City has a greater need for additional recycled water storage than for potable water storage. Providing additional storage for non-potable water will make it possible to more efficiently serve existing and new customers. These long-term consequences outweigh the short-term "uses."

5.0 CUMULATIVE EFFECTS

CEQ NEPA regulations state that a cumulative effects analysis should consider the potential environmental impacts resulting from "the incremental impacts of the action when added to other past, present, and reasonably foreseeable future actions" in an affected area [7] Cumulative impacts can result from minor but collectively substantial actions undertaken over a period of time by various agencies (Federal, state or local) or persons. CEQ guidance is provided in *Considering Cumulative Effects under the National Environmental Policy Act* (CEQ 1997). In accordance with NEPA, cumulative impacts resulting from projects that are proposed, under construction, recently completed or anticipated to be implemented in the near future are discussed in this section.

Implementation of the Proposed Action, if conducted simultaneously with other planning improvements to the City of Santa Monica, could cumulatively impact biological resources, construction effects, and cultural resources in the immediate area; however, impacts would be short-term and mitigation measures BIO-1 and BIO-2 contained in Section 4.1.4, *Biological Resources*, mitigation measures CON-1(a-g) in Section 4.1.5, *Construction Effects*, and Mitigation Measure CR-1 contained in Section 4.1.6, *Cultural Resources* would reduce these impacts to less than significant levels. Long-term cumulative impacts associated with the Proposed Action would be beneficial to reliability of the City's non-potable water supply systems, as discussed above in Section 4.3.

[7] CEQ Regulations Implementing NEPA (40 CFR Part 1500 et seq.) at Section 1508.7.

6.0 REFERENCES AND PERSONS CONTACTED

Alvitre, Cindi. Personal Communication regarding Native American Cultural Resources at Memorial Park. October 1st, 2010.

ArcheoPaleo Resource Management Inc., "Water Infrastructure- Santa Monica Reliability Improvement Project, XP-96945401-0 Memorial Park City of Santa Monica, Los Angeles County, California," May 2008.

Association of Environmental Professionals (AEP). Alternative Approaches to Analyzing Greenhouse Gas Emissions and Global Climate Change in CEQA Documents. June 29, 2007.

Behrens and Associates, Inc. Environmental Noise Study for the Memorial Park Reservoir in Santa Monica, CA. May 17, 2010.

California Air Resources Board, Ambient Air Quality Standards, updated November 2008. Available online at: http://www.arb.ca.gov/research/aaqs/aaqs2.pdf.

California Air Resources Board, April 2005. Air Quality and Land Use Handbook: A Community Health Perspective.

California Air Pollution Control Officers Association (CAPCOA), January 2008. CEQA and Climate Change.

California Air Resources Board. Climate Change Emission Control Fact Sheet, 2007. http://www.arb.ca.gov/cc/factsheets/cc_newfs.pdf

California Air Resources Board, Climate Change Emission Control Fact Sheet, 2007. http://www.arb.ca.gov/cc/factsheets/cc_newfs.pdf

California Climate Change Center. Climate Scenarios for California. 2006.

California Department of Conservation. Seismic Hazards Zones Map – Beverly Hills Quadrangle. 1999.

California Department of Education. 2008-2009 Santa Monica-Malibu Unified School District Enrollment. Available at: http://www.ed-data.k12.ca.us/welcome.asp

California Department of Fish and Game. "Habitat Conservation Programs". Accessed online in May 2010. Available at: http://www.dfg.ca.gov/habcon/.

California Department of Water Resources. Progress on Incorporating Climate Change into Management of California's Water Resources. July 2006

California Energy Commission, February 2006. Scenarios of Climate Change in California: An Overview. CEC-500-2005-186-SF

California Energy Commission. Inventory of California Greenhouse Gas Emissions and Sinks: 1990-2004. Staff Final Report. CEC-600-2006-013-SF. December 2006

California Energy Commission. Inventory Draft 2009 Biennial Report to the Governor and Legislature. Staff Draft Report. March 2009.

California Environmental Protection Agency, March 2006. Climate Action Team Report to Governor Schwarzenegger and the Legislature. http://www.climatechange.ca.gov/climate_action_team/reports/2006-04-03_FINAL_CAT_REPORT_EXECSUMMARY.PDF

California Integrated Waste Management Board Facility/Site Profile. Accessed online in May 2010. Available at: http://www.calrecycle.ca.gov/SWFacilities/Directory/search.aspx

Cayan, D., A.L. Luers, M. Hanemann, G. Granco, and B. Croes. Scenarios of Climate Change in California: An Overview. California Climate Change Center, State of California. White Paper, CEC-500-2005-203-SF. March 2006

Cayan, D., E. Maurer, M. Dettinger, M. Tyree, K. Hayhoe, C. Bonfils, P. Duffy, and B. Santer. Climate Scenarios for California: Climate Action Team Reports to the Governor and Legislature. 2006.

City of Santa Monica, 2919 Wilshire Mixed Use Draft EIR, 2009.

City of Santa Monica, Civic Center Specific Plan Environmental Impact Report, 2000.

City of Santa Monica General Plan: Draft Land Use and Circulation Element Draft EIR, January 2010.

City of Santa Monica Information Systems Division. Santa Monica Geologic Hazards, 2001. Accessed August 13, 2008. http://www01.smgov.net/isd/gis/map_catalog/index.html

City of Santa Monica Official Website. Airport Runway flight paths. Accessed May 2010. Available online at: http://www01.smgov.net/airport/images_ap/img_21_Dep_Map.jpg http://www01.smgov.net/airport/images_ap/img_rwy3.jpg

City of Santa Monica Official Website. Requested Flight Paths. Accessed May 2010. Available online at: http://www01.smgov.net/airport/n_flight_paths.aspx

City of Santa Monica, Map Catalog, Airport Influence Area (ALUC). May, 2010. http://www.smgov.net/isd/gis/map_catalog/index.html

City of Santa Monica Official Homepage, 2010.

City of Santa Monica. Water Efficiency Strategic Plan, 2002

City of Santa Monica. 2003. Sustainable City Plan.

Doramae, Robert F. Personal Communication regarding Native American Cultural Resources at Memorial Park. October 4th, 2010.

Environmental Data Resources, Inc. (EDR). Radius Search. March 2010.

Kiparsky, Michael and Peter H. Gleick, 2003. Climate Change and California Water Resources: A Survey and Summary of the Literature. California Energy Commission Report 500-04-073

Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM) (community Panel Number 06037C1590F), September 2008.

Leighton Consulting, Inc., "Feasibility Geotechnical Reconnaissance, City of Santa Monica Water Resources Division, Proposed Underground Water Reservoir, Memorial Park," February 18, 2008.

Leighton Consulting, Inc., "Geotechnical Exploration: City of Santa Monica Water Resource Division Proposed 1.0 MG Buried Non-Potable Water Tank". April 2010.

Native American Heritage Commission. Request for a Sacred Lands File Search and Native American Contacts list. September 30, 2010.

Parmesan, C. 2004. Ecological and Evolutionary Responses to Recent Climate Change.

Parmesan C, Galbraith H. 2004. Observed Ecological Impacts of Climate Change in North America. Arlington, VA: Pew Cent. Glob. Clim. Change

Rincon Consultants, Inc. Paleontological Resources Assessment. May 2010.

Rincon Consultants, Inc. Site Reconnaissance. April 2010.

San Buenaventura Research Associates. Historic Resources Report Santa Monica Memorial Park. May 7, 2010.

South Coast Air Quality Management District. 2007 Air Quality Management Plan. June 1, 2007.

South Coast Air Quality Management District. 1993 CEQA Air Quality Handbook. 1993. Accessed March, 2010.

South Coast Air Quality Management District, CEQA, Final Localized Significance Threshold Methodology, SCAQMD, June 2003. Available at: http://www.aqmd.gov/CEQA/handbook/LST/Method_final.pdf

Santa Monica Municipal Code. Available online at: http://www.qcode.us/codes/santamonica/

United Nations Framework Convention on Climate Change (www.unfccc.int), 2007.

U.S. Geological Survey, 2010. Available at: http://minerals.usgs.gov/.

Tetra Tech. City of Santa Monica Feasibility Report Memorial Park Reservoirs. September 2008.

7.0 LIST OF PREPARERS

The following individuals were involved in preparation of the EA:

7.1 AGENCY STAFF

7.1.1 U.S. ENVIRONMENTAL PROTECTION AGENCY

Ephraim Leon-Guerrero, Environmental Protection Specialist, Water Division, Region 9

7.1.2 CITY OF SANTA MONICA

Eric Bailey, Civil Engineer.

7.2 CONSULTANT PERSONNEL

7.2.1 RINCON CONSULTANTS, INC.

Joe Power, AICP, Principal

Chris Bersbach, MESM, Associate

Matt Maddox, MESM, Associate

Scott English, RME, REA II

Kathy Babcock, Graphics Technician

7.2.2 SAN BUENAVENTURA RESEARCH ASSOCIATES

Mitch Stone

Appendix A

Air Quality:URBEMIS Results
GHG Calculaton Worksheets

6/1/2011 1:38:26 PM

Urbemis 2007 Version 9.2.4

Summary Report for Summer Emissions (Pounds/Day)

File Name: C:\Documents and Settings\MMaddox\Application Data\Urbemis\Version9a\Projects\Memorial Park Reservoir.urb924

Project Name: Memorial Park

Project Location: Los Angeles County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2012 TOTALS (lbs/day unmitigated)	4.49	38.66	23.21	0.03	96.80	1.89	98.55	20.23	1.73	21.84	5,126.57
2012 TOTALS (lbs/day mitigated)	4.49	38.66	23.21	0.03	5.09	0.89	5.77	1.06	0.82	1.68	5,126.57
2013 TOTALS (lbs/day unmitigated)	4.20	34.87	22.08	0.02	4.47	1.70	6.17	0.94	1.56	2.50	4,941.22
2013 TOTALS (lbs/day mitigated)	4.20	29.17	22.08	0.02	0.36	0.79	1.15	0.08	0.72	0.81	4,941.22

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	0.12	0.02	1.55	0.00	0.01	0.01	2.81

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	0.03	0.03	0.24	0.00	0.04	0.01	26.34

6/1/2011 1:38:27 PM

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	0.15	0.05	1.79	0.00	0.05	0.02	29.15

6/1/2011 1:39:13 PM

Urbemis 2007 Version 9.2.4

Detail Report for Summer Construction Unmitigated Emissions (Pounds/Day)

File Name: C:\Documents and Settings\MMaddox\Application Data\Urbemis\Version9a\Projects\Memorial Park Reservoir.urb924

Project Name: Memorial Park

Project Location: Los Angeles County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES (Summer Pounds Per Day, Unmitigated)

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10 Total	PM2.5 Dust	PM2.5 Exhaust	PM2.5 Total	CO2
Time Slice 3/5/2012-3/30/2012 Active Days: 20	1.37	11.11	7.17	0.01	5.09	0.67	5.77	1.06	0.62	1.68	1,534.17
Demolition 03/05/2012-03/30/2012	1.37	11.11	7.17	0.01	5.09	0.67	5.77	1.06	0.62	1.68	1,534.17
Fugitive Dust	0.00	0.00	0.00	0.00	5.06	0.00	5.06	1.05	0.00	1.05	0.00
Demo Off Road Diesel	0.98	6.77	4.49	0.00	0.00	0.49	0.49	0.00	0.45	0.45	700.30
Demo On Road Diesel	0.36	4.29	1.74	0.01	0.02	0.18	0.20	0.01	0.16	0.17	709.58
Demo Worker Trips	0.03	0.05	0.95	0.00	0.01	0.00	0.01	0.00	0.00	0.00	124.29
Time Slice 4/2/2012-5/25/2012 Active Days: 40	4.12	**38.66**	19.20	**0.03**	**96.80**	1.76	**98.55**	**20.23**	1.61	**21.84**	**5,126.57**
Mass Grading 04/02/2012-05/25/2012	4.12	38.66	19.20	0.03	96.80	1.76	98.55	20.23	1.61	21.84	5,126.57
Mass Grading Dust	0.00	0.00	0.00	0.00	96.70	0.00	96.70	20.19	0.00	20.19	0.00
Mass Grading Off Road Diesel	2.69	21.95	11.51	0.00	0.00	1.07	1.07	0.00	0.99	0.99	2,247.32
Mass Grading On Road Diesel	1.40	16.66	6.74	0.03	0.09	0.68	0.77	0.03	0.63	0.66	2,754.96
Mass Grading Worker Trips	0.03	0.05	0.95	0.00	0.01	0.00	0.01	0.00	0.00	0.00	124.29
Time Slice 5/28/2012-7/6/2012 Active Days: 30	1.83	15.30	8.96	0.00	0.01	0.74	0.74	0.00	0.68	0.68	1,838.93
Trenching 05/28/2012-07/06/2012	1.83	15.30	8.96	0.00	0.01	0.74	0.74	0.00	0.68	0.68	1,838.93
Trenching Off Road Diesel	1.80	15.24	8.01	0.00	0.00	0.73	0.73	0.00	0.67	0.67	1,714.64
Trenching Worker Trips	0.03	0.05	0.95	0.00	0.01	0.00	0.01	0.00	0.00	0.00	124.29

6/1/2011 1:39:13 PM

Time Slice 7/9/2012-11/23/2012 Active Days: 100	1.21	9.01	8.03	0.01	0.02	0.53	0.56	0.01	0.49	0.50	1,455.83
Building 07/09/2012-05/24/2013	1.13	8.05	7.64	0.00	0.02	0.50	0.52	0.01	0.46	0.46	1,298.16
Building Off Road Diesel	1.03	7.87	4.56	0.00	0.00	0.49	0.49	0.00	0.45	0.45	893.39
Building Vendor Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building Worker Trips	0.09	0.18	3.08	0.00	0.02	0.01	0.03	0.01	0.01	0.02	404.77
Fine Grading 07/09/2012-11/23/2012	0.08	0.95	0.39	0.00	0.01	0.04	0.04	0.00	0.04	0.04	157.67
Fine Grading Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Off Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading On Road Diesel	0.08	0.95	0.39	0.00	0.01	0.04	0.04	0.00	0.04	0.04	157.67
Fine Grading Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Time Slice 11/26/2012-12/31/2012 Active Days: 26	**4.49**	37.74	**23.21**	0.02	4.47	**1.89**	6.35	0.94	**1.73**	2.68	4,941.29
Building 07/09/2012-05/24/2013	1.13	8.05	7.64	0.00	0.02	0.50	0.52	0.01	0.46	0.46	1,298.16
Building Off Road Diesel	1.03	7.87	4.56	0.00	0.00	0.49	0.49	0.00	0.45	0.45	893.39
Building Vendor Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building Worker Trips	0.09	0.18	3.08	0.00	0.02	0.01	0.03	0.01	0.01	0.02	404.77
Fine Grading 11/26/2012-02/08/2013	3.37	29.69	15.57	0.01	4.45	1.39	5.84	0.93	1.28	2.21	3,643.13
Fine Grading Dust	0.00	0.00	0.00	0.00	4.40	0.00	4.40	0.92	0.00	0.92	0.00
Fine Grading Off Road Diesel	2.69	21.95	11.51	0.00	0.00	1.07	1.07	0.00	0.99	0.99	2,247.32
Fine Grading On Road Diesel	0.65	7.69	3.11	0.01	0.04	0.31	0.36	0.01	0.29	0.30	1,271.52
Fine Grading Worker Trips	0.03	0.05	0.95	0.00	0.01	0.00	0.01	0.00	0.00	0.00	124.29

6/1/2011 1:39:13 PM

Time Slice 1/1/2013-2/8/2013 Active Days: 29	4.20	34.87	22.08	0.02	4.47	1.70	6.17	0.94	1.56	2.50	4,941.22
Building 07/09/2012-05/24/2013	1.04	7.45	7.34	0.00	0.02	0.44	0.46	0.01	0.40	0.41	1,298.11
Building Off Road Diesel	0.95	7.29	4.48	0.00	0.00	0.43	0.43	0.00	0.39	0.39	893.39
Building Vendor Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building Worker Trips	0.09	0.16	2.87	0.00	0.02	0.01	0.03	0.01	0.01	0.02	404.72
Fine Grading 11/26/2012-02/08/2013	3.16	27.42	14.74	0.01	4.45	1.26	5.71	0.93	1.16	2.10	3,643.12
Fine Grading Dust	0.00	0.00	0.00	0.00	4.40	0.00	4.40	0.92	0.00	0.92	0.00
Fine Grading Off Road Diesel	2.55	20.56	11.10	0.00	0.00	0.99	0.99	0.00	0.91	0.91	2,247.32
Fine Grading On Road Diesel	0.59	6.81	2.76	0.01	0.04	0.27	0.31	0.01	0.25	0.26	1,271.52
Fine Grading Worker Trips	0.03	0.05	0.88	0.00	0.01	0.00	0.01	0.00	0.00	0.00	124.28
Time Slice 2/11/2013-4/26/2013 Active Days: 55	3.39	21.42	18.13	0.01	0.03	1.60	1.63	0.01	1.47	1.48	2,867.94
Asphalt 02/11/2013-04/26/2013	2.35	13.96	10.78	0.00	0.01	1.16	1.18	0.00	1.07	1.07	1,569.83
Paving Off-Gas	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	2.19	13.60	8.91	0.00	0.00	1.15	1.15	0.00	1.05	1.05	1,272.04
Paving On Road Diesel	0.02	0.26	0.11	0.00	0.00	0.01	0.01	0.00	0.01	0.01	49.24
Paving Worker Trips	0.05	0.10	1.76	0.00	0.01	0.01	0.02	0.00	0.01	0.01	248.56
Building 07/09/2012-05/24/2013	1.04	7.45	7.34	0.00	0.02	0.44	0.46	0.01	0.40	0.41	1,298.11
Building Off Road Diesel	0.95	7.29	4.48	0.00	0.00	0.43	0.43	0.00	0.39	0.39	893.39
Building Vendor Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building Worker Trips	0.09	0.16	2.87	0.00	0.02	0.01	0.03	0.01	0.01	0.02	404.72
Time Slice 4/29/2013-5/24/2013 Active Days: 20	1.04	7.45	7.34	0.00	0.02	0.44	0.46	0.01	0.40	0.41	1,298.11
Building 07/09/2012-05/24/2013	1.04	7.45	7.34	0.00	0.02	0.44	0.46	0.01	0.40	0.41	1,298.11
Building Off Road Diesel	0.95	7.29	4.48	0.00	0.00	0.43	0.43	0.00	0.39	0.39	893.39
Building Vendor Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building Worker Trips	0.09	0.16	2.87	0.00	0.02	0.01	0.03	0.01	0.01	0.02	404.72

6/1/2011 1:39:13 PM

Time Slice 5/27/2013-6/28/2013 Active Days: 25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating 05/27/2013-06/28/2013	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Architectural Coating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Phase Assumptions

Phase: Demolition 3/5/2012 - 3/30/2012 - Clear Site Preparation

Building Volume Total (cubic feet): 232470

Building Volume Daily (cubic feet): 12054

On Road Truck Travel (VMT): 167.42

Off-Road Equipment:

1 Concrete/Industrial Saws (10 hp) operating at a 0.73 load factor for 8 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 1 hours per day

2 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 6 hours per day

Phase: Fine Grading 7/9/2012 - 11/23/2012 - Concrete Hauling for Tank and Pump Building

Total Acres Disturbed: 0

Maximum Daily Acreage Disturbed: 0

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 37.2

Off-Road Equipment:

Phase: Fine Grading 11/26/2012 - 2/8/2013 - Backfill around Tank and Pump Station

Total Acres Disturbed: 1.78

Maximum Daily Acreage Disturbed: 0.44

Fugitive Dust Level of Detail: Low

Onsite Cut/Fill: 0 cubic yards/day; Offsite Cut/Fill: 0 cubic yards/day

On Road Truck Travel (VMT): 300

Off-Road Equipment:

1 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 6 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

6/1/2011 1:39:13 PM

1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Mass Grading 4/2/2012 - 5/25/2012 - Excavate Site for reservoir and Pump Station

Total Acres Disturbed: 2

Maximum Daily Acreage Disturbed: 2

Fugitive Dust Level of Detail: Low

Onsite Cut/Fill: 650 cubic yards/day; Offsite Cut/Fill: 0 cubic yards/day

On Road Truck Travel (VMT): 650

Off-Road Equipment:

1 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 6 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Trenching 5/28/2012 - 7/6/2012 - Shoring

Off-Road Equipment:

2 Excavators (168 hp) operating at a 0.57 load factor for 8 hours per day

1 Other General Industrial Equipment (238 hp) operating at a 0.51 load factor for 8 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 0 hours per day

Phase: Paving 2/11/2013 - 4/26/2013 - Restore and Install Site Improvements-Tennis courts and Parking Lot

Acres to be Paved: 1.78

Off-Road Equipment:

4 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 6 hours per day

1 Pavers (100 hp) operating at a 0.62 load factor for 7 hours per day

1 Paving Equipment (104 hp) operating at a 0.53 load factor for 8 hours per day

1 Rollers (95 hp) operating at a 0.56 load factor for 7 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

Phase: Building Construction 7/9/2012 - 5/24/2013 - Install Tank, Pump Building, Piping, Pumps, Motors, Electrical, Controls, Instrumentation, Piping System

Off-Road Equipment:

