Upper Stone Canyon Reservoir Water Quality Improvement Project

May 2011

VOLUME 2
APPENDICES TO DRAFT EIR

APPENDICES

APPENDIX A

NOTICE OF PREPARATION AND INITIAL STUDY AND RESPONSES TO THE NOP/IS

Initial Study

Upper Stone Canyon Reservoir Water Quality Improvement Project

Los Angeles Department of Water and Power
Environmental Services
111 North Hope Street, Room 1044
Los Angeles, California 90012

June 20, 2008

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PROJECT DESCRIPTION

1.1 Overview of the Project

To help ensure the quality, reliability, and stability of the City of Los Angeles drinking water supply, and to ensure compliance with updated United States Environmental Protection Agency (EPA) water quality standards, the Los Angeles Department of Water and Power (LADWP) proposes to replace the uncovered Upper Stone Canyon Reservoir with a buried concrete storage structure, which would be sited essentially within the existing reservoir (proposed project). The concrete storage structure would provide a minimum of 81 million gallons (MG) of potable water storage. The area atop the concrete storage structure would be planted, and a pedestrian trail system would be established within the Stone Canyon Reservoir complex property to provide for passive recreation activity. After completion of project construction, the trails within the site would be open to public use, and the recreation functions would be maintained and operated by the Los Angeles Department of Recreation and Parks (LADRP).

1.2 California Environmental Quality Act

The California Environmental Quality Act (CEQA) applies to proposed projects initiated by, funded by, or requiring discretionary approvals from state or local government agencies. The proposed changes at Upper Stone Canyon Reservoir constitute a project as defined by CEQA (California Public Resources Code §§21000 et seq.). LADWP is the lead agency for the compliance with CEQA because pursuant to *CEQA Guidelines* §15367, "'Lead Agency' means the public agency which has the principal responsibility for carrying out or approving a project."

As the lead agency for this project, LADWP must complete an environmental review to determine if the proposed project would create significant adverse environmental impacts. To fulfill the purpose of CEQA, this Initial Study has been prepared to assist in making that determination. Based on the nature and scope of the proposed project, the evaluations contained in the Initial Study environmental checklist (included herein), and the comments received from agencies and members of the public during review of the Notice of Preparation (NOP) of an Environmental Impact Report (EIR), factors that have potential to involve significant adverse environmental impacts will be determined. Such factors will become the focus of more detailed analysis in an EIR to determine the nature and extent of any potential environmental impacts and establish appropriate mitigations for those impacts determined to be significant. Based on the Initial Study analysis and NOP review, factors for which no significant adverse environmental impacts are expected to occur will be eliminated from further evaluation in the EIR. A preliminary evaluation of the potentially affected factors is included in the Initial Study checklist in Section 2.

1.3 Project Location

Upper Stone Canyon Reservoir is located approximately 0.5 miles south of Mulholland Drive between Roscomare Road and Beverly Glen Boulevard. The Stone Canyon Reservoir complex property is owned and maintained by LADWP. Upper Stone Canyon Reservoir itself is accessed from Mulholland Drive via a non-publicly accessible road, approximately 1.5 miles east of the

San Diego Freeway (Interstate [I] 405). Figure 1 shows Upper Stone Canyon Reservoir in relation to the region, and Figure 2 shows the vicinity of the reservoir.

1.4 Historical Perspective and Current Operations of Upper Stone Canyon Reservoir

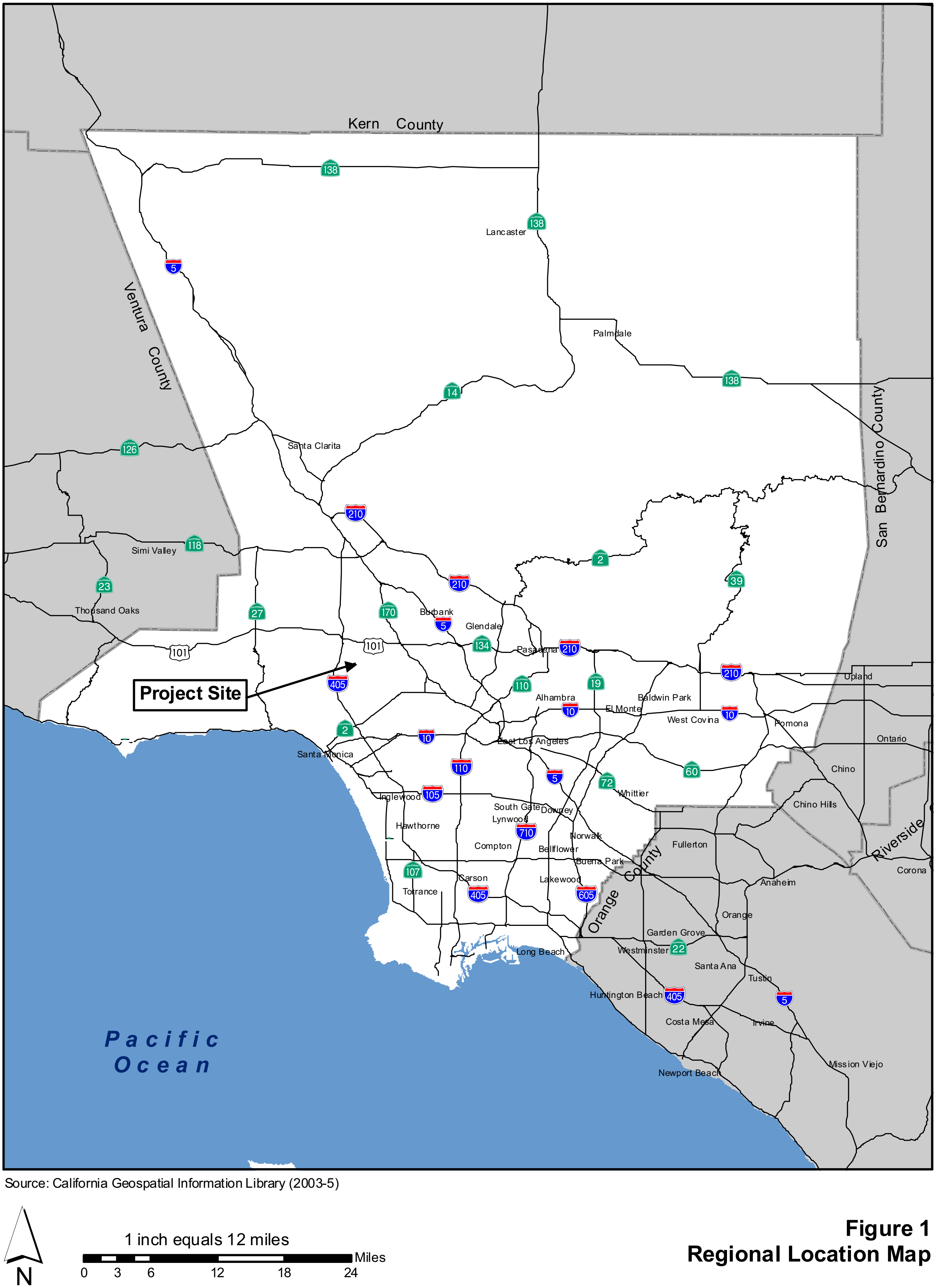
Upper Stone Canyon Reservoir is a component of the larger Stone Canyon Reservoir complex, which occupies approximately 756 acres of property owned and maintained by LADWP. The original Stone Canyon Reservoir (now referred to as Lower Stone Canyon Reservoir) was built in 1921 by damming the canyon. This reservoir provided storage for approximately 3.4 billion gallons of drinking water to serve western areas of Los Angeles. However, Lower Stone Canyon Reservoir has recently been taken out of service as a drinking water source as part of a system-wide initiative to comply with the California Department of Public Health drinking water quality requirements related to the Surface Water Treatment Rule. LADWP worked with members of Coalition to Protect Open Reservoirs, Stone Canyon subcommittee, to reach a mutually agreed upon solution for removing the reservoir from service. To facilitate this removal, a new water supply conduit was constructed to entirely bypass the Lower Reservoir and deliver water directly from Upper Stone Canyon Reservoir to the reservoir service area distribution system. The Lower Stone Canyon Reservoir will remain filled with essentially raw water that will be used only in emergency circumstances.

Upper Stone Canyon Reservoir was constructed in 1954 to provide approximately 138 MG of additional storage capacity and increase the distribution system operating pressure for portions of the service area. Treated drinking water is supplied to the reservoir by pipelines originating at the Los Angeles Aqueduct Filtration Plant (LAAFP) located in Granada Hills. Upper Stone Canyon Reservoir serves approximately 450,000 people in a service area that includes Beverly Glen, West Los Angeles, Pacific Palisades, Marina Del Rey, and the Los Angeles International Airport vicinity. During lower demand periods, water from the LAAFP may be diverted around Upper Stone Canyon Reservoir through bypass conduits and directly into the service area distribution network. However, the reservoir provides crucial storage capacity that allows for the operational flexibility necessary to meet daily and seasonal peaks in demand that could not be satisfied through the use of water distribution pipelines alone. This operational flexibility has become increasingly important since the loss of vast amount of storage previously provided by, but no longer available from, Lower Stone Canyon Reservoir.

1.5 Existing Facility and Site Description

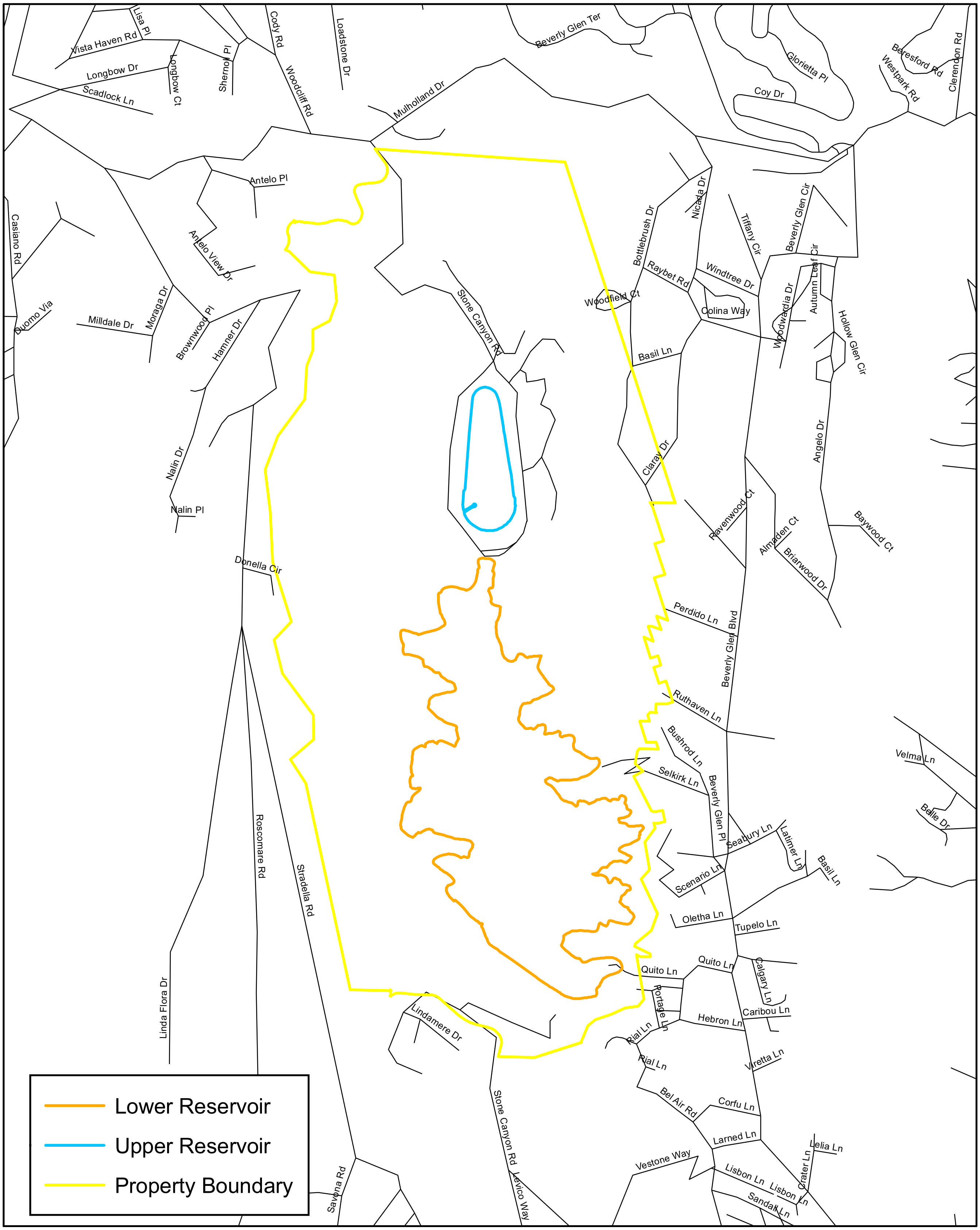
While Upper Stone Canyon Reservoir has a total storage volume of 138 MG, its effective operating capacity is only 81 MG because of pressure limitations imposed on the gravity fed system by elevation. The reservoir has a maximum depth of 49 feet, a high water elevation of 929 feet, and a surface area of approximately 14 acres at the high water elevation. The reservoir is approximately 1,600 feet long and approximately 500 feet wide at the maximum width, near the outlet tower at the southern end, tapering to approximately 250 feet wide, near the inlet at the northern end. The bottom and sides of the reservoir are paved with asphaltic concrete. A 7-foot tall chain link fence encloses the entire reservoir. An approximately 20- to 25-foot-wide paved road is located around the perimeter of the reservoir. Figure 3 shows the Upper Stone Canyon Reservoir site.

In addition to the bypass line constructed as part of the Lower Stone Canyon Reservoir project, facilities recently constructed at Stone Canyon include a new chlorination station, located adjacent to the west side of the Upper Reservoir. Other than the reservoirs and appurtenant facilities, the Stone Canyon Reservoir complex property remains essentially undeveloped.



Source: California Geospatial Information Library (2003-5)

Figure 1
Regional Location Map



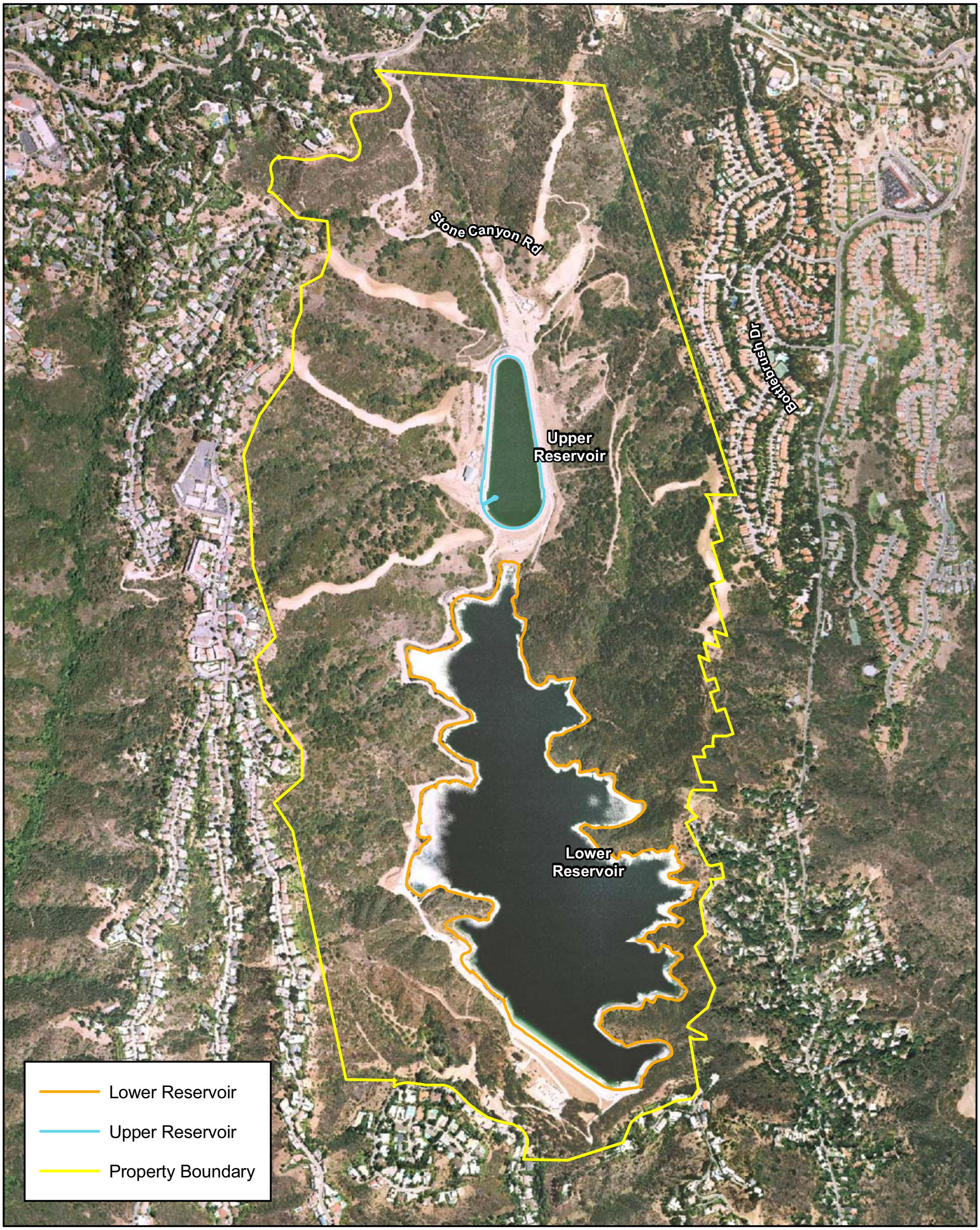
Source: U.S. Census Bureau 2000 TIGER files

N

1 inch equals 1,500 feet

0 250500 1,000 1,500 2,000 2,500 3,000 Feet

Figure 2
Project Vicinity Map



Source: Globexplorer 2007

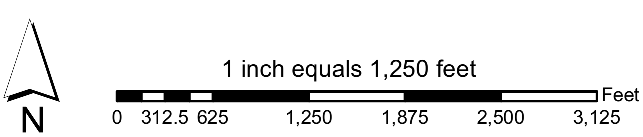


Figure 3
Upper Stone Canyon Reservoir Site

The proposed project would be contained entirely within the boundaries of the property. The entire complex property has a land use designation of Open Space. Surrounding land uses are predominantly low- to very low-density residential. The northern portion of the complex property, located just north of the Upper Reservoir itself, is included with the Mulholland Scenic Parkway Specific Plan Area, which is intended to preserve natural scenic values and enhance recreation opportunities along the Mulholland Drive corridor.

1.6 Project Description

The primary goal of the proposed project is to help improve the quality of the City of Los Angeles drinking water, including compliance with updated EPA water quality standards contained in the Stage 2 Disinfectants and Disinfection Byproducts Rule and the Long Term 2 Enhanced Surface Water Treatment Rule, while at the same time maintaining the water supply system reliability and stability provided by Upper Stone Canyon Reservoir. To accomplish this goal, a buried concrete storage structure would be constructed in place of the existing uncovered reservoir to protect the stored water from exposure to microbial pathogens and reduce the application of certain types of disinfectants used to treat the water. The concrete storage structure would provide a minimum storage capacity of 81 MG, which is 57 MG less than the current total volume of Upper Stone Canyon Reservoir, but equivalent to the reservoir's effective operational capacity.

In order to initiate construction of the proposed project, the Upper Stone Canyon Reservoir water level would initially be drawn down by normal consumption through the drinking water distribution system until the water level reached an elevation of 923 feet, which is the lower limit of the normal operating range of the reservoir. Below this elevation, the reservoir water would need to be drained into Lower Stone Canyon Reservoir. To maintain the stability of the Upper Reservoir dam, the rate at which the water level would be lowered would be carefully controlled. At this controlled rate, the storage capacity of the Lower Reservoir and the associated storm drainage system would readily accommodate the water drained from the Upper Reservoir.

A material laydown and equipment storage area would be established in the already cleared and graded area to the north of the reservoir. The existing reservoir, including the outlet tower, intake, reservoir sides and bottom, portions of the dam, and portions of the perimeter road would then be demolished. The site of the reservoir would be excavated to accommodate the proposed underground storage structure. However, because the proposed concrete storage structure would need to remain at a given elevation to maintain an adequate operating pressure for the water distribution system, the amount of backfill material generated from excavation may not be sufficient to fully cover the concrete storage structure. The additional material required to bury the concrete storage structure would be obtained from a borrow site located within the Stone Canyon Reservoir complex property, adjacent to the reservoir. The topsoil from the borrow area would be stockpiled and replaced over the disturbed area during site restoration. The concrete storage structure would be poured in place and buried, with a maximum of 3 feet of cover over the highest point of the top of the storage structure. Finally, the site would be landscaped, including restoration of the borrow area, and a pedestrian trail system, including interpretive displays and small informal picnic sites, would be created.