1 Cranes (399 hp) operating at a 0.43 load factor for 4 hours per day

2 Forklifts (145 hp) operating at a 0.3 load factor for 6 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

6/1/2011 1:39:13 PM

Phase: Architectural Coating 5/27/2013 - 6/28/2013 - Type Your Description Here

Rule: Residential Interior Coatings begins 1/1/2005 ends 6/30/2008 specifies a VOC of 100

Rule: Residential Interior Coatings begins 7/1/2008 ends 12/31/2040 specifies a VOC of 50

Rule: Residential Exterior Coatings begins 1/1/2005 ends 6/30/2008 specifies a VOC of 250

Rule: Residential Exterior Coatings begins 7/1/2008 ends 12/31/2040 specifies a VOC of 100

Rule: Nonresidential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

6/1/2011 1:39:22 PM

Urbemis 2007 Version 9.2.4

Detail Report for Summer Construction Mitigated Emissions (Pounds/Day)

File Name: C:\Documents and Settings\MMaddox\Application Data\Urbemis\Version9a\Projects\Memorial Park Reservoir.urb924

Project Name: Memorial Park

Project Location: Los Angeles County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES (Summer Pounds Per Day, Mitigated)

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10 Total	PM2.5 Dust	PM2.5 Exhaust	PM2.5 Total	CO2
Time Slice 3/5/2012-3/30/2012 Active Days: 20	1.37	11.11	7.17	0.01	5.09	0.67	5.77	1.06	0.62	1.68	1,534.17
Demolition 03/05/2012-03/30/2012	1.37	11.11	7.17	0.01	5.09	0.67	5.77	1.06	0.62	1.68	1,534.17
Fugitive Dust	0.00	0.00	0.00	0.00	5.06	0.00	5.06	1.05	0.00	1.05	0.00
Demo Off Road Diesel	0.98	6.77	4.49	0.00	0.00	0.49	0.49	0.00	0.45	0.45	700.30
Demo On Road Diesel	0.36	4.29	1.74	0.01	0.02	0.18	0.20	0.01	0.16	0.17	709.58
Demo Worker Trips	0.03	0.05	0.95	0.00	0.01	0.00	0.01	0.00	0.00	0.00	124.29
Time Slice 4/2/2012-5/25/2012 Active Days: 40	4.12	**38.66**	19.20	**0.03**	1.62	0.84	2.46	0.35	0.78	1.13	**5,126.57**
Mass Grading 04/02/2012-05/25/2012	4.12	38.66	19.20	0.03	1.62	0.84	2.46	0.35	0.78	1.13	5,126.57
Mass Grading Dust	0.00	0.00	0.00	0.00	1.52	0.00	1.52	0.32	0.00	0.32	0.00
Mass Grading Off Road Diesel	2.69	21.95	11.51	0.00	0.00	0.16	0.16	0.00	0.15	0.15	2,247.32
Mass Grading On Road Diesel	1.40	16.66	6.74	0.03	0.09	0.68	0.77	0.03	0.63	0.66	2,754.96
Mass Grading Worker Trips	0.03	0.05	0.95	0.00	0.01	0.00	0.01	0.00	0.00	0.00	124.29
Time Slice 5/28/2012-7/6/2012 Active Days: 30	1.83	15.30	8.96	0.00	0.01	0.74	0.74	0.00	0.68	0.68	1,838.93
Trenching 05/28/2012-07/06/2012	1.83	15.30	8.96	0.00	0.01	0.74	0.74	0.00	0.68	0.68	1,838.93
Trenching Off Road Diesel	1.80	15.24	8.01	0.00	0.00	0.73	0.73	0.00	0.67	0.67	1,714.64
Trenching Worker Trips	0.03	0.05	0.95	0.00	0.01	0.00	0.01	0.00	0.00	0.00	124.29

6/1/2011 1:39:22 PM

Time Slice 7/9/2012-11/23/2012 Active Days: 100	1.21	9.01	8.03	0.01	0.02	0.53	0.56	0.01	0.49	0.50	1,455.83
Building 07/09/2012-05/24/2013	1.13	8.05	7.64	0.00	0.02	0.50	0.52	0.01	0.46	0.46	1,298.16
Building Off Road Diesel	1.03	7.87	4.56	0.00	0.00	0.49	0.49	0.00	0.45	0.45	893.39
Building Vendor Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building Worker Trips	0.09	0.18	3.08	0.00	0.02	0.01	0.03	0.01	0.01	0.02	404.77
Fine Grading 07/09/2012-11/23/2012	0.08	0.95	0.39	0.00	0.01	0.04	0.04	0.00	0.04	0.04	157.67
Fine Grading Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Off Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading On Road Diesel	0.08	0.95	0.39	0.00	0.01	0.04	0.04	0.00	0.04	0.04	157.67
Fine Grading Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Time Slice 11/26/2012-12/31/2012 Active Days: 26	**4.49**	31.65	**23.21**	0.02	0.36	0.89	1.26	0.08	0.82	0.91	4,941.29
Building 07/09/2012-05/24/2013	1.13	8.05	7.64	0.00	0.02	0.50	0.52	0.01	0.46	0.46	1,298.16
Building Off Road Diesel	1.03	7.87	4.56	0.00	0.00	0.49	0.49	0.00	0.45	0.45	893.39
Building Vendor Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building Worker Trips	0.09	0.18	3.08	0.00	0.02	0.01	0.03	0.01	0.01	0.02	404.77
Fine Grading 11/26/2012-02/08/2013	3.37	23.60	15.57	0.01	0.34	0.40	0.74	0.08	0.37	0.44	3,643.13
Fine Grading Dust	0.00	0.00	0.00	0.00	0.30	0.00	0.30	0.06	0.00	0.06	0.00
Fine Grading Off Road Diesel	2.69	15.86	11.51	0.00	0.00	0.08	0.08	0.00	0.07	0.07	2,247.32
Fine Grading On Road Diesel	0.65	7.69	3.11	0.01	0.04	0.31	0.36	0.01	0.29	0.30	1,271.52
Fine Grading Worker Trips	0.03	0.05	0.95	0.00	0.01	0.00	0.01	0.00	0.00	0.00	124.29

6/1/2011 1:39:22 PM

Time Slice 1/1/2013-2/8/2013 Active Days: 29	4.20	29.17	22.08	0.02	0.36	0.79	1.15	0.08	0.72	0.81	4,941.22
Building 07/09/2012-05/24/2013	1.04	7.45	7.34	0.00	0.02	0.44	0.46	0.01	0.40	0.41	1,298.11
Building Off Road Diesel	0.95	7.29	4.48	0.00	0.00	0.43	0.43	0.00	0.39	0.39	893.39
Building Vendor Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building Worker Trips	0.09	0.16	2.87	0.00	0.02	0.01	0.03	0.01	0.01	0.02	404.72
Fine Grading 11/26/2012-02/08/2013	3.16	21.71	14.74	0.01	0.34	0.35	0.69	0.08	0.32	0.40	3,643.12
Fine Grading Dust	0.00	0.00	0.00	0.00	0.30	0.00	0.30	0.06	0.00	0.06	0.00
Fine Grading Off Road Diesel	2.55	14.86	11.10	0.00	0.00	0.07	0.07	0.00	0.07	0.07	2,247.32
Fine Grading On Road Diesel	0.59	6.81	2.76	0.01	0.04	0.27	0.31	0.01	0.25	0.26	1,271.52
Fine Grading Worker Trips	0.03	0.05	0.88	0.00	0.01	0.00	0.01	0.00	0.00	0.00	124.28
Time Slice 2/11/2013-4/26/2013 Active Days: 55	3.39	17.64	18.13	0.01	0.03	0.54	0.57	0.01	0.50	0.51	2,867.94
Asphalt 02/11/2013-04/26/2013	2.35	10.19	10.78	0.00	0.01	0.10	0.12	0.00	0.09	0.10	1,569.83
Paving Off-Gas	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	2.19	9.83	8.91	0.00	0.00	0.09	0.09	0.00	0.08	0.08	1,272.04
Paving On Road Diesel	0.02	0.26	0.11	0.00	0.00	0.01	0.01	0.00	0.01	0.01	49.24
Paving Worker Trips	0.05	0.10	1.76	0.00	0.01	0.01	0.02	0.00	0.01	0.01	248.56
Building 07/09/2012-05/24/2013	1.04	7.45	7.34	0.00	0.02	0.44	0.46	0.01	0.40	0.41	1,298.11
Building Off Road Diesel	0.95	7.29	4.48	0.00	0.00	0.43	0.43	0.00	0.39	0.39	893.39
Building Vendor Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building Worker Trips	0.09	0.16	2.87	0.00	0.02	0.01	0.03	0.01	0.01	0.02	404.72
Time Slice 4/29/2013-5/24/2013 Active Days: 20	1.04	7.45	7.34	0.00	0.02	0.44	0.46	0.01	0.40	0.41	1,298.11
Building 07/09/2012-05/24/2013	1.04	7.45	7.34	0.00	0.02	0.44	0.46	0.01	0.40	0.41	1,298.11
Building Off Road Diesel	0.95	7.29	4.48	0.00	0.00	0.43	0.43	0.00	0.39	0.39	893.39
Building Vendor Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building Worker Trips	0.09	0.16	2.87	0.00	0.02	0.01	0.03	0.01	0.01	0.02	404.72

6/1/2011 1:39:22 PM

Time Slice 5/27/2013-6/28/2013 Active Days: 25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating 05/27/2013-06/28/2013	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Architectural Coating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Construction Related Mitigation Measures

The following mitigation measures apply to Phase: Fine Grading 11/26/2012 - 2/8/2013 - Backfill around Tank and Pump Station

For Soil Stablizing Measures, the Apply soil stabilizers to inactive areas mitigation reduces emissions by:

PM10: 84% PM25: 84%

For Soil Stablizing Measures, the Replace ground cover in disturbed areas quickly mitigation reduces emissions by:

PM10: 5% PM25: 5%

For Soil Stablizing Measures, the Water exposed surfaces 3x daily watering mitigation reduces emissions by:

PM10: 61% PM25: 61%

For Soil Stablizing Measures, the Equipment loading/unloading mitigation reduces emissions by:

PM10: 69% PM25: 69%

For Unpaved Roads Measures, the Reduce speed on unpaved roads to less than 15 mph mitigation reduces emissions by:

PM10: 44% PM25: 44%

For Unpaved Roads Measures, the Manage haul road dust 2x daily watering mitigation reduces emissions by:

PM10: 55% PM25: 55%

For Graders, the Use Aqueous Diesel Fuel mitigation reduces emissions by:

NOX: 15% PM10: 50% PM25: 50%

For Graders, the Diesel Particulate Filter (DPF) 1st Tier mitigation reduces emissions by:

PM10: 85% PM25: 85%

For Graders, the Diesel Oxidation Catalyst 15% mitigation reduces emissions by:

NOX: 15%

For Rubber Tired Dozers, the Use Aqueous Diesel Fuel mitigation reduces emissions by:

NOX: 15% PM10: 50% PM25: 50%

For Rubber Tired Dozers, the Diesel Particulate Filter (DPF) 1st Tier mitigation reduces emissions by:

PM10: 85% PM25: 85%

For Rubber Tired Dozers, the Diesel Oxidation Catalyst 15% mitigation reduces emissions by:

NOX: 15%

For Tractors/Loaders/Backhoes, the Use Aqueous Diesel Fuel mitigation reduces emissions by:

NOX: 15% PM10: 50% PM25: 50%

6/1/2011 1:39:22 PM

For Tractors/Loaders/Backhoes, the Diesel Particulate Filter (DPF) 1st Tier mitigation reduces emissions by:

PM10: 85% PM25: 85%

For Tractors/Loaders/Backhoes, the Diesel Oxidation Catalyst 15% mitigation reduces emissions by:

NOX: 15%

For Water Trucks, the Use Aqueous Diesel Fuel mitigation reduces emissions by:

NOX: 15% PM10: 50% PM25: 50%

For Water Trucks, the Diesel Particulate Filter (DPF) 1st Tier mitigation reduces emissions by:

PM10: 85% PM25: 85%

For Water Trucks, the Diesel Oxidation Catalyst 15% mitigation reduces emissions by:

NOX: 15%

The following mitigation measures apply to Phase: Mass Grading 4/2/2012 - 5/25/2012 - Excavate Site for reservoir and Pump Station

For Soil Stablizing Measures, the Apply soil stabilizers to inactive areas mitigation reduces emissions by:

PM10: 84% PM25: 84%

For Soil Stablizing Measures, the Replace ground cover in disturbed areas quickly mitigation reduces emissions by:

PM10: 5% PM25: 5%

For Soil Stablizing Measures, the Water exposed surfaces 3x daily watering mitigation reduces emissions by:

PM10: 61% PM25: 61%

For Soil Stablizing Measures, the Equipment loading/unloading mitigation reduces emissions by:

PM10: 69% PM25: 69%

For Unpaved Roads Measures, the Reduce speed on unpaved roads to less than 15 mph mitigation reduces emissions by:

PM10: 44% PM25: 44%

For Unpaved Roads Measures, the Manage haul road dust Pave all haul roads mitigation reduces emissions by:

PM10: 99% PM25: 99%

For Graders, the Diesel Particulate Filter (DPF) 1st Tier mitigation reduces emissions by:

PM10: 85% PM25: 85%

For Rubber Tired Dozers, the Diesel Particulate Filter (DPF) 1st Tier mitigation reduces emissions by:

PM10: 85% PM25: 85%

For Tractors/Loaders/Backhoes, the Diesel Particulate Filter (DPF) 1st Tier mitigation reduces emissions by:

PM10: 85% PM25: 85%

For Water Trucks, the Diesel Particulate Filter (DPF) 1st Tier mitigation reduces emissions by:

PM10: 85% PM25: 85%

The following mitigation measures apply to Phase: Paving 2/11/2013 - 4/26/2013 - Restore and Install Site Improvements-Tennis courts and Parking Lot

For Cement and Mortar Mixers, the Use Aqueous Diesel Fuel mitigation reduces emissions by:

NOX: 15% PM10: 50% PM25: 50%

6/1/2011 1:39:22 PM

For Cement and Mortar Mixers, the Diesel Particulate Filter (DPF) 1st Tier mitigation reduces emissions by:
PM10: 85% PM25: 85%
For Cement and Mortar Mixers, the Diesel Oxidation Catalyst 15% mitigation reduces emissions by:
NOX: 15%
For Pavers, the Use Aqueous Diesel Fuel mitigation reduces emissions by:
NOX: 15% PM10: 50% PM25: 50%
For Pavers, the Diesel Particulate Filter (DPF) 1st Tier mitigation reduces emissions by:
PM10: 85% PM25: 85%
For Pavers, the Diesel Oxidation Catalyst 15% mitigation reduces emissions by:
NOX: 15%
For Rollers, the Use Aqueous Diesel Fuel mitigation reduces emissions by:
NOX: 15% PM10: 50% PM25: 50%
For Rollers, the Diesel Particulate Filter (DPF) 1st Tier mitigation reduces emissions by:
PM10: 85% PM25: 85%
For Rollers, the Diesel Oxidation Catalyst 15% mitigation reduces emissions by:
NOX: 15%
For Tractors/Loaders/Backhoes, the Use Aqueous Diesel Fuel mitigation reduces emissions by:
NOX: 15% PM10: 50% PM25: 50%
For Tractors/Loaders/Backhoes, the Diesel Particulate Filter (DPF) 1st Tier mitigation reduces emissions by:
PM10: 85% PM25: 85%
For Tractors/Loaders/Backhoes, the Diesel Oxidation Catalyst 15% mitigation reduces emissions by:
NOX: 15%
For Paving Equipment, the Use Aqueous Diesel Fuel mitigation reduces emissions by:
NOX: 15% PM10: 50% PM25: 50%
For Paving Equipment, the Diesel Particulate Filter (DPF) 1st Tier mitigation reduces emissions by:
PM10: 85% PM25: 85%
For Paving Equipment, the Diesel Oxidation Catalyst 15% mitigation reduces emissions by:
NOX: 15%

Phase Assumptions

Phase: Demolition 3/5/2012 - 3/30/2012 - Clear Site Preparation
Building Volume Total (cubic feet): 232470
Building Volume Daily (cubic feet): 12054
On Road Truck Travel (VMT): 167.42
Off-Road Equipment:

6/1/2011 1:39:22 PM

1 Concrete/Industrial Saws (10 hp) operating at a 0.73 load factor for 8 hours per day
1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 1 hours per day
2 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 6 hours per day

Phase: Fine Grading 7/9/2012 - 11/23/2012 - Concrete Hauling for Tank and Pump Building
Total Acres Disturbed: 0
Maximum Daily Acreage Disturbed: 0
Fugitive Dust Level of Detail: Default
20 lbs per acre-day
On Road Truck Travel (VMT): 37.2
Off-Road Equipment:

Phase: Fine Grading 11/26/2012 - 2/8/2013 - Backfill around Tank and Pump Station
Total Acres Disturbed: 1.78
Maximum Daily Acreage Disturbed: 0.44
Fugitive Dust Level of Detail: Low
Onsite Cut/Fill: 0 cubic yards/day; Offsite Cut/Fill: 0 cubic yards/day
On Road Truck Travel (VMT): 300
Off-Road Equipment:
1 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day
1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 6 hours per day
1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day
1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Mass Grading 4/2/2012 - 5/25/2012 - Excavate Site for reservoir and Pump Station
Total Acres Disturbed: 2
Maximum Daily Acreage Disturbed: 2
Fugitive Dust Level of Detail: Low
Onsite Cut/Fill: 650 cubic yards/day; Offsite Cut/Fill: 0 cubic yards/day
On Road Truck Travel (VMT): 650
Off-Road Equipment:
1 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day
1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 6 hours per day
1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day
1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

6/1/2011 1:39:22 PM

Phase: Trenching 5/28/2012 - 7/6/2012 - Shoring

Off-Road Equipment:

2 Excavators (168 hp) operating at a 0.57 load factor for 8 hours per day

1 Other General Industrial Equipment (238 hp) operating at a 0.51 load factor for 8 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 0 hours per day

Phase: Paving 2/11/2013 - 4/26/2013 - Restore and Install Site Improvements-Tennis courts and Parking Lot

Acres to be Paved: 1.78

Off-Road Equipment:

4 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 6 hours per day

1 Pavers (100 hp) operating at a 0.62 load factor for 7 hours per day

1 Paving Equipment (104 hp) operating at a 0.53 load factor for 8 hours per day

1 Rollers (95 hp) operating at a 0.56 load factor for 7 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

Phase: Building Construction 7/9/2012 - 5/24/2013 - Install Tank, Pump Building, Piping, Pumps, Motors, Electrical, Controls, Instrumentation, Piping System

Off-Road Equipment:

1 Cranes (399 hp) operating at a 0.43 load factor for 4 hours per day

2 Forklifts (145 hp) operating at a 0.3 load factor for 6 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

Phase: Architectural Coating 5/27/2013 - 6/28/2013 - Type Your Description Here

Rule: Residential Interior Coatings begins 1/1/2005 ends 6/30/2008 specifies a VOC of 100

Rule: Residential Interior Coatings begins 7/1/2008 ends 12/31/2040 specifies a VOC of 50

Rule: Residential Exterior Coatings begins 1/1/2005 ends 6/30/2008 specifies a VOC of 250

Rule: Residential Exterior Coatings begins 7/1/2008 ends 12/31/2040 specifies a VOC of 100

Rule: Nonresidential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

6/1/2011 1:39:47 PM

Urbemis 2007 Version 9.2.4

Detail Report for Summer Area Source Unmitigated Emissions (Pounds/Day)

File Name: C:\Documents and Settings\MMaddox\Application Data\Urbemis\Version9a\Projects\Memorial Park Reservoir.urb924

Project Name: Memorial Park

Project Location: Los Angeles County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

AREA SOURCE EMISSION ESTIMATES (Summer Pounds Per Day, Unmitigated)

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth - No Summer Emissions							
Landscape	0.12	0.02	1.55	0.00	0.01	0.01	2.81
Consumer Products	0.00						
Architectural Coatings	0.00						
TOTALS (lbs/day, unmitigated)	0.12	0.02	1.55	0.00	0.01	0.01	2.81

Area Source Changes to Defaults

6/1/2011 1:39:56 PM

Urbemis 2007 Version 9.2.4

Detail Report for Summer Operational Unmitigated Emissions (Pounds/Day)

File Name: C:\Documents and Settings\MMaddox\Application Data\Urbemis\Version9a\Projects\Memorial Park Reservoir.urb924

Project Name: Memorial Park

Project Location: Los Angeles County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

OPERATIONAL EMISSION ESTIMATES (Summer Pounds Per Day, Unmitigated)

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
City park	0.03	0.03	0.24	0.00	0.04	0.01	26.34
TOTALS (lbs/day, unmitigated)	0.03	0.03	0.24	0.00	0.04	0.01	26.34

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2011 Temperature (F): 80 Season: Summer

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
City park		1.59	acres	1.78	2.83	25.71
					2.83	25.71

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	53.5	0.7	99.1	0.2
Light Truck < 3750 lbs	6.8	2.9	94.2	2.9

6/1/2011 1:39:56 PM

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Truck 3751-5750 lbs	22.9	0.4	99.6	0.0
Med Truck 5751-8500 lbs	10.0	1.0	99.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.5	0.0	86.7	13.3
Lite-Heavy Truck 10,001-14,000 lbs	0.5	0.0	60.0	40.0
Med-Heavy Truck 14,001-33,000 lbs	0.9	0.0	22.2	77.8
Heavy-Heavy Truck 33,001-60,000 lbs	0.5	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	2.3	65.2	34.8	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.8	0.0	87.5	12.5

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	12.7	7.0	9.5	13.3	7.4	8.9
Rural Trip Length (miles)	17.6	12.1	14.9	15.4	9.6	12.6
Trip speeds (mph)	30.0	30.0	30.0	30.0	30.0	30.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
City park				5.0	2.5	92.5

Operational Changes to Defaults

Greenhouse Gas Emission Worksheet
Construction Emissions Memorial Park Reservoir

From URBEMIS 2007 Vehicle Fleet Mix Output:

Daily Vehicle Miles Traveled (VMT):	650	(Net: Proposed - Existing)
Construction VMT (345 Days):	224,250	

Vehicle Type	Percent Type	CH4 Emission Factor (g/mile)*	CH4 Emission (g/mile)**	N2O Emission Factor (g/mile)*	N2O Emission (g/mile)**
Light Auto	0.0%	0.04	0	0.04	0
Light Truck < 3750 lbs	0.0%	0.05	0	0.06	0
Light Truck 3751-5750 lbs	0.0%	0.05	0	0.06	0
Med Truck 5751-8500 lbs	0.0%	0.12	0	0.2	0
Lite-Heavy Truck 8501-10,000 lbs	0.0%	0.12	0	0.2	0
Lite-Heavy Truck 10,001-14,000 lbs	0.0%	0.09	0	0.125	0
Med-Heavy Truck 14,001-33,000 lbs	0.0%	0.06	0	0.05	0
Heavy-Heavy Truck 33,001-60,000 lbs	100.0%	0.06	0.06	0.05	0.05
Other Bus	0.0%	0.06	0	0.05	0
Urban Bus	0.0%	0.06	0	0.05	0
Motorcycle	0.0%	0.09	0	0.01	0
School Bus	0.0%	0.06	0	0.05	0
Motor Home	0.0%	0.09	0	0.125	0
Total			**0.06**		**0.05**

Total Emissions (metric tons) =
Emission Factor by Vehicle Mix (g/mi) x Annual VMT(mi) x 0.000001 metric tons/g

Conversion to Carbon Dioxide Equivalency (CO2e) Units based on Global Warming Potential (GWP)

CH4	21	GWP
N2O	310	GWP
1 ton (short, US) =	0.90718474	metric ton

Construction Emissions (345 Days):

	Total Emissions		Total CO2e units	
CO2 Emissions***:	884.33	tons CO2	**802**	metric tons CO2e
CH4 Emissions:	0.0135	metric tons CH4	**0.28**	metric tons CO2e
N20 Emissions:	0.0112	metric tons N2O	**3.48**	metric tons CO2e
		Project Total:	***806***	***metric tons CO2e***

References

* from Table C.4: Methane and Nitrous Oxide Emission Factors for Mobile Sources by Vehicle and Fuel Type (g/mile).
in California Climate Action Registry General Reporting Protocol, Reporting Entity-Wide Greenhouse Gas Emissions, Version 3.1, January 2009.
Assume Model year 2000-present, gasoline fueled.
** Source: California Climate Action Registry General Reporting Protocol, Reporting Entity-Wide Greenhouse Gas Emissions, Version 3.1, January 2009.
*** From URBEMIS 2007 results for mobile sources

Appendix B

Cultural Resources:
Historic Resources Report
Cultural Resource Feasibility Study
Native American Consultation

Historic Resources Report
Santa Monica Memorial Park
Santa Monica, CA

7 May 2010

Prepared by:

SAN BUENAVENTURA
RESEARCH ASSOCIATES
HISTORIC · RESOURCES · CONSULTING
1328 WOODLAND DRIVE SANTA PAULA CA 93060

Prepared for:

Rincon Consultants, Inc.

790 East Santa Clara Street

Ventura, CA 93001

Executive Summary

This report was prepared for the purpose of assisting the City of Santa Monica in their compliance with the California Environmental Quality Act (CEQA) as it relates to historic resources, in connection with the proposed construction of a one million gallon water reservoir, a pumping station, and supporting pipelines. All of the facilities will be located underground within Santa Monica Memorial Park, located on the city block bounded by Colorado Avenue, Olympic Boulevard, 14th and 16th streets. [Figure 1]

This report assesses the historical and architectural significance of potentially significant historic properties in accordance with the National Register of Historic Places (NRHP), the California Register of Historical Resources (CRHR) Criteria for Evaluation, and City of Santa Monica criteria. A determination will be made as to whether adverse environmental impacts on historic resources, as defined by CEQA and the CEQA Guidelines, may occur as a consequence of the proposed project, and recommend the adoption of mitigation measures, as appropriate.

This report was prepared by San Buenaventura Research Associates of Santa Paula, California, Judy Triem, Historian; and Mitch Stone, Preservation Planner, for Rincon Consultants, Inc., and is based on a field investigation and research conducted in May 2010. The conclusions contained herein represent the professional opinions of San Buenaventura Research Associates, and are based on the factual data available at the time of its preparation, the application of the appropriate local, state and federal regulations, and best professional practices.

Summary of Findings

The property evaluated in this report was found to be ineligible for listing on the NRHP and CRHR and ineligible for designation as a City of Santa Monica landmark. Consequently, the property was found to not be a historic resource for purposes of CEQA. Consequently, the proposed project will have no potential adverse impacts on historic resources.

Report Contents

1. Administrative Setting 1
2. Impact Thresholds and Mitigation 3
3. Historical Setting 3
   General Historical Context
   Site-Specific Context
4. Eligibility of Historic Resources 5
   Properties Less Than 50 Years of Age
   Local Significance and Eligibility
5. Selected Sources 7

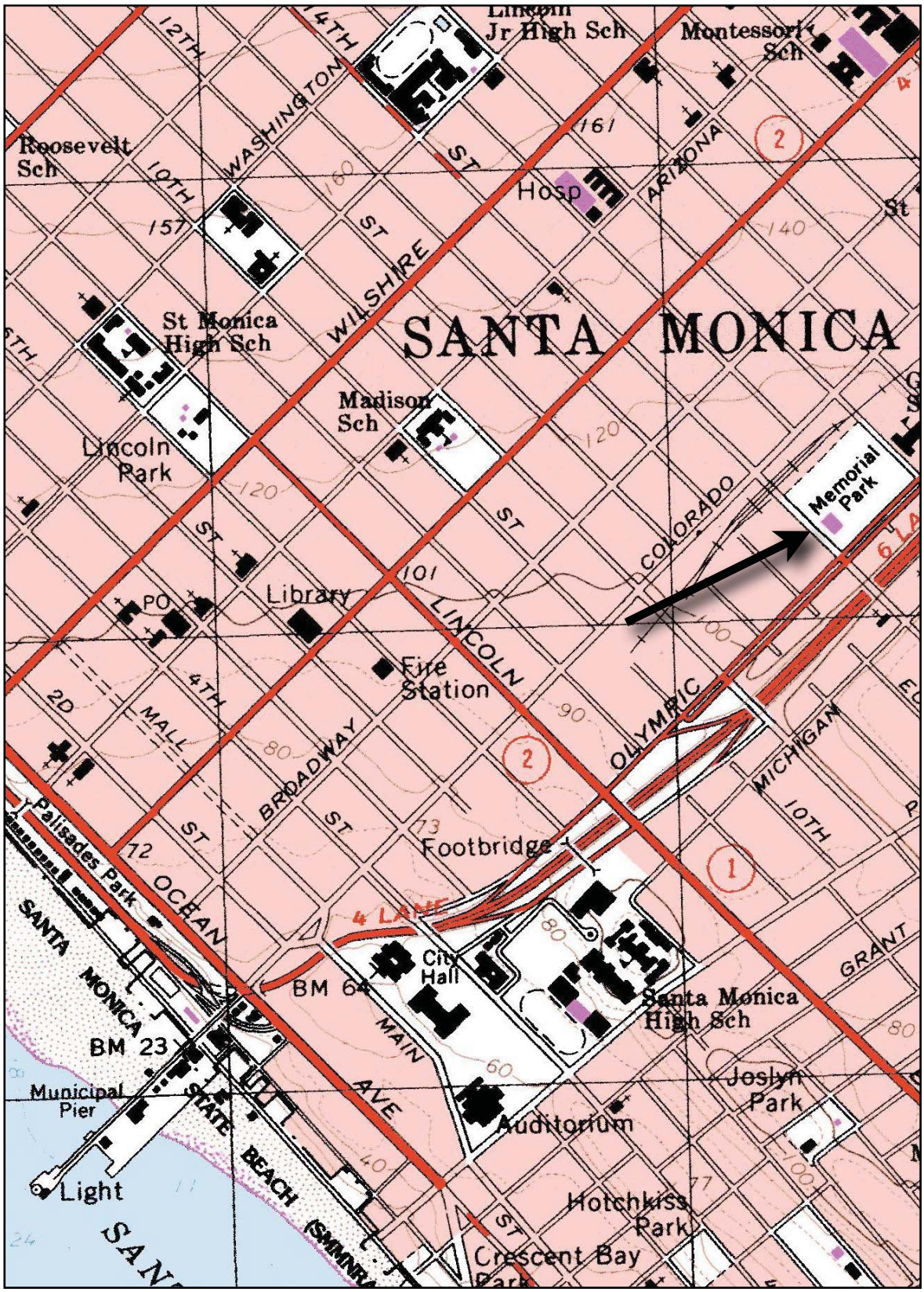


Figure 1. Project Location [Source: USGS 7.5′ Quadrangle, Beverly Hills, 1995]

1. Administrative Setting

The California Environmental Quality Act (CEQA) requires evaluation of project impacts on historic resources, including properties "listed in, or determined eligible for listing in, the California Register of Historical Resources [or] included in a local register of historical resources." A resource is eligible for listing on the California Register of Historical Resources if it meets any of the criteria for listing, which are:

1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
2. Is associated with the lives of persons important in our past;
3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
4. Has yielded, or may be likely to yield, information important in prehistory or history. (PRC §5024.1(c))

By definition, the California Register of Historical Resources also includes all "properties formally determined eligible for, or listed in, the National Register of Historic Places," and certain specified State Historical Landmarks. The majority of "formal determinations" of NRHP eligibility occur when properties are evaluated by the State Office of Historic Preservation in connection with federal environmental review procedures (Section 106 of the National Historic Preservation Act of 1966). Formal determinations of eligibility also occur when properties are nominated to the NRHP, but are not listed due to a lack of owner consent.

The criteria for determining eligibility for listing on the National Register of Historic Places (NRHP) have been developed by the National Park Service. Eligible properties include districts, sites, buildings and structures,

A. That are associated with events that have made a significant contribution to the broad patterns of our history; or
B. That are associated with the lives of persons significant in our past; or
C. That embody the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
D. That have yielded, or may be likely to yield, information important in prehistory or history.

According to the NRHP standards, in order for a property which is found to significant under one or more of the criteria to be considered eligible for listing, the "essential physical features" which define the property's significance must be present. The standard for determining if a property's essential physical features exist is known as *integrity*, which is defined as "the ability of a property to convey its significance." The integrity evaluation is broken down into seven "aspects."

The seven aspects of integrity are: *Location* (the place where the historic property was constructed or the place where the historic event occurred); *Design* (the combination of elements that create the form, plan, space, structure, and style of a property); *Setting* (the physical environment of a historic property); *Materials* (the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property); *Workmanship* (the physical evidence of the crafts of a particular culture or people during any given period of history or prehistory); *Feeling* (a property's expression of the aesthetic or historic sense of a particular period of time), and; *Association* (the direct link between an important historic event or person and a historic property).

The relevant aspects of integrity depend upon the NRHP criteria applied to a property. For example, a property nominated under Criterion A (events), would be likely to convey its significance primarily through integrity of

location, setting and association. A property nominated solely under Criterion C (design) would usually rely primarily upon integrity of design, materials and workmanship. The California Register regulations include similar language with regard to integrity, but also state that "it is possible that historical resources may not retain sufficient integrity to meet the criteria for listing in the National Register, but they may still be eligible for listing in the California Register." Further, according to the NRHP guidelines, the integrity of a property must be evaluated at the time the evaluation of eligibility is conducted. Integrity assessments cannot be based on speculation with respect to historic fabric and architectural elements which may exist but are not visible to the evaluator, or on restorations which are theoretically possible but which have not occurred. (CCR §4852 (c))

The minimum age criterion for the National Register of Historic Places (NRHP) and the California Register of Historical Resources (CRHR) is 50 years. Properties less than 50 years old may be eligible for listing on the NRHP if they can be regarded as "exceptional," as defined by the NRHP procedures, or in terms of the CRHR, "if it can be demonstrated that sufficient time has passed to understand its historical importance" (Chapter 11, Title 14, §4842(d)(2))

Historic resources as defined by CEQA also includes properties listed in "local registers" of historic properties. A "local register of historic resources" is broadly defined in §5020.1 (k) of the Public Resources Code, as "a list of properties officially designated or recognized as historically significant by a local government pursuant to a local ordinance or resolution." Local registers of historic properties come essentially in two forms: (1) surveys of historic resources conducted by a local agency in accordance with Office of Historic Preservation procedures and standards, adopted by the local agency and maintained as current, and (2) landmarks designated under local ordinances or resolutions. These properties are "presumed to be historically or culturally significant... unless the preponderance of the evidence demonstrates that the resource is not historically or culturally significant." (PRC §§ 5024.1, 21804.1, 15064.5)

According to Section 9.36.100 of the Santa Monica City Code, Landmark or Historic District designation criteria, (a) ... the Landmarks Commission may approve the landmark designation of a structure, improvement, natural feature or an object if it finds that it meets one or more of the following criteria:

1. It exemplifies, symbolizes, or manifests elements of the cultural, social, economic, political or architectural history of the City.
2. It has aesthetic or artistic interest or value, or other noteworthy interest or value.
3. It is identified with historic personages or with important events in local, state or national history.
4. It embodies distinguishing architectural characteristics valuable to a study of a period, style, method of construction, or the use of indigenous materials or craftsmanship, or is a unique or rare example of an architectural design, detail or historical type valuable to such a study.
5. It is a significant or representative example of the work or product of a notable builder, designer or architect.
6. It has a unique location, a singular physical characteristic, or is an established and familiar visual feature of a neighborhood, community or the City.

(b) ... a geographic area or a noncontiguous grouping of thematically related properties may be designated a Historic District if the City Council finds that such area meets one of the following criteria:

1. Any of the criteria identified in Section 9.36.100(a) 1 through 6.

2. It is a noncontiguous grouping of thematically related properties or a definable area possessing a concentration of historic, scenic or thematic sites, which contribute to each other and are unified aesthetically by plan, physical development or architectural quality.
3. It reflects significant geographical patterns, including those associated with different eras of settlement and growth, particular transportation modes, or distinctive examples of park or community planning.
4. It has unique location, a singular physical characteristic, or is an established and familiar visual feature of a neighborhood, community or the City.

2. Impact Thresholds and Mitigation

According to the Public Resources Code, "a project that may cause a substantial change in the significance of an historical resource is a project that may have a significant effect on the environment." The Public Resources Code broadly defines a threshold for determining if the impacts of a project on an historic property will be significant and adverse. By definition, a substantial adverse change means, "demolition, destruction, relocation, or alterations," such that the significance of an historical resource would be impaired. For purposes of NRHP eligibility, reductions in a property's integrity (the ability of the property to convey its significance) should be regarded as potentially adverse impacts. (PRC §21084.1, §5020.1(6))

Further, according to the CEQA Guidelines, "an historical resource is materially impaired when a project... [d]emolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register of Historical Resources [or] that account for its inclusion in a local register of historical resources pursuant to section 5020.1(k) of the Public Resources Code or its identification in an historical resources survey meeting the requirements of section 5024.1(g) of the Public Resources Code, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant."

The lead agency is responsible for the identification of "potentially feasible measures to mitigate significant adverse changes in the significance of an historical resource." The specified methodology for determining if impacts are mitigated to less than significant levels are the *Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings and the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings* (1995), publications of the National Park Service. (PRC §15064.5(b)(3-4))

3. Historical Setting

General Historical Context

The area which is now the City of Santa Monica was originally a part of the Rancho San Vicente, a land grant given to Francisco Sepulveda in 1828 for his services as a soldier for the Mexican government and confirmed in 1839 by Governor Alvarado. Sepulveda built three houses on his rancho which also contained an orchard and 500 head of cattle, along with 50 head of sheep. He died in 1853 having willed his rancho to his wife, Ramona.

Prior to the establishment of Santa Monica, a trail crossed the site of what would eventually become Santa Monica to the foot of what is now Colorado Avenue. This trail was used by teams of oxen hauling brea from Hancock Ranch tar pits to a small wharf extending into Santa Monica Bay.

In 1872 Colonel R.S. Baker of San Francisco, a "forty-niner," purchased Rancho San Vicente from the Sepulveda heirs for $55,000 in order to establish a sheep ranch. He later purchased adjoining property to the northwest and southeast which he stocked with sheep.

A wealthy Nevada senator, John P. Jones, purchased two-thirds interest in the Baker ranch in 1875 and the construction of a wharf and a railroad to Los Angeles were initiated. The town of Santa Monica was laid out and recorded on July 10, 1875, bounded on the northwest by Montana Avenue, on the southeast by Railroad Avenue (now Colorado) on the northeast by 26th Street and on the southwest by the Pacific Ocean.

A lively auction of lots followed. The *Santa Monica Outlook* began publication in November of 1875 announcing that "Santa Monica continues to advance. We now have a wharf... two hotels, one handsome clubhouse... two private schools." Jones completed the Los Angeles and Independence railroad from Santa Monica to Los Angeles, raising expectations.

Santa Monica, residents believed, was destined to become a great port city, but events in 1876 dashed those hopes, when the Southern Pacific Railroad was completed to Los Angeles. Awarded the Los Angeles to San Pedro narrow gauge railroad as a bonus, the much larger Southern Pacific began a rate war that resulted in the sale of Jones' Santa Monica-Los Angeles railroad to the Southern Pacific, which immediately increased rates and diverted business to San Pedro.

Following this loss, Santa Monica experienced further difficulties, including a smallpox epidemic and a severe drought that brought an end to the local sheep industry. Baker and Jones attempted to stem the tide of a dwindling population by encouraging tourism and transforming Santa Monica into a resort community. These first efforts were a failure, to the extent that by 1880, lots that once brought hundreds of dollars were selling for as little as ten cents down.

The boom of the late 1880s in Southern California had a revitalizing effect on Santa Monica, sparking a revival in home and hotel construction. In 1890-91, Collis P. Huntington, the president of the Southern Pacific Railroad, attempted once again to transform Santa Monica into a regional port city, building a large new wharf for the purpose and aggressively lobbying the U.S. Congress for improvement funding. Ultimately, however, the City of Los Angeles prevailed in the long battle, and the federal port improvement funds went to San Pedro.

Santa Monica fell back on tourism, beginning a campaign advertising itself as a residential and resort community. In 1892 an amusement park was built at Ocean Park, known as South Santa Monica, along the beach, and the Santa Fe and Santa Monica Railroad built a line and station to encourage tourists to visit "the Coney Island of the Pacific." Visitors were also attracted to the new golf courses, and race tracks which staged automobile races between 1909 and 1916. Santa Monica incorporated as a charter city in 1907.

Although Santa Monica had been growing steadily since the late 1880s, the regional boom of the 1920s marked the period of greatest growth, as Santa Monica's mild climate and graceful residential areas were successfully marketed to buyers in the East and Midwest. Within easy commuting distance of Hollywood, Santa Monica also became a favorite among entertainment industry figures, many of whom built elaborate summer homes on the beach.

Also during the 1920s, Donald W. Douglas began a fledgling aircraft company which eventually became the Douglas Aircraft Company, one of the world's largest aircraft manufacturers during the 1940s and 1950s. The main plant was located on eighteen acres on Ocean Avenue. Other manufacturing plants were built in Santa Monica during this time period, some on land outside of the original city boundaries.

Site-Specific Context

The project site, currently known as Santa Monica Memorial Park, covers most of the block bounded by Colorado Avenue, Olympic Boulevard, 14th and 16th streets. In 1918 this block was nearly entirely vacant except for a few single family residences located on eight parcels on 15th and 16th streets, near Olympic Boulevard (then called Pennsylvania Avenue). Along the northern edge of the block near Colorado Avenue was the right-of-way of the Pacific Electric Railway "Air Line" route, one of several which connected Los Angeles to Santa Monica and Venice. By 1950 the northern end of the block between the Pacific Electric line and Colorado Avenue was the location of the John W. Fisher Lumber Company, consisting of an office building and three lumber sheds dating from circa 1923.