After the above construction is complete, the property would be open to the public on a controlled basis to provide access to the passive recreation trail system. A parking area for trail users would be constructed onsite, and a restroom facility would be provided adjacent to the parking area. A facility to house office space and maintenance storage would also be provided, including a small yard area to store equipment and supplies. The trail system and associated facilities would be operated and maintained by LADRP. Site access would be controlled by a gate, which would be open for public entry during daylight hours only.

The total duration of construction would be approximately 5.5 years. Based on an assumption that the material required to bury the concrete storage structure would come from an onsite borrow area, it is anticipated that the proposed project would involve approximately 15,000 truck trips to the site. In addition, there would be daily worker commute trips to the site. Construction vehicles would use Mulholland Drive to access the site from I-405. After completion of construction, operation of the water storage facilities onsite would not generate additional traffic. The recreation functions are anticipated to generate a relatively small amount of additional traffic to the site. Public vehicle access to the site would only be provided from Mulholland Drive during operation of the proposed project.

1.7 Land Use Consistency

City of Los Angeles Municipal Code Section 12.04.05 states that the purpose of the Open Space (OS) zone is to provide regulation for publicly owned land in order to implement the City's adopted General Plan. No building, structure, or land shall be used and no building or structure shall be erected, moved onto the site, enlarged or maintained, except as specified. The primary purpose of this zone is to protect and preserve natural resources and natural features of the environment; to provide outdoor recreation opportunities and advance the public health and welfare; to enhance environmental quality; to encourage the management of public lands in a manner which protects environmental characteristics; and to encourage the maintenance of open space uses on all publicly owned park and recreation land, and open space public land which is essentially unimproved. Uncovered public water supply reservoirs and accessory uses that are incidental to the operation and continued maintenance of such reservoirs are permitted within the OS zone. The proposed project would remove the existing open reservoir and replace it with a buried concrete storage structure, providing potentially usable open space. Operation of the passive recreation area may require construction of accessory structures, such as restroom/storage facilities. These facilities are conditionally permitted accessory structures within the OS zone, under the provisions of a Conditional Use Permit (CUP). The proposed project would therefore be consistent with the OS zone.

1.8 Required Permits and Approvals

Numerous approvals and/or permits would be required to implement the Upper Stone Canyon Reservoir Water Quality Improvement Project. The environmental documentation for the project would be used to facilitate compliance with federal and state laws and the granting of permits by various state and local agencies having jurisdiction over one or more aspects of the proposed project. These approvals and permits may include the following:

City of Los Angeles Department of Water and Power

- Certification by the Board of Commissioners that the EIR was prepared in accordance with CEQA and other applicable codes and guidelines
- Approval by the Board of Commissioners of the proposed project

City of Los Angeles Department of Recreation and Parks

- Approval by the Board of Commissioners of an agreement between LADWP and LADRP for the lease, operations, maintenance, and security for the recreation aspects of the reservoir property

City of Los Angeles Department of Public Works, Bureau of Engineering

- Excavation Permits

City of Los Angeles Department of Building and Safety

- Grading Permit
- Haul Route Permits
- Building Permit

City of Los Angeles Department of Planning

- Conditional Use Permit
- Design Review per the Mulholland Scenic Parkway Specific Plan

City of Los Angeles Department of Public Works, Flood Control

- Discharge Permit for construction dewatering and hydrostatic test water discharge in storm system and channel

State of California Department of Water Resources, Division of Safety of Dams

- Application for approval of plans and specifications for the removal of a dam and reservoir

State of California Department of Industrial Relations, Division of Occupational Safety and Health, Mining and Tunneling Unit

- Underground Classification Permit for tunneling and jacking locations

State of California Los Angeles Regional Water Quality Control Board

- National Pollution Discharge Elimination System (NPDES) Permit for Construction Dewatering
- NPDES Permit for Hydrostatic Test Water Discharge

SECTION 2
INITIAL STUDY CHECKLIST

The following discussion of potential environmental effects was completed in accordance with §15063(d) (3) of the *CEQA Guidelines* (2008) to determine if the project may have a significant effect on the environment.

A brief explanation is provided for all determinations in Section 3, *Environmental Impact Assessment*, of this document. A "No Impact" or "Less than Significant Impact" determination is made when the proposed project would not have any impact or would not have a significant effect on the environment for that issue area based on a project-specific analysis.

Project Title:
Upper Stone Canyon Reservoir Water Quality Improvement Project

Lead Agency Name and Address:
Los Angeles Department of Water and Power
Environmental Services
111 North Hope Street, Room 1044
Los Angeles, CA 90012

Contact Person and Phone Number:
Sarah Easley Perez
Environmental Specialist
Los Angeles Department of Water and Power
(213) 367-1276

Project Sponsor's Name and Address:
Los Angeles Department of Water and Power
Water Engineering and Technical Services
111 North Hope Street
Los Angeles, CA 90012

Project Location:
Upper Stone Canyon Reservoir is located approximately 0.5 miles south of Mulholland Drive, between Roscomare Road and Beverly Glen Boulevard in the Bel Air area of Los Angeles.

City Council District:
District 5

Neighborhood Council District:
Bel Air-Beverly Crest

General Plan Designation:

The proposed project site is designated as Open Space in the City of Los Angeles General Plan. The proposed project site is located within the Bel Air-Beverly Crest Community Plan area.

Zoning:

[Q]OS-1XL (Open Space)

Description of Project:

To help ensure the quality, reliability, and stability of the City of Los Angeles drinking water supply, LADWP proposes to replace the uncovered Upper Stone Canyon Reservoir with a buried concrete storage structure, which would be sited essentially within the existing reservoir (proposed project). The concrete storage structure would provide a minimum of 81 MG of potable water storage. The area atop the buried concrete storage structure would be planted, and a pedestrian trail system would be established within the Stone Canyon Reservoir complex property to provide for passive recreation activity. A restroom/storage facility would be provided adjacent to the parking area. After completion of project construction, the trails within the site would be open to the public. The trail system and recreation functions would be operated and maintained by LADRP.

Surrounding Land Uses and Setting:

Upper Stone Canyon Reservoir is a component of the larger Stone Canyon Reservoir complex, which occupies approximately 756 acres of property owned and maintained by LADWP and also includes the 3.4-billion gallon Lower Stone Canyon Reservoir, which has recently been removed from service as a drinking water storage reservoir. Other than the reservoirs and appurtenant facilities, the Stone Canyon complex property remains essentially undeveloped. The Upper Reservoir itself has a surface area of approximately 14 acres at high water elevation. The reservoir is surrounded by a paved road. The proposed project would be contained entirely within the boundaries of the Stone Canyon Reservoir complex property. The entire complex property is designated as Open Space. Surrounding land uses are predominantly low- to very low-density residential uses. The northern portion of the complex property, located just north of the Upper Reservoir itself, is included with the Mulholland Scenic Parkway Specific Plan Area, which is intended to preserve natural scenic values and enhance recreation opportunities along the Mulholland Drive corridor.

Agencies That May Have an Interest in the Proposed Project:

CEQA Lead Agency

- Los Angeles Department of Water and Power

Responsible/Trustee Agencies

- Los Angeles Department of Recreation and Parks

- California Department of Water Resources, Division of Safety of Dams
- California Division of Occupational Safety and Health, Mining and Tunneling Unit
- Los Angeles Regional Water Quality Control Board

Reviewing Agencies

- California Department of Transportation
- California Department of Public Health
- City of Los Angeles Department of Public Works, Bureau of Engineering
- City of Los Angeles Department of Public Works, Flood Control
- City of Los Angeles Fire Department
- City of Los Angeles Police Department
- City of Los Angeles Department of Transportation
- City of Los Angeles Department of Building and Safety
- City of Los Angeles Department of Planning

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the Environmental Impacts discussion in Section 3.

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

DETERMINATION

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☐ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☒ I find that the proposed project MAY have a significant effect on the environment, and an environmental impact report is required.

☐ I find that the proposed project may have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Charles C. Holloway — 6/17/08

Signature — Date

Charles Holloway
Manager of Environmental Assessment
Los Angeles Department of Water and Power

		Potentially Significant Impact	Less than Significant Impact After Mitigation Incorporated	Less Than Significant Impact	No Impact
I.	**AESTHETICS**. Would the project:				
a.	Have a substantial adverse effect on a scenic vista?	X			
b.	Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	X			
c.	Substantially degrade the existing visual character or quality of the site and its surroundings?	X			
d.	Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?				X
e.	Create a new source of substantial shade or shadow that would adversely affect daytime views in the area?				X
II.	**AGRICULTURE RESOURCES**. In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:				
a.	Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				X
b.	Conflict with existing zoning for agricultural use, or a Williamson act contract?				X
c.	Involve other changes in the existing environment that, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?				X
III.	**AIR QUALITY**. Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a.	Conflict with or obstruct implementation of the applicable air quality plan?				X
b.	Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	X			
c.	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	X			
d.	Expose sensitive receptors to substantial pollutant concentrations?	X			
e.	Create objectionable odors affecting a substantial number of people?			X	

		Potentially Significant Impact	Less than Significant Impact After Mitigation Incorporated	Less Than Significant Impact	No Impact
IV.	**BIOLOGICAL RESOURCES**. Would the project:				
a.	Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	X			
b.	Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	X			
c.	Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	X			
d.	Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	X			
e.	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	X			
f.	Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				X
V.	**CULTURAL RESOURCES**. Would the project:				
a.	Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5?	X			
b.	Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5?	X			
c.	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	X			
d.	Disturb any human remains, including those interred outside of formal cemeteries?			X	
VI.	**GEOLOGY AND SOILS**. Would the project:				
a.	Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
	i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.			X	

		Potentially Significant Impact	Less than Significant Impact After Mitigation Incorporated	Less Than Significant Impact	No Impact
	ii) Strong seismic ground shaking?			X	
	iii) Seismic-related ground failure, including liquefaction?				X
	iv) Landslides?			X	
b.	Result in substantial soil erosion, loss of topsoil, or changes in topography or unstable soil conditions from excavation, grading, or fill?			X	
c.	Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on-or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?			X	
d.	Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?				X
e.	Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?				X
VII.	**HAZARDS AND HAZARDOUS MATERIALS**: Would the project:				
a.	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			X	
b.	Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?			X	
c.	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?			X	
d.	Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				X
e.	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?				X
f.	For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?				X
g.	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				X
h.	Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?			X	

		Potentially Significant Impact	Less than Significant Impact After Mitigation Incorporated	Less Than Significant Impact	No Impact
VII.	**HYDROLOGY AND WATER QUALITY**. Would the project:				
a.	Violate any water quality standards or waste discharge requirements?			X	
b.	Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?			X	
c.	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of stream or river, in a manner that would result in substantial erosion or siltation on- or off-site?			X	
d.	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site?			X	
e.	Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?			X	
f.	Otherwise substantially degrade water quality?			X	
g.	Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				X
h.	Place within a 100-year flood hazard area structures that would impede or redirect flood flows?				X
i.	Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?				X
j.	Inundation by seiche, tsunami, or mudflow?			X	
IX.	**LAND USE AND PLANNING**. Would the project:				
a.	Physically divide an established community?				X
b.	Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?			X	
c.	Conflict with any applicable habitat conservation plan or natural community conservation plan?				X

		Potentially Significant Impact	Less than Significant Impact After Mitigation Incorporated	Less Than Significant Impact	No Impact
X.	**MINERAL RESOURCES**. Would the project:				
a.	Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				X
b.	Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				X
XI.	**NOISE**. Would the project result in:				
a.	Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	X			
b.	Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	X			
c.	A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?			X	
d.	A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	X			
e.	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				X
f.	For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?				X
XII.	**POPULATION AND HOUSING**. Would the project:				
a.	Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?				X
b.	Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				X
c.	Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				X
XIII.	**PUBLIC SERVICES**.				
a.	Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				

		Potentially Significant Impact	Less than Significant Impact After Mitigation Incorporated	Less Than Significant Impact	No Impact
	i) Fire protection?				X
	ii) Police protection?				X
	iii) Schools?				X
	iv) Parks?				X
	v) Other public facilities?				X
XIV.	**RECREATION**.				
a.	Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				X
b.	Does the project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?			X	
XV.	**TRANSPORTATION/TRAFFIC**. Would the project:				
a.	Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?	X			
b.	Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	X			
c.	Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?				X
d.	Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	X			
e.	Result in inadequate emergency access?			X	
f.	Result in inadequate parking capacity?				X
g.	Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?				X
XVI.	**UTILITIES AND SERVICE SYSTEMS**. Would the project:				
a.	Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?				X
b.	Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			X	
c.	Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				X

		Potentially Significant Impact	Less than Significant Impact After Mitigation Incorporated	Less Than Significant Impact	No Impact
d.	Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?			X	
e.	Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?				X
f.	Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?			X	
g.	Comply with federal, state, and local statutes and regulations related to solid waste?				X
XVII.	**MANDATORY FINDINGS OF SIGNIFICANCE**.				
a.	Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	X			
b.	Does the project have impacts that are individually limited, but cumulatively considerable? "Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.	X			
c.	Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	X			

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SECTION 3
ENVIRONMENTAL IMPACT ASSESSMENT

INTRODUCTION

The following discussion addresses impacts to various environmental resources, per the Initial Study checklist questions contained in Appendix G of the *CEQA Guidelines*, as summarized above in Section 2.0, *Initial Study Checklist*. It was prepared in accordance with §15070 and §15071 of the *CEQA Guidelines* (2008).

I. AESTHETICS

Would the project:

a) Have a substantial adverse effect on a scenic vista?

Potentially Significant Impact. The proposed project site is located approximately 0.5 miles south of Mulholland Drive between Roscomare Road and Beverly Glen Boulevard. The 756-acre Stone Canyon Reservoir complex property is owned and maintained by LADWP. Upper Stone Canyon Reservoir itself is accessed from Mulholland Drive via a non-publicly accessible road. The reservoir is visible from adjacent residences located above the reservoir to the east and west. The Mulholland Scenic Parkway Specific Plan designates a scenic viewpoint above the reservoir (Nicada Overlook) that provides public views of the Stone Canyon property. A trail runs along the southern side of Mulholland Drive that may also provide views of the reservoir. The proposed project involves replacing the reservoir with a buried concrete storage structure. Following construction, the area atop of the storage structure would be planted. Nevertheless, the proposed project would alter the views of the site by removing the open reservoir from the visual environment. Furthermore, portions of the project site that may be used as a borrow area for material to bury the concrete water storage structure may fall within the Mulholland Scenic Parkway Specific Plan boundary. As such, the proposed project could create potentially significant impacts to a scenic vista. This issue will be examined further in the EIR.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

Potentially Significant Impact. Roadways that provide scenic views within and around the City of Los Angeles are classified by the County of Los Angeles and State of California Department of Transportation (Caltrans) as officially designated scenic highways or corridors. The closest officially designated local scenic parkway to the proposed project is Mulholland Drive, which is located approximately 0.5 miles north of Upper Stone Canyon Reservoir. The northern portion of the reservoir complex property, located just north of the Upper Reservoir itself, is included with the Mulholland Scenic Parkway Specific Plan Area, which is intended to preserve natural scenic values and enhance recreation opportunities along the Mulholland Drive corridor. Alteration of the project site could be visible from Mulholland Drive. As such, the proposed project could substantially damage scenic resources. This issue will be examined further in the EIR.

c) Substantially degrade the existing visual character or quality of the site and its surroundings?

Potentially Significant Impact. The proposed project would involve replacing Upper Stone Canyon Reservoir with a buried concrete storage structure and planting the area atop the structure. As described above, there are private and possibly public views of the existing open reservoir. Removing the reservoir would eliminate views of open water from these residences and public vantage points. As such, the proposed project could potentially degrade the existing visual character or quality of the site and its surroundings. This issue will be examined further in the EIR.

d) Create new source of substantial light or glare that would adversely affect day or nighttime views in the area?

No Impact. The proposed project would involve replacing the existing reservoir with a buried concrete storage structure and planting the area atop the structure. During the construction phase, all activities would occur during daylight hours; no lighting would be used. During operation of the proposed project, no new lighting would be provided. No impact would occur, and no further study of this issue is required.

e) Create new source of substantial shade and shadow that would adversely affect daytime views in the area?

No Impact. The proposed project would involve replacing the existing reservoir with a buried concrete storage structure and planting the area atop the structure. The only aboveground structures would be a relatively small restroom/storage facility, vents, and access hatches. As such, there is no potential to create shade and shadow. No impact would occur, and no further study of this issue is required.

II. AGRICULTURE RESOURCES

Would the project:

a) Convert Prime Farmland, Unique Farmland or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

No Impact. See discussion in item *c*, below.

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

No Impact. See discussion in item *c*, below.

c) Involve other changes in the existing environment which, due to their location or nature, could result in the conversion of Farmland, to non-agricultural use?

No Impact. There is no Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) on or in the vicinity of the proposed project site. Therefore, there would be no potential for construction or operation of the proposed project to convert farmland, either directly or indirectly, to non-agricultural use. Upper Stone Canyon Reservoir is located in the Bel Air-Beverly Crest community of the City of Los Angeles in an area that is zoned [Q]OS-1XL (Open Space). The proposed project is located on a previously developed site owned by LADWP and used for drinking water storage. The project site is not zoned for agricultural purposes and is not used for agricultural purposes. No Williamson Act contract applies to the site. Thus, the proposed project would not conflict with existing zoning for agricultural use or a Williamson Act contract. Replacing the reservoir with a buried concrete storage structure would not result in the conversion of farmland to non-agricultural use. No impact would occur, and no further study of this issue is required.

III. AIR QUALITY

Would the project:

a) Conflict with or obstruct implementation of the applicable air quality plan (e.g., the SCAQMD Plan or Congestion Management Plan)?

No Impact. The project site is located within the South Coast Air Basin (Basin), which is bounded by the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east, and the Pacific Ocean to the south and west. The air quality in the Basin is managed by the South Coast Air Quality Management District (SCAQMD). The Basin has a history of recorded air quality violations and is an area where both state and federal ambient air quality standards are exceeded. Because of the violations of the California Ambient Air Quality Standards (CAAQS), the California Clean Air Act requires triennial preparation of an Air Quality Management Plan (AQMP). The AQMP analyzes air quality on a regional level and identifies region-wide attenuation methods to achieve the air quality standards, including regulations for stationary-source polluters; facilitation of new transportation technologies, such as low-emission vehicles; and capital improvements, such as park-and-ride facilities and public transit improvements. The most recently adopted plan is the 2007 AQMP, adopted on June 11, 2007. This plan is the SCAQMD's portion of the State Implementation Plan (SIP).

The SCAQMD accepts that Southern California is growing. As such, the AQMP accommodates population growth and transportation projections based on the forecasts made by the Southern California Association of Governments (SCAG). Projects that are consistent with employment and population forecasts are considered by the SCAQMD to be consistent with the AQMP. The proposed project involves replacing an existing open reservoir with a buried concrete storage structure, planting the area atop the structure, and providing a trail system for passive recreation use. Covering or enclosing the reservoir is required by the EPA to meet water quality regulations. The total storage capacity of the reservoir would be reduced, but its operational capability and service area would not change. The proposed project would not involve new residential or businesses that could generate population growth or jobs. Therefore, the project is consistent with the growth expectations for the region, and it would not conflict with the AQMP. No impact would occur, and no further study of this issue is required.

b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Potentially Significant Impact. Demolition of the existing reservoir and construction of the buried concrete storage structure would generate short-term construction emissions. Emissions would be generated from demolition, site grading and other site preparation activities, construction equipment, and worker vehicle exhaust.

Construction activities would be short-term in nature and would not add to long-term air quality degradation. However, these emissions may exceed the SCAQMD daily emissions thresholds. Temporary construction emissions would, therefore, be considered potentially significant and will be analyzed further in the EIR.

Following construction of the buried concrete storage structure, no additional vehicle trips to and from the project site would be generated in relation to the water storage function, and the operation of the water storage facility would not require the use of pollutant-generating equipment. The proposed project would introduce new passive recreational uses. However, the small number of vehicle trips generated by this use is not anticipated to create significant impacts in relation to air quality standards or contribute substantially to an existing or projected air quality violation. Operation of the proposed project would not exceed the SCAQMD daily emissions thresholds or contribute substantially to an existing air quality violation. The impact would be less than significant, and no further analysis of this issue is required.

c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

Potentially Significant Impact. The project site is located in the Basin, which is a non-attainment area for ozone (O_3), fine particulate matter ($PM_{2.5}$), and respirable particulate matter (PM_{10}). Construction activities for the proposed project would contribute to an increase in air quality emissions for which the region is non-attainment. As such, air quality impacts from construction of the buried concrete storage structure will be evaluated using the thresholds of significance established by the SCAQMD. Construction activities associated with implementation of the proposed project could result in increases in air pollutant emissions, which individually or cumulatively, would exceed established thresholds for these criteria pollutants. The impact is potentially significant and will be analyzed in the EIR.

Following construction of the buried concrete storage structure, no additional vehicle trips to and from the project site in relation to the water storage function would be generated beyond what currently occurs for the existing reservoir, and the operation of the water storage facility would not require the use of pollutant-generating equipment. The proposed project would introduce new passive recreational uses. However, the small number of vehicle trips generated by this use is not anticipated to create significant impacts in relation to a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment. Operation of the proposed project would create less than significant impacts, and no further analysis of this issue is required.

Currently there are no adopted thresholds of significance or specific methodologies established for determining impacts related to a project’s potential contribution to global climate change in CEQA documents. As such, that the proposed project’s contribution to global climate change will be addressed within the context of cumulative impacts until further guidelines, methodologies, and thresholds of significance are established. Therefore, this issue will be analyzed as a potentially significant cumulative impact in the EIR.

d) **Expose sensitive receptors to substantial pollutant concentrations?**

Potentially Significant Impact. The proposed project would be bordered by sensitive receptors, namely residential uses. Since daily construction emissions could exceed the SCAQMD significance thresholds for daily emissions, the impact is potentially significant and will be analyzed in the EIR.

Following construction of the buried concrete storage structure, no additional vehicle trips to and from the project site in relation to the water storage function would be generated beyond what currently occurs for the existing reservoir, and the operation of the water storage facility would not require the use of pollutant-generating equipment. The proposed project would introduce new passive recreation uses. However, the small number of vehicle trips generated by this use is not anticipated to create significant impacts in relation to exposure of sensitive receptors to substantial pollutant concentrations. Operation of the proposed project would create less than significant impacts, and no further analysis of this issue is required.

e) **Create objectionable odors affecting a substantial number of people?**

Less Than Significant Impact. Any odors (e.g., odors from construction vehicle emissions) would be controlled in accordance with SCAQMD Rule 402 (Nuisance Emissions). Other than construction vehicle operation, no activities are anticipated to occur that would have the potential to cause odor impacts during the construction of the proposed project. Because use of construction vehicles would be temporary and no objectionable odors would remain after project construction, impacts would be less than significant. During project operation, there would be no odor-generating equipment or other activities. The impact would be less than significant, and no further analysis of this issue is required.

IV. BIOLOGICAL RESOURCES

Would the project:

a) **Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?**

Potentially Significant Impact. See discussion in item *d*, below.

b) **Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?**

Potentially Significant Impact. See discussion in item *d*, below.

c) **Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?**

Potentially Significant Impact. See discussion in item *d*, below.

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery/breeding sites?

Potentially Significant Impact. The majority of the Stone Canyon Reservoir complex is undeveloped and covered with vegetation. These undeveloped areas have the potential to include candidate, sensitive, or special status species or the vegetation communities on which they depend. Removal of the reservoir and construction of the buried concrete storage structure would require disturbance of previously undeveloped hillside areas within the reservoir property. This activity could have a substantial adverse effect, either directly or through habitat modifications, on species identified as candidate, sensitive, or special status. In addition, the Mulholland Scenic Parkway Specific Plan has identified watercourses within the project site that may contain riparian vegetation, other sensitive natural community, or wetland. Removal or disturbance of these areas would be potentially significant. Further, there is potential for a substantial adverse effect on the movement of native resident or migratory wildlife species using the areas of the project site that may be disturbed during construction of the buried concrete storage structure. Biological surveys will be conducted and a detailed biological resources technical report will be prepared for the project to fully characterize the existing biological conditions at the site and evaluate the potential impacts associated with removing the reservoir and constructing a buried concrete storage structure. The technical report will be included as an appendix to the EIR, and the results of the biological resource surveys will be summarized and incorporated into the EIR. If necessary, mitigation measures will be provided in the technical report and the EIR to address potential impacts to biological resources resulting from the project.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance (e.g., oak trees or California walnut woodlands)?

Potentially Significant Impact. The majority of the site is undeveloped and includes vegetated areas with trees and shrubs. Removal of trees during construction of the proposed project could conflict with the City of Los Angeles Tree Protection Ordinance. This issue will be analyzed further in the EIR.

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

No Impact. The proposed project site is not part of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. Therefore, no impacts would occur, and no further study of this issue is required.

V. CULTURAL RESOURCES

Would the project:

a) Cause a substantial adverse change in the significance of a historical resource as defined in California Code of Regulations Section 15064.5?

Potentially Significant Impact. Upper Stone Canyon Reservoir was constructed in 1954 and is more than 45 years of age. Due to the age of the reservoir and its role in the development of Los Angeles, it could potentially be eligible for listing as a historic resource. This issue will be analyzed in detail in the EIR.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to California Code of Regulations Section 15064.5?

Potentially Significant Impact. See discussion in item *c*, below.

c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Potentially Significant Impact. There are areas with native topsoil located adjacent to the reservoir that could be disturbed during construction of the buried concrete storage structure. As such, there is the potential to uncover buried archaeological resources or destroy unique paleontological resources during project construction. This issue will be analyzed further in the EIR.

d) Disturb any human remains, including those interred outside of formal cemeteries?

Less Than Significant Impact. The proposed project would not impact known cemeteries, and no evidence of burials exists in the proposed project site or surrounding areas. Should any remains be discovered during project construction, LADWP would be required to stop excavation or disturbance of the affected site until satisfying the steps outlined in CEQA §15064.5(e). Compliance with existing regulations would ensure a less than significant impact, and no further study of this issue is required.

VI. GEOLOGY AND SOILS

Would the project:

a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

Less than Significant Impact. See discussion in item *ii*, below.

ii) Strong seismic ground shaking?

Less Than Significant Impact. Active faults do not cross through the proposed project site, and active faults are not located in the immediate vicinity of the proposed project site. The proposed project site is not located within an Alquist-Priolo Earthquake Fault Zone or within a Fault Rupture Study Area, as mapped by the City of Los Angeles and the California Geological Survey. The closest known fault to the proposed project site, the Hollywood Fault, is located approximately 2 miles to the southeast. Therefore, as with all of Los Angeles County, the project area is susceptible to high-intensity ground shaking that affects all structures in the City. Thus, the buried concrete storage structure would be constructed in accordance with seismic requirements of the California Building Code for seismic safety. Compliance with established standards would reduce risks of structural failure or collapse to a less than significant level, and no further study of this issue is required.

iii) Seismic-related ground failure, including liquefaction?

No Impact. Liquefaction, essentially the transformation of the soil to a liquid state, results in lateral spreading, ground settlement, sand boils, and soil falls. Liquefaction typically occurs in areas with a high groundwater table. According to the City of Los Angeles Safety Element, the project site is not located in a liquefaction zone. As such, no impact would occur, and no further study of this issue is required.

iv) Landslides?

Less Than Significant Impact. According to the City of Los Angeles Safety Element, the project site is located in an area that is subject to landslides and has historically experienced landslides. Excavation work in areas surrounding the reservoir to provide material to bury the concrete storage structure could create adverse effects associated with landslides. Work in hillside areas would comply with the City Hillside Grading Ordinance, and the slopes would be stabilized as necessary to prevent landslides. Compliance with established standards would reduce risks associated with landslides to a less than significant level, and no further study of this issue is required.

b) Result in substantial soil erosion or the loss of topsoil?

Less Than Significant Impact. The proposed project would not result in substantial soil erosion or the loss of topsoil. Construction of the proposed project would result in ground surface disturbance during excavation and grading that could create the potential for erosion to occur. The topsoil from any onsite borrow areas would be stockpiled and replaced over the disturbed area during site restoration. Since the proposed project site is greater than one acre, LADWP's construction contractor must prepare and comply with a Storm Water Pollution Prevention Plan (SWPPP), which would include erosion control measures. In addition, LADWP's construction contractor must comply with a Storm Water Construction Activities General Permit and obtain a National Pollution Discharge Elimination System (NPDES) Permit. Compliance with existing regulations would reduce impacts due to soil erosion to a less than significant level. After construction of the buried concrete storage structure, the project site would be stabilized and landscaped, and no significant soil erosion or loss of topsoil is expected to occur. The impact would be less than significant, and no further study of this issue is required.

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on-or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

Less Than Significant Impact. As discussed above, the proposed project is located in an area identified as having the potential for landslides. The proposed site is not located within an area identified as having a potential for liquefaction. Lateral spreading generally occurs where soils are susceptible to soil liquefaction. As stated above, the buried concrete storage structure would be constructed in accordance with requirements of the California Building Code. Excavation work in hillside areas would comply with the City Hillside Grading Ordinance, and the slopes would be stabilized as necessary to prevent landslides. Compliance with established standards would reduce risks associated with landslides to a less than significant level, and no further study of this issue is required.

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

No Impact. Expansive soil is defined as soil that expands to a significant degree upon wetting and shrinks upon drying. Generally, expansive soils contain a high percentage of clay particles. The proposed project is not located on soils that are expansive, as described in Table 18-1B of the Uniform Building Code. No impact would occur, and no further study of this issue is required.

e) Have soils incapable of adequately supporting use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

No Impact. The proposed project may include restroom facilities in relation to the recreation function. However, these facilities would not use a septic system or similar systems. No impact would occur, and no further study of this issue is required.

VII. HAZARDS AND HAZARDOUS MATERIALS

Would the project:

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Less Than Significant Impact. See discussion under item *b*, below.

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Less Than Significant Impact. Although construction may involve the transport, storage, use or disposal of some hazardous materials, such as onsite fueling/servicing of construction equipment, construction activities would be short-term. Such transport, use, storage, and disposal would not be expected to create a significant hazard to workers or the community. In addition, all construction activities involving hazardous materials would be subject to federal, state, and local health and safety requirements involving transport, use, storage, and disposal. The impact would be less than significant, and no further study of this issue is required.

As under current conditions, the buried concrete structure would be used for the storage of treated water. The existing chlorination station located onsite would continue to operate as under current conditions. The chlorination station would be fenced off to ensure the security of the facility. All chemicals used as part of the chlorination station would be secured and stored in accordance with local, state, and federal safety requirements. In the event of a release or accident associated with the chlorination station, the site would be closed to the public and LADWP would implement its standard emergency response and cleanup plan. Under unusual circumstances, if additional disinfection is required, chemicals would be added to the storage structure. Similarly, chemicals would be applied to the structure when it is cleaned. These water treatment operations would be subject to federal, state, and local health and safety requirements. Thus, operation of the proposed project would not create an increased hazard to the public or the environment associated with the routine transport, use, storage, or disposal of hazardous materials, and the proposed project would not create a hazard to the public or the environment through reasonably foreseeable upset and accident conditions. The impact would be less than significant, and no further study of this issue is required.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances or waste within one-quarter mile of an existing or proposed school?

Less Than Significant Impact. There are no schools within one-quarter mile of the proposed project site. The closest school is Roscomare Road Elementary School, located approximately 0.4 miles to the west. Although construction may involve the transport, storage, use, or disposal of some hazardous materials, such as onsite fueling/servicing of construction equipment, construction activities would be short-term. Construction activities involving hazardous materials would be subject to federal, state, and local health and safety requirements involving the transport, use, and disposal. The impact would be less than significant.

After construction, the buried concrete structure would be used for the storage of treated water, similar to the existing reservoir. The impact to schools would be less than significant, and no further study of this issue is required.

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

No Impact. The proposed project is not contained on lists compiled pursuant to Section 65962.5 of the Government Code. No impact would occur, and no further study of this issue is required.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?

No Impact. See discussion under item *f*, below.

f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?

No Impact. The closest public airport to the project site is Bob Hope Airport located approximately 7.5 miles to the northeast. The closest general aviation airport to the proposed project site is the Van Nuys Airport, located approximately 5.5 miles to the north. As such, the proposed project is not located within an airport land use plan or within 2 miles of a public airport or a private airstrip such that it would pose a safety hazard for people residing or working in the project area. No impact would occur, and no further study of this issue is required.

g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

No Impact. The proposed project would not impair or physically interfere with an adopted emergency response plan or a local, state, or federal agencies emergency evacuation plan. The proposed project is the replacement of Upper Stone Canyon Reservoir with a buried concrete storage structure, planting the area atop, and providing a trail system for passive recreation use. No temporary or permanent street closures are planned as part of the project. Staging areas for construction would be located within the reservoir property; therefore, emergency access to the site or adjacent areas would not be adversely impacted during construction. No impact would occur, and no further study of this issue is required.

h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

Less Than Significant Impact. According to the City of Los Angeles General Plan Safety Element, the project site is located in a High Fire Hazard District. The proposed project involves construction of a buried concrete storage structure, planting the area atop, and providing a trail system for passive recreation use. The undeveloped portions of the Stone Canyon complex contain vegetation that could catch fire. In accordance with local and state fuel modification requirements, the site is currently maintained to minimize the probability of wildfire. In accordance with the Los Angeles Public Safety Code, fire prevention procedures during project construction would include such measures as fire safety training of all construction workers, onsite water truck for rapid response, equipping construction equipment with spark arresters, and stopping construction during red flag alert conditions. Following project construction, the site would continue to be maintained to comply with and the Los Angeles Public Safety Code to minimize the risk of wildland fire. Compliance with existing regulations would ensure a less than significant impact, and no further study of this issue is required.

VIII. HYDROLOGY AND WATER QUALITY

Would the project:

a) Violate any water quality standards or waste discharge requirements?

Less Than Significant Impact. The construction and operation of the proposed project would not generate significant amounts of wastewater or significantly increase urban runoff entering existing storm drains. The primary objective of the proposed project is to improve drinking water quality in accordance with updated EPA rules regarding surface water treatment and water disinfection and disinfection byproducts. To convert the existing open reservoir to a buried concrete storage structure, the reservoir would be drained of all water, which has been treated with chlorine. To achieve this, the reservoir water level would initially be drawn down by normal consumption through the drinking water distribution system. Once the water level in the reservoir reaches an elevation of 923 feet (from a maximum operating level of 929 feet), the remaining water would be drained to the 3.4 billion gallon Lower Stone Canyon Reservoir.

In the event that dewatering of the site is required during project construction, all dewatering discharges would be carried out in accordance with applicable requirements of the Regional Water Quality Control Board, including compliance with the NPDES permit regulations.

During project operation, rain that currently falls on the reservoir surface and enters the drinking water distribution system would fall on the ground surface above the buried storage structure. Much of the rain water would percolate into the soil. Any runoff would flow into the existing storm drainage system, which empties into Lower Stone Canyon Reservoir. The proposed project must comply with NPDES requirements to maintain water quality during project operation. As such, construction and operation of the proposed project would not violate water quality standards or waste discharge requirements. Compliance with existing regulations would ensure a less than significant impact to water quality, and no further study of this issue is required.

b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?

Less Than Significant Impact. The proposed project is the construction and operation of a buried concrete storage structure in place of Upper Stone Canyon Reservoir and development and operation of the site for passive recreation. During construction, the reservoir would be drained for a period of approximately five years. However, the existing reservoir is paved with asphaltic concrete, which does not allow percolation to the groundwater supply. Thus, removing the reservoir would not interfere with groundwater recharge. Completion of the project would create more permeable surface area than is currently located at the project site because the asphaltic concrete reservoir would be removed and the area atop the buried concrete storage structure would be planted. A small parking lot and restroom/storage building provided for the recreational uses at the site would not add significant areas of impermeable surfaces. Construction of the buried concrete storage structure would maintain the same amount of operational water storage at the site that is currently provided by Upper Stone Canyon Reservoir. Thus, the proposed project would not indirectly deplete groundwater supplies. No impact to groundwater recharge or groundwater supply would occur, and no further study of this issue is required.

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner, which would result in substantial erosion or siltation on- or off-site?

Less Than Significant Impact. The proposed project involves the conversion of Upper Stone Canyon Reservoir from an open reservoir to a buried concrete storage structure, planting the area atop, and providing a trail system for passive recreation use. During construction, it would be necessary to remove soils from surrounding hillside areas within the Stone Canyon Reservoir complex property to bury the concrete storage structure. There are natural drainage courses located within the reservoir complex that could be altered during construction. However, the general drainage pattern at the site would not be altered in a manner that would increase the amount of erosion or siltation. Rain that currently falls on the reservoir surface and enters the drinking water distribution system would fall on the ground surface above the buried concrete storage structure. Much of the rain water would percolate into the soil. Any runoff would flow into the existing storm drainage system, which empties into Lower Stone Canyon Reservoir. The proposed project must comply with NPDES requirements to maintain water quality during project operation.

As discussed above, all construction activities would comply with applicable requirements of the Regional Water Quality Control Board, including compliance with NPDES permit regulations. Best Management Practices (BMPs) would be employed during project construction to control any potential erosion or siltation impacts related to construction activities. The project site, including the hillside areas disturbed by excavation, would be planted with locally indigenous native vegetation to stabilize soils and reduce erosion and siltation. LADWP and LADRP would also comply with BMPs during project operation to prevent erosion and siltation. Compliance with NPDES requirements would ensure a less than significant impact, and no further study of this issue is required.

d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner, which would result in flooding on- or off-site?

Less Than Significant Impact. The proposed project involves the conversion of Upper Stone Canyon Reservoir from an open reservoir to a buried concrete storage structure, planting the area atop, and providing a trail system for passive recreation use. During construction, it would be necessary to remove soils from surrounding hillside areas to bury the concrete storage structure. There are natural drainage courses located within the reservoir complex that could be altered during construction. However, the general drainage pattern at the site would not be altered significantly in a manner that would result in flooding on or offsite. As discussed above, the proposed project would continue to discharge storm water runoff into the existing storm drainage system. The amount of storm water runoff during construction or operation of the proposed project would not be expected to exceed the capacity of the existing storm water drainage system. During project operation, rain that currently falls on the reservoir surface and enters the drinking water distribution system would fall on the ground surface above the buried concrete storage structure. Much of the rain water would percolate into the soil. Any runoff would flow into the existing storm drainage system, which empties into Lower Stone Reservoir. Based on a maximum volume runoff from the surface area above the proposed buried concrete storage structure, the surface elevation of Lower Stone Reservoir would rise only approximately 2 to 3 inches. No flooding would result on or offsite. The impact would be less than significant, and no further study of this issue is required.

e) Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?

Less Than Significant Impact. The proposed project involves replacing Upper Stone Canyon Reservoir with a buried concrete storage structure, planting the area atop, and providing a trail system for passive recreation use. To convert the reservoir to a buried storage structure, it would be drained of all water, which has been treated with chlorine. To achieve this, the reservoir water level would first be drawn down by normal consumption through the drinking water distribution system. Once the water level in the reservoir reaches an elevation of 923 feet (from a maximum operating level of 929 feet), the remaining water would be drained to the 3.4 billion gallon Lower Stone Canyon Reservoir. To maintain the stability of the reservoir dam, the rate at which the water would be drained would be limited to approximately 4 feet per day. At this controlled rate, the storage capacity of the Lower Reservoir and the associated storm drainage system would readily accommodate the water drained from the Upper Reservoir. In addition, if the volume and rate of flow were to exceed the capacity of the Lower Stone Canyon Reservoir, the Lower Reservoir water level would be lowered by drinking it down through the micro filtration plant to the potable water distribution system.

During project operation, rain that currently falls on the reservoir surface and enters the drinking water distribution system would fall on the ground surface above the buried concrete storage structure. Much of the rain water would percolate into the soil. Any runoff would flow into the existing storm water drainage system, which empties into Lower Stone Reservoir. Based on a maximum volume runoff from the surface area above the proposed buried concrete storage structure, the surface elevation of Lower Stone Reservoir would rise only approximately 2 to 3 inches. The proposed project must comply with NPDES requirements to maintain water quality during project operation.

Therefore, the construction and operation of the proposed project would not create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage system or provide substantial additional sources of polluted runoff. The impact would be less than significant, and no further analysis of this issue is required.

f) Otherwise substantially degrade water quality?