During the 1930s, Santa Monica Municipal Stadium was established on the portion of the block near Olympic Boulevard. A large modified u-shaped grandstand was built. Behind it was a trailer park. A wide variety of entertainment events were held at the stadium. During the mid-1930s, it served as a baseball stadium for minor league teams of the Pacific Coast League and the California Winter League. A rodeo was also held on the site in 1936. Fans could also watch midget auto and motorcycle racing on a square track at the stadium, from 1936 through the mid-1940s. (*Santa Monica Outlook,* 1-22-1940; Sanborn Maps 1918 and 1918 updated to 1950)

Between 1950 and 1952 the City of Santa Monica established Memorial Park on the site, and the grandstands were demolished. The eight residential lots near Olympic Boulevard were acquired and absorbed into the park. In 1953 service on the Pacific Electric line was discontinued, which permitted the lumber yard to expand onto the former right-of-way. Historic photos from the 1950s show a recreation building located at the corner of Olympic Boulevard and 14th Street and a little league baseball field with wood bleachers. (Santa Monica Public Library Image Archives)

None of these earlier improvements appear to remain on the park site. A search in the index of the Santa Monica newspapers suggests some of the dates when the current buildings were constructed in Memorial Park. A new community building costing $168,000 was proposed in 1968. In 1971 a new gym at Memorial Park opened. In 1974 Stanley Borbals was hired as the park project architect apparently to design an addition to the 14th Street side of the gym. In 1976 a new Cultural Arts building opened and the Recreation unit was ready. (*Evening Outlook,* 3-29-1968; 6-4-1971; 8-12-1974; 8-25-1974; 11-7-1974; 4-1-1976)

It appears that the original recreation building constructed between 1950 and 1952 was demolished to make way for the newer buildings constructed from 1968 through 1976. Other structures and uses in the park include baseball fields, tennis courts, and a children's play area. In 2005 a new skatepark was constructed in the park.

4. Eligibility of Historic Resources

None of the improvements, buildings or structures currently located in Memorial Park appear to be of sufficient age to be regarded as eligible for the NRHP or CRHR.

Properties Less Than 50 Years of Age

Properties less than 50 years of age may be eligible if they can be found to be "exceptional." While no hard and fast definition for "exceptional" is provided in the NRHP literature, the special language developed to support nominating these properties was clearly intended to accommodate properties which demonstrate a level of importance such that their historical significance can be understood without the passage of time. In

general, according to NRHP literature, eligible "exceptional" properties may include, "resources so fragile that survivors of any age are unusual. [Exceptionalness] may be a function of the relative age of a community and its perceptions of old and new. It may be represented by a building or structure whose developmental or design value is quickly recognized as historically significant by the architectural or engineering profession [or] it may be reflected in a range of resources for which the community has an unusually strong associative attachment." The CRHR provides for a somewhat less rigorous test for establishing the eligibility of properties less than 50 years of age, "if it can be demonstrated that sufficient time has passed to understand its historical importance." No buildings or structures in the study area appear to rise to the exceptional level by either definition.

Local Significance and Eligibility

Neither Santa Monica Memorial Park or any improvements within the park appear to be eligible for designation as a Santa Monica City Landmark. It does not appear that any of the improvements within the park or the park as a whole "exemplifies, symbolizes, or manifests elements of the cultural, social, economic, political or architectural history of the City" (Criterion 1); or, "has aesthetic or artistic interest or value, or other noteworthy interest or value" (Criterion 2); or "is identified with historic personages or with important events in local, state or national history" (Criterion 3); or "embodies distinguishing architectural characteristics valuable to a study of a period, style, method of construction, or the use of indigenous materials or craftsmanship, or is "a unique or rare example of an architectural design, detail or historical type valuable to such a study" (Criterion 4); or "is a significant or representative example of the work or product of a notable builder, designer or architect" (Criterion 5); or "has a unique location, a singular physical characteristic, or is an established and familiar visual feature of a neighborhood, community or the City" (Criterion 6).

This property is not listed in the *City of Santa Monica Historic Resources Inventory* (June 2009).

5. Selected Sources

Crump, Spenser. *Ride the Big Red Cars: The Pacific Electric Story*. Glendale: Trans-Anglo Books, 1983.

Gebhard, David and Robert Winter. *Architecture in Los Angeles, A Compleat Guide*. Salt Lake City: Gibbs M. Smith, 1985.

Heumann, Leslie. City of Santa Monica Historic Resources Survey, Phase 3, 1994.

Los Angeles. *A Guide to the City and its Environs*. New York: Hastings House, 1951.

Los Angeles County Property Assessment Information System.

Los Angeles Times (various dates).

National Register Bulletin 15: How to Apply the National Register Criteria for Evaluation. U.S. Department of the Interior, National Park Service, Interagency Resources Division, nd.

National Register Bulletin 22: Guidelines for Evaluating and Nominating Properties that have Achieved Significance within the Last Fifty Years. U.S. Department of the Interior, National Park Service, Interagency Resources Division, nd.

Parkinson Field Associates. Historic Resources Inventory Update for the City of Santa Monica. Final Report, September 30, 1995.

Robinson, W.W. *Ranchos become Cities*. Pasadena, CA: San Pasqual Press, 1939.

Sanborn Maps: 1918 (updated to 1950).

Spalding, William A. *History and Reminiscences Los Angeles City and County California, Vol. I*. Los Angeles, CA: J.R. Finnell & Sons Publishing Company, 1930.

Santa Monica, City of. City of Santa Monica Historic Resources Inventory. City of Santa Monica, 6-12-2009.

Santa Monica, City of. City Park and Recreation Master Plan. City of Santa Monica, 1997.

Santa Monica Evening Outlook, 3-29-1968; 6-4-1971; 8-12-1974; 8-25-1974; 11-7-1974; 4-1-1976.

Santa Monica Outlook, 1-22-1940.

Photo 1. Gym and recreation buildings, viewed from west.

Photo 2. Gym and recreation buildings, viewed from northwest (14th Street on right).

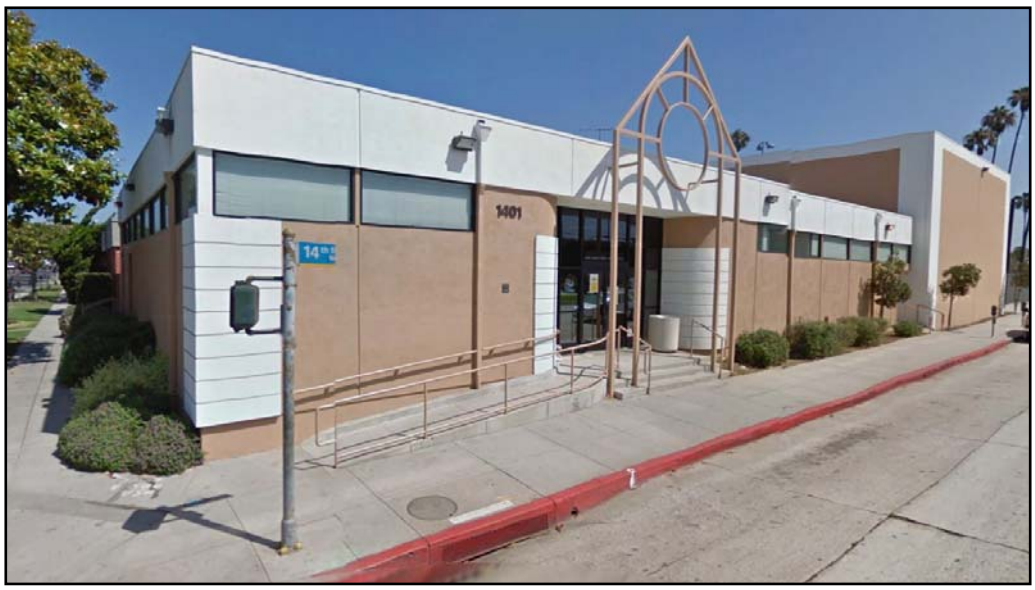


Photo 3. Gym and recreation buildings, viewed from south (corner 14th Street and Olympic Boulevard).

Photo 4. Skate park, viewed from west.

Photo 5. Children's play area, viewed from south.

Photo 6. Parking lot and tennis courts, viewed from southeast.

STATE OF CALIFORNIA Arnold Schwarzenegger, Governor

NATIVE AMERICAN HERITAGE COMMISSION
915 CAPITOL MALL, ROOM 364
SACRAMENTO, CA 95814
(916) 653-6251
Fax (916) 657-5390
Web Site www.nahc.ca.gov
ds_nahc@pacbell.net

September 30, 2010

Mr. Joe Power
RINCON CONSULTANTS, INC.
180 N. Ashwood Avenue
Ventura, CA 93003

Sent by FAX to: 805-644-4240
No. of Pages: 4

Re: Request for a Sacred Lands File Search and Native American Contacts list for the "**Memorial Park Reservoir Project**" located west of downtown Los Angeles; Los Angeles County, California

Dear Mr. Power:

The Native American Heritage Commission (NAHC), the State of California 'Trustee Agency' for the protection and preservation of Native American cultural resources. The NAHC SLF search, **did Indicate** the presence of Native American cultural resources within one-half mile of the proposed project site (APE).

Also, this letter includes state and federal statutes relating to Native American historic properties of religious and cultural significance to American Indian tribes and interested Native American individuals as 'consulting parties' under both state and federal law. State law also addresses the freedom of Native American Religious Expression in Public Resources Code §5097.9.

The California Environmental Quality Act (CEQA – CA Public Resources Code 21000-21177, amendments effective 3/18/2010) requires that any project that causes a substantial adverse change in the significance of an historical resource, that includes archaeological resources, is a 'significant effect' requiring the preparation of an Environmental Impact Report (EIR) per the CEQA Guidelines defines a significant impact on the environment as 'a substantial, or potentially substantial, adverse change in any of physical conditions within an area affected by the proposed project, including ...objects of historic or aesthetic significance." In order to comply with this provision, the lead agency is required to assess whether the project will have an adverse impact on these resources within the 'area of potential effect (APE), and if so, to mitigate that effect.

Early consultation with Native American tribes in your area is the best way to avoid unanticipated discoveries once a project is underway. Culturally-affiliated tribes and individuals may have knowledge of the religious and cultural significance of the historic properties in the project area (e.g. APE). We strongly recommend that you contact persons on the attached list of Native American contacts to see if there are any updated contacts and to determine if the proposed project may harm a cultural resource.

Furthermore we suggest that you contact the California Historic Resources Information System (CHRIS) for pertinent archaeological data within or near the APE, at the Office of

Historic Preservation Coordinator's office (at 916-653-7278, for referral to the nearest Information Center of which there are 10.

Consultation with tribes and interested Native American consulting parties, on the NAHC list, should be conducted in compliance with the requirements of federal NEPA (42 U.S.C 4321-43351) and Section 106 and 4(f) of federal NHPA (16 U.S.C. 470 *et seq*), 36 CFR Part 800.3 (f) (2), the President's Council on Environmental Quality (CSQ, 42 U.S.C 4371 *et seq.* and NAGPRA (25 U.S.C. 3001-3013) as appropriate. The 1992 *Secretary of the Interiors Standards for the Treatment of Historic Properties* were revised so that they could be applied to all historic resource types included in the National Register of Historic Places and including cultural landscapes.

Also, Public Resources Code Section 5097.98 and Health & Safety Code Section 7050.5 provide for provisions for accidentally discovered archeological resources during construction and mandate the processes to be followed in the event of an accidental discovery of any human remains in a project location other than a 'dedicated cemetery'.

To be effective, consultation on specific projects must be the result of an ongoing relationship between Native American tribes and lead agencies, project proponents and their contractors, in the opinion of the NAHC. Regarding tribal consultation, a relationship built around regular meetings and informal involvement with local tribes will lead to more qualitative consultation tribal input on specific projects. Also, the 2006 SB 1059 the state enabling legislation to the Federal Energy Policy Act of 2005, does mandate tribal consultation for the 'electric transmission corridors. This is codified in the California Public Resources Code, Chapter 4.3, and §25330 to Division 15, requires consultation with California Native American tribes, and identifies both federally recognized and non-federally recognized on a list maintained by the NAHC. Consultation with Native American communities is also a matter of environmental justice as defined by California Government Code §65040.12(e).

The response to this search for Native American cultural resources is conducted in the NAHC Sacred Lands Inventory, established by the California Legislature (CA Public Resources Code 5097.94(a) and is exempt from the CA Public Records Act (c.f. California Government Code 6254.10) although Native Americans on the attached contact list may wish to reveal the nature of identified cultural resources/historic properties. Confidentiality of "historic properties of religious and cultural significance" may also be protected under Section 304 of he NHA or at the Secretary of the Interior discretion if not eligible for listing on the National Register of Historic Places. The Secretary may also be advised by the federal Indian Religious Freedom Act (cf. 42 U.S.C., 1996) in issuing a decision on whether or not to disclose items of religious and/or cultural significance identified in or near the APE and possibility threatened by proposed project activity.

If you have any questions about this response to your request, please do not hesitate to contact me at (916) 653-6251.

Sincerely,

Dave Singleton
Program Analyst

Attachment: Native American Contact List

Native American Contacts
Los Angeles County
September 30, 2010

LA City/County Native American Indian Comm
Ron Andrade, Director
3175 West 6th Street, Rm.
Los Angeles , CA 90020
randrade@css.lacounty.gov
(213) 351-5324
(213) 386-3995 FAX

Gabrielino Tongva Nation
Sam Dunlap, Chairperson
P.O. Box 86908
Los Angeles , CA 90086
samdunlap@earthlink.net
(909) 262-9351 - cell
Gabrielino Tongva

Ti'At Society
Cindi Alvitre
6515 E. Seaside Walk, #C
Long Beach , CA 90803
calvitre@yahoo.com
(714) 504-2468 Cell
Gabrielino

Gabrielino Tongva Indians of California Tribal Council
Robert F. Doramae, Tribal Chair/Cultural
P.O. Box 490
Bellflower , CA 90707
gtongva@verizon.net
562-761-6417 - voice
562-925-7989 - fax
Gabrielino Tongva

Tongva Ancestral Territorial Tribal Nation
John Tommy Rosas, Tribal Admin.
tattnlaw@gmail.com
310-570-6567
Gabrielino Tongva

Gabrielino-Tongva Tribe
Bernie Acuna
1875 Century Pk East #1500
Los Angeles , CA 90067
(310) 428-7720 - cell
(310) 587-2281
Gabrielino

Gabrieleno/Tongva San Gabriel Band of Mission
Anthony Morales, Chairperson
PO Box 693
San Gabriel , CA 91778
GTTribalcouncil@aol.com
(626) 286-1632
(626) 286-1758 - Home
(626) 286-1262 -FAX
Gabrielino Tongva

Shoshoneon Gabrieleno Band of Mission Indians
Andy Salas, Chairperson
PO Box 393
Covina , CA 91723
(626)926-41``31
gabirelenoindians@yahoo.com
213) 688-0181 - FAX
Gabrieleno

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code. Also, federal National Environmental Policy Act (NEPA), National Historic Preservation Act, Section 106 and federal NAGPRA. And 36 CFR Part 800.

This list is only applicable for contacting local Native Americans for consultation purposes with regard to cultural resources impact by the proposed Memorial Park Reservoir Project; located between 14th and 16th Streets and between Olympic Boulevard and Colorado Avenue; City of Los Angeles; Los Angeles County, California for which a Sacred Lands File search and Native American Contacts were requested.

Native American Contacts
Los Angeles County
September 30, 2010

Gabrielino-Tongva Tribe
Linda Candelaria, Chairwoman
1875 Century Park East, Suite 1500
Los Angeles , CA 90067 Gabrielino
lcandelaria1@gabrielinoTribe.org
310-428-5767- cell
(310) 587-2281 - fax

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code. Also, federal National Environmental Policy Act (NEPA), National Historic Preservation Act, Section 106 and federal NAGPRA. And 36 CFR Part 800.

This list is only applicable for contacting local Native Americans for consultation purposes with regard to cultural resources impact by the proposed Memorial Park Reservoir Project; located between 14th and 16th Streets and between Olympic Boulevard and Colorado Avenue; City of Los Angeles; Los Angeles County, California for which a Sacred Lands File search and Native American Contacts were requested.

Gabrielino Tongva
Indians of California
POB 490, Bellflower, CA 90707
gtongva@verizon.net

Robert F. Dorame
562-761-6417

Mathew Maddox
Associate Environmental Planner
Rincon Consultants, Inc.
180 North Ashwood Avenue
Ventura, California 93003

Sent via email to: Mathew Maddox at: mmaddox@rinconconsultants.com

October 5, 2010

Dear Mathew:

It was a pleasure to speak with you this morning. Thank you for contacting me regarding the Memorial Park excavation in Santa Monica, CA.

As I discussed with you in our phone conversation, I was born in Santa Monica, lived on 12th Street at Olympic and my parents and siblings are buried in the little cemetery on 14th so I know the area well. There are so many parts of the city that have signs of prehistory occupation just under the soil level, showing it was a great place to live then as it is now. It has been disheartening over the years to enter someone's home and see a mano sitting on their mantle, something found in their back yard and of course, not reported to anyone so the history is lost.

While I cannot recollect finding shell or artifacts at the location of the park, due to native human remains being uncovered within one half mile of the project, it will be necessary for the project to retain native monitoring throughout all phases of soil disturbances as well as any locations that may show up during grading that uncovers any cultural material. I would very much appreciate the opportunity to work with you on this project.

Thank you for your consideration and either way, I hope you will keep me informed of what conclusions you may develop during this process.

Sincerely,

Robert F. Dorame
Tribal Chair
Cultural Consultant

CULTURAL RESOURCE FEASIBILITY STUDY

Water Infrastructure-Santa Monica Reliability Improvement Project, XP-96945401-0

MEMORIAL PARK
CITY OF SANTA MONICA
LOS ANGELES COUNTY, CALIFORNIA

Prepared For:

Tetra Tech, Inc.
16241 Laguna Canyon Road, Suite 200
Irvine, CA 92618

and

City of Santa Monica / Water Resources Division
1685 Main Street
Santa Monica, CA 90401

Prepared By:

Shannon Loftus, M.A.H.P./RPA
Robin D. Turner, M.A.

Edited By:

Robin D. Turner, M.A.
Orlay Edward Plummer, Ph.D.

ArchaeoPaleo Resource Management Inc.
13368 Beach Avenue
Marina del Rey, CA 90292
310-823-2850

May 2008

TABLE OF CONTENTS

EXECUTIVE SUMMARY v

INTRODUCTION 1

Purpose of Study 1
Project Area Description 1
Regulatory Requirements 5
Cultural Resources 5
Paleontologic Resources 12
Native American Consultation 13
Project Personnel 13

BACKGROUND 14

Geologic and Natural Environmental Setting 14
Ethnographic Setting 14
Historic Context 15
Prehistoric Period 15
Historic Period 17
Historic Context-City of Santa Monica and the Project Area 20
Archival Research 21
Cultural Archival Research 21

EXISTING CONDITIONS 24

Methodology 24
Results 24

SUMMARY and MANAGEMENT RECOMMENDATIONS 33

Summary of Existing Conditions 33
Management Recommendations 33

REFERENCES 35

LIST OF FIGURES

Figure 1.	General project area map	3
Figure 2.	Project location map	4
Figure 3.	Gabrielino or Tongva territory	15
Figure 4.	Overview of City Yard facility	24
Figure 5.	City Yard facility	25
Figure 6.	Overview of modal scale and foundation slab	26
Figure 7.	North side of PAL Building	27
Figure 8.	Detail of PAL building	27
Figure 9.	Detail of Pal building	27
Figure 10.	PAL Building	28
Figure 11.	Building at 14th Street and Colorado Blvd	29
Figure 12.	Building south of Colorado Boulevard and 16th Street	29
Figure 13.	Santa Monica-Malibu Unified School District building	30
Figure 14.	Building south of Olympic Boulevard	30
Figure 15.	Building south of Olympic Boulevard	31
Figure 16.	Building east of 14th Street and Olympic Boulevard	31
Figure 17.	Building north of 14th Street and Olympic Boulevard	32
Figure 18.	Building west of 14th Street and Olympic Boulevard	32

LIST OF TABLES

Table 1. Archival Research Results-Studies 22
Table 2. Archival Research Results-Sites 23

EXECUTIVE SUMMARY

The following report discusses the findings of a cultural resource preliminary inventory assessment conducted by ArchaeoPaleo Resource Management, Inc. (APRMI) staff at the request of Tetra Tech, Inc. (the Client), for the City of Santa Monica Water Resources Division. This cultural resource preliminary inventory assessment was conducted for the purpose of gathering pertinent data and information to determine the feasibility of building the proposed *Memorial Park Water Infrastructure-Santa Monica Reliability Improvement Project, XP-96945401-0* (the Project), located in the City of Santa Monica, California. The cultural resources that were assessed include determining if known prehistoric and historic archaeological sites were present, provide preliminary identification of historic buildings and structures, identify potential historic objects or art on the Project grounds, and provide an initial paleontologic assessment based on known area geology. This preliminary inventory of cultural resources for the Project is in keeping with compliance protocol of the California Environmental Quality Act (CEQA), the National Environmental Policy Act (NEPA), Section 106 of the National Historic Preservation Act (NHPA), and the regulatory requirements of the City of Santa Monica.

The proposed Project with alternative locations within the Project area is situated in the City of Santa Monica, on the grounds of *Memorial Park* and southward into the median strip on Olympic Blvd. and the adjacent roadway rights-of-way. An archival research and site visit performed in support of this study revealed that numerous historic buildings and structures (ca. 1918-1950) were present within the Project area and alternative locations that include the *Santa Monica Municipal Stadium,* the *Pacific Electric Railway* air-car right-of-way (ROW) and *Freight Depot*, and the *John W. Fisher Lumber Company* offices, buildings and lumber barns. Additional businesses and historic entities include a modal scale, dwellings with associated garages or outbuildings, auto body repair shops, auto wrecking yards, the *Crescent Laundry* and other dry cleaning and clothes pressing businesses, a machine shop, and sash and door manufacturing and hardware warehouse facilities, plus a pool hall and restaurant. There are two historic structures of interest present within the northwestern portion of the property, which are the *John W. Fisher* lumber barns (ca. 1923).