Less Than Significant Impact. Potential short-term erosion effects could occur during construction activities that could affect water quality with runoff. However, as discussed above, all construction activities would comply with applicable requirements of the Regional Water Quality Control Board, including compliance with NPDES permit regulations. BMPs would be employed during project construction to control any potential erosion or siltation impacts related to construction activities. After construction, storm water runoff would be collected and discharged into the existing storm drainage system. LADWP and LADRP would also comply with BMPs during project operation to maintain water quality. Compliance with NPDES requirements would ensure a less than significant impact, and no further study of this issue is required.

g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

No Impact. Upper Stone Canyon itself is designated a 100-year flood hazard area according to the City of Los Angeles General Plan Safety Element. However, the proposed project does not involve the construction of housing and would not otherwise place housing within a 100-year flood hazard area. No impact would occur, and no further study of this issue is required.

h) **Place within a 100-year flood area structures to impede or redirect flood flows?**

No Impact. Upper Stone Canyon Reservoir itself is designated a 100-year flood hazard area according to the City of Los Angeles General Plan Safety Element. However, the proposed project involves the replacement of Upper Stone Canyon Reservoir with a buried concrete storage structure and would not place structures on site that would impede or redirect flood flows. No impact would occur, and no further study of this issue is required.

i) **Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?**

No Impact. The proposed project site is not located in an area susceptible to inundation from failure of upstream dams as none are located in the project vicinity. The proposed project would remove an open reservoir and replace it with a buried concrete storage structure, thereby reducing the potential for inundation of downstream areas. As such, the construction and operation of the proposed project would not increase the risk from flooding or inundation. No impact would occur, and no further study of this issue is required.

j) **Expose people or structures to a significant risk of loss, injury or death involving inundation by seiche, tsunami, or mudflow?**

Less Than Significant Impact. The proposed project is not subject to tsunami-related inundation as it is not located within the range of a tsunami hazard zone. The project site is subject to seiches from the reservoir. However, replacement of the open reservoir with a buried concrete storage structure would reduce the risk of seiche at the proposed project site. The impacts would be less than significant, and no further study of these issues is required. The proposed project does not involve placing structures onsite that would increase the risk associated with mudflows. However, construction activities would require disturbance of the hillsides surrounding the reservoir and may increase the potential for mudflows during construction. As discussed above, LADWP’s construction contractor would prepare and comply with a SWPPP, which would include erosion control measures and slope stabilization to minimize the potential for mudflows. In addition, LADWP’s construction contractor would comply with the Storm Water Construction Activities General Permit and obtain a NPDES Permit. Compliance with existing regulations would reduce impacts due to mudflows to a less than significant level. No further study of this issue is required.

IX. LAND USE AND PLANNING

Would the project:

a) **Physically divide an established community?**

No Impact. The site is currently used and has historically been used as a reservoir. Removing the existing reservoir and replacing it with a buried concrete storage structure, planting the area atop, and providing a trail system for passive recreation use would not divide an established community. The proposed project would not create a physical barrier. The project would take place entirely within the Stone

Canyon Reservoir complex. No road closures would occur as a result of the project. No impact would occur, and no further study of this issue is required.

b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

Less Than Significant Impact. The proposed project site is designated as Open Space in the City of Los Angeles General Plan. The proposed project site is located within the Bel Air-Beverly Crest Community Plan area. The zoning designation for the proposed project site is [Q]OS-1XL (Open Space). The City of Los Angeles Municipal Code Section 12.04.05 states that the purpose of the Open Space (OS) zone is to provide regulation for publicly owned land in order to implement the City's adopted General Plan. No building, structure, or land shall be used and no building or structure shall be erected, moved onto the site, enlarged or maintained, except as specified. The primary purpose of this zone is to protect and preserve natural resources and natural features of the environment; to provide outdoor recreation opportunities and advance the public health and welfare; to enhance environmental quality; to encourage the management of public lands in a manner which protects environmental characteristics; and to encourage the maintenance of open space uses on all publicly owned park and recreation land and open space public land which is essentially unimproved. Uncovered public water supply reservoirs and accessory uses which are incidental to the operation and continued maintenance of such reservoirs are permitted within the OS zone. The proposed project would bury the existing open reservoir and, as such, would not create new structures in an open space zone. The project would have the beneficial impact of creating new publicly-accessible passive recreation space. Operation of the proposed project site as a recreation area may require construction of accessory structures, such as restroom/storage facilities. Such facilities are conditionally permitted accessory structures within the OS zone, under the provisions of a Conditional Use Permit (CUP). Thus, the proposed project would not conflict with an applicable land use plan upon obtaining a CUP. The impact would less than significant, and no further study of this issue is required.

Construction of the proposed project may require removal of mature trees that are protected under the City of Los Angeles Tree Protection Ordinance. This impact is described in Section IV(e) and will be analyzed further as part of the EIR.

c) Conflict with any applicable habitat conservation plan or natural community conservation plan?

No Impact. The proposed project would not conflict with any habitat conservation plan. The site is not within a habitat conservation plan or a natural community conservation plan. No impact would occur, and no further study of this issue is required.

X. MINERAL RESOURCES

Would the project:

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

No Impact. See discussion in item *b*, below.

b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

No Impact. The proposed project would not result in the loss of a locally important mineral resource. The project site is not located on significant mineral or energy deposits as mapped by the City or the state. No impact would occur, and no further study of this issue is required.

XI. NOISE

Would the project result in:

a) Exposure of persons to or generation of noise levels in excess of applicable standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Potentially Significant Impact. Noise from construction activities would include noise from heavy equipment, pavement removal, excavation, grading, and construction of the buried concrete storage structure. Construction of the proposed project is expected to last approximately 5.5 years. Construction activities would generally occur within delineated work areas Monday through Friday between 7:00 a.m. and 6:00 p.m. and Saturday between 8:00 a.m. and 6:00 p.m. However, project construction could potentially expose nearby sensitive receptors (i.e., residential uses) to noise levels above established standards. Further analysis of construction noise impacts will be included in the EIR.

During project operation, there would be no additional noise-generating pieces of equipment or personnel at the project site related to the water storage function. The proposed project would introduce passive recreation uses. However, these uses are not anticipated to significantly increase noise levels in the project vicinity. No impact would occur during project operation, and no further study of this issue is required.

b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

Potentially Significant Impact. The proposed project may result in excessive exposure of persons to or generation of groundborne vibration or noise levels during project construction. Excavation and grading activities could result in minor amounts of groundborne vibration for limited durations. Typical construction equipment, such as bulldozers, loaded trucks, and jackhammers would generate certain levels of groundborne vibration. Thus, nearby sensitive receptors may be subjected to vibration attributable to construction activities in excess of applicable standards. This impact is potentially significant and will be analyzed in the EIR.

During project operation, there would be no additional heavy equipment, truck traffic, or other activities at the project site that could create vibration impacts. No impact would occur during project operation, and no further study of this issue is required.

c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

Less Than Significant Impact. As described above, noise from construction activities includes noise from heavy equipment, pavement removal, excavation, and grading. Construction activities could generate substantial increases in ambient noise levels in the project vicinity through the duration of construction, but these will be temporary in nature and occur only during the construction period.

During project operation, there would be no additional noise-generating pieces of equipment or personnel at the project site related to the water storage function. The proposed project would introduce passive recreation uses. However, these uses are not anticipated to significantly increase noise levels in the project vicinity. The impacts would be less than significant during project operation, and no further study of this issue is required.

d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

Potentially Significant Impact. As discussed above, noise impacts associated with project construction could potentially result in temporary or periodic increases in daytime noise levels. This issue is potentially significant and will be analyzed in the EIR.

During project operation, there would be no additional noise-generating pieces of equipment or personnel at the project site related to the water storage function. The proposed project would introduce passive recreation uses. However, these uses are not anticipated to significantly increase noise levels in the project vicinity. No impact would occur during project operation, and no further study of this issue is required.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

No Impact. See discussion in item *f*, below.

f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

No Impact. The proposed project is not located within an airport land use plan or within 2 miles of an airport. The closest public airport to the project site is Bob Hope Airport located approximately 7.5 miles to the northeast. The closest general aviation airport to the proposed project site is the Van Nuys Airport, located approximately 5.5 miles to the north. As such, the proposed project would not expose people residing or working near the project area to excessive noise levels associated with airport uses. No impact would occur, and no further study of this issue is required.

XII. POPULATION AND HOUSING

Would the project:

a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

No Impact. The proposed project involves the replacement of Upper Stone Canyon Reservoir with a buried concrete storage structure in order to meet water quality standards. The proposed project is intended to ensure the reliability and safety of the existing water supply. The project does not involve increasing the amount of water that can be stored onsite such that additional water supply would be available. As such, the project would not induce substantial population growth in the area, either directly or indirectly. No impact would occur, and no further study of this issue is required.

b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

No Impact. See discussion in item *c*, below.

c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

No Impact. Construction and operation of the proposed project would occur within the LADWP Stone Canyon Reservoir complex property. There is no existing housing within the property, and the project does not require the removal of housing. Therefore, construction and operation of the proposed project would not have any impacts on the number or availability of existing housing in the area and would not necessitate the construction of replacement housing elsewhere. No impact would occur, and no further study of this issue is required.

XIII. PUBLIC SERVICES

a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

i) Fire protection?

No Impact. See discussion in item *ii*, below.

ii) Police protection?

No Impact. The proposed project is the replacement of Upper Stone Canyon Reservoir with a buried concrete storage structure, planting the area atop, and providing a trail system for passive recreation use. Fire service to the project site is provided by the City of Los Angeles Fire Department. Police protection services are provided by the City of Los Angeles Police Department. In addition, LADWP currently has security staff stationed onsite at all times and would continue to use security staff during and after project construction. Construction of the proposed project would occur entirely within the Stone Canyon Reservoir complex property. No road closures would be required during project construction that would interfere with emergency response. The proposed passive recreation function would not generate significant additional fire or police protection needs at the site. As such, no new or expansion of existing fire or police protection facilities would be required, the construction of which could cause significant environmental impacts. No further study of this issue is required.

iii) Schools?

No Impact. See discussion in item *v*, below.

iv) Parks?

No Impact. See discussion in item *v*, below.

v) Other public facilities?

No Impact. The primary objective of the proposed project is to ensure the safety and reliability of the drinking water supply in accordance with updated EPA rules regarding surface water treatment and water disinfection and disinfection byproducts. No population increase in the project area would result from the construction and operation of the buried concrete storage structure. The proposed project would take place entirely within the Stone Canyon Reservoir complex property. No new housing or businesses would be constructed as part of the project to induce population growth. The proposed project would have the beneficial impact of creating new passive recreational space at the Stone Canyon Reservoir complex. No substantial adverse physical impact to local schools, parks, or other public facilities would occur, and no further study of this issue is required.

XIV. RECREATION

Would the project:

a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

No Impact. The proposed project is the replacement of Upper Stone Canyon Reservoir with a buried concrete storage structure, planting the area atop, and providing a trail system for passive recreation use. The proposed project would have the beneficial impact of providing new passive recreational space. It would not increase the use of existing park areas or other recreation facilities such that substantial physical deterioration of existing nearby parks would occur or be accelerated. No impact would occur, and no further study of this issue is required.

b) Include recreational facilities or require construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

Less Than Significant Impact. Although the proposed project includes new recreational facilities, including a trail system and support functions such as restrooms, maintenance storage areas, and parking, as discussed elsewhere in this document, the passive nature and scale of the recreational activity and the relatively small size of the facilities within the setting of the Stone Canyon Reservoir complex are not expected to generate significant long-term adverse physical environmental effects.

XV. TRANSPORTATION/TRAFFIC

Would the project:

a) Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume-to-capacity ratio on roads, or congestion at intersections)?

Potentially Significant Impact. See discussion in item *b*, below.

b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?

Potentially Significant Impact. Based on the trips generated by construction activities, including the delivery of materials and supplies to the reservoir site and worker commutes, the proposed project could result in increased traffic that could be substantial in relation to existing traffic load and street capacity and could, individually or cumulatively, exceed established level of service standards for roads in the vicinity. Construction is anticipated to take 5.5 years to complete. This impact is potentially significant and will be analyzed in the EIR.

Following construction of the proposed project, no additional vehicle trips to and from the project site in relation to the water storage function would be generated beyond what currently occurs for the existing reservoir. The proposed project would introduce new passive recreation uses. However, the small number of vehicle trips generated by this use is not anticipated to create significant impacts in relation to existing traffic load and street capacity or level of service standards. Operation of the proposed project would create less than significant impacts, and no further analysis of this issue is required.

c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

No Impact. Construction and operation of the proposed project would not generate air traffic. The project would not include any high-rise structures that could act as a hazard to aircraft navigation. No impact would occur, and no further study of this issue is required.

d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Potentially Significant Impact. Construction of the proposed project would not require road closures. Construction activity and staging would occur entirely within the Stone Canyon Reservoir complex property. However, construction trucks turning into and out of the site could create a hazard to through traffic because of the slow speeds and blind corners on Mulholland Drive. During operation of the proposed project, vehicles attempting to turn into and out of the project site could also create a hazard to through traffic on Mulholland Drive. These issues will be studied further in the EIR.

e) Result in inadequate emergency access?

Less Than Significant Impact. The proposed project would not hinder emergency access in the area, as no road closures are proposed as part of the project. All construction activities and staging would take place within the Stone Canyon Reservoir complex property. During project operation, the existing access road would provide emergency access to the site. Therefore, operation of the proposed project would not result in inadequate emergency access. The impacts would be less than significant, and no further study of this issue is required.

f) Result in inadequate parking capacity?

No Impact. During construction, worker vehicle parking would occur within the Stone Canyon Reservoir property. As such, construction activities would not result in inadequate parking capacity. During project operation, no additional employees would be located on the project site related to water storage functions. The site would be used for passive recreation. Parking within the reservoir property boundaries would be designed to accommodate the expected number of users related to this passive recreation use. No impact would occur, and no further study of this issue is required.

g) Would the project conflict with adopted policies supporting alternative transportation (e.g., bus turnouts, bicycle racks)?

No Impact. The proposed project would not conflict with adopted policies supporting alternative transportation. Construction activities would take place entirely within the Stone Canyon Reservoir complex property and would not require the removal or relocation of alternative transportation facilities (i.e., bus stops and bike lanes). Accordingly, no impacts to alternative transportation would occur, and no further study of this issue is required.

XVI. UTILITIES AND SERVICE SYSTEMS

Would the project:

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

No Impact. The proposed project would not result in changes to facilities or operations at existing wastewater treatment facilities. The primary objective of the proposed project is to ensure the safety and reliability of the drinking water supply in accordance with updated EPA rules regarding surface water treatment and water disinfection and disinfection byproducts. No modification to a wastewater treatment facility’s current wastewater discharges would occur. No impact to wastewater treatment requirements of the applicable Regional Water Quality Control Board would occur, and no further study of this issue is required.

b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Less Than Significant Impact. Construction and operation of the proposed project would generate only minor amounts of wastewater. The proposed project involves replacing Upper Stone Canyon Reservoir with a buried concrete storage structure, planting the area atop, and providing a trail system for passive recreation use. Restroom facilities would be constructed at the site. However, the relatively small volume of wastewater generated at these facilities would not require the construction of new water or wastewater treatment facilities or expansion of existing facilities. The impact would be less than significant, and no further study of this issue is required.

c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

No Impact. The proposed project involves replacing Upper Stone Canyon Reservoir with a buried concrete storage structure, planting the area atop, and providing a trail system for passive recreation use. To convert the reservoir to a buried concrete storage structure, it would be drained of all water. To achieve this, the reservoir water level would first be drawn down by normal consumption through the drinking water distribution system. Once the water level in the reservoir reaches an elevation of 923 feet (from a maximum operating level of 929 feet), the remaining water would be drained to the 3.4-billion gallon Lower Stone Canyon Reservoir. To maintain the stability of the reservoir dam, the rate at which the water would be drained would be limited to approximately 4 feet per day. At this controlled rate, the storage capacity of the Lower Reservoir and the associated storm drainage system would readily accommodate the water drained from the Upper Reservoir. In addition, if the volume and rate of flow would exceed the capacity of the Lower Stone Canyon Reservoir, the Lower Reservoir water level would be lowered by drinking it down through the micro filtration plant to the potable water distribution system.

During project operation, rain that currently falls on the reservoir surface and enters the drinking water distribution system would fall on the ground surface above the buried water storage structure. Much of the rain water would percolate into the soil. Any runoff would flow into the existing storm drainage system, which empties into Lower Stone Reservoir. Based on a maximum volume runoff from the surface area above the proposed buried concrete storage structure, the surface elevation of Lower Stone Reservoir would rise only approximately 2 to 3 inches.

Therefore, the construction and operation of the proposed project would not require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects. No further analysis of this issue is required.

d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

Less Than Significant Impact. The proposed project includes replacing Upper Stone Canyon Reservoir with a buried concrete storage structure, planting the area atop, and providing a trail system for passive recreation use. The buried concrete storage structure would provide an equivalent operating capacity as the existing open reservoir. During project construction, the reservoir would be out of service for approximately 5 years. Potable water would be supplied to the Upper Stone Canyon Reservoir service area through a bypass line that would provide water from the LAAFP. LADWP would supplement its water supply with additional purchased water during the construction period to ensure that there would be adequate supply to meet peak demand. No shortage of water supply would be expected. The impact would be less than significant, and no further study of this issue is required.

e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

No Impact. Construction and operation of the proposed project would generate only minor amounts of wastewater. The proposed project involves replacing Upper Stone Canyon Reservoir with a buried concrete storage structure, planting the area atop, and providing a trail system for passive recreation use. Restroom facilities would be constructed at the site. However, the relatively small volume of wastewater generated at these facilities would not result in a determination by the wastewater treatment provider that it lacked adequate capacity to serve the project's projected demand in addition to the provider's existing commitments. No impact would occur, and no further study of this issue is required.

f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

Less Than Significant Impact. Construction debris would be recycled or transported to a landfill site and disposed appropriately. In accordance with AB 939, LADWP's construction contractor would ensure that source reduction techniques and recycling measures are incorporated into project construction. The amount of debris generated during project construction is not expected to significantly impact landfill capacities. Operation of the proposed project would not result in an increase in personnel at the project site in relation to the water storage functions. The site would be used for passive recreation. As such, operation would not generate significant volumes of solid waste. The impact would be less than significant, and no further analysis of this issue is required.

g) Comply with federal, state, and local statutes and regulations related to solid waste?

No Impact. During construction and operation of the proposed project, LADWP would comply with all City and state solid waste diversion, reduction, and recycling mandates, including compliance with the County-wide Integrated Waste Management Plan (IWMP) and the City of Los Angeles Municipal Code. No impact would occur, and no further study of this issue is required.

XVII. MANDATORY FINDINGS OF SIGNIFICANCE

a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?

Potentially Significant Impact. The analysis conducted in this Initial Study results in a determination that the proposed project could potentially degrade the quality of the environment by reducing the habitat of wildlife species, or eliminating a plant or animal community or important examples of the major period of California history, as discussed in Sections IV and V, above. The impact is potentially significant, and further analysis of these issues will be included in the EIR.

b) Does the project have environmental effects that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a 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.)

Potentially Significant Impact. As discussed Section II, the proposed project could contribute to cumulative air quality impacts within a region that is non-attainment for O_3, PM_{10}, and $PM_{2.5}$. Cumulative noise and traffic impacts could also occur during project construction. These impacts are potentially significant. These issues will be discussed further in the EIR.

c) Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?

Potentially Significant Impact. As discussed in the respective issue areas, the proposed project could have adverse effects on human beings related to aesthetics, air quality, biological resources, cultural resources, noise, and traffic. These issues will be discussed further in the EIR.

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SECTION 4
LIST OF PREPARERS, ACRONYMS, AND REFERENCES

LEAD AGENCY

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Jen Martinez, Graphic Artist (EDAW)
Dave Kelly, Senior Biologist (Garcia and Associates)
Jason Brooks, Botanist (Garcia and Associates)

ACRONYMS

AQMP	Air Quality Management Plan
Basin	South Coast Air Basin
BMPs	Best Management Practices
CAAQS	California Ambient Air Quality Standards
CEQA	California Environmental Quality Act
DSOD	Division of Safety of Dams
EIR	Environmental Impact Report
EPA	United States Environmental Protection Agency
GHG	greenhouse gases
I-405	Interstate 405, San Diego Freeway
IWMP	Integrated Waste Management Plan
LAAFP	Los Angeles Aqueduct Filtration Plant
LADRP	Los Angeles Department of Recreation and Parks
LADWP	Los Angeles Department of Water and Power
MG	million gallon
MWD	Metropolitan Water District of Southern California
NOP	Notice of Preparation
NPDES	National Pollution Discharge Elimination System
O_3	ozone
OS	Open Space Zone
PM_{10}	respirable particulate matter
$PM_{2.5}$	fine particulate matter
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SIP	State Implementation Plan
SWPPP	Storm Water Pollution Prevention Plan

REFERENCES

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RESPONSES FROM NOP/IS

STATE OF CALIFORNIA
GOVERNOR'S OFFICE *of* PLANNING AND RESEARCH
STATE CLEARINGHOUSE AND PLANNING UNIT

ARNOLD SCHWARZENEGGER
GOVERNOR

CYNTHIA BRYANT
DIRECTOR

Notice of Preparation

June 20, 2008

To: Reviewing Agencies

Re: Upper Stone Canyon Reservoir Water Quality Improvement Project
SCH# 2008061110

Attached for your review and comment is the Notice of Preparation (NOP) for the Upper Stone Canyon Reservoir Water Quality Improvement Project draft Environmental Impact Report (EIR).

Responsible agencies must transmit their comments on the scope and content of the NOP, focusing on specific information related to their own statutory responsibility, within 30 days of receipt of the NOP from the Lead Agency. This is a courtesy notice provided by the State Clearinghouse with a reminder for you to comment in a timely manner. We encourage other agencies to also respond to this notice and express their concerns early in the environmental review process.

Please direct your comments to:

Sarah Easley Perez
Los Angeles Department of Water and Power (LADWP)
111 North Hope Street, Room 1044
Los Angeles, CA 90012

with a copy to the State Clearinghouse in the Office of Planning and Research. Please refer to the SCH number noted above in all correspondence concerning this project.

If you have any questions about the environmental document review process, please call the State Clearinghouse at (916) 445-0613.

Sincerely,

Scott Morgan
Project Analyst, State Clearinghouse

Attachments
cc: Lead Agency

Document Details Report
State Clearinghouse Data Base

SCH# 2008061110
Project Title Upper Stone Canyon Reservoir Water Quality Improvement Project
Lead Agency Los Angeles, City of

Type **NOP** Notice of Preparation

Description To ensure the quality, reliability, and stability of the City of Los Angeles drinking water supply, including compliance with updated US EPA water quality standards, LADWP proposes to replace the uncovered Upper Stone Canyon Reservoir with a buried concrete storage structure sited essentially within the existing reservoir. This concrete storage structure would provide approximately 81 million gallons of potable water storage. The area atop the concrete storage structure would be planted, and a pedestrian trail system, picnic area, restroom facilities, and a parking lot may be established within the Stone Canyon Reservoir complex to provide for passive recreation activity. After completion of project construction, the trails within the site would be open to public use, and recreation functions would be maintained and operated by the LADRP.

Lead Agency Contact

Name Sarah Easley Perez
Agency Los Angeles Department of Water and Power (LADWP)
Phone (213) 367-1276 **Fax**
email
Address 111 North Hope Street, Room 1044
City Los Angeles **State** CA **Zip** 90012

Project Location

County Los Angeles
City Los Angeles, City of
Region
Cross Streets Mulholland Drive and Roscomare Road
Lat / Long 34° 7' 11.4" N / 118° 27' 18.6" W
Parcel No. 4379029900
Township **Range** **Section** **Base**

Proximity to:

Highways I-405
Airports
Railways
Waterways
Schools Roscomare Road Elementary
Land Use Reservoir; Z: [Q]OS-1XL (Open Space); GPD: Open Space

Project Issues Aesthetic/Visual; Agricultural Land; Air Quality; Archaeologic-Historic; Biological Resources; Drainage/Absorption; Flood Plain/Flooding; Forest Land/Fire Hazard; Geologic/Seismic; Minerals; Noise; Population/Housing Balance; Public Services; Recreation/Parks; Schools/Universities; Septic System; Sewer Capacity; Soil Erosion/Compaction/Grading; Solid Waste; Toxic/Hazardous; Traffic/Circulation; Vegetation; Water Quality; Water Supply; Wetland/Riparian; Wildlife; Landuse

Reviewing Agencies Resources Agency; Office of Historic Preservation; Department of Parks and Recreation; Department of Water Resources; Department of Fish and Game, Region 5; Department of Health Services; Native American Heritage Commission; California Highway Patrol; Caltrans, District 7; Air Resources Board, Transportation Projects; Integrated Waste Management Board; State Water Resources Control Board, Division of Loans and Grants; State Water Resources Control Board, Division of Water Rights; Regional Water Quality Control Board, Region 4

Date Received 06/20/2008 **Start of Review** 06/20/2008 **End of Review** 07/21/2008

Note: Blanks in data fields result from insufficient information provided by lead agency.

NOP Distribution List — County: Los Angeles — SCH# 2008081110

Resources Agency

- [x] **Resources Agency**
  Nadell Gayou
- [ ] **Dept. of Boating & Waterways**
  David Johnson
- [ ] **California Coastal Commission**
  Elizabeth A. Fuchs
- [ ] **Colorado River Board**
  Gerald R. Zimmerman
- [ ] **Dept. of Conservation**
  Sharon Howell
- [ ] **California Energy Commission**
  Paul Richins
- [ ] **Cal Fire**
  Allen Robertson
- [x] **Office of Historic Preservation**
  Wayne Donaldson
- [x] **Dept of Parks & Recreation**
  Environmental Stewardship Section
- [ ] **Central Valley Flood Protection Board**
  Mark Herald
- [ ] **S.F. Bay Conservation & Dev't. Comm.**
  Steve McAdam
- [x] **Dept. of Water Resources**
  Resources Agency
  Nadell Gayou
- [ ] ____________
  Conservancy

Fish and Game

- [ ] **Depart. of Fish & Game**
  Scott Flint
  Environmental Services Division
- [ ] **Fish & Game Region 1**
  Donald Koch
- [ ] **Fish & Game Region 1E**
  Laurie Harnsberger
- [ ] **Fish & Game Region 2**
  Jeff Drongesen
- [ ] **Fish & Game Region 3**
  Robert Floerke
- [ ] **Fish & Game Region 4**
  Julie Vance
- [x] **Fish & Game Region 5**
  Don Chadwick
  Habitat Conservation Program
- [ ] **Fish & Game Region 6**
  Gabrina Gatchel
  Habitat Conservation Program
- [ ] **Fish & Game Region 6 I/M**
  Gabrina Getchel
  Inyo/Mono, Habitat Conservation Program
- [ ] **Dept. of Fish & Game M**
  George Isaac
  Marine Region

Other Departments

- [ ] **Food & Agriculture**
  Steve Shaffer
  Dept. of Food and Agriculture
- [ ] **Depart. of General Services**
  Public School Construction
- [ ] **Dept. of General Services**
  Robert Sleppy
  Environmental Services Section
- [x] **Dept. of Health Services**
  Veronica Malloy
  Dept. of Health/Drinking Water

Independent Commissions,Boards

- [ ] **Delta Protection Commission**
  Debby Eddy
- [ ] **Office of Emergency Services**
  Dennis Castrillo
- [ ] **Governor's Office of Planning & Research**
  State Clearinghouse
- [x] **Native American Heritage Comm.**
  Debbie Treadway
- [ ] **Public Utilities Commission**
  Ken Lewis
- [ ] **Santa Monica Bay Restoration**
  Guangyu Wang
- [ ] **State Lands Commission**
  Jean Sarino
- [ ] **Tahoe Regional Planning Agency (TRPA)**
  Cherry Jacques

Business, Trans & Housing

- [ ] **Caltrans - Division of Aeronautics**
  Sandy Hesnard
- [ ] **Caltrans - Planning**
  Terri Pencovic
- [x] **California Highway Patrol**
  Shirley Kelly
  Office of Special Projects
- [ ] **Housing & Community Development**
  Lisa Nichols
  Housing Policy Division

Dept. of Transportation

- [ ] **Caltrans, District 1**
  Rex Jackman
- [ ] **Caltrans, District 2**
  Marcelino Gonzalez
- [ ] **Caltrans, District 3**
  Jeff Pulverman
- [ ] **Caltrans, District 4**
  Tim Sable
- [ ] **Caltrans, District 5**
  David Murray
- [ ] **Caltrans, District 6**
  Moses Stites
- [x] **Caltrans, District 7**
  Vin Kumar
- [ ] **Caltrans, District 8**
  Dan Kopulsky
- [ ] **Caltrans, District 9**
  Gayle Rosander
- [ ] **Caltrans, District 10**
  Tom Dumas
- [ ] **Caltrans, District 11**
  Jacob Armstrong
- [ ] **Caltrans, District 12**
  Bob Joseph

Cal EPA

Air Resources Board

- [ ] Airport Projects
  Jim Lerner
- [x] Transportation Projects
  Ravi Ramalingam
- [ ] Industrial Projects
  Mike Tollstrup
- [x] **California Integrated Waste Management Board**
  Sue O'Leary
- [x] **State Water Resources Control Board**
  Regional Programs Unit
  Division of Financial Assistance
- [ ] **State Water Resources Control Board**
  Student Intern, 401 Water Quality Certification Unit
  Division of Water Quality
- [x] **State Water Resouces Control Board**
  Steven Herrera
  Division of Water Rights
- [ ] **Dept. of Toxic Substances Control**
  CEQA Tracking Center
- [ ] **Department of Pesticide Regulation**

Regional Water Quality Control Board (RWQCB)

- [ ] **RWQCB 1**
  Cathleen Hudson
  North Coast Region (1)
- [ ] **RWQCB 2**
  Environmental Document Coordinator
  San Francisco Bay Region (2)
- [ ] **RWQCB 3**
  Central Coast Region (3)
- [x] **RWQCB 4**
  Teresa Rodgers
  Los Angeles Region (4)
- [ ] **RWQCB 5S**
  Central Valley Region (5)
  - [ ] **RWQCB 5F**
    Central Valley Region (5)
    Fresno Branch Office
  - [ ] **RWQCB 5R**
    Central Valley Region (5)
    Redding Branch Office
- [ ] **RWQCB 6**
  Lahontan Region (6)
  - [ ] **RWQCB 6V**
    Lahontan Region (6)
    Victorville Branch Office
- [ ] **RWQCB 7**
  Colorado River Basin Region (7)
- [ ] **RWQCB 8**
  Santa Ana Region (8)
- [ ] **RWQCB 9**
  San Diego Region (9)
- [ ] Other ____________

Last Updated on 02/21/08

DEPARTMENT OF TRANSPORTATION
DISTRICT 7, REGIONAL PLANNING
IGR/CEQA BRANCH
100 MAIN STREET, MS # 16
LOS ANGELES, CA 90012-3606
PHONE: (213) 897-6696
FAX: (213) 897-1337

Flex your power!
Be energy efficient!

IGR/CEQA No. 080638AL, NOP
Upper Stone Canyon Reservoir Water Quality
Improvement Project
Vic. LA-405 / 36.718
SCH # 2008061110

July 1, 2008

Ms. Sarah Easley Perez
L.A. Department of Water and Power
111 North Hope Street, Room 1044
Los Angeles, CA 90012

Dear Ms. Perez:

Thank you for including the California Department of Transportation (Caltrans) in the environmental review process for the above referenced project. The proposed project is to replace the uncovered Upper Stone Canyon Reservoir a buried concrete storage structure sited essentially within the existing reservoir and buried. Construction is anticipated to take 5.5 years to complete.

To assist us in our efforts to evaluate the impacts of this project on State Transportation Facilities, please forward a copy of a construction traffic study for our review, if one has been prepared. Otherwise, a new construction traffic study should be prepared to analyze the following information:

1. Traffic impacts on State Routes 405, 101 and all affected on-ramps and off-ramps at Skirball Center Dr. and Van Nuys Blvd., and all significantly impacted streets, crossroads and controlling intersections, as well as analysis of existing condition and construction periods.
2. Traffic volume counts to include anticipated AM and PM peak-hour volumes.
3. Level of service (LOS) before and during the construction.
4. A brief construction traffic discussion showing ingress/egress, turning movements, and a directional flow for construction vehicle trips.
5. Discussion of mitigation measures appropriate to alleviate anticipated traffic impacts, including sharing of mitigation costs.
6. A truck/traffic construction management plan is needed for this project.

If you have any questions, please feel free to contact me at (213) 897-6696 or Alan Lin the project coordinator at (213) 897-8391 and refer to IGR/CEQA No. 080638AL.

Sincerely,

Elmer Alvarez

ELMER ALVAREZ
IGR/CEQA Branch Chief

cc: Scott Morgan, State Clearinghouse

DEPARTMENT OF FISH AND GAME
http://www.dfg.ca.gov
South Coast Region
4949 Viewridge Avenue
San Diego, CA 92123
(858) 467-4201

July 18, 2008

Ms. Sarah Easley Perez
Los Angeles Department of Water and Power
111 Norht Hope Street, Room 1044
Los Angeles, CA 90012

Notice of Preparation of a
Draft Environmental Impact Report for
Upper Stone Canyon Reservoir Water Quality Improvement Project
SCH 2008061110, Los Angeles County

Dear Ms. Perez:

The Department of Fish and Game (Department) has reviewed the above-referenced Notice of Preparation (NOP), for a Draft Environmental Impact Report for the Upper Stone Canyon Reservoir Water Quality Improvement Project. The project proposes to replace the uncovered Stone Canyon Reservoir with a buried concrete storage structure at the same location. The project is located within Stone Canyon in the Santa Monica Mountains, 0.5 miles south of Mulholland Drive, between Roscomare Road and Beverly Glen Boulevard, City of Los Angeles.

To enable Department staff to adequately review and comment on the proposed project we recommend the following information, where applicable, be included in the Draft Environmental Impact Report:

1. A complete, recent assessment of flora and fauna within and adjacent to the project area, with particular emphasis upon identifying endangered, threatened, and locally unique species and sensitive habitats (Attachment 1).

    a. A thorough recent assessment of rare plants and rare natural communities, following the Department's Guidelines for Assessing Impacts to Rare Plants and Rare Natural Communities.

    b. A complete, recent assessment of sensitive fish, wildlife, reptile, and amphibian species. Seasonal variations in use of the project area should also be addressed. Recent, focused, species-specific surveys, conducted at the appropriate time of year and time of day when the sensitive species are active or otherwise identifiable, are required. Acceptable species-specific survey procedures should be developed in consultation with the Department and U.S. Fish and Wildlife Service.

    c. Rare, threatened, and endangered species to be addressed should include all those which meet the California Environmental Quality Act (CEQA) definition (see CEQA Guidelines, Section 15380).

d. The Department's Biogeographic Data Branch in Sacramento should be contacted at (916) 322-2493 to obtain current information on any previously reported sensitive species and habitats, including Significant Natural Areas identified under Chapter 12 of the Fish and Game Code. Also, any Significant Ecological Areas (SEAs) or Environmentally Sensitive Habitats (ESHs) or any areas that are considered sensitive by the local jurisdiction that are located in or adjacent to the project area must be addressed.

2. A thorough discussion of direct, indirect, and cumulative impacts expected to adversely affect biological resources, with specific measures to offset such impacts. This discussion should focus on maximizing avoidance, and minimizing impacts.

a. CEQA Guidelines, Section 15125(a), direct that knowledge of the regional setting is critical to an assessment of environmental impacts and that special emphasis should be placed on resources that are rare or unique to the region.

b. Project impacts should also be analyzed relative to their effects on off-site habitats and populations. Specifically, this should include nearby public lands, open space, adjacent natural habitats, and riparian ecosystems. Impacts to and maintenance of wildlife corridor/movement areas, including access to undisturbed habitat in adjacent areas are of concern to the Department and should be fully evaluated and provided. The analysis should also include a discussion of the potential for impacts resulting from such effects as increased vehicle traffic, outdoor artificial lighting, noise and vibration.

c. A cumulative effects analysis should be developed as described under CEQA Guidelines, Section 15130. General and specific plans, as well as past, present, and anticipated future projects, should be analyzed relative to their impacts on similar plant communities and wildlife habitats.

d. Impacts to migratory wildlife affected by the project should be fully evaluated including proposals to removal/disturb native and ornamental landscaping and other nesting habitat for native birds. Impact evaluation may also include such elements as migratory butterfly roost sites and neo-tropical bird and waterfowl stop-over and staging sites. All migratory nongame native bird species are protected by international treaty under the Federal Migratory Bird Treaty Act (MBTA) of 1918 (50 C.F.R. Section 10.13). Sections 3503, 3503.5 and 3513 of the California Fish and Game Code prohibit take of birds and their active nests, including raptors and other migratory nongame birds as listed under the MBTA.

e. Impacts to all habitats from City or County required Fuel Modification Zones (FMZ). Areas slated as mitigation for loss of habitat shall not occur within the FMZ.

f. Proposed project activities (including disturbances to vegetation) should take place outside of the breeding bird season (February 1- September 1) to avoid take (including disturbances which would cause abandonment of active nests containing eggs and/or young). If project activities cannot avoid the breeding bird season, nest surveys should be conducted and active nests should be avoided and provided with a minimum buffer as determined by a biological monitor (the Department recommends a minimum 500-foot buffer for all active raptor nests).

3. A range of alternatives should be analyzed to ensure that alternatives to the proposed project are fully considered and evaluated. A range of alternatives which avoid or otherwise minimize impacts to sensitive biological resources including wetlands/riparian habitats, alluvial scrub, coastal sage scrub, etc. should be included. Specific alternative locations should also be evaluated in areas with lower resource sensitivity where appropriate.

   a. Mitigation measures for project impacts to sensitive plants, animals, and habitats should emphasize evaluation and selection of alternatives which avoid or otherwise minimize project impacts. Compensation for unavoidable impacts through acquisition and protection of high quality habitat elsewhere should be addressed with offsite mitigation locations clearly identified.

   b. The Department considers Rare Natural Communities as threatened habitats having both regional and local significance. Thus, these communities should be fully avoided and otherwise protected from project-related impacts (Attachment 2).

   c. The Department generally does not support the use of relocation, salvage, and/or transplantation as mitigation for impacts to rare, threatened, or endangered species. Department studies have shown that these efforts are experimental in nature and largely unsuccessful.

4. A California Endangered Species Act (CESA) Permit must be obtained, if the project has the potential to result in "take" of species of plants or animals listed under CESA, either during construction or over the life of the project. CESA Permits are issued to conserve, protect, enhance, and restore State-listed threatened or endangered species and their habitats. Early consultation is encouraged, as significant modification to the proposed project and mitigation measures may be required in order to obtain a CESA Permit. Revisions to the Fish and Game Code, effective January 1998, require that the Department issue a separate CEQA document for the issuance of a CESA permit unless the project CEQA document addresses all project impacts to listed species and specifies a mitigation monitoring and reporting program that will meet the requirements of a CESA permit. For these reasons, the following information is requested:

   a. Biological mitigation monitoring and reporting proposals should be of sufficient detail and resolution to satisfy the requirements for a CESA Permit.

   b. A Department-approved Mitigation Agreement and Mitigation Plan are required for plants listed as rare under the Native Plant Protection Act.

5. The Department opposes the elimination of watercourses (including concrete channels) and/or the canalization of natural and manmade drainages or conversion to subsurface drains. All wetlands and watercourses, whether intermittent, ephemeral, or perennial, must be retained and provided with substantial setbacks which preserve the riparian and aquatic habitat values and maintain their value to on-site and off-site wildlife populations. The Department recommends a minimum natural buffer of 100 feet from the outside edge of the riparian zone on each side of a drainage.

   a. The Department requires a Streambed Alteration Agreement (SAA), pursuant to Section 1600 et seq. of the Fish and Game Code, with the applicant prior to any direct or indirect impact to a lake or stream bed, bank or channel or associated riparian resources. The Department's issuance of a SAA may be a project that is subject to CEQA. To facilitate our issuance of the Agreement when CEQA applies, the Department as a responsible agency under CEQA may consider the local jurisdiction's (Lead Agency) document for the project. To minimize additional requirements by the Department under CEQA the document should fully identify the potential impacts to the lake, stream or riparian resources and provide adequate avoidance, mitigation, monitoring and reporting commitments for issuance of the Agreement. Early consultation is recommended, since modification of the proposed project may be required to avoid or reduce impacts to fish and wildlife resources.

The Notice of Determination was addressed to Mr. Don Chadwick. Mr. Chadwick is no longer with the Department. All CEQA correspondence should be addressed to Attn: CEQA Review Program. Please make a note of this change to facilitate timely review.

Thank you for this opportunity to provide comment. Please contact Mr. Scott Harris, Environmental Scientist, at (626) 797-3170 if you should have any questions and for further coordination on the proposed project.

Sincerely,

Scott Harris for

Terri Dickerson
Senior Environmental Scientist

cc: Ms. Helen Birss, Los Alamitos
Ms. Terri Dickerson, Laguna Niguel
Ms. Kelly Schmoker, Glendora
Mr. Scott Harris, Pasadena
Ms. Jamie Jackson, Altadena
HabCon-Chron
Department of Fish and Game

State Clearinghouse, Sacramento

SPH:sph
spharris/City of Los Angeles DWP,Stone Canyon Reservoir Project/NOP 2008

Sensitivity of Top Priority Rare Natural Communities in Southern California

Sensitivity rankings are determined by the Department of Fish and Game, California Natural Diversity Data Base and based on either number of known occurrences (locations) and/or amount of habitat remaining (acreage). The three rankings used for these top priority rare natural communities are as follows:

S1.# Fewer than 6 known locations and/or on fewer than 2,000 acres of habitat remaining.

S2.# Occurs in 6-20 known locations and/or 2,000-10,000 acres of habitat remaining.

S3.# Occurs in 21-100-known locations and/or 10,000-50,000 acres of habitat remaining.