The findings of the cultural resources preliminary inventory indicate that further investigation of the Project area is required by a professional archaeologist and architectural historian per the *Secretary of the Interior* (SOI) *Professional Qualifications Standards*, and in keeping with the compliance protocol for cultural resources as set forth in the CEQA, NEPA, Section 106 of the NHPA, and the regulations of the City of Santa Monica. This additional investigation would be comprised of a Phase I cultural resource inventory and assessment, and possibly Phase II testing and evaluation of any identified cultural resources for historic significance that fits within the criteria framework established by CEQA and Section 106 of the NHPA, as well as any criteria established by the City of Santa Monica. Additionally, Native American Consultation, per the statute outlined by Senate Bill 18 (SB18), would be required in order to contact and identify interested parties of affiliated cultural descent, as well as obtaining pertinent information

regarding possible Sacred Lands or Traditional Cultural Properties. Lastly, a Vertebrate and Invertebrate Paleontologic Records Check would be required in keeping with the compliance protocol for paleontologic resources as set forth by CEQA and NEPA, in order to determined if significant fossil localities are present, or likely present, within the Project area.

INTRODUCTION

Purpose of Study

The City of Santa Monica-Water Resources Division has initiated a Feasibility Study regarding potential construction of a 20-million gallon underground potable reservoir and pumping station within the confines of *Memorial Park*. The Feasibility Study is required in accordance with NEPA as a result of Project funding inclusive of federal grants, and per the City's Grant Agreement with the United States Environmental Protection Agency for the "*Water Infrastructure—Santa Monica Reliability Improvement Project, XP-96945401-0.*"

Project Area Description

The Project is located in California, within the City of Santa Monica, at Olympic Boulevard and 14th Street. The preferred Project area is bound by 16th Street to the northeast, 14th Street to the southwest, Colorado Avenue to the northwest and Olympic Boulevard to the southeast. The median of Olympic Boulevard and the rights-of-way of other adjacent roadways have been identified by the City of Santa Monica as potential Project area alternatives for the construction and placement of the underground potable reservoir.

Topographically, the Project is located on the Beverly Hills, California, 7.5' series United States Geological Survey topographic quadrangle (1965 Photorevised 1991, Minor Revision 1995), Township 2S, Range 15W (no section numbers), San Bernardino Base Meridian. The ecological environment of the Project area surroundings is comprised of urban sprawl, modern landscape, streetscape, and cityscape with ornamental and imported flora intermixed within the built environment. The *Memorial Park* ecological environment is primarily domesticated sod grass, palm trees, some ornamental trees, and bedded flora.

The geology of the region is comprised of Pleistocene non-marine deposits (Qc) overlain by surficial sediments of alluvial gravels, sand, and silt-clay (Qa) originating primarily in the Santa Monica Mountains (Transverse Mountain range) (Dibblee Jr. 1991) and is at an elevation of 115 feet above sea level. The Santa Monica Mountains to the north are comprised of metamorphic bedrock of the Franciscan formation and sedimentary sediments. The Baldwin Hills are located to the southeast and are part of the Inglewood-Newport fault system. The geology of the Baldwin Hills is comprised of upper Pliocene marine deposits (Pu), Pleistocene marine and non-marine terrace deposits (Qm), overlain by recent quaternary alluvium (Qal) (Jennings and Strand 1991).

The Project area is comprised of a large modern city park with four lighted tennis courts, two youth baseball fields with concession stand, one adult baseball field, three softball in-fields, one soccer field, one children's playground, one off-leash dog run, one skate park, a *Police Activities League* (gymnasium, youth center, and offices), a gymnasium for volleyball and basketballs activities with associated restroom and shower facilities, off-street parking (63 spaces), and park restroom facilities. Immediately adjacent to the west,

and included within the Project area, are the City of Santa Monica *Community Maintenance Department* offices (one building) and maintenance yard facilities (four structures).

Surrounding *Memorial Park* are the adjacent roadways and Project area alternatives: 16th Street to the northeast, 14th Street to the southwest, Colorado Avenue to the northwest and Olympic Boulevard to the southeast. These roadways are comprised of commercial and industrial development of the early to mid 20th Century.

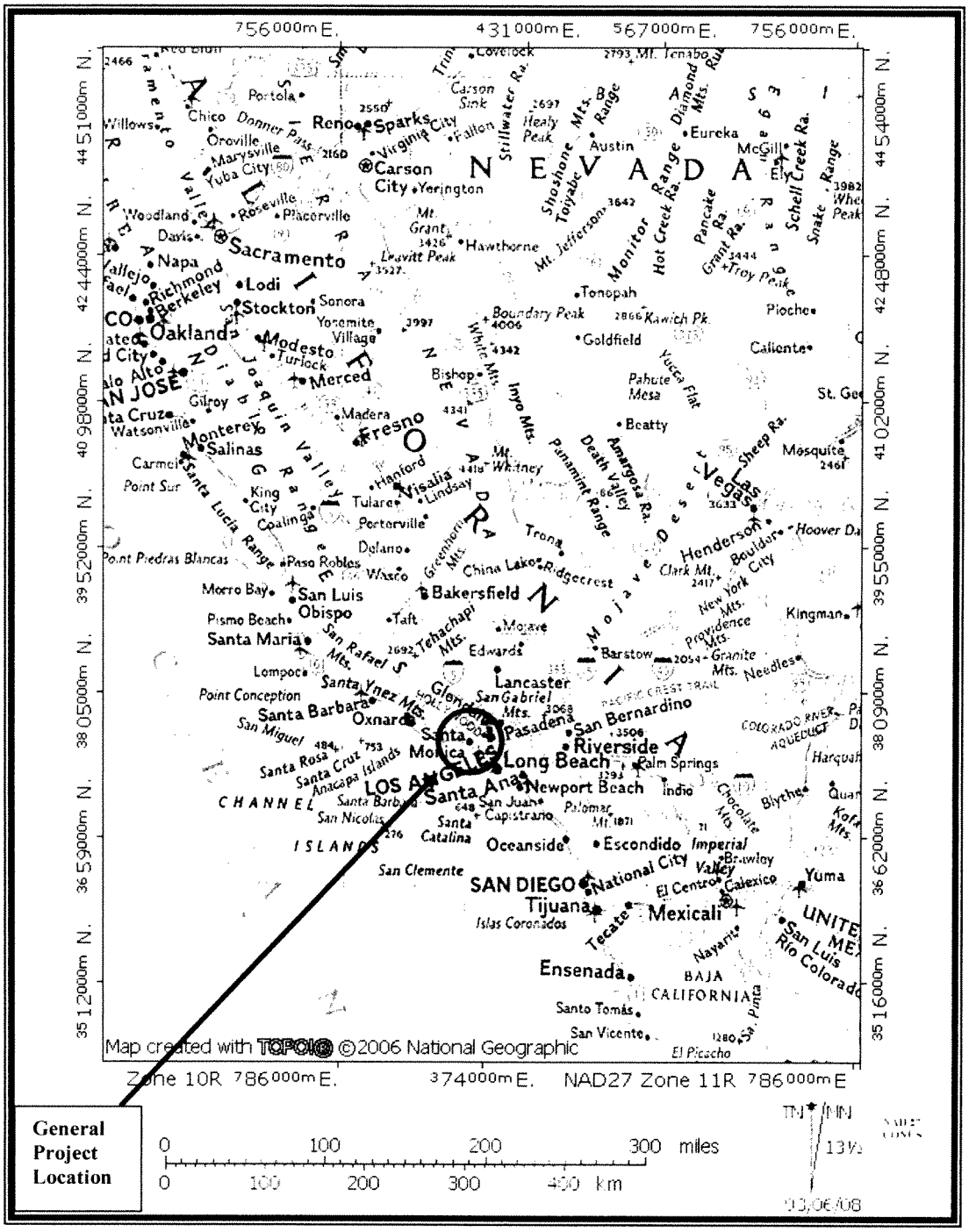


Figure 1. General Project Area (*TOPO! California by National Geographic 2008*).

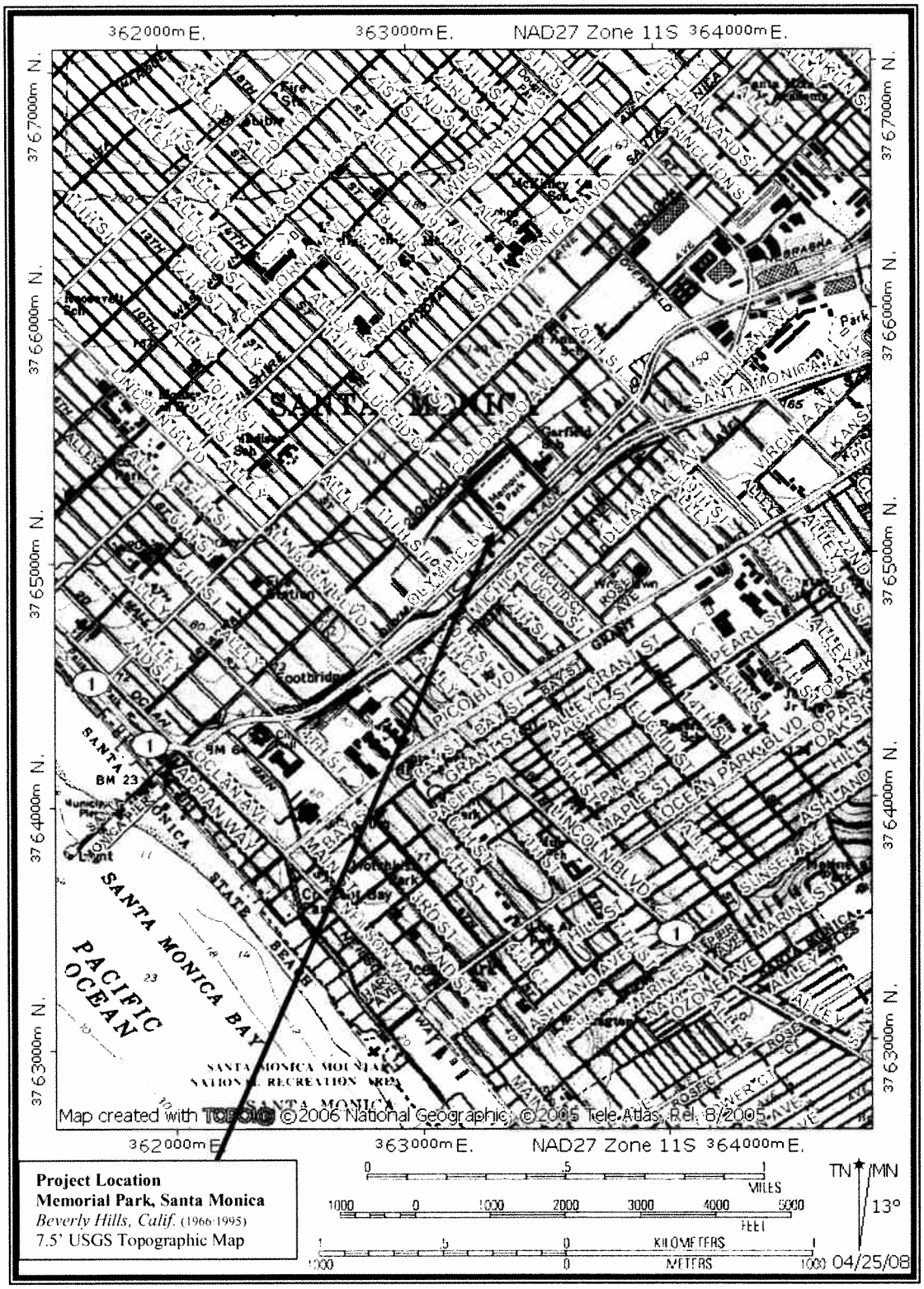


Figure 2. Project Location Map (*TOPO! California* by National Geographic 2008).

Regulatory Requirements

Cultural resources are defined as (1) prehistoric and historic archaeological sites, (2) historic buildings, structures, and objects, (3) traditional cultural properties and (4) sacred sites. This section of the report identifies federal and state regulatory requirements that preserve and protect cultural resources.

Cultural Resources-Regulatory Requirements

Federal Regulations

- ***Antiquities Act of 1906***

  The Antiquities Act of 1906 (16 USC § 431 *et seq.*), provides for the establishment and preservation of national monuments, historic landmarks, and historic or prehistoric structures, or other items of interest on federally owned lands. Additionally, Section 433 of this act prohibits the purposeful taking, excavation, damage, and destruction of historic or prehistoric ruins, monuments, or other objects of antiquity on federally owned lands.

- ***National Environmental Policy Act of 1969***

  The National Environmental Policy Act (NEPA) of 1969, specifically P.L. 91-190, 83 Stat. 852, 42 USC §§ 4321-4327, mandates the preservation of "important historic, cultural, and natural aspects of our national heritage" (§101.b4).

- ***Section 106 of the National Historic Preservation Act***

> "The head of any Federal agency having direct or indirect jurisdiction over a proposed Federal or federally assisted undertaking in any State and the head of any Federal department of independent agency having authority to license any undertaking shall, prior to the approval of the expenditure of any Federal funds on the undertaking or prior to the issuance of any license, as the case may be, take into account the effect of the undertaking on any district, site, building, structure or object that is included in or eligible for inclusion in the National Register [of Historic Places (NRHP)]. The head of any such Federal agency shall afford the Advisory Council on Historic Preservation [The Council], established under Title II of this Act, reasonable opportunity to comment with regard to such and undertaking." [16 U.S.C. § 470f]

An effect, or "adverse effect," as defined by 36 CFR § 800.5 (a)(1), is as follows:

> "...when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register [NRHP] in a manner that would diminish the integrity of

the property's location, design, setting, materials, workmanship, feeling, or association."

To further clarify the meaning of what constitutes as adverse effect, 36 CFR § 800.5 (a)(2) identifies the following: physical destruction, alteration that is not in keeping with the *Secretary of the Interiors Standards for the Treatment of Historic Properties* per 36 CFR §68, removal, change of use, alteration of property setting, relocation, application of intrusive elements, neglect, change of ownership (federal to non-federal).

The NHPA (16 U.S.C. § *et seq*) defines an historic resource as significant if eligible for inclusion in the NRHP as defined by one of four eligibility criteria set forth in 36 CFR § 60.4. A determination of historic resource significance is carried out via implementation of the Section 106 process of the NHPA, as set forth by the Council per 36 CFR § 800 "Protection of Historic Properties." Such significant historic resources can include archaeological sites of pre-historic or historic context and historic buildings, structures, or objects that are of state, local, or federal importance, and retain integrity of location, design, setting, feeling, association, material, and/or workmanship, and are

(A) Associated with events which have made a significant contribution to the broad patterns of our history, or are
(B) Associated with the lives of persons significant in our past, or
(C) Embody the distinctive characteristics of a type, period, or method of construction, or represent the work of master, or possess high artistic value, or are representative of a significant and distinguishable entity of which the component may lack individual distinction, or have
(D) Yielded, or are likely to yield, data important to our understanding of prehistory and/or history.

State Regulations

- ***California Register of Historical Resources***

The California State Historical Resources Commission established the California Register of Historical Resources (CRHR), utilized by state and local agencies, to included private groups or citizens as a means to,

> "...identify, evaluate, register, and protect California's historic resources. The Register [CRHR] is the authoritative guide to the state's significant historical and archaeological resources. The California Register [CRHR] program encourages public recognition and protection of resources of architectural, historical, archaeological and cultural significance, identifies historical resources for state and local planning purposes, determines eligibility for state historic preservation grant funding and affords certain protections under the California Environmental Quality Act [CEQA]."

- ***California Environmental Quality Act (Section 15064.5)***

A significant historical resource, as defined by CEQA, is referred to as a "Historical Resource." Such Historical Resources have been determined eligible for inclusion in the California Register of Historical Resources per Title 14, California Code of Regulations (CCR), § 15064.5(a)(3), or are historically significant at a local level, such as a city, town, community, or county. This includes historic properties eligible for inclusion on the NRHP per PRC § 5024.1. A cultural resource is considered historically significant under CEQA [Title 14, CCR § 15064.5(a)(3)], provided the resource retains integrity and meets one of four criteria:

(A) Associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage, or
(B) Associated with the lives of persons important in our past, or
(C) Embodies the distinctive characteristics of type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values, or
(D) Yielded, or likely to yield, information important to the understanding of prehistory of history.

- ***Public Resources Code 21083.2***

Public Resources Code § 21083.2 (a) pertains to archaeological resources, specifically, those determined significant per the CEQA.

> (a) As part of the determination made pursuant to Section 21080.1, the lead agency shall determine whether the project may have a significant effect on archaeological resources. If the lead agency determines that the project may have a significant effect on unique archaeological resources, the environmental impact shall address the issue of the resources. An environmental impact report, if necessary, shall not address the issue of non-unique resources. A negative declaration shall be issued with respect to a project if, but for the issue of non-unique archaeological resources, the negative declaration would be otherwise issued.

A "significant effect" upon an historic resource, is considered a "substantial adverse change" per CEQA 15064.5 (b)(1,2): "physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historic resource would be materially impaired," possibly resulting in a determination of ineligibility for the CRHR.

- ***Public Resources Code 21084.1***

> "A project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment. For purposes of this section, an historical resource is a resource

listed in, or determined to be eligible for listing in, the California Register of Historical Resources. Historical resources included in a local register of historical resources, as defined in subdivision (k) of Section 5020.1, or deemed significant pursuant to criteria set forth in subdivision (g) Section 5024.1, are presumed to be historically or culturally significant for purposed of this section, unless the preponderance of evidence demonstrates that the resource is not historically or culturally significant. The fact that a resource is not listed in, or determined to be eligible for listing in, the California Register of Historical Resources, not included in a local resister of historical resources, or not deemed significant pursuant to criteria set for in subdivision (g) of Section 5024.1 shall not preclude a lead agency from determining whether the resource may be an historical resource for purposes of this section."

The NRHP and CRHR criteria mirror each other in terms of determination of site significance and listing eligibility. As previously stated, an NRHP eligible historic property qualifies for CRHR eligibility; however, the CEQA addresses local resources of historical significance, provided the local resource meets the criteria set forth in [Title 14, CCR § 15064.5(a)(3)].

- ***California State Historical Building Code, CCR Title 24, Part 8***

The California State Historic Building Code (SHBC) is a forty-page document, accessible via the Office of Historic Preservation website. The intent of the SHBC is the appropriate treatment of historical buildings while simultaneously providing for the health and safety of potential occupants, and energy conservation.

"It is the purpose of the State Historical Building Code to provide regulations and standards for the rehabilitation, preservation, restoration (including related reconstruction) or relocation as applicable to all historical buildings, structures and properties deemed of importance to the history, architecture, or culture of an area by an appropriate local or state governmental jurisdiction. Such standards and regulations are intended to facilitate the restoration or change of occupancy so as to preserve their original or restored elements and features, to encourage energy conservation and a cost effective approach to preservation, and to provide for reasonable safety from fire, seismic forces or other hazards for occupants and users of such "buildings, structures and properties" and to provide reasonable availability and usability by the physically disabled."

The State Historical Building Code is defined in Sections 18950 to 18961 of Division 13, Part 2.7 of Health and Safety Code (H&SC) Health and Safety Code, a part of California Law.

Local Regulations-City of Santa Monica

Information pertaining to the local regulatory requirements established for identification and treatment of historic resources within the City of Santa Monica can be found in the city's "*Historic Preservation Element*" (PCR Services Corporation (PCR) and Historic Resources Group (HRG) 2002). A summary of

the local regulatory requirements described in the *Historic Preservation Element* is presented below.

- ***City of Santa Monica-Certified Local Government***

  In 1980 the NHPA was amended to allow for the creation of Certified Local Government (CLG) organization at the city, town and community level. The purpose of a CLG is to incorporate local historic preservation activities within the framework of the state, to include review and comment on proposed projects pertaining to cultural resources for local, state and federal regulatory compliance, to include use of the SHBC. An added benefit of CLG status is the availability of matching grant funding for historic preservation activities. The responsibilities of CLG status require that the community establish and implement a historic preservation ordinance, recruit a competent historic preservation commission, and design and implement a historic resources survey of the community.

  In 1992, the City of Santa Monica became a CLG; however much of the regulatory requirements pertaining to historic resources was already in place at the municipal level. The City of Santa Monica has a local Landmarks Commission, Landmark and Historic District Ordinances, Historic Buildings Code(s), Zoning Code(s), and Demolition Ordinance specific to historic structures established in the 1970s. In addition, the City of Santa Monica's CLG organization has initiated historic resources surveys within the community that have identified historic resources, structures of merit, local landmarks, and historic districts.

- ***City of Santa Monica-Landmarks District and Historic Preservation Ordinance***

  In 1973 the City of Santa Monica established the Historical Sites Committee to develop standards of practice and guidelines for the identification and preservation of historical resources. Three years later the city enacted the Landmarks District and Historic Preservation Ordinance, subsequently amending it in 1987 and 1991. This ordinance provides the Landmarks Commission with the authority to identify local landmarks and Structures of Merit, as well as, weigh in on identification and designation of historic districts. The ordinance also provides for criteria and procedures for the identification and designation of local historic resources, much as Historical Sites Committee had, and establishes the regulatory framework for acquisition of a Certificate of Appropriateness in accordance with Section 9.36.140 of the city Zoning Code.

  > "The ordinance requires a Certificate of Appropriateness for any proposed alterations, restorations, construction, removal, relocation, or demolition, in whole or in part, of or to a Structure of Merit, Landmark or Landmark Parcel, or to a building or structure located within a Historic District" (PCR and HRG 2002).

- ***City of Santa Monica-Landmark or Historic District Designation Criteria, Municipal Code, Section 9.36.100***

The following criteria are applied when assessing a historic property for local significance as a Landmark within the City of Santa Monica.

(a) For purposes of this Chapter, the Landmarks Commission may approve the landmark designation of a structure, improvement, natural feature or an object if it finds that it meets one or more of the following criteria:

(1) It exemplifies, symbolizes, or manifests elements of the cultural, social, economic, political or architectural history of the City.
(2) It has aesthetic or artistic interest or value, or other noteworthy interest or value.
(3) It is identified with historic personages or with important events in local, state or national history.
(4) It embodies distinguishing architectural characteristics valuable to a study of a period, style, method of construction, or the use of indigenous materials or craftsmanship, or is a unique or rare example of an architectural design, detail or historical type valuable to such a study.
(5) It is a significant or a representative example of the work or product of a notable builder, designer or architect.
(6) It has a unique location, a singular physical characteristic, or is an established and familiar visual feature of a neighborhood, community or the City.

(b) For the purposes of this Chapter, a geographic area or a noncontiguous grouping of thematically related properties may be designated a Historic District if the City Council finds that such area meets one of the following criteria:

(1) Any of the criteria identified in Section 9.36.100(a)(1) through (6).
(2) It is a noncontiguous grouping of thematically related properties or a definable area possessing a concentration of historic, scenic or thematic sites, which contribute to each other and are unified aesthetically by plan, physical development or architectural quality.
(3) It reflects significant geographical patterns, including those associated with different eras of settlement and growth, particular transportation modes, or distinctive examples of park or community planning.
(4) It has a unique location, a singular physical characteristic, or is an established and familiar visual feature of a neighborhood, community or the City.

Prior code § 9607; added by Ord. No. 1028CCS, adopted 3/24/76; amended by Ord. No. 1590CCS § 1, adopted 7/23/91 (City of Santa Monica website 2008)

- ***City of Santa Monica-Structures of Merit Criteria, Municipal Code, Section 9.36.080***

  The following criteria are applied when assessing a historic property for local significance as a Structure of Merit within the City of Santa Monica.

  > (a) The structure has been identified in the City's Historic Resources Inventory.
  >
  > (b) The structure is a minimum of 50 years of age and meets one of the following criteria:
  >
  > > (1) The structure is a unique or rare example of an architectural design, detail or historical type.
  > > (2) The structure is representative of a style in the City that is no longer prevalent.
  > > (3) The structure contributes to a potential Historic District.
  > >
  > > (Prior code § 9606.1; added by Ord. No. 1590CCS § 1, adopted 7/23/91)

- ***City of Santa Monica-Demolition Ordinance, Municipal Code, Section 9.04.10.16.010***

  In 1992, the City of Santa Monica established its Demolition Ordinance (Municipal Code, Section 9.04.10.16.010), requiring that historic structures in excess of 50 years of age be reviewed for local historical significance, prior to the issuance of a Demolition Permit. The applicant of a Demolition Permit is required to submit his request to the Landmarks Commission for a 60-day assessment period, during which time the Commission has the opportunity to assess and possibly designate the structure in question as a local Landmark, Structure of Merit, or contributing element to a Historic District. In the event no such designation is filed, then the demolition may proceed. However, if such designation is filed, the structure is subject to the Landmarks and Historic District Ordinance. Ms. Roxanne Tanemori, Associate Planner with the City of Santa Monica Planning Division, was consulted by APRMI staff in early May 2008 for clarification as to the Demolition Ordinance, as presented here.

- ***City of Santa Monica-Municipal Code, Section 9.04.18.020***

  This section of the City of Santa Monica's Municipal Code provides the Landmarks Commission with the authority to require that non-conforming elements of historic structures be restored, if the Commission determines that such elements or features contribute to the architectural integrity of the structure, or are significant in their own right. Such restoration of architectural elements

and features are required by the Commission to be in keeping with the *Secretary of the Interior's Standards and Guidelines for Rehabilitation.*

Paleontologic Resources-Regulatory Requirements

Federal Regulations

- ***Antiquities Act of 1906***

  The Antiquities Act of 1906 also accounts for the protection of fossil remains. The explanation of this Act can be viewed on page 5 of this document under Antiquities Act of 1906.

- ***National Environmental Policy Act of 1969***

  The protection of fossil remains is protected in the NEPA (as previously defined in the Cultural Resource section of this document), is interpreted as providing for the protection and preservation of paleontologic remains.

State Regulations

- ***California Environmental Quality Act (PRC §21000 et seq.)***

  This section of the CEQA requires public agencies and private interests to identify the potential adverse impacts or environmental consequences of their proposed project to any object or site of significance with respect to the scientific annals of California (Division I, Public Resources Code:5020.1 [b]).

- ***California Environmental Quality Act Guidelines, as amended May 10, 1980 and March 29, 1999 (Title 14, Chapter 3, California Administrative Code:15000 et seq.)*** – Defines procedures, types of activities, persons, and public agencies required to comply with CEQA, and include definitions of significant impacts on a fossil locality (Section 15023, Appendix G [5.c].

- ***Public Resources Code, Section 5097.5***

  The PRC 5097.5 prohibits the excavation and/or the removal of "vertebrate paleontological site...or any other archaeological, paleontological or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over such lands."

- ***Public Resources Code , Section 30244***

  The PRC 30244 requires that reasonable mitigation of adverse impacts on paleontological resources resulting from development on public land that affects paleontologic resources.

Native American Consultation

The project is located within the City of Santa Monica, specifically in and around the city-owned *Memorial Park* property. This region was the traditional homeland of the Tongva Gabrielino Indian tribe. A government-to-government level consultation with interested Native American parties is required as part of the Project Environmental Impact Study or Environmental Impact Report (EIS/EIR). Therefore, during any ensuing environmental study for the Project, the Native American Heritage Commission (NAHC) in Sacramento, California must be queried for input as to a listing of potentially interested parties of California Indian descent, as well as a list of any known sacred lands that may exist with the Project area. Once the requested documents have been received from the NAHC, Native American consultation must be initiated on a government-to-government basis between the lead agency and the proper Native American parties, at the appropriate time.

Project Personnel

Shannon L. Loftus is a Certified Architectural Historian and Staff Archaeologist for APRMI. She holds a Master of Arts degree in Historic Preservation, with an emphasis on historic structure assessments and evaluations from Savannah College of Art and Design, Savannah, Georgia (2007); and a Bachelor of Arts degree in Anthropology from Union Institute and University, Cincinnati, Ohio (2002). Ms. Loftus is a Registered Professional Archaeologist (RPA) with over nine years experience in Cultural Resource Management (CRM). She satisfies all *Secretary of the Interior's Professional Qualifications Standards* as a professional archaeologist and architectural historian. In addition, she possesses paleontological field experience pertaining to late Pleistocene terrestrial fossils within Los Angeles and Orange Counties.

Robin D. Turner is the Principal Investigator for APRMI. She holds a Masters of Arts degree in Anthropology, with an emphasis on Public Archaeology, from California State University, Northridge (1995); and a Bachelor of Arts degree in Anthropology, from CSU Northridge (1991). Ms. Turner possesses over 20 years of experience in the CRM and the paleontologic field, and has conducted major field and technical investigations throughout southern California. She satisfies the *Secretary of the Interior's Professional Qualifications Standards* as a professional archaeologist and the *Society for Vertebrate Paleontologists* as a professional paleontologist.

BACKGROUND

Natural Environmental and Geologic Setting

Topographically, the Project area is located within the Los Angeles Lowland Province (Hartman 1970), of the Los Angeles Basin, a relatively flat wedge-shaped area between the Transverse and Peninsula Mountain Ranges. Specifically, the Project area is situated less than two-miles inland from the Pacific Ocean, south of the Santa Monica Mountains, part of the east/west Transverse Mountain Ranges, and north of Baldwin Hills, part of the Inglewood-Newport fault system. This area is characterized by the east/west Interstate 10, also known as the Santa Monica Freeway to the south, the north/south Pacific Coast Highway, or Highway 1 to the west, and the expansive Pacific Ocean beaches to the west and southwest. The nearest body of fresh water is Ballona Creek, part of the ancestral Los Angeles River, several miles to the southeast.

The geology of the area is comprised mostly of recent alluvial sedimentary deposits overlying deeper non-marine deposits of the Pleistocene age. The Santa Monica Mountains are located to the north and are comprised of alluvial gravels, sand, silt-clay (Qa), including the gravels and sand of stream channels, as well as Franciscan Formations granitic bedrock (Dibblee Jr. 1991). The Baldwin Hills are located to the southeast and are comprised of upper Pliocene marine deposits (Pu), Pleistocene marine and non-marine terrace deposits (Qm), overlain by recent Quaternary alluvium sediments (Qal) (Jennings and Strand 1991). The region experienced little in terms of recent climatic change affiliated with the Holocene Epoch.

Historic and recent land-use changes have altered the natural environment of the proposed project location. Presently the Project area is void of any natural flora, and is comprised of urban sprawl, modern landscape, streetscape and cityscape with imported plants and trees interspersed within a tightly configured city park, *Memorial Park*, and the built environment.

Ethnographic Setting

The proposed project area is located in a region that was once the territorial homeland of the Gabrielino or Tongva, a Shoshonean branch of Takic speakers of the Cupan language group (Bean and Smith 1978). Gabrielino territory ranged from the Los Angles Basin, Aliso Creek in the south to Topanga Canyon in the north, and the four southern Channel Islands, as well as the watersheds of the Los Angeles, San Gabriel, and Santa Ana Rivers (Maki 1995). The Gabrielino were an immigrant population from the Great Basin having displaced the Hokan groups who are believed to have previously inhabited the area (Maki 1995; Kroeber 1925; Harrington 1962).

Within this territory, it is estimated that there were in excess of 50 to 100 mainland villages with populations averaging between 50 and 100 people. These villages appeared to have been politically autonomous, and were composed of non-localized lineages led by political elites. This territory contained a broad and diverse ecological environment and resource base thereby enabling the Gabrielino to facilitate complex trade networks with

other coastal groups, such as their Chumash neighbors to the north, and interior groups, such as the Kitanemuk of the Antelope Valley in the northeast. Local goods such as steatite, shell beads, dried fish, and sea otter pelts were exchanged for acorns, seeds, and obsidian of other coastal and interior groups throughout southern California and Arizona (Bean and Smith 1978; Kroeber 1925). This wealth of resources, coupled with a well-developed complex trade network and political system, afforded the Gabrielino with one of the wealthiest and most sophisticated California Indian societies in southern California (McCawley 1996: 141; Goldberg et al 2004: 25).

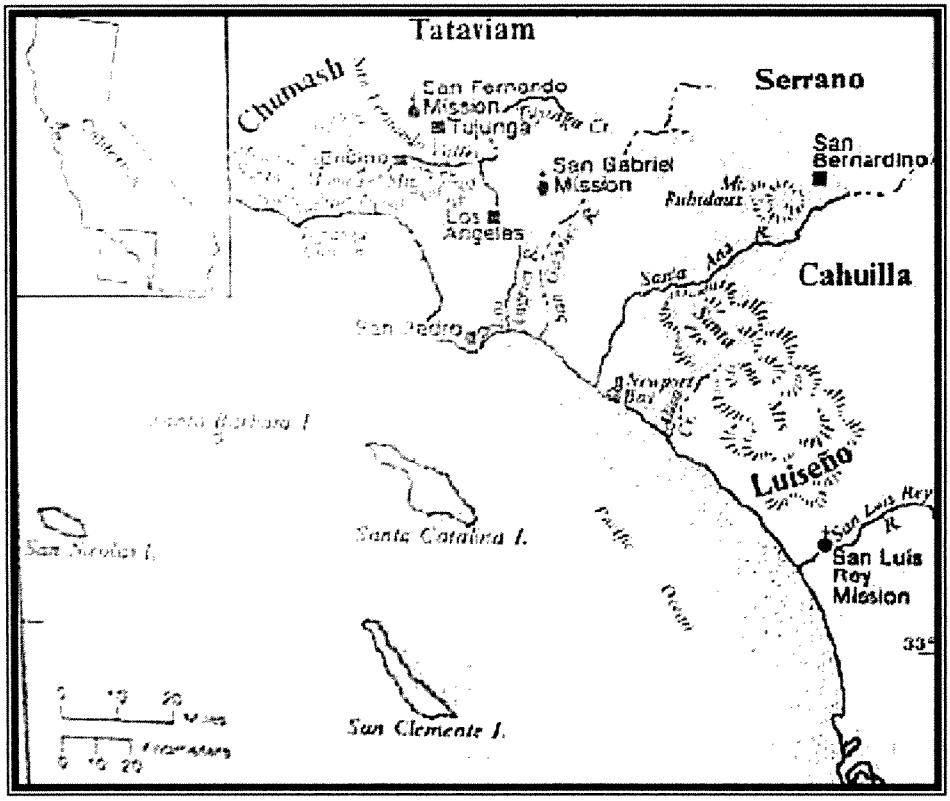


Figure 3. Gabrielino or Tongva territory as depicted in Bean and Smith (1978).

Historic Context

Prehistoric Period

Prior to the Shoshonean immigration from the Great Basin, and subsequent Gabrielino habitation ca. 2500 years-before-present (B.P.), the region was possibly occupied in excess of 20,000 years, as evinced by the archaeological discoveries at Ballona Creek to the southeast, the La Brea Tar Pits to the east, Malaga Cove to the northwest, and various

known sites within the Los Angeles Basin (Starzak 1994). A generally accepted chronology of four distinct Horizons for the region has been devised by W.J. Wallace (1955). The generalized themes from Wallace provide the foundation for the regional prehistory that include: the **Early Man Period (>12,000 B.P. to 6000 B.P.)**, the **Millingstone Period (6000 B.P. to 1000 B.C.)**, the **Intermediate Period (1000 B.C. to 750 A.D.)**, and the **Late-Prehistoric Period (750 A.D. to European Contact**, or the **Spanish Period ca 1533 to 1821**).

Horizon I, described as the **Early Man Period**, began with the arrival of the first inhabitants of the region approximately 12,000 B.P. to 6,000 B.C. This period is characterized by the presence of nomadic and semi-nomadic hunter-gatherer groups who exploited coastal and inland environments for food and shelter. Many early sites were located on or near the shorelines of ancient lakes and marshes, as well as along stream channels and estuaries. These initial inhabitants appeared to be primarily big game hunters who followed large and medium-sized animals during seasonal rounds.

Horizon II, also known as the **Millingstone Period**, began approximately 6,000 B.P and lasted until 1,000 B.C. The hallmarks of the Millingstone Period are extensive use of millingstone implements, such as manos and metates, suggestive of hard seed processing, and the use of core tools. The earliest portion of this period "...suggests a generalized plant collecting economy in operation, which was supplemented by hunting and fishing. Regional interaction appeared to be limited when compared to later period(s)" (Starzak 1994). The Millingstone Period is also indicative of increased sedentism with long-term habitation within an established settlement area, and cultural adaptation toward the coastal perimeter and along lakes, streams, lagoons, and estuaries started to be prolific. There is great diversification of subsistence strategies during the Millingstone Period between the inhabitants; some sites evince a greater reliance upon shellfish, small mammals, and birds, as well as plant resources, and less emphasis upon hunting and fishing.

Horizon III is identified as the **Intermediate Period**, which is a short temporal shift that lasts from approximately 1,000 B.C. to 750 A.D. During the latter part of the Millingstone Period and throughout the Intermediate Period, the use of mortar and pestles appear extensively in the archaeological record suggesting increased reliance upon the acorn as a dietary staple, and a noticeable shift away from the hard seed exploitation of the Millingstone Period (Starzak 1994). Additionally, projectile point and faunal remains indicate increased land and sea exploitation as well as seasonal hunting and gathering subsistence strategies (Strauss 2004). The artifact assemblages of this period are diverse and include broad leaf shaped blades, heavy stemmed projectile points in association with terrestrial and aquatic bone, antler and bone tools, asphaltum, steatite, the bow and arrow, and arrow shaft straighteners (Goldberg et al 1999).

Horizon IV, considered the **Late Prehistoric Period**, began approximately 750 A.D. and terminated at the time of European contact. This period is characterized by greater population density and socio-cultural complexity. Beginning approximately 1500 B.P., there is an increased use in the bow and arrow, bedrock mortars and milling slicks,

indicative of the transition from the Intermediate to the Late Prehistoric Period and continuing to the period contact (Goldberg et al. 1999). The bow and arrow was widely used during this period, and there was a greater reliance upon fishing and sea mammal hunting. The artifact assemblages of this period tend to be more diverse and elaborate, and include evidence of trade goods, indicative of increasing intricacy with respect to trade networks and social contact with other groups. The evidence includes small bird points, mortar and pestle, steatite ornaments, cogged stones, stone discs, perforated stone discs, circular shell fish hooks, bone tools, bone and shell ornaments, asphaltum, and elaborate mortuary customs (ibid), and points to increased religious or ceremonial complexity and deity worship, such as the *Chinigchinich* religion (Bissell and Gust 2001) of the Gabrielino and other southern California Indian tribes. The *Chinigchinich* religion was one of polytheism that likely influenced the social and cultural values and mores of the Gabrielino. In addition, the populace of a settlement tended to be quite large, indicative of village-type habitation, possibly with smaller inland seasonal camp affiliation (Starzak 1994).

In the mid 16th Century, the Spanish arrived in Gabrielino territory initiating European Contact with the Native Californians. The chronological periods and temporal affiliation following the time of contact are considered to be of historic type and are discussed below.

Historic Period

Historic cultural resources are generally more than 45 years of age and range from the earliest time of European contact to around the year 1960. This near 500-year span of time gives ample opportunity for the development of numerous types of cultural resources that may be recorded and possibly evaluated as significant, important, or unique under current cultural resource protection laws. Site types include trails and highways, homesteads and other structures or buildings, remnants of single or time-based use activities such as trash deposits, and historically documented landscape sites such as the camp sites of the Spanish explorer Gaspar de Portola. The following discusses the historic setting in three parts: **The Spanish Period (ca. 1533 to 1821), the Mexican Period (1821 to 1848), and the American Period (1848 to Present).**

The Spanish were the first known Europeans to explore and colonize the land area of what today is known as California. This includes Alta California (presently known as the State of California, U.S.A.), and Baja California, (presently known as the Mexican states of Baja California Norte and Baja California Sur). This summary will focus only on Alta California in general, and more specifically, the Lowland Province of the Los Angeles Basin. This period of time is referred to as **the Spanish Period (ca. 1533 to 1821)**.

The early reconnaissance of California began in 1540 with Hernando de Alarcon's ocean expedition traveling northward up the Gulf of California and into the mouth of the Colorado River, thus making those travelers the first Europeans to enter California. From 1542 to 1543, Juan Rodriguez Cabrillo led an ocean expedition to explore the coastal perimeter of California (Laylander 2000). Cabrillo and his crew first stepped ashore at

the present day harbor of San Diego, claiming California for the King of Spain in 1542. He is also believed to have made port in the bay of Santa Monica that same year (Gabriel 2006). The Cabrillo expedition visited most of the Channel Islands and the land near the City of Ventura, and sailed as far north as Monterey Bay, possibly as far north as Point Reyes, although the expedition failed to sight San Francisco Bay.

Later, by the 1560s, Spain controlled all of the Pacific Ocean. The Philippine Islands served as the major commercial outpost in Asia. Galleons out of Manila first sailed northward to the Japan Current, then eastward to the northern California coast, and finally southward to Mexico. Because of the long and arduous trip, many galleons stopped along the coast looking for food and water, thus coming into contact with the local Native Californians, for example, Sir Francis Drake's five week encampment north of the San Francisco Bay in 1579 (Heizer, 1947).

Drake's raids in the Pacific for the English Crown prompted New Spain to undertake additional ocean expeditions to better map California. The ultimate objective of these Spanish expeditions was the establishment of ports to protect and refurbish the Manila Galleons. Sebastián Vizcaíno, in 1602-1603, mapped and described the coast in great detail and proposed a Spanish settlement in Monterey, although this was not a reality until approximately 170 years later. These early Spanish expeditions made contact with the local Native Californians, facilitated trade networks and set the stage for future Spanish colonization, resulting in the eventual decline of the Native Californian population.

The colonization of California by the Spanish began in 1769 with the arrival of the Franciscan administrator Junípero Serra and the Spanish military under the command of Gaspar de Portolá in San Diego. Thus began the eventual establishment of twenty-one California Missions and Spanish Missionization efforts, the purpose of which was to "convert" the Native Californians to Catholicism within a ten year period and then return the Mission lands to the Indians.