The number to the right of the decimal point after the ranking refers to the degree of threat posed to that natural community regardless of the ranking. For example:

S1.1 = very threatened
S2.2 = threatened
S3.3 = no current threats known

Sensitivity Rankings (February 1992)

Rank	Community Name
S1.1	Mojave Riparian Forest
	Sonoran Cottonwood Willow Riparian
	Mesquite Bosque
	Elephant Tree Woodland
	Crucifixion Thorn Woodland
	Allthorn Woodland
	Arizonan Woodland
	Southern California Walnut Forest
	Mainland Cherry Forest
	Southern Bishop Pine Forest
	Torrey Pine Forest
	Desert Mountain White Fir Forest
	Southern Dune Scrub
	Southern Coastal Bluff Scrub
	Maritime Succulent Scrub
	Riversidean Alluvial Fan Sage Scrub
	Southern Maritime Chaparral
	Valley Needlegrass Grassland
	Great Basin Grassland
	Mojave Desert Grassland
	Pebble Plains
	Southern Sedge Bog
	Cismontane Alkali Marsh

S1.2	Southern Foredunes Mono Pumice Flat Southern Interior Basalt Flow Vernal Pool
S2.1	Venturan Coastal Sage Scrub Diegan Coastal Sage Scrub Riversidean Upland Coastal Sage Scrub Riversidean Desert Sage Scrub Sagebrush Steppe Desert Sink Scrub Mafic Southern Mixed Chaparral San Diego Mesa Hardpan Vernal Pool San Diego Mesa Claypan Vernal Pool Alkali Meadow Southern Coastal Salt Marsh Coastal Brackish Marsh Transmontane Alkali Marsh Coastal and Valley Freshwater Marsh Southern Arroyo Willow Riparian Forest Southern Willow Scrub Modoc-Great Basin Cottonwood Willow Riparian Modoc-Great Basin Riparian Scrub Mojave Desert Wash Scrub Engelmann Oak Woodland Open Engelmann Oak Woodland Closed Engelmann Oak Woodland Island Oak Woodland California Walnut Woodland Island Ironwood Forest Island Cherry Forest Southern Interior Cypress Forest Bigcone Spruce-Canyon Oak Forest
S2.2	Active Coastal Dunes Active Desert Dunes Stabilized and Partially Stabilized Desert Dunes Stabilized and Partially Stabilized Desert Sandfield Mojave Mixed Steppe Transmontane Freshwater Marsh Coulter Pine Forest Southern California Fellfield White Mountains Fellfield
S2.3	Bristlecone Pine Forest Limber Pine Forest

Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Natural Communities

State of California
THE RESOURCES AGENCY
Department of Fish and Game
December 9, 1983
Revised May 8, 2000

The following recommendations are intended to help those who prepare and review environmental documents determine **when** a botanical survey is needed, **who** should be considered qualified to conduct such surveys, **how** field surveys should be conducted, and **what** information should be contained in the survey report. The Department may recommend that lead agencies not accept the results of surveys that are not conducted according to these guidelines.

1. Botanical surveys are conducted in order to determine the environmental effects of proposed projects on all rare, threatened, and endangered plants and plant communities. Rare, threatened, and endangered plants are not necessarily limited to those species which have been "listed" by state and federal agencies but should include any species that, based on all available data, can be shown to be rare, threatened, and/or endangered under the following definitions:

A species, subspecies, or variety of plant is "endangered" when the prospects of its survival and reproduction are in immediate jeopardy from one or more causes, including loss of habitat, change in habitat, over-exploitation, predation, competition, or disease. A plant is "threatened" when it is likely to become endangered in the foreseeable future in the absence of protection measures. A plant is "rare" when, although not presently threatened with extinction, the species, subspecies, or variety is found in such small numbers throughout its range that it may be endangered if its environment worsens.

Rare natural communities are those communities that are of highly limited distribution. These communities may or may not contain rare, threatened, or endangered species. The most current version of the California Natural Diversity Database's List of California Terrestrial Natural Communities may be used as a guide to the names and status of communities.

2. It is appropriate to conduct a botanical field survey to determine if, or to the extent that, rare, threatened, or endangered plants will be affected by a proposed project when:

a. Natural vegetation occurs on the site, it is unknown if rare, threatened, or endangered plants or habitats occur on the site, and the project has the potential for direct or indirect effects on vegetation; or
b. Rare plants have historically been identified on the project site, but adequate information for impact assessment is lacking.

3. Botanical consultants should possess the following qualifications:

a. Experience conducting floristic field surveys;
b. Knowledge of plant taxonomy and plant community ecology;
c. Familiarity with the plants of the area, including rare, threatened, and endangered species;
d. Familiarity with the appropriate state and federal statutes related to plants and plant collecting; and,
e. Experience with analyzing impacts of development on native plant species and communities.

4. Field surveys should be conducted in a manner that will locate any rare, threatened, or endangered species that may be present. Specifically, rare, threatened, or endangered plant surveys should be:

a. Conducted in the field at the proper time of year when rare, threatened, or endangered species are both evident and identifiable. Usually, this is when the plants are flowering.

When rare, threatened, or endangered plants are known to occur in the type(s) of habitat present in the project area, nearby accessible occurrences of the plants (reference sites) should be observed to determine that the species are identifiable at the time of the survey.

b. Floristic in nature. A floristic survey requires that every plant observed be identified to the extent necessary to determine its rarity and listing status. In addition, a sufficient number of visits spaced throughout the growing season are necessary to accurately determine what plants exist on the site. In order to properly characterize the site and document the completeness of the survey, a complete list of plants observed on the site should be included in every botanical survey report.

c. Conducted in a manner that is consistent with conservation ethics. Collections (voucher specimens) of rare, threatened, or endangered species, or suspected rare, threatened, or endangered species should be made only when such actions would not jeopardize the continued existence of the population and in accordance with applicable state and federal permit requirements. A collecting permit from the Habitat Conservation Planning Branch of DFG is required for collection of state-listed plant species. Voucher specimens should be deposited at recognized public herbaria for future reference. Photography should be used to document plant identification and habitat whenever possible, but especially when the population cannot withstand collection of voucher specimens.

d. Conducted using systematic field techniques in all habitats of the site to ensure a thorough coverage of potential impact areas.

e. Well documented. When a rare, threatened, or endangered plant (or rare plant community) is located, a California Native Species (or Community) Field Survey Form or equivalent written form, accompanied by a copy of the appropriate portion of a 7.5 minute topographic map with the occurrence mapped, should be completed and submitted to the Natural Diversity Database. Locations may be best documented using global positioning systems (GPS) and presented in map and digital forms as these tools become more accessible.

5. Reports of botanical field surveys should be included in or with environmental assessments, negative declarations and mitigated negative declarations, Timber Harvesting Plans (THPs), EIR's, and EIS's, and should contain the following information:

a. Project description, including a detailed map of the project location and study area.
b. A written description of biological setting referencing the community nomenclature used and a vegetation map.
c. Detailed description of survey methodology.
d. Dates of field surveys and total person-hours spent on field surveys.
e. Results of field survey including detailed maps and specific location data for each plant population found. Investigators are encouraged to provide GPS data and maps documenting population boundaries.
f. An assessment of potential impacts. This should include a map showing the distribution of plants in relation to proposed activities.
g. Discussion of the significance of rare, threatened, or endangered plant populations in the project area considering nearby populations and total species distribution.
h. Recommended measures to avoid impacts.
i. A list of all plants observed on the project area. Plants should be identified to the taxonomic level necessary to determine whether or not they are rare, threatened or endangered.
j. Description of reference site(s) visited and phenological development of rare, threatened, or endangered plant(s).
k. Copies of all California Native Species Field Survey Forms or Natural Community Field Survey Forms.
l. Name of field investigator(s).
m. References cited, persons contacted, herbaria visited, and the location of voucher specimens.

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

June 24, 2008

Ms. Sarah Easley Perez
LOS ANGELES DEPARTMENT OF WATER & POWER
111 NORTH HOPE STREET, ROOM 1044
LOS ANGELES, CA 90012

Re: SCH# 2008061110; CEQA Notice of Preparation (NOP) draft Environmental Impact Report (DEIR) for THE UPPER STONE CANYON RESERVOIR WATER QUALITY IMPROVEMENT PROJECT; Los Angeles County, California

Dear Ms Perez:

Thank you for the opportunity to comment on the above-referenced document. The Native American Heritage Commission is the state agency designated for the protection of California's Native American cultural resources. The California Environmental Quality Act (CEQA) requires that any project that causes a substantial adverse change in the significance of an historical resource, that includes archeological resources, is a 'significant effect' requiring the preparation of an Environmental Impact Report (EIR per the California Code of Regulations § 15064.5(b)(c) (CEQA Guidelines). 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. To adequately assess the project-related impacts on historical resources, the Commission recommends the following action:
√ Contact the appropriate California Historic Resources Information Center (CHRIS). Contact information for the 'Information Center' nearest you is available from the State Office of Historic Preservation in Sacramento (916/653-7278). The record search will determine:

- If a part or the entire (APE) has been previously surveyed for cultural resources.
- If any known cultural resources have already been recorded in or adjacent to the APE.
- If the probability is low, moderate, or high that cultural resources are located in the APE.
- If a survey is required to determine whether previously unrecorded cultural resources are present.

√ If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.

- The final report containing site forms, site significance, and mitigation measurers should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for pubic disclosure.
- The final written report should be submitted within 3 months after work has been completed to the appropriate regional archaeological Information Center.

√ Contact the Native American Heritage Commission (NAHC) for:
* A Sacred Lands File (SLF) search of the project area and information on tribal contacts in the project vicinity who may have information on cultural resources in or near the APE. Please provide us site identification as follows: USGS 7.5-minute quadrangle citation with name, township, range and section. This will assist us with the SLF.

- Also, we recommend that you contact the Native American contacts on the attached list to get their input on the effect of potential project (e.g. APE) impact. In many cases a culturally-affiliated Native American tribe or person will be the only source of information about the existence of a cultural resource.

√ Lack of surface evidence of archeological resources does not preclude their subsurface existence.

- Lead agencies should include in their mitigation plan provisions for the identification and evaluation of accidentally discovered archeological resources, per California Environmental Quality Act (CEQA) §15064.5 (f)of the California Code of Regulations (CEQA Guidelines). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American, with knowledge in cultural resources, should monitor all ground-disturbing activities.
- Lead agencies should include in their mitigation plan provisions for the disposition of recovered artifacts, in consultation with culturally affiliated Native Americans.

√ Lead agencies should include provisions for discovery of Native American human remains or unmarked cemeteries in their mitigations plans.

- CEQA Guidelines §15064.5(d) requires the lead agency to work with the Native Americans identified by this Commission if the Initial Study identifies the presence or likely presence of Native American human remains within the APE. CEQA Guidelines provide for agreements with Native American groups, identified by the NAHE, to ensure the appropriate and dignified treatment of Native American human remains and any associated grave goods.
- Health and Safety Code §7050.5, Public Resources Code §5097.98 and CEQA Guidelines §15064.5(d) mandate procedures to be followed in the event of an accidental discovery of any human remains in a location other than a dedicated cemetery.

√ Lead agencies should consider avoidance, as defined in CEQA Guidelines §15370 when significant cultural resources are discovered during the course of project planning or execution.

Please feel free to contact me at (916) 653-6251 if you have any questions.

Sincerely,

Dave Singleton

Dave Singleton
Program Analyst

Attachment: Native American Contact List.

Cc: State Clearinghouse

Native American Contacts
Los Angeles County
June 24, 2008

LA City/County Native American Indian Comm
Ron Andrade, Director
3175 West 6th Street, Rm. 403
Los Angeles , CA 90020
(213) 351-5324
(213) 386-3995 FAX

Gabrielino/Tongva Council / Gabrielino Tongva Nation
Sam Dunlap, Tribal Secretary
761 Terminal Street; Bldg 1, 2nd floor Gabrielino Tongva
Los Angeles , CA 90021
office @tongvatribe.net
(213) 489-5001 - Office
(909) 262-9351 - cell
(213) 489-5002 Fax

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

Gabrielino Tongva Indians of California Tribal Council
Robert Dorame, Tribal Chair/Cultural Resources
5450 Slauson, Ave, Suite 151 PMB Gabrielino Tongva
Culver City , CA 90230
gtongva@verizon.net
562-761-6417 - voice
562-925-7989 - fax

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

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

This list is only applicable for contacting local Native Americans with regard to cultural resources for the propose SCH#2008061110; CEQA Notice of Preparation (NOP); draft Environmental Impact Report (DEIR) for the Upper Stone Canyon Reservoir Water Quality Improvement Project; located 1.5 miles east of the Interstate 405 and ner Mulholland Drive in the City of Los Angeles; Los Angeles County, California.

South Coast
Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765-4178
(909) 396-2000 · www.aqmd.gov

June 30, 2008

Ms. Sarah Easley Perez
Department of Water and Power
City of Los Angeles
111 North Hope Street, Room 1044
Los Angeles, CA 90012

Dear Ms. Perez:

Notice of Preparation of a Draft Environmental Impact Report (Draft EIR) for the Upper Stone Canyon Reservoir Water Quality Improvement Project

The South Coast Air Quality Management District (SCAQMD) appreciates the opportunity to comment on the above-mentioned document. The SCAQMD's comments are recommendations regarding the analysis of potential air quality impacts from the proposed project that should be included in the draft environmental impact report (EIR). Please send the SCAQMD a copy of the Draft EIR upon its completion. **In addition, please send with the draft EIR all appendices or technical documents related to the air quality analysis and electronic versions of all air quality modeling and health risk assessment files. Without all files and supporting air quality documentation, the SCAQMD will be unable to complete its review of the air quality analysis in a timely manner. Any delays in providing all supporting air quality documentation will require additional time for review beyond the end of the comment period.**

Air Quality Analysis
The SCAQMD adopted its California Environmental Quality Act (CEQA) Air Quality Handbook in 1993 to assist other public agencies with the preparation of air quality analyses. The SCAQMD recommends that the Lead Agency use this Handbook as guidance when preparing its air quality analysis. Copies of the Handbook are available from the SCAQMD's Subscription Services Department by calling (909) 396-3720. Alternatively, the lead agency may wish to consider using the California Air Resources Board (CARB) approved URBEMIS 2007 Model. This model is available on the SCAQMD Website at: www.urbemis.com.

The Lead Agency should identify any potential adverse air quality impacts that could occur from all phases of the project and all air pollutant sources related to the project. Air quality impacts from both construction (including demolition, if any) and operations should be calculated. Construction-related air quality impacts typically include, but are not limited to, emissions from the use of heavy-duty equipment from grading, earth-loading/unloading, paving, architectural coatings, off-road mobile sources (e.g., heavy-duty construction equipment) and on-road mobile sources (e.g., construction worker vehicle trips, material transport trips). Operation-related air quality impacts may include, but are not limited to, emissions from stationary sources (e.g., boilers), area sources (e.g., solvents and coatings), and vehicular trips (e.g., on- and off-road tailpipe emissions and entrained dust). Air quality impacts from indirect sources, that is, sources that generate or attract vehicular trips should be included in the analysis.

The SCAQMD has developed a methodology for calculating PM2.5 emissions from construction and operational activities and processes. In connection with developing PM2.5 calculation methodologies, the SCAQMD has also developed both regional and localized significance thresholds. The SCAQMD requests that the lead agency quantify PM2.5 emissions and compare the results to the recommended PM2.5 significance thresholds. Guidance for calculating PM2.5 emissions and PM2.5 significance thresholds can be found at the following internet address: http://www.aqmd.gov/ceqa/handbook/PM2_5/PM2_5.html.

In addition to analyzing regional air quality impacts the SCAQMD recommends calculating localized air quality impacts and comparing the results to localized significance thresholds (LSTs). LST's can be used in addition to the recommended regional significance thresholds as a second indication of air quality impacts when preparing a CEQA document. Therefore, when preparing the air quality analysis for the proposed project, it is recommended that the lead agency perform a localized significance analysis by either using the LSTs developed by the SCAQMD or performing dispersion modeling as necessary. Guidance for performing a localized air quality analysis can be found at http://www.aqmd.gov/ceqa/handbook/LST/LST.html.

It is recommended that lead agencies for projects generating or attracting vehicular trips, especially heavy-duty diesel-fueled vehicles, perform a mobile source health risk assessment. Guidance for performing a mobile source health risk assessment ("Health Risk Assessment Guidance for Analyzing Cancer Risk from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis") can be found on the SCAQMD's CEQA web pages at the following internet address: http://www.aqmd.gov/ceqa/handbook/mobile_toxic/mobile_toxic.html. An analysis of all toxic air contaminant impacts due to the decommissioning or use of equipment potentially generating such air pollutants should also be included.

Mitigation Measures

In the event that the project generates significant adverse air quality impacts, CEQA requires that all feasible mitigation measures that go beyond what is required by law be utilized during project construction and operation to minimize or eliminate significant adverse air quality impacts. To assist the Lead Agency with identifying possible mitigation measures for the project, please refer to Chapter 11 of the SCAQMD CEQA Air Quality Handbook for sample air quality mitigation measures. Additional mitigation measures can be found on the SCAQMD's CEQA web pages at the following internet address: www.aqmd.gov/ceqa/handbook/mitigation/MM_intro.html Additionally, SCAQMD's Rule 403 – Fugitive Dust, and the Implementation Handbook contain numerous measures for controlling construction-related emissions that should be considered for use as CEQA mitigation if not otherwise required. Other measures to reduce air quality impacts from land use projects can be found in the SCAQMD's Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning. This document can be found at the following internet address: http://www.aqmd.gov/prdas/aqguide/aqguide.html. In addition, guidance on sitting incompatible land uses can be found in the California Air Resources Board's Air Quality and Land Use Handbook: A Community Perspective, which can be found at the following internet address: http://www.arb.ca.gov/ch/handbook.pdf. Pursuant to state CEQA Guidelines §15126.4 (a)(1)(D), any impacts resulting from mitigation measures must also be discussed.

Data Sources

SCAQMD rules and relevant air quality reports and data are available by calling the SCAQMD's Public Information Center at (909) 396-2039. Much of the information available through the Public Information Center is also available via the SCAQMD's World Wide Web Homepage (http://www.aqmd.gov).

The SCAQMD is willing to work with the Lead Agency to ensure that project-related emissions are accurately identified, categorized, and evaluated. Please call Gordon Mize, Ph.D., Air Quality Specialist, CEQA Section, at (909) 396-3302 if you have any questions regarding this letter.

Sincerely,

Steve Smith

Steve Smith, Ph.D.
Program Supervisor, CEQA Section
Planning, Rule Development and Area Sources

SS:GM:AK
LAC080620-04AK
Control Number

Alba Luz Matienzo
2841 Bottlebrush Blvd.
Los Angeles, Ca 90077

July 17, 2007

Los Angeles DWP Environmental Services
Att. Sarah Perez
111 N. Hope Street room 1044
Los Angeles, Ca 90012

Dear Ms. Perez,

Per this letter, I inform to you that I am opposed to the creation of a park structure, restrooms and hiking trails in the **upper stone canyon reservoirs area.** I believe that the congestion of traffic on Mullholand drive is heavy enough. I do not think that our water supply area should be exposed to such projects. This would lead to strangers coming to disturb the natural habitat and wild life.

Your consideration will be greatly appreciated.

Truly Yours,

Alba Luz Matienzo

Alba Luz Matienzo

2781 Woodwardia Drive, Los Angeles, CA 90077
Tel. 310-234-0177
Fax 310-470-6132

Fax

To:	LA DWP Environmental Services	**From:**	Anne & Andrew Kaplan
Fax:	213-367-4710	**Pages:**	1
Phone:		**Date:**	July 20, 2008
Re:	Upper Stone Canyon Reservoir Project	**CC:**	

☑ **Urgent** ☑ **For Review** ☐ **Please Comment** ☐ **Please Reply** ☐ **Please Recycle**

• **Comments:**

Dear LA DWP Environmental Services:

We are the owners of the property at 2781 Woodwardia Drive, Los Angeles, CA 90077 in Beverly Glen Park. We oppose the LA DWP plans to cover Stone Canyon reservoir and make it into a public park. We believe it should remain a wildlife refuge and backup reservoir. The road infrastructure in our area does not have sufficient capacity to support current traffic, which becomes gridlocked on an almost daily basis during Rush Hours, much less the capacity to support the increased traffic that would result from turning this area into a public park.

In addition, this area remains at significant hazard for fire, as already reflected in our insurance rates. Covering the reservoir that would normally be available to firefighters' helicopters would increase our liability and potential property losses and danger in the event of fire, not to mention further increasing our insurance rates.

We believe this project must be reconsidered.

Sincerely,

Anne M. Kaplan

Anne and Andrew Kaplan

Sarah Easley Perez
Los Angeles Department of Water and Power
Environmental Services
111 North Hope Street, Room 1044
Los Angeles, CA 90012

FAX: 213-367-4710

Dear Ms Perez,

I am a homeowner in the Beverly Glen Park area. I have read recent proposals by DWP for the Upper Stone Canyon Reservoir. I have serious concerns about how this project will affect the increased traffic we experience on canyon roads which are at most places one lane in each direction. I worry about the increased traffic and the potential fire danger. In addition I have concerns about the wild life.