At the time of the Spanish arrival, population estimates of California Indians are placed at about 310,000 individuals. By the end of the Spanish reign, through unhygienic Spanish population centers (essential labor camps), European disease, incarceration of Indians, excessive manual labor demands and poor nutrition, the population declined as a result of over 100,000 fatalities, nearly 1/3 of the California Indians (Castillo 1998).

The year 1821 marks the beginning of the **Mexican Period (1821 to 1848)** and is synonymous with Mexico's independence from Spain. Mexico became California's new ruling government, and at first, little changed for the California Indians. The Franciscan missions continued to enjoy the free unpaid labor the natives provided, despite the Mexican Republic's 1824 Constitution that declared the Indians to be Mexican citizens. This monopoly of Indian labor by a system which accounted for nearly 1/6 of the land in the state angered the newly land-granted colonial citizens. This situation led to an uprising of the Indian population against the Mexican government, and the eventual secularization and collapse of the mission system by 1834. Although return of the land

was mandated by the government, little land was distributed back to the California Indians.

During this time period, other European countries began to make their presence felt in California. The Russians founded Fort Ross in 1812 north of San Francisco and Americans began to make contact with Mexican colonists. American ships from Boston traded with the towns and Missions mostly for tallow and hides. In addition, trappers and hunters begin to operate in the state, entering by land from the east.

American military forces were present within California during the summer of 1846 as a result of the Mexican-American war. Rapidly, Mexican resistance deteriorated and the United States occupied Mexico City in 1848, marking the beginning of the **American Period (1848 to Present)**. California becomes a U.S. holding with the signing of the Treaty of Guadalupe Hidalgo in February of 1848. This treaty ended the Mexican-American war, and ceded much of the southwest (California, Nevada, Utah, and portions of Arizona, New Mexico, Colorado, and Wyoming) to the United States. A month earlier, January 24, 1848, gold was discovered along the American River, near Sacramento. The following year resulted in 100,000 adventurers, known as "49-ers" descending upon California. That same year, 1849, California petitioned Congress for admission to the Union as a "free state." As a result of the Compromise of 1850, California was admitted to the Union as the 31st state on September 9, 1850, and as a slave-free state (California State Parks 2008; Public Broadcast Service).

Meanwhile, California adapted "*An Act for the Government and Protection of Indians*" (Chapter 133, Statutes of California, April 22, 1850), enacting Justices of the Peace jurisdiction in all complaints by, for, or against Indians. The result of this action was the denial of the right of citizenship guaranteed in the Treaty of Guadalupe Hidalgo. In addition, then Governor McDougall promised in his first address to the state legislature "... a war of extermination will continue to be waged between the races until the Indian race becomes extinct..." (Castillo 1998). This law was finally repealed in 1863 with the enactment of President Lincoln's *Emancipation Proclamation.*

At the federal level, Congress had created a commission to validate land claims in California requiring all individuals to present documents regarding the nature of their claims within a two year period. The practical result was the complete dispossession of all the land for all the California Indians. Later, in 1852, Congress authorized three federal officials to make treaties with the California Indians with the goal of extinguishing all land titles and to provide the various Indian tribes reservation land. These federal authorities were poorly equipped to handle this daunting task; few of the Indians could speak English; translators were often non-existent; and many tribes failed to be contacted. The results were treaties which did not fairly represent the California Indians. The signed treaties become known as the "Lost 18 Treaties of 1852." Later that same year, Congress failed to ratify the treaties and they were filed with an injunction of secrecy that was finally removed in 1905 (Castillo 1998). Today, some California Indians do have reservation land, while others remain landless and unrecognized by the

U.S. government, and are involved in ongoing legal battles to regain their tradition homeland.

Historic Context-Santa Monica and the Project Area

Santa Monica

Louise Gabriel's book "*Early Santa Monica*" (2006) presents a concise historical context supported with numerous archival photographs and other graphics. *Early Santa Monica* (2006) is part of the Images of the America series produced by Arcadia Publishing. The following synopsis of the early development in Santa Monica is drawn from Gabriel's (2006) work.

The region known as Santa Monica was named by members of the Gaspar de Portola Expedition in 1769, upon finding cool water to drink, and a shady place to rest. "The day, May 4, happened to be St. Monica's day on the religious calendar and as the springs reminded them of the tears St. Monica shed for her erring son Augustine, they [the expedition members] called the area Santa Monica" (Gabriel 2006).

In 1828, the Mexican government granted Don Francisco Sepulveda title to the *Rancho San Vicente y Santa Monica*; land that included the Santa Monica Canyon and Pico Boulevard northeasterly toward the Westwood Region. Eleven years later, a portion of this *Rancho San Vicente y Santa Monica* was subdivided and its provision title was granted to Ysidro Reyes and Francisco Marquez as the *Boca de Santa Monica* (the Santa Monica Canyon). In 1872, Colonel Robert Baker, a former 49-er entrepreneur and stockman, purchased the *Rancho San Vicente y Santa Monica* from Don Sepulveda's heirs. In pursuit of funding for the purpose of establishing a center of commerce and port at Santa Monica Bay, Col. Baker enlisted the financial support of Senator John Percival Jones (Nevada). Colonel Baker sold three-fourths of the *Rancho San Vicente y Santa Monica* to Senator Jones in 1874. The following year the two men set out to establish Santa Monica as a major commercial center with a shipping port (Gabriel 2006).

Santa Monica never developed as a port city or center of commerce. Rather, Santa Monica developed as a residential and resort type community, facilitated by the broad beaches of its "Gold Coast" and nearness to the Hollywood rich and famous, as well as its passenger railroad service to and from Los Angeles. In 1886, Santa Monica incorporated as an independent city. Two years later, Senator Jones provided a deed of title for 300 acres of land for the establishment of the Pacific Branch of the *National Asylum for Disabled Volunteer Soldiers and Sailors of the Civil War*, now known as the *National Home for Disabled Volunteer Soldiers* (Robinson 1939; Bonner 1998; U.S. Department of Veterans Affairs 2006).

The aircraft industrial giant Donald Douglas came to Santa Monica in the early 1920s and was responsible for building the "World Cruisers." These World Cruisers made the first around-the-world flights, thereby putting Santa Monica on the map, with respect to the aviation community. In 1929, the first women's cross-country air race was held in Santa Monica, and enlisted the likes of Amelia Earhart and Pancho Barnes; the latter beating

the former by 24 minutes. In addition, General Dwight D. Eisenhower stated the Douglas C-47s were instrumental in America's victory in World War II (Gabriel 2006; Pancho Barnes Enterprises, Inc. n.d.).

Archival Research and Results

Cultural Archival Research Results

The cultural resource archival research for the Project was undertaken at the South Central Coastal Information Center located on the campus of California State University-Fullerton. Research consisted of review of the USGS 7.5' Beverly Hills (1965 Photorevised 1991, Minor Revision 1995) topographic quadrangle, and 15' and 30' series historic quadrangle maps of Santa Monica dated 1902 (reprinted in 1906), and 1921, and 6' series dated 1926. This map-based review yielded negative results for sites and previous cultural resource studies within the Project area and positive results for sites and previous cultural resource studies within ¼ mile and ½ mile of the Project area (Tables 1 and 2).

Additional review of the California Points of Historical Interest (CPHI) and California State Historic Resources Inventory (HRI), the NRHP, the National Historic Landmarks (NHL), and Santa Monica Landmarks (SML) indicated the nearest site is the Santa Monica Pier, and is inclusive of the Looff Hippodrome and the Santa Monica Pier (CPHI, HRI, NRHP, NHL, SML) approximately 1 ¼ mile southwest of the Project area (LAN-016 [19-178414]). Review of the California Historical Landmarks, 1990 (CHL) yielded a negative result within ½ mile of the Project area.

Author LA #	Report Title	Site	Description	¼ mile	½ mile	½ to 1mile
Bonner, Wayne H. (LA3857)	Cultural Resources Monitoring L.A. Cellular Site C5552.2, Venice, CA	-	Monitoring report	X	-	-
Breece, William H. (LA1535)	The Results of an Archaeological Survey on Two Parcels Located in Santa Monica, California	-	Survey	X	-	-
Duke, Curt (LA4550)	Cultural Resource Assessment for Pacific Bell Mobile Services Facility LA416-03, in the County of Los Angeles, California	-	Literature review and records search	X	-	-
Duke, Curt (LA5032)	Cultural Resource Assessment for AT&T Wireless Facility Number R329.2, County of Los Angeles, California	-	records search and survey	X	-	-
Lapin, Philippe (LA5007)	Cultural Resource Assessment for AT&T Wireless Services Facility Number R329. County of Los Angeles, California	-	records search and survey	X	-	-
McKenna Jeanette (LA6498)	CalTrans District 7-Historic Property Survey Report, Negative Findings	-	Survey	X	-	-
PCR and HRG	Historic Preservation Element: City of Santa Monica (2002)	-	Literature review survey	X	X	X
Peak & Associates, Inc. (LA1975)	Cultural Resource Survey and Clearance Report for the Proposed American Telephone and Telegraph Los Angeles Airport Central Office to the Santa Monica Central Office Fiberoptic Communication Route	-	records search and survey	X	-	-
Barbara, Sylvia (LA7841)	Project Proposes to Construct Curb Ramps at Various Location on Pacific Coast Highway from Pier Avenue to Topanga Canyon Boulevard and on Route 27 Mulholland Drive	2	survey (sites out of Project area)	-	X	X
Duke, Curt (LA6508)	Cultural Resource Assessment for AT&T Wireless Services Facility Number R322.1, County of Los Angeles, California	-	records search and survey	-	X	-
Duke, Curt (LA5188)	Cultural Resource Assessment: Cingular Wireless Facility no. LA 904-03 Los Angeles County, California	-	records search	-	X	-
King, Chester (LA3402)	Archaeological Reconnaissance at 1436-1444 16th Street, Santa Monica, California	-	records search and survey	-	X	-
Lapin, Philippe (LA5038)	Cultural Resource Assessment for AT&T Wireless Facility Number R325, County of Los Angeles, California	-	records search and survey	-	X	-
Maki, Mary (LA6714)	Relocation of Access Center & Daybreak Shelter and Creation of Westside Safe Haven Project, City of Santa Monica	-	records search and survey	-	X	-

Table 1. Archival Records Search Results-Studies

Author	Report Title	Site	Description	¼ mile	½ mile	1 mile
McLean, Deborah (LA3872)	Archaeological Assessment for Pacific Bell Mobile Services, Telecommunications Facility LA-268-02, 2419 Michigan Avenue, City of Santa Monica, Los Angeles County, California	-	records search and survey	-	X	-
PCR (LA6503)	Environmental Assessment for Federal Emergency Management Agency (FEMA) Funding under the Seismic Hazard Mitigation Program for Hospitals (SHMP) of the Santa Monica-UCLA Medical Center Facilities Reconstruction Project 1250 16th Street, Santa Monica, California 90404 of the UCLA	-	literature review, records search, and survey	-	X	-
Smith, Philomene C. (LA6505)	CalTrans District 7-Negative Archaeological Survey Report: Replacing the Existing Overhead Reflective Sign Panels in Kind with Retro-Reflective Panels	-	records search and survey	-	X	-
Greenwood and Associates (LA3322)	Monitoring Report: 1400 Block, 7th Street, Santa Monica, California	-	monitoring report	-	-	X
Greenwood and Associates (LA3324)	Monitoring Report Addendum: 1422 6th Street, Santa Monica, California	-	monitoring report	-	-	X

Table 1 Cont. Archival Records Search Results-Studies

Author and LA#	Report Title	Site 19-	Description	¼ mile	½ mile	1+mile
Selverston, Mark	SITE RECORD	002392	historic period refuse	-	X	-
Charleton, James, H.	NRHP Nomination Form	178414	Santa Monica Pier and Looff Hippodrome: NRHP # LAN-016			X

Table 2. Archival Records Search Results-Sites

EXISTING CONDITIONS

Methodology

Shannon Loftus, MAHP/RPA, of APRMI reviewed the archival research and performed an informal site visit of the Project property in mid April and early May 2008. The Project area and alternatives, comprised of the *Memorial Park* grounds, associated recreational structures and buildings, the City Yard facility, and surrounding road rights of way, were visually assessed for historic age and photographed.

Results

- ***John W. Fisher Lumber Company Lumber Barns***

There are five structures associated with the *John W. Fisher Lumber Company*; two of the structures present on the Project property likely represent the ca. 1923 modified lumber barns. Three additional buildings are modern era structures of indeterminate age.

Figure 4. Overview of the City Yard facility and the *John W. Fisher Lumber Company* buildings and structures (view to east); historic structures (left), modern era (right).

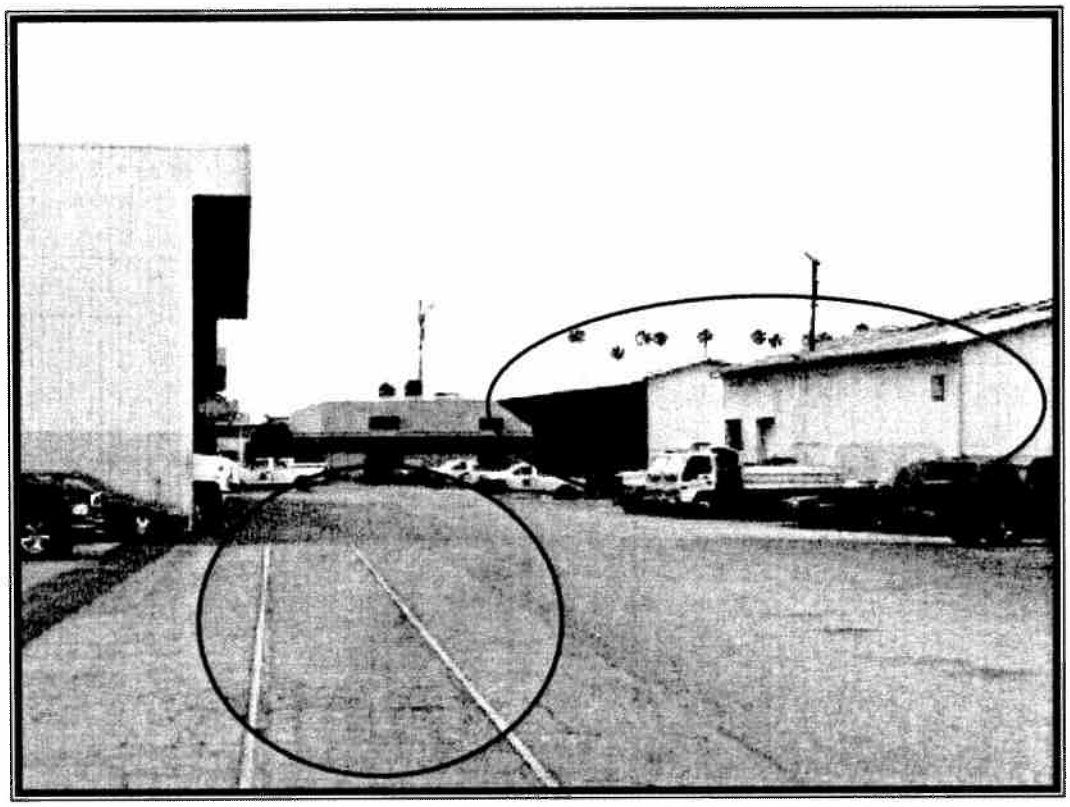


Figure 5. City Yard facility; view to west. The structures encircled in red on the right likely represent the ca. 1923 John W. Fisher Lumber Company lumber barns. Encircled in blue in the foreground is the remnant Pacific Electric Railway track.

- ***Pacific Electric Railway***

The remnant PE track, visible in Figure 5, is located at the eastern end of the City Yard facility. The track was not inspected as part of this feasibility study, therefore its age is unknown. It is unclear if additional PE track is buried beneath the asphalt in the western end of the City Yard facility.

- ***Modal Scale***

The modal scale is located south of the PE track at the eastern end of the City Yard facility. The scale appears to be constructed of rebar reinforced concrete, with two manhole lids at either end (east and west), embossed with the letters "FM." The age of the scale is unknown at this time, and requires further assessment.

Figure 6. Overview of the modal scale and foundation slab; view to the east.

- ***Foundation Slab***

The foundation slab is located west of, and adjacent to the modal scale (Figure 6). The foundation slab was not inspected, and it is unclear if the foundation slab is associated with the scale, or if it was part of an unaffiliated structure. Additionally, the age of the foundation slab is unknown at this time, and requires further assessment.

- ***Remaining Buildings and Structures of Memorial Park***

The remaining buildings located within Memorial Park, northwest of the intersection of 14th Street and Olympic Boulevard, comprise the PAL offices, classrooms, gymnasium, and shower facilities. Additional assessment of the buildings is required to determine their age. A visual assessment does not indicate anything unique in terms architectural design or craftsmanship. However, additional assessment is required to rule out affiliation with a person of significance, such as an architect, or association with an event of historical significance. The structures affiliated with the recreational ball fields, the playground and skate-park do not appear historic, but rather modern.

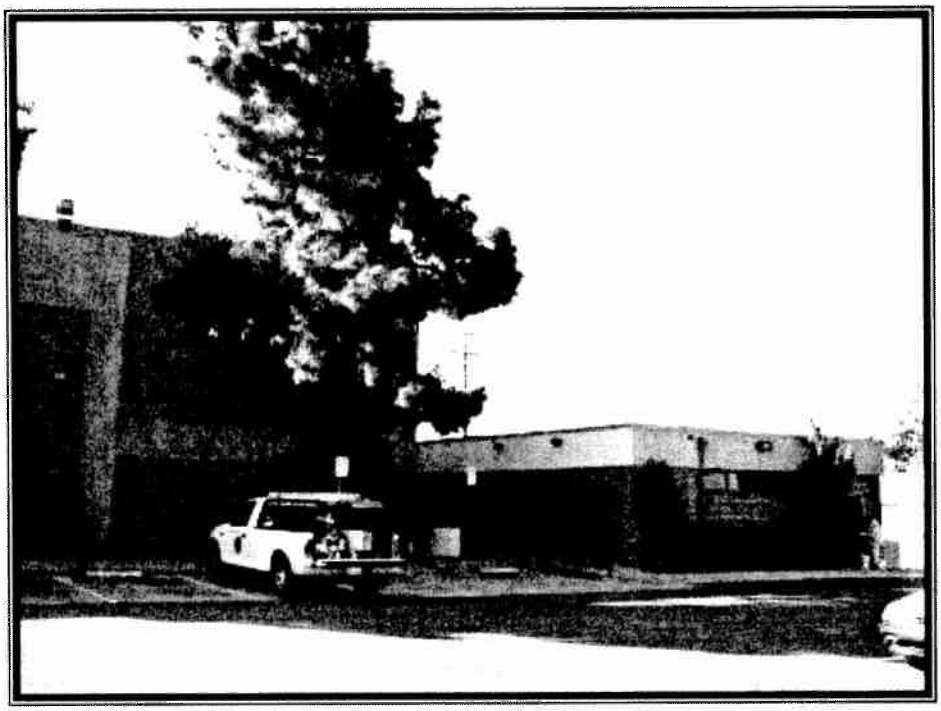
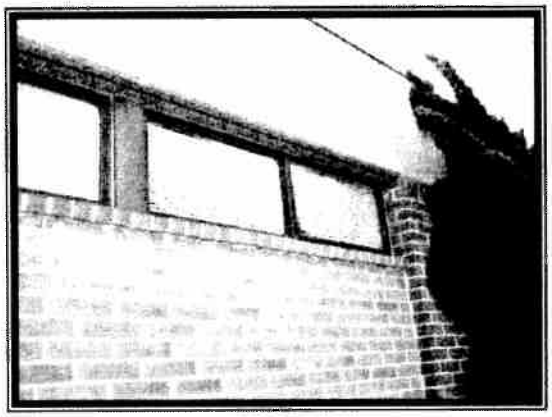


Figure 7. The northern side of the PAL buildings at Memorial Park.



Figures 8 and 9. Detail of the PAL buildings; western face along 14th Street.

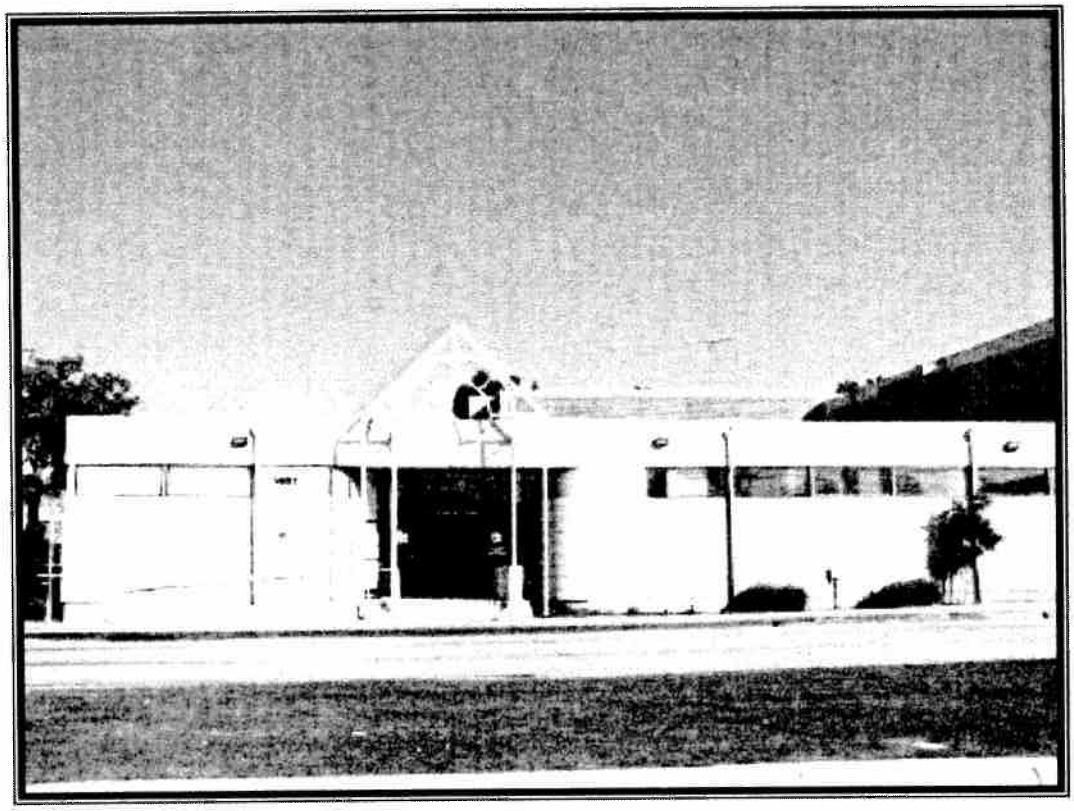


Figure 10. The PAL building as viewed from the east side of Olympic Boulevard.

Cultural Resources—Alternative Project Location

The Project alternatives include the medians of the adjacent roadways: 14th Street, 16th Street, Olympic Boulevard, and Colorado Boulevard. The buildings adjacent to the roadways, opposite Memorial Park, were photographed but remain unassessed at this time. The buildings comprise historic and modern era structures ca. 1920s to 1980s. However, the buildings appear to be located outside the Project alternatives location, thus additional assessment may not be necessary. A sample of some of these buildings is provided on the following pages.

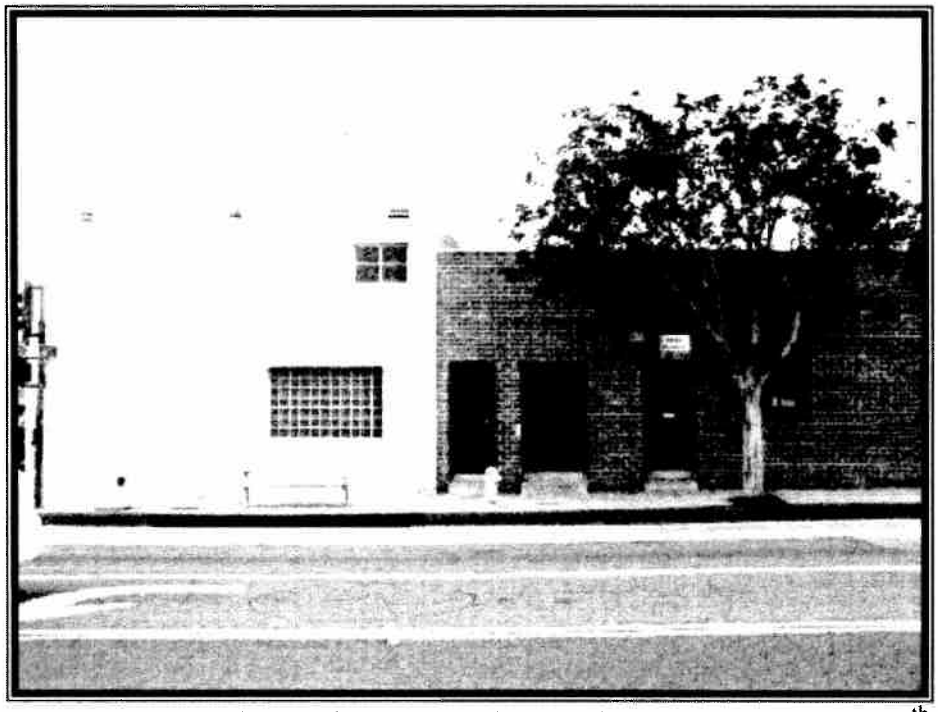


Figure 11. Buildings located northeast of the intersection at 14th Street and Colorado Boulevard

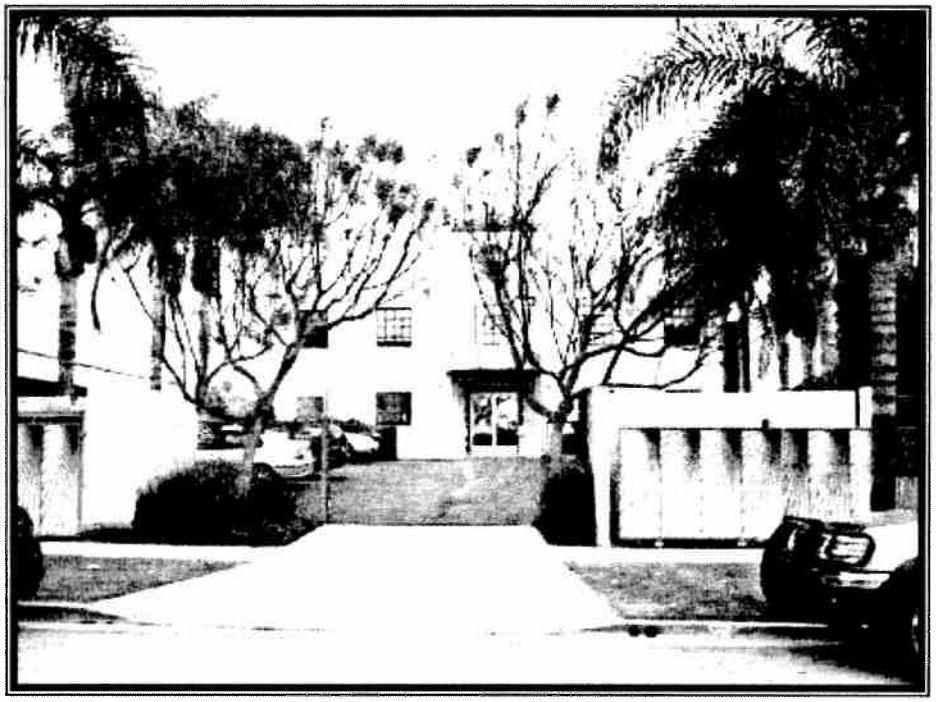


Figure 12. Building southeast of the intersection of Colorado Boulevard and 16th Street.

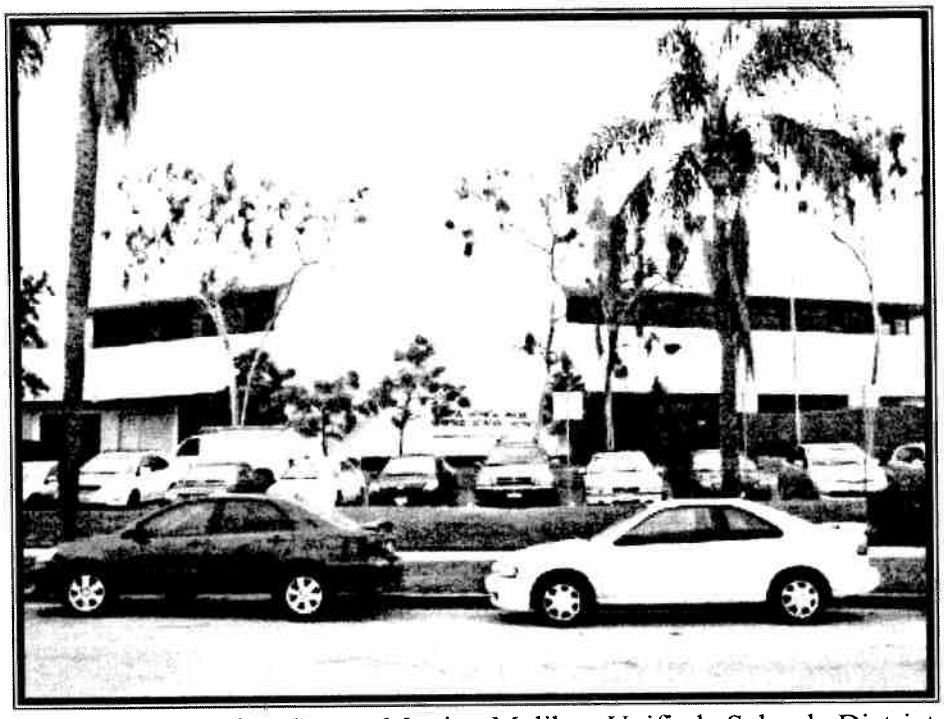


Figure 13. The Santa Monica-Malibu Unified School District administration building, at the previous Garfield School location.

Figure 14. Building south of Olympic Boulevard.

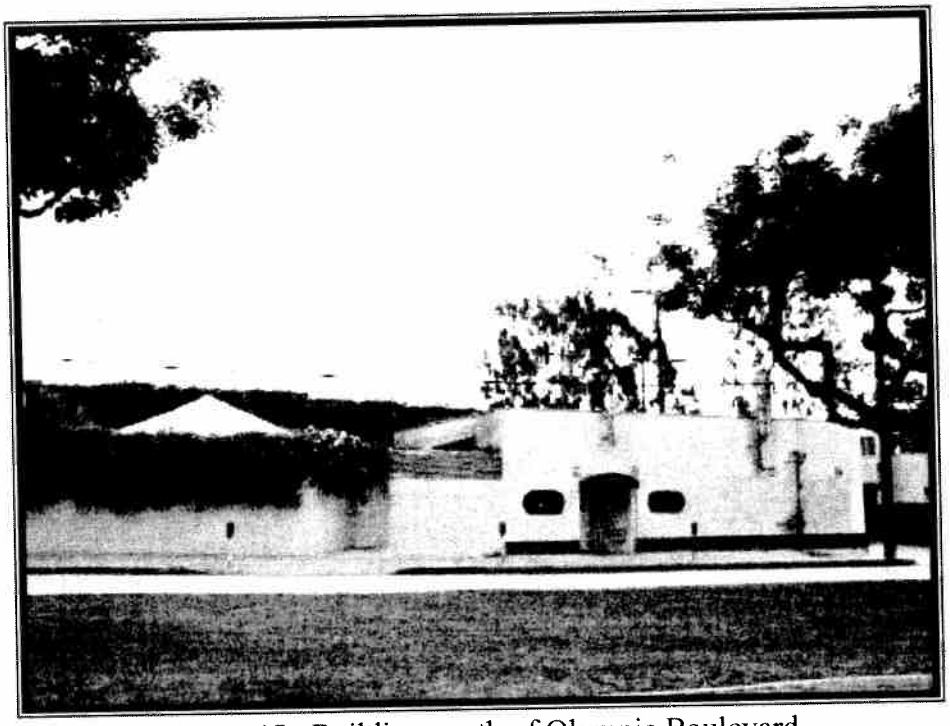


Figure 15. Building south of Olympic Boulevard.

Figure 16. Building east of intersection of 14th Street and Olympic Boulevard.

Figure 17. Building north of intersection of 14th Street and Olympic Boulevard.

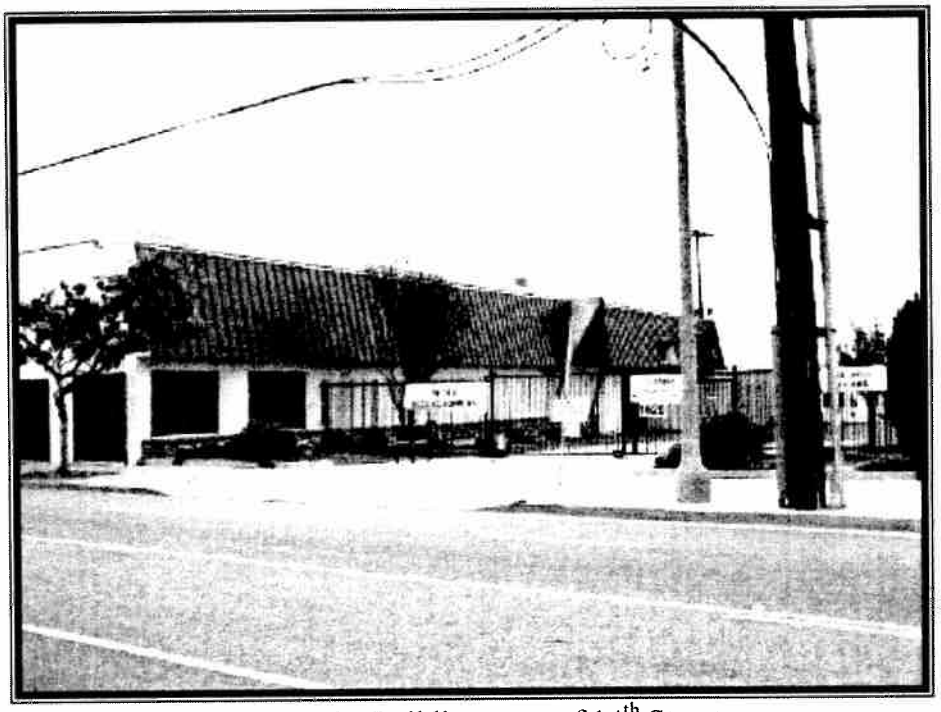


Figure 18. Building west of 14th Street.

SUMMARY and MANAGEMENT RECOMMENDATIONS

Summary of Existing Conditions-Cultural Resources

The preferred Project area and alternative locations are primarily comprised of modern-era buildings and structures, as well as municipal park facilities (ball fields, bleachers, skate-park, playground), and ornamental landscaping. The informal site visit identified five resources, all of which are historic in age and all pertain to the built environment and are comprised of structures. The five structures of historic interest are located in the northern portion of the preferred Project property within the confines of the City Yard facility:

- two (circa 1923) lumber barns associated with the *John W. Fisher Lumber Company* at 14th Street and Colorado Boulevard,
- a remnant set of PE tracks,
- a modal scale, and
- a foundation slab

The lumber barns are located in northwestern portion of the City Yard facility, and the PE track, modal scale, and foundation slab in the eastern portion of the City Yard facility. All five structures of historic interest require further investigation in the form of a formal Phase I (inventory) and possible Phase II (evaluation) in keeping with the requirement set forth by the CEQA, NEPA, Section 106 of the NHPA, and the City of Santa Monica. Such investigations (Phase I and Phase II) are beyond the scope of this feasibility study.

Management Recommendations

Paleontologic Resources

The regional geology shows that it is possible that the Project area may contain Pleistocene fossils. Therefore, a Vertebrate Paleontologic Records check is required as part of any environmental study, such as an Environmental Impact Report (EIR) or Environmental Impact Statement (EIS). A vertebrate paleontologic records search is not required as part of a feasibility study for cultural resources, therefore this task was not undertaken for the purposes of this report. However, should an EIR/EIS be undertaken for the Project, it is recommended that vertebrate paleontologic records search be conducted by a professional Paleontologist per the *Society of Vertebrate Paleontology* Standards.

Cultural Resources

The management recommendations for cultural resources within the preferred Project area and Project alternatives are two fold. First, this Report of Findings pertains to a

feasibility study, and a preliminary assessment of existing condition pertaining to cultural resources within the Project area and Project alternative locations. Therefore additional assessment of the buildings and structures identified within the Project area during this feasibility study require further investigation as to their potential historic significance under CEQA, NEPA, and at the local level.

Secondly, that type of investigation and assessment is comprised of a Cultural Resources Phase I inventory, and a Cultural Resources Phase II evaluation study, both of which are beyond the scope of this study. As a result of the preliminary identification of cultural resources within the Project area and the Project alternative locations, it is recommended that a professional Architectural Historian and professional Archaeologist, per the *SOI Professional Qualification Standards*, be retained by the Client or the City of Santa Monica to further inventory and assess the historical significance of the cultural resources per the compliance protocols set forth in the CEQA, NEPA, Section 106 of NHPA, and the ordinances and statutes of the City of Santa Monica.

REFERENCES

Bean, Lowell, J. and Charles R. Smith

1978 Gabrielino: In *Handbook of North American Indians*, Vol. 8, California. William C. Sturtevant, general editor, Robert F. Heizer volume editor. Washington D.C.: Smithsonian Institution.

Bissel, R., and S. Gust

2001 *Emergency Recovery Actions at CA-LAn-2828 (P.N. 19-002828), Los Angeles, Los Angeles County, California.* On file, South Central Coastal Information Center, California State University-Fullerton.

Bonner, Wayne

1998 *Cultural Resource Monitoring; L.A. Cellular Site C5552.2, Venice, California.* On file, South Central Coastal Information Center, California State University-Fullerton.

California State Parks

2008 "Admission Day, September 9, 1850." < http://www.parks.ca.gov/?page_id=%2023856> accessed 2/2008.

Castillo, Edward D.

1998 *Short Overview of California Indian History.* From, < http://www.nahc.ca.gov/califindian.html>, The Californian Native American Heritage Commission web page.

City of Santa Monica

2008 Planning and Community Development Department website < http://www.smgov.net/planning/ >, accessed 4/2008; 5/2008.

Dibblee Jr., Thomas W.

1991 *Beverly Hills and Van Nuys; South Half (DF31).* Geologic Map. Dibblee Geologic Foundation. Santa Barbara, CA 93160.

Gabriel, Louise

2006 *Early Santa Monica.* Arcadia Publishing.

Goldberg, Susan K, *et al.*

1999 The Metropolitan Water District of Southern California Headquarters Facility Project, The People of Yaanga?, Archaeological Investigations at CA-LAn-1575/H. On file, South Central Coast Information Center, California State University-Fullerton

2004 Cultural Resources Technical Evaluation for the California High Speed Train Project, Los Angeles-Orange County-San Diego. Available on line via link at the California High Speed Train website < http://www.cahighspeedrail.ca.gov/images/chsr/20080131155347_Cult_Report.pdf > (subject to change).

Harrington, John P.
1962 Preface. **In** *California's Gabrielino Indians*, by Bernice E. Johnston. Southwest Museum, Los Angles.

Hartman, David N.
1970 California and Man (second edition). Wm. C. Brown Company, Dubuque.

Heizer, Robert F.
1947 Francis Drake and the California Indians. *University of California Publications in American Archaeology and Ethnology* 42(3):251-302.

Jennings, Charles W. and Rudolph G. Strand
1991 *Geologic Map of California*: Olaf P. Jenkins Edition, Los Angeles Sheet Compilation. State of California, The Resources Agency, Department of Conservation.

Kroeber, Alfred L.
1925 *Handbook of the Indians of California*. Bureau of American Ethnology, Bulletin 78. Washington, D.C.: Smithsonian Institution

Laylander, Don
2000 *Early Ethnography of the Californias: 1533-1825*. Coyote Press Archives of California Prehistory, no. 47.

Maki, Mary
1995 *A Phase I Cultural Resource Survey of 0.53 Acre at 1151, 1155, 1201, and 1212 Detroit Street; City of West Hollywood, Los Angeles County, California*. On file, South Central Coast Information Center, California State University-Fullerton.

McCawley, William
1996 *The First Angelino: The Gabrielino Indians of Los Angeles*. Malki Museum and Ballena Press, Banning/Novato, California.

National Geographic
2002 *TOPO! California*. Recreational Mapping Software. Updated 2/2008

PCR Services and Historic Resources Group
2002 *Historic Preservation Element*, for the City of Santa Monica. Available on-line via link at the City of Santa Monica website < http://www.smgov.net/planning/planningcomm/Final%20Preservation%20Element.pdf>.

Pancho Barnes Enterprises, Inc.
n.d. Pancho Barnes website <http://www.panchobarnes.com/>, accessed 4/2008.

Public Broadcasting Service
2007 "Compromise of 1850 and the Fugitive Slave Act" in Part 4 1831-1865 of *Africans in America: Judgment Day*. < http://www.pbs.org/wgbh/aia/part4/4p2951.html >, accessed 2/2008.

Robinson, W.W.
1939 *Ranchos Become Cities*. San Pasqual Press, Pasadena, California.

Starzak, Richard
1994 *Historic Properties Survey Report for the Proposed Alameda Corridor from the Ports of Long Beach and Los Angeles to Downtown Los Angeles, in Los Angeles County*. On file, South Central Coast Information Center, California State University-Fullerton.

Strauss, Monica
2004 *Archaeological Resources Assessment for the Proposed Public Safety Maintenance Facilities Master Plan Project, City of Los Angeles*. On file, South Central Coast Information Center, California State University-Fullerton

United States Department of Veterans Affairs
2006 Office of Construction and Facilities Management; Historic Preservation. *National Home for Disabled Volunteer Soldiers*. < http://www.va.gov/facmgt/historic/NHDVS.asp >, accessed 4/2008

United States Geological Survey
6' Series Topographic Map
1926 *Santa Monica*

7.5' Series Topographic Maps
1965 *Beverly Hills* (Photorevised 1991, Minor Revision 1995)

15' and 30' Series Topographic Maps
1902 *Santa Monica* (Reprinted 1906)
1921 *Santa Monica*

Wallace, William J.
1955 A Suggested Chronology for Southern California Coastal Archaeology. **In** *The Southwestern Journal of Anthropology* 11 (3): 214-230.