I very much oppose any changes to the current use pattern , and encourage DWP to utilize alternate plans.

Thank you,

Barbara Kingsley
10144 Hollow Glen Circle
Los Angeles, 90077

DR. BERTRAM HAYMES
2755 Bottlebrush Drive
Los Angeles, California 90077

7/16/08

RE: DWP proposal to create a park with parking structures, restrooms + hiking trails on Upper Stone Canyon reservoir area —

Both Mrs. Haymes and I strongly protest this proposal. The traffic congestion, potential terrorism, fires started by people visiting the area – lack of privacy and potential disruption of the natural habitat – all endanger the privacy (privacy) of our well being –

Please reject this plan out of hand!

Sincerely –

Dr. & Mrs. Bertram Haymes

July 11. 2008

We categorically and unequivocally oppose the Upper Stone Canyon Resevoir Plan to include any recreational facilities. The DWP and the city of Los Angeles have no money for a prudent energy plan and the city can't even come up with a budget for necessary services at this time.

We who will be most affected by this plan do not need more traffic in this area or public restrooms or parking structures. These facilities lead to accidental fires in our parched woodlands (we remember the Bel Air fire) in an already high fire area where we pay extra premiums for fire insurance. Traffic on Mulholland and Roscomare is already overburdened. Our roads are in deplorable shape. Public parks always encourage a criminal element of some sort.

Do what has to be done for the Reservoir but put the millions of dollars a public facility would cost the tax payers into a more efficient energy plan and the city's sadly and dangerously failing infra-structure. There is much wild life here that would be deprived of its natural habitat

Can't we leave the beauty of the hills and foliage as nature intended them? The people of Bel Air would not use this park:--they mostly have their own recreational facilities, and not too many, if any people who could use a park will drive these distances on crowded roads to get to this one. Whatever is the DWP thinking of? NO TO PARKING STRUCTURES, RESTROOMS AND ENCOURAGED CRIME1111

Betty L Goldman
2341 Dorella Circle
Los Angeles, Ca.
90077

A Fax From
Carrie Field, CCAM
Beverly Glen Park Homeowners Association, Inc.
2830 Woodwardia Drive
Los Angeles, California 90077
310.474.2444
310.475.0420 Fax
e-mail: bgphoa2@verizon.net

DATE: July 21, 2008

TO: Ms. Sarah Easley Perez
DWP- Environmental Services

FAX NUMBER: 213-367-4710

RE: Stone Canyon Reservoir Project

NO. OF PAGES 3 (Including Cover)

Dear Ms. Easley Perez:

Enclosed is a letter from the Vice President of the Beverly Glen Park on behalf of the Board of Directors and the homeowners in our community regarding our objections to the proposed Stone Canyon Reservoir Project.

Should you have any comments or question, please do not hesitate to call me.

Beverly Glen Park HOMEOWNER'S ASSOCIATION, INC.
PRIVATE COMMUNITY ESTATES & RECREATION CLUB
2830 Woodwardia Drive • Los Angeles, CA 90077
TEL: (310) 474-2444 • FAX: (310) 475-0420

July 21, 2008

Via Facsimile and Mail

Attention: Sarah Easley Perez
Los Angeles Department of Water and Power
Environmental Services
111 North Hope Street, Room 1044
Los Angeles, CA 90012

FAX: 213-367-4710

Dear Ms. Perez:

We are members of the Board of Directors of Beverly Glen Park Homeowners Association (the "BGPHOA"), which is one of the two largest homeowners associations in the Bel Air community, and will be the most impacted by the planned project, as our development is just east of the 5 year, $165,000,000 planned construction project on the upper Stone Canyon Reservoir. Some of our directors and a number of our homeowners recently attended the public comment meeting in connection with the creation of a public park on the site of the current Stone Canyon Reservoir.

We are very opposed to the project for several significant reasons. First, we understand there is an option to bypass this location and create the storage facility elsewhere. Second, covering the existing reservoir would disrupt what little natural aesthetic the current open reservoir creates. Third, the proposal will significantly decrease the available water supply by close to 35,000,000 gallons. Fourth, the increase in road traffic to an already crumbling Mulholland Drive roadway would be unbearable and dangerous. Fifth, the disruption for all wildlife which relies upon the current (non-human) inhabitation and undisturbed environment the current reservoir offers needs to be seriously looked at. Removing the water would have an unparalleled impacted on the ecologic balance in the Glen. In addition, there are additional concerns, which will affect the communities as a whole.

Fires. Currently with the open waters should a fire as the one in Bel Air in the 1960's occur, the fire fighting helicopters can get in there and use the water to save the Glen as well as houses and businesses in Bel Air.

Insurance and liability: We are already experiencing difficulty in obtaining insurers for fire, brush and other homeowner issues. The proposed construction project will only increase the premium for both the homeowners and the DWP and State.

Crime: Crime will increase. You are looking to bring those who do not live in or have a vested interest in the area to the "candy store". . . . Why are you looking for trouble?

We would like to know the benefits of this plan? There is limited access in and out of the Glen at present. Hospitals are at least a half hour away. The unnecessary and increased load on the fire departments needs to be looked at. And at what cost? Who is paying for this entire truly unnecessary project?

We believe we would be far better to all surrounding communities to find another solution and place for water storage and do all that you can to preserve what bit of nature we have left in this world and LA.

Please feel free to call our management office at (310) 474-2444 with any comments or questions. Our general manager, Carrie Field, will be available to speak with you.

Sincerely,

Lori Dietzman
Vice President of the Beverly Glen Park Homeowners Association

To: Los Angeles Department of Water and Power
Environmental Services
ATTN: Sarah Easley Perez
Phone:
Fax: (213) 367-4710

From: Alex Tkabladze, Katya Swann,
Heather Pfeiffer, and Levan Tkabladze
Date Sent: 7-22-08
Number of Pages: 2 including fax cover

Message: Beverly Glen Park Residents in opposition of the Stone Canyon Reservoir conversion to a public Park.

7/22/08

Attention: Sarah Easley Perez
Los Angeles Department of Water and Power
Environmental Services
111 North Hope St. Room 144
Los Angeles, CA 90012

As residents of Beverly Glen Park we are strongly opposed to the DWP's plan to make Stone Canyon Park Reservoir into a public park. We feel strongly in leaving the reservoir in its current state as a natural habitat and esthetic lake environment.

Sincerely,

Alex Tkabladze, Katya Swann,
Heather Pfeiffer, and Levan Tkabladze
2884 Woodwardia Dr.
Los Angeles, CA 90077

UPPER STONE CANYON RESERVOIR WATER QUALITY IMPROVEMENT PROJECT
SCOPING MEETING COMMENTS

(Please hand in, mail back, or fax to (213) 367-4710 by Tuesday, July 22, 2008)

Name: Carla Axelrod

Organization (if any):

Address: 2708 Angelo Dr.

City, State, Zip: L.A. 90077

Phone (optional):

E-mail (optional):

Would you like to remain on our mailing list to receive future project updates? Yes ☐ No ☒

Comments

I oppose the Project.

I am a homeowner in the Beverly Glen Park Homeowners Association.

FAX

DATE: JULY 24, 2008

TO: SARAH EASLEY PEREZ

FROM: CAROLL REED (day) #323-653-6677 x129…(night)310-472-0058
caroll@jandev.com

FAX # 213-367-4710

PHONE 213-367-4710

NUMBER OF PAGES 6 including cover sheet

RE: Upper Stone Canyon Reservoir Water Quality Improvement Project

Dear Ms. Perez,

Attached please find a letter addressing pertinent items of interest relating to this project. As I mentioned to you, in my voice message, I have been out of town and just returned, hence the lateness of my mailing.

This is such a serious issue that I would much appreciate your routing it to the proper individuals, as well as getting it included in the final draft of statements

Sincerely,

Caroll Reed
caroll@jandev.com

Caroll Reed
2304 Donells Circle, Los Angeles, California 90077
310-472-0058

July 22, 2008

Department of Water and Power
City of Los Angeles
111 North Hope Street, Room 1944
Los Angeles, California 90012
Contact: Sarah Easley Perez
Fax: (213) 367-4710

Re: LADWP PROPOSED STONE CANYON RESEVOIR / PROPOSED TANK COVERING AND PASSIVE RECREATION INSTALLATION

Dear Ms. Perez and Executives of DWP:

I have been a resident of the Roscomare Valley, Los Angeles 90077 for 37 years. I am told that the lumber for my home was placed on the site, the day of the 1962 Bel Air fire. Because of this fact, I have always been conscious of taking the necessary precautions to not create, add to or exacerbate any fire or fire condition.

- I clear my lot, which abuts the LADWP property, promptly by May 31^{st} of each year.
- I have had a fireproof roof installed (in fact I have done two roofs)
- I have replaced a wood fence with a block wall
- I have removed 6 highly flammable eucalyptus trees from my property
- I have had a large area of brick patio and walk ways installed around my home
- I keep my property free of excess "junk" stored close to my home (It protects me and my neighbors)

On the other hand, the LADWP appears not to be concerned with its neighbors:

- DWP, many times, doesn't perform the required brush clearance on it's property until September/October...and this is done only after 6 calls to the fire department brush clearance unit, thus endangering ALL the residents, not only Roscomare Valley, but the entire Mullhulland corridor which also includes Sherman Oaks to the north, Encino to the West and Studio City, Beverly Glen and potentially Beverly Hills to the east.

- A number of years ago, I am informed that, the DWP actually ran an illegal, against code, asphalt recycling process from the premises around the Upper Stone Canyon Reservoir. Odors, at night, were significant and telling…At times, even now, some of these same odors appear. Why? Suspicious!
- DWP makes decisions about projects in the community, without considering the feedback of the affected residents. Even though DWP holds open meetings, the personnel sent to conduct the meetings, albeit, courteous, are at a level, without any ability, knowledge or rank to answer questions from the public. Instead we are told…"we appreciate your question, your question will be taken back to the office and it will be answered at a later time." The public attends meetings to gain information, not to be stone-walled.

Now to the subject at hand; the covering of the Upper Stone Canyon Reservoir and the **RIDICULOUS proposal to create a PASSIVE RECREATION AREA in and around Upper Stone Canyon Reservoir.**

I must reiterate many statements of fact, that are common knowledge to all residents as well as outsiders. It appears the only people who choose to turn a BLIND EYE to the FACTS are the BOARD OF DIRECTORS or HIGH LEVEL BUREAUCRATS at the DWP.

- This is an **EXTREMELY HIGH-FIRE DANGER, BRUSH AREA!**

- **State Farm Insurance Co. or the California State's fire insurance dept. coverage, are the only options available for fire insurance coverage. Cannot obtain competitive bids, due to the area's "brush area" designation. What do you think would happen to rates if a recreation area were installed in the middle of a low lying brush area?**

- Per the **Home-Land Security Dept., reservoirs** are **OFF LIMIT** to the **general public**, in order to **limit** the possibility of **CONTAMINATION and other malicious acts,** due to **TERRORISIM**

- Current water storage in the Upper Reservoir is approx. 131,000 gal. The proposal is to Reduce the water storage to somewhere around 81,000 gal. As time and population grows, there will be a need for MORE water, not LESS.

- Proposal to construct 3 underground covered tanks, within the area of the current reservoir, creating unnecessary, inflated cost. Cost that will be passed on to the rate paying public.

- Proposed **Passive Recreation** portion of the plan is **unconscionably, irresponsible.** Possible repercussions can include among other things:

a. Terrorism

b. Fire potential due to carelessness of public. (Recent Franklin Canyon fire, started by picnicker. With numerous "No smoking" postings...a recent canyon walk, found 35 cigarette butts. Someone decides to bring in a BBQ...Someone's car sparks and causes a brush fire, with 200 people trapped in a low canyon with only one way out...Disaster!!

c. Wild animals: this is coyote, mountain lion, deer, snake, possum, and raccoon country. One snake bite or attack by a coyote on a child would cause uproar...and calls of "death to the animal"...but you've invaded their territory.

d. This is also a natural animal cross-corridor. If you close up the cross-corridor, animals will begin to invade the residential area. Then the animal will be blamed for being an animal, when in fact, the unthinking individuals proposing this recreational use have NOT THOUGHT ABOUT THE RAMIFICATIONS.

e. Bird migration...This area is a bird migration path...add a "park of people" and the noise, and the birds will have no path.

f. The increased potential for burglary, robbery, rape, abductions, perversions, graffiti, property trespass and invasion of privacy could increase because of the proposed walking/hiking trails. (The public strangers could potentially walk up the back hillside into adjoining residents' homes.)

g. Noise. Significant increase. Currently neighbors can hear the talking of workmen, the sound of their automobiles and equipment. Multiply this by 100, by 200. Add in barking dogs, due to people bringing their dogs to play and run. Multiply this by the high pitched voices of young children and crying babies.

h. Lights. With parking lots, hiking trails, restrooms, entrance/exit driveways, lights will be needed. This is supposed to be a natural habitat area, preserved for the reservoir, NOT for the residents to suddenly look down onto a new CITY street!

i. Restrooms are proposed; a perfect opportunity for graffiti taggers and perverts to prey on unsuspecting children.

j. A Parking lot is proposed. Again, a Concern as to "what" could be transported into the area by unscrupulous individuals; in addition to the noise and pollution of the cars, trucks, RVs, etc. and the potential for abandonment of vehicles.

k. Trash. Unfortunately, people are thoughtless, even when you provide trash containers; they throw garbage on the ground and leave half eaten food, which brings an increase in rodents.

l. This type of use activity requires numerous monitoring, cleaning and security personnel. All added costs. Not to mention, the background checks needed for this kind of personnel.

m. Continuation of construction and further earth disruption will disturb the habitat of the snakes, rats, mice, squirrels, etc. I am told that these snakes and rodents historically "run"1,000 feet or 1,000 yards and take up residence in someone's' home or undermine some current resident's hillside.

n. Street repair needed. Mulhulland Dr. has been severely impacted by the previous/current project. Near head-on collisions have been observed, due to the pavement breakdown in the actual driving portion; the shoulders have dangerous drop-offs.

The Roscomare Valley residents were informed, when the first clean water renovation of the reservoirs was discussed, that

- There would only be **a limited # of authorized personnel on site (1-3 people)**
- **Helicopters** would/are making **multiple reservoir fly-over trips**, constantly **monitoring for any possible suspicious activity. That's how concerned they were about security.**
- We had to **fight long and hard** to finally arrive at the **currently minimized project**, which everyone agrees **works fine, instead** of the **original bloated plan proposed by DWP.**

- **The site was to be completed with the required structures and then landscaped to minimize calling attention to any additional facilities.**

Now, again, DWP is trying to make a bigger project out of the need to simply COVER the reservoir…

ONE LAST STATEMENT AND THOUGHT.

The DWP recently raised its' rates. The DWP employees are known to be the highest paid City employees…..

IF YOU HAVE SO MUCH SURPLUS MONEY TO CONSIDER SPENDING IT ON THIS PROJECT, SIMPLY COVER THE RESERVIOUR AND RETURN THE REMAINING SURPLUS TO THE RATE PAYORS! HOW'S THAT FOR A PLAN?

Respectfully submitted,

Caroll Reed

Caroll Reed

UPPER STONE CANYON RESERVOIR WATER QUALITY IMPROVEMENT PROJECT
SCOPING MEETING COMMENTS

(Please hand in, mail back, or fax to (213) 367-4710 by Tuesday, July 22, 2008)

Name: CHRISTOPHER CONTE-YARDUM

Organization (if any):

Address: 2544 ROSCOMARE ROAD

City, State, Zip: LOS ANGELES CA 90077

Phone (optional): 310 476-1625

E-mail (optional): CCONTE@PRODIGY.NET

Would you like to remain on our mailing list to receive future project updates? Yes ☑ No ☐

Comments

OPENING THE PREMISES TO THE PUBLIC WOULD BE A MISTAKE IN MY OPINION. THIS CANYON HAS NOT CAUGHT FIRE SINCE 1964.

I DO NOT UNDERSTAND WHY YOU HAVE NOT CONSIDERED THE FACT OF REPLACING WHAT YOU WISH TO DESTROY

WHY NOT BURY THE TANKS UNDER THE RESERVOIR AND RE-FILL THE UPPER RESERVOIR AS TO KEEP THE BEAUTY AND TRANQUILITY THERE OF.

UPPER STONE CANYON RESERVOIR WATER QUALITY IMPROVEMENT PROJECT
SCOPING MEETING COMMENTS

(Please hand in, mail back, or fax to (213) 367-4710 by Tuesday, July 22, 2008)

Name: COLIN MOSSMAN
Organization (If any): RESIDENT - GLENRIDGE HOA - (SOON - BEL AIR RIDGE)
Address: 2711 BOTTLEBRUSH DR.
City, State, Zip: LOS ANGELES - CA 90077
Phone (optional): (310) 446-1561 } DO NOT PUBLISH.
E-mail (optional): BRENDAMI@EARTHLINK.NET

Would you like to remain on our mailing list to receive future project updates? Yes ☑ No ☐

Comments

SEE ACCOMPANYING LETTER DATED
JULY 21ST 2008.

COLIN F. MOSSMAN
2711 Bottlebrush Drive
Los Angeles CA 90077

BY FAX: (213) 367 4710

July 21st 2008

Department of Water & Power - LA
111 North Hope Street, Room 1044
Los Angeles CA 90012
Contact: Ms. Sarah Easley Perez

Dear Sirs

Re: Upper Stone Canyon Reservoir Water Quality Improvement Project

My wife and I attended your Public Meeting on the above subject last Monday (July 14th) at Steven S. Wise Temple, when we were given a copy of your Notice of Preparation of a DEIR for the above project.

- ***Public Comment Period on your Initial Report***
  In the Notice of Preparation (NOP) you refer to the public comment period as being from June 23rd to July 22nd 2008. ***Since we only have a week*** *to provide a worthwhile response, we respectfully request that our comments, and those of any other interested parties, be given careful consideration if, indeed, they are received after the July 22nd deadline.*

- ***Comments on Initial Report dated June 20th 2008***
  - *The buried tank option is the most expensive, most invasive and lengthiest of the options mentioned thus far.*
  - *By your own admission – [Ref. Sections 2-5 to 2-11] – as a major "dig and pour" project, it will have significant impact on air quality, noise, and traffic along Mulholland and will greatly disturb the ecosystem.*
  - ***Existing storage capacity*** *– The information provided by the DWP for the January 27th 2008 meeting refers, under "Floating Cover – General Description", to maintaining the* ***"existing storage of 138 million gallons", which will be reduced to 81.0 million gallons under the buried tank proposal.*** *There was no mention of "effective operating capacity" at that time. California is short of water and heading for the worst drought situation in history. The lengthier the project, the more the DWP will be forced to buy in expensive water from other sources to satisfy its customers.*

Department of Water & Power – LA
July 21st 2008

- ***"Catastrophic fire area"*** – *This is the term used in the 1998 DEIR on the original Stone Canyon Filtration Plant proposal referring to "potential impacts of significant concern to the local community." California has just come through a catastrophic year for fires [which ended on June 30th] resulting in 900,000 acres of scorched land. At its peak there were 2,000 fires ablaze at a total fire-fighting cost of $393 million. The Governor is looking for additional funding to combat the ever increasing threat of fires.* <u>*Lengthy construction and public hiking trails substantially increase the risk.*</u>

  - ***Fire Insurance*** – *Is extremely expensive and difficult to obtain.*

  - ***DWP Brush Clearance*** – *We live on Bottlebrush Drive and overlook Stone Canyon. The DWP has yet to embark on a major project to trim/cut back the mass of trees in the Canyon that have never been touched.*

- ***Security*** – *The DWP land in Stone Canyon is designated for the storage of water – not recreational use. Opening the area up to the public will expose the community and water supply to heightened security risk. We receive regular "Community Alert Notifications" from the LAPD (the last one dated 05/20/08).*

- ***Aesthetics*** *- The addition of a parking lot, picnic tables and toilet facilities will detract from, not enhance, the natural beauty of the Canyon.*

- ***Slope stability/Soil erosion/Seismic hazards*** – *It is of concern that these items come under the category of "less than significant impact" – therefore, "no further study is required", when the project calls for* ***"approximately 50.5 acres of the hillside being temporarily disturbed during construction".*** *[Reference DWP January 27th 2008 report]*

- ***Ecosystem*** – *Referring to comments made by the National Park Service to the DWP in a letter dated October 1994, with regard to the original SCWQIP DEIR, quote "Stone Canyon represents an important component of the Santa Monica Mountains' ecosystem, albeit isolated. In fact, because the site is isolated from the rest of the natural ecosystem of the Santa Monica Mountains is the very reason that it is important. The opportunities for native plant and animal re-introduction to the site after displacement by construction are minute."....* ***This statement is as relevant today as it was then.***

My wife and I are not alone in questioning the need for such a drastic project. We dispute the claim in your report that the area is not densely populated. There are insufficient mitigating factors to safeguard the well being of the large number of inhabitants of the Stone Canyon area. Furthermore, we consider the DWP's Initial Report dated June 20th 2008 is flawed and call for a re-examination of the whole project.

Yours faithfully

C.J. Mossman

COLIN MOSSMAN

UPPER STONE CANYON RESERVOIR WATER QUALITY IMPROVEMENT PROJECT
SCOPING MEETING COMMENTS

(Please hand in, mail back, or fax to (213) 367-4710 by Tuesday, July 22, 2008)

Name: CRAIG O'CONNOR

Organization (if any):

Address: 1726 N. Beverly Glen Blvd.

City, State, Zip: Los Angeles, CA 90077

Phone (optional): ~~#~~ 310-~~441~~-0605

E-mail (optional):

Would you like to remain on our mailing list to receive future project updates? Yes [x] No [ ]

Comments I strongly support the idea of creating some trail or trail system through the area. Impacts to neighbors and wildlife must be considered. I believe that a trail system would be heavily used by the public as there a few safe trails easily accessible from the Beverly Crest, Beverly Glen, Benedict Canyon neighborhoods.

Perez, Sarah

From: CCENTER
Sent: Wednesday, July 23, 2008 7:18 PM
To: Perez, Sarah
Subject: FW: Attn Sarah E. Perez

Hi Sarah,

The email below came into the Customer Service inbox. Sorry to be getting it to you so late. Have a pleasant day.

Eric Bajarias
Los Angeles Department of Water & Power
Customer Contact Center
CCenter@ladwp.com
(800) 342-5397
(818) 342-5397
www.ladwp.com

-----Original Message-----
From: dmtfessler@gmail.com [mailto:dmtfessler@gmail.com]
Sent: Friday, July 18, 2008 6:03 PM
To: CCENTER
Subject: Attn Sarah E. Perez

RE: WP-021-08, Stone Canyon Reservoir Complex. While we recognize the right of the public to enjoy the scenic outdoors in Stone Canyon, in order to protect the safety, peace of mind, and investments of ourselves and, importantly, those of our neighbors whose property overlooks Upper Stone Canyon Reservoir, we urge the LADWP to take the following into consideration: In the event that the proposed public park is established, 1) Vistas be preserved through the installation of a pond or similar shallow body of water atop the covered reservoir; 2) Structures, such as restrooms and storage facilities, be constructed in an architecturally appropriate manner and surrounded by mature trees and foliage; 3) Trail systems be constructed in a professional manner such that they do not increase erosion in this landslide-prone area; 4) Binding contractual agreements be signed by the LADRP guaranteeing the provision of resources sufficient to ensure that the park and its trails are patrolled by rangers in such numbers as to protect neighbors from intentional or accidental harm inflicted by park visitors, importantly including the risk of brushfires in this highly fire-prone region; likewise, that the LADRP guarantee trail maintenance to prevent erosion; that provisions be made to regulate access to the park during periods of heightened fire danger; and that the LA Fire Department have both ready access to the site, and a constantly-available line of communication with park personnel.

Please feel free to contact me if you have questions regarding this, or related, matters.

Sincerely,

Daniel M.T. Fessler

CAN: 1065421466
Service Address: 2557 Roscomare Rd
SSN: 1712

First Name: Daniel
Last Name: Fessler
Telephone: (310) 472-7911
Email Address: dmtfessler@gmail.com

UPPER STONE CANYON RESERVOIR WATER QUALITY IMPROVEMENT PROJECT
SCOPING MEETING COMMENTS

(Please hand in, mail back, or fax to (213) 367-4710 by Tuesday, July 22, 2008)

Name: DEBRA LA GRANGE + HARRY HARALAMBUS
Organization (if any):
Address: 2532 ROSCOMARE ROAD
City, State, Zip: LOS ANGELES, CA 90077
Phone (optional):
E-mail (optional): debra@lambuscorp.com

Would you like to remain on our mailing list to receive future project updates? Yes ☒ No ☐

Comments

Please see attached

TOTAL 2 pgs

Debra La Grange and Harry Haralambus
2532 Roscomare Road
Los Angeles, CA 90077

Our home has a view of the upper Stone Canyon Reservoir.

Whilst we recognize that new regulations require that the reservoir cannot stay open to the elements, we strongly urge the DWP to take note of the following :

1. Losing the view of the water will cause our home to devalue.

2. The disruption of the natural habitat for the animals would be disastrous.

3. Moving the proposed amount of soil from and around the hillsides could cause destabilization.

4. Moving the soil would disrupt the snake population and add to the existing problem that the area already has with snakes.

5. The quality of the air that we will have to breathe for the next 5.5 years would be strongly compromised.

6. The increase in risk of fire would be enormous both from the project as well as afterwards if passive recreation were to be allowed.

7. The cost of our already very expensive fire insurance would increase substantially.

8. Allowing passive recreation at the site would increase crime.

9. Mulholland Drive cannot handle more traffic and it would make an already dangerous road even more dangerous.

10. The road itself is deteriorated and the increase in trucks to and from the site over a 5 year period will further deteriorate the road.

BIREN KATZMAN
TRIAL LAWYERS

FACSIMILE TRANSMITTAL

DATE:	July 21, 2008	3:12 pm	PAGES (incl. cover sheet): 2
TO:	Attn: Sarah Easley Perez		
COMPANY:	Los Angeles Department of Water and Power		
PHONE:			FAX NO.: (213) 367-4710
FROM:	Debra J. Tauger		
	No: F0Office		

ATTACHED PLEASE FIND: Please see attached.

039

- ☐ FOR YOUR FILES
- ☒ FOR YOUR REVIEW
- ☐ FOR YOUR INFORMATION
- ☐ IN ACCORDANCE WITH YOUR REQUEST
- ☐ PLEASE COMMENT
- ☐ PLEASE TELEPHONE ME
- ☐ ALSO SENT VIA U.S. MAIL
- ☐ PLEASE HANDLE

gdh:7/2008-1291
F#0Office

UPPER STONE CANYON RESERVOIR WATER QUALITY IMPROVEMENT PROJECT
SCOPING MEETING COMMENTS

(Please hand in, mail back, or fax to (213) 367-4710 by Tuesday, July 22, 2008)

Name: Debra Tauger

Organization (If any):

Address: 2775 Angelo Drive

City, State, Zip: Los Angeles, CA 90077

Phone (optional):

E-mail (optional):

Would you like to remain on our mailing list to receive future project updates? Yes [X] No [ ]

Comments As a member of the community who would be affected by the proposed park, I am adamently against this proposal. Please do not increase traffic, crime, and potential fires and harm the wildlife and security in our community.

There are many better places to develop parks in the city. We need the reservoir to fight fires, should they erupt in our neighborhood.

Elizabeth & Gary Engler
2938 Woodwardia Drive
Los Angeles, CA 90077
bettiengler@verizon.net

July 21, 2008

<u>SENT BY FAX: 213-367-4710</u>
Attn: Sarah Easley Perez
Los Angeles Department of Water and Power
Environmental Services
111 North Hope Street, Room 1044
Los Angeles, CA 90012

Re: <u>Upper Stone Canyon Reservoir</u>

Dear Ms. Easley Perez:

We live in the proximity of the Upper Stone Canyon Reservoir and we are writing to you as we are strongly opposed to the plan to turn the reservoir into a public park for the following reasons:

1. This area can only be accessed through very few roads that are very narrow, curvy and trafficked as it is (Beverly Glen, Roscomare, Mulholland.) Construction equipment parked along Mulholland Drive and construction trucks driving up and down those roads, will congest traffic even more and it will make it very difficult for us to get to work and to get our kids to school on time;

2. There are plenty of parks as it is in this area and we don't need any more parks. What we need is to preserve whatever little natural habitat is left for the wildlife in this area;

3. Fires are common in this area and the Stone Canyon Reservoir represents an important source of water for firefighters.

Thank you very much for your attention.

Elizabeth and Gary Engler

UPPER STONE CANYON RESERVOIR WATER QUALITY IMPROVEMENT PROJECT SCOPING MEETING COMMENTS

(Please fax to 213-367-4710 by Tuesday, July 22, 2008)

Name: Evelyn V. Rane
Address: 2044 Stradella Road
City, State, Zip: Los Angeles, CA 90077
Phone: (310) 271-4377

COMMENTS:

I AM STRONGLY OPPOSED TO THE DWP'S PROPOSAL TO TURN THE STONE CANYON RESERVOIR INTO A PUBLIC PARK!!

I have lived on Stradella Road overlooking this beautiful Reservoir since 1965, when my husband had our house built on a lot involved in the Bel Air fire. We love this Reservoir and everyone that comes to my house, says that I have the most spectacular view in the entire city. Over the years, especially in the 60's, it was always fun to look through our binoculars and watch a guard catch an occasional swimmer and escort them out of the area. In addition to the beauty of this "lake," there are many animals, including deer, birds, snakes, fish, etc., that make this environment their home. This Reservoir and the surrounding area maintains a delicate eco balance and to destroy this peaceful, natural setting with a public park, for profit, would be unconscionable.

Approximately 12 years ago, my Allstate agent notified me that he could no longer underwrite my fire insurance policy, due to the brush area in back of my house, leading down to the Reservoir, as it posed an extreme fire hazard. He advised me that I would have to seek coverage with the CA Fair Plan. We have a wooden deck and fence surrounding our pool and below that, about 50' from our house, at the end of our property line, there is a wire fence, and the property below that belongs to the DWP. The CA Fair Plan advised me that the brush in back of my house had to be cleared to a depth of 150'. I initially spent many hours contacting the City of L.A. and the DWP about the brush clearance required on the 100' of property owned by them. They have consistently refused to take care of this, although I have followed up with them at other renewal times, including this year. Even though I furnished the CA Fair Plan with documentation showing this property was owned by the DWP, they told me I was responsible for clearing the brush because it was in back of my house. So, for the past 12 years, I've had to pay several thousand dollars each year to have the brush cleared, because the DWP refuses to own up to their responsibility.

Now, after refusing to take responsibility for the brush clearance required on THEIR PROPERTY, the DWP wants to destroy the esthetic lake environment, disturb the natural habitat, ruin the environment and construct a public park, which would attract hundreds of people. Who is going to maintain such a park? Who is going to provide security? Who is going to take responsibility for the increased traffic, the air pollution, the noise, the fire risk, the devalue of our homes, the loss of aesthetic value, etc., etc.? If the DWP won't even comply with the CA Fair Plan's requirement to clear brush on *their* property, and instead, forces the homeowners to take on this responsibility at our own expense, I sure don't trust them or believe that they would keep any other agreements they would stipulate to in order to push their proposal through.

PLEASE URGE THE DWP TO ABANDON THEIR PROJECT OR TO RELOCATE THEIR PARK!

UPPER STONE CANYON RESERVOIR WATER QUALITY IMPROVEMENT PROJECT
SCOPING MEETING COMMENTS

(Please hand in, mail back, or fax to (213) 367-4710 by Tuesday, July 22, 2008)

Name: FOROUGH MANAVI

Organization (if any):

Address: 2560 Roscomare Rd.

City, State, Zip: LA CA 90077

Phone (optional): 1310-472-6535

E-mail (optional):

Would you like to remain on our mailing list to receive future project updates? Yes [X] No [ ]

Comments: 1) We have the view of the reservoir for more than Thirty years. By covering the reservoir please do something that the view of the water in the that space will not vanish.

2) Please donot openen it to the public because all kind of hazards may happen specially fires, crimes, traffic, noise.

3) The distruction of wild life will occur and also the invironment change and distruction.

4) Affluent area - Many different kind of peaple will have the access for crime activities.

5) A lot of traffic in narrow Mulholand Corridor will disturb the Community.

6) The Fire Insurance of Our Properties will go higher because of Public Access and the price of the properties will go down.

Please Consider our Conserns and Stop this Plan

Forough Manavi
July 17, 2008

Franklin D. Niver, D.M.D.
Judith M. Niver, M.A.
10128 Hollow Glen Circle
Los Angeles, CA 90077

July 19, 2008

Sarah Easley Perez
Los Angeles Department of Water and Power
Environmental Services
111 North Hope Street, Room 1044
Los Angeles, CA 90012

Dear Ms. Perez,

Please be advised that we are strongly opposed to the Stone Canyon Reservoir public park project due to the affect it will have on the safety of our neighborhood. We reside in Beverly Glen Park and are very concerned that without the presence of nearby exposed water for firefighting helicopters in the event of a fire in Benedict Canyon, our home and many of those in Beverly Glen could be lost. In addition, it would jeopardize the purchase of adequate fire insurance for our home and those of our neighbors.

We would greatly appreciate your consideration of these safety issues and cancel this public park project.

Sincerely,

Franklin D Niver
Judith M Niver

Franklin D. Niver
Judith Niver

+3233618052

UPPER STONE CANYON RESERVOIR WATER QUALITY IMPROVEMENT PROJECT SCOPING MEETING COMMENTS

(Please hand in, mail back, or fax to (213) 367-4710 by Tuesday, July 22, 2008)

Name: Gale Gordon

Organization (if any):

Address: 10353 Summer Holly Circle

City, State, Zip: Los Angeles Ca. 90077

Phone (optional):

E-mail (optional): galegordon@verizon.net

Would you like to remain on our mailing list to receive future project updates? Yes ☑ No ☐

Comments

I object to the detriment to our neighborhood in noise, traffic, crime, air quality.

Gale Gordon

GINA KEIL CRUZ, P.E.
2874 ANGELO DR.
LOS ANGELES, CA 90077
PHONE: (310)276-9682

July 21, 2008

Sarah Easley Perez
Los Angeles Department of Water and Power
Environmental Services
111 North Hope Street, Room 1044
Los Angeles, CA 90012

Via Fax 213-367-4710

Dear Ms. Perez,

I am the owner of 2874 Angelo Drive in Beverly Glen Park. I am writing this letter to express my objection to the plans to cover Stone Canyon reservoir, and make it a public park. I, along with a majority of my neighbors in Beverly Glen Park, feel this land should remain a wildlife refuge and that the water needs to remain available to firefighting helicopters.

If this project goes forward it could have a negative impact on wildlife in the area causing more animals to leave their natural habitat in search of water, and we already have a significant problem with rattlesnakes, coyotes and bobcats from Benedict Canyon coming up to our homes seeking water. The loss of access to the reservoir water would add to this problem significantly, and makes me very concerned for the safety of my 4-year old daughter. Our insurance costs could also potentially increase dramatically, due to the added difficulty in fighting fires in the area if an existing open water source is no longer available for fire fighting helicopters to access. We are also greatly concerned that turning the covered area into a public park would add to the already highly congested traffic on the Mulholland corridor.

I am a licensed civil engineer who spent a number of years working in water quality research at the Metropolitan Water District, so I do understand the water quality issues that result from an uncovered potable water reservoir. If the reservoir must be covered for water quality reasons, then my preference would be to have the newly landscaped area turned into a wildlife refuge that is closed to the public. The reservoir grounds have been closed to the public in the entire time that my family has lived here, and I see no justifiable reason to turn it into a public park. If the plans for the park are intended to be a concession that would be of value to the surrounding community, I think you will find that most people in the immediate area would not find that to be the case. The proposed recreation area would most likely be utilized by others who do not live in the area, bringing additional traffic to the already heavily congested Mulholland corridor. Please consider the needs of the immediate residents in deciding how to deal with a potentially covered reservoir, since we are the only ones who have to deal with the negative impacts of the reservoir being covered.

Thank you for your consideration.

Respectfully,

Gina M. Keil Cruz

Gina M. Keil Cruz, P.E.

Glenn & Staci Kagan
2873 Woodwardia Drive
Los Angeles, CA 90077

Phone: 310-475-2046
Fax: 310-475-2396

July 20, 2008

Los Angeles Department of Water and Power
Environmental Services
111 North Hope Street, Room 1044
Los Angeles, CA 90012

FAX: 213-367-4710

Attn: Sarah Easley Perez

Re: Stone Canyon Reservoir Project

Dear Ms. Perez:

We are the owner's of 2873 Woodwardia Drive, L.A., CA 90077, which is located in Beverly Glen Park.

We object to the plans to cover the Stone Canyon reservoir and making it into a public park. This area should remain a wildlife refuge. It is imperative that the water remain available to aid the firefighters' helicopters in the event of fires in our area. In addition to having our insurance premiums sky rocket, it poses a huge risk for potential fires caused by the increased traffic. The Malibu fires last year were started in this manner. We feel that this project will adversely affect our property values.

Sincerely,

Glenn Kagan Staci Kagan

Glenn & Staci Kagan

/DWP/

UCLA Anderson
School of Management

From the Desk of
Harvey Avedon
Alumni

7/12/08

TO:
LOS ANGELES-D.W.P. ENVIRONENTAL SERVICES
ATTENTION SARAH PEREZ:

I HAVE BEEN INFORMED OF A PROPOSAL TO CREATE A PUBLIC RECREATIONAL USE AREA ATOP THE NEW UPPER STONE CANYON RESERVOIR.

I OPPOSE THIS PROPOSITION FOR OUR RESIDENTIAL AREA FOR A NUMBER OF REASONS. FORTUNATELY, WE HAVE NOT HAD A FIRE FOR MANY YEARS NOW (E.G. MALIBU FIRES). HOWEVER, DURING DRY YEARS, AS WE HAVE NOW, THIS AREA IS ALSO SUSCEPTIBLE TO A MAJOR FIRE THAT COULD BE STARTED BY CARELESS PARK VISITORS.

THERE ARE MANY MORE VALID REASONS TO SERIOUSLY CONSIDER TAKING STEPS ON THIS ISSUE. I HOPE TO ATTEND THE MEETING ON JULY 14, '08. I EXPECT THAT MANY INTERESTED PEOPLE WILL ALSO BE IN ATTENDENCE.

SINCERELY INTERESTED,

Harvey Avedon

3015 NALLRADA DRIVE
BEL AIR, CALIF. 90077

JAMES R. BRAUFMAN
SHARON P. BRAUFMAN
10508 Woodfield Ct.
Los Angeles, CA 90077
Home (310) 474-3779
Office (818) 986-6706
Fax (818) 986-3114

FAX COVER SHEET

DATE:	July 22, 2008
DELIVER TO:	MS. SARAH EASLEY PEREZ LADWP
REGARDING:	Upper Stone Canyon Reservoir Water Quality Improvement Project - Comments on Initial Study
FROM:	JAMES R. BRAUFMAN
TOTAL NO. OF PAGES:	5
FAX NUMBER DIALED:	213 367-4710
TIME SENT:	10:30 PM

JAMES R. BRAUFMAN
SHARON P. BRAUFMAN
10508 Woodfield Ct.
Los Angeles, CA 90077
Home (310) 474-3779
Office (818) 986-6706
Fax (818) 986-3114

July 22, 2008

MS. SARAH EASLEY PEREZ
LADWP
111 N. Hope St., Room 1044
Los Angeles, CA 90012

Re: Upper Stone Canyon Reservoir Water Quality Improvement Project - Comments on Initial Study

Dear Ms. Perez:

We have reviewed the Initial Study and have attended some of the meetings on the Upper Stone Canyon Reservoir Water Quality Improvement Project.

We question why the LADWP has selected this project rather than the other alternatives presented to the public. Of the various alternatives, the proposed project

- is the most expensive
- will require the most lengthy construction time
- will be the most invasive, intrusive and disruptive of Stone Canyon's environment as it is a major dig and pour type project
- will have the greatest amount of adverse effects, and the most severe adverse effects, on the surrounding communities and their residents
- will require the greatest number of truck trips

We question the LADWP's choice of the most expensive alternative when the news media informs us daily of the severe financial difficulties being experienced by the federal, state, and local governments. We hear constantly of budget cuts and insufficient funds to maintain the infrastructure, yet the LADWP has selected the most costly project. We view the cost of this project as being excessive and an unnecessary waste of funds. Request is hereby made that the public be informed as to where the money for this project is coming from. Will it result in increases in our LADWP bills and/or taxes?

Has the LADWP considered the fuel costs for the 15,000 contemplated truck trips? We submit that in today's world where fuel prices are escalating and conservation of fuel resources should be the goal, is it prudent to undertake a project which will result in the purchase and consumption of fuel for 15,000 truck trips? We think not.

We also question whether State or Federal law actually requires that the reservoir be covered. Request is hereby made that the LADWP forthwith provide us as well as other members of the affected communities with copies of the regulations and/or statutes on which the LADWP relies in asserting that covering of the reservoir is mandatory.

In regard to water quality, we are frequently reminded by the LADWP that our water quality is among the best. The water is treated at Sylmar and according to the Initial Study, there is a chlorination facility at Upper Stone to provide additional treatment. Further, having actively participated in the process in the 1990's that kept the LADWP's proposed filtration plant out of Stone Canyon, we know that improvements were made as part of the compromise project to insure the purity of the water in Upper Stone. Therefore, the concerns expressed in Section 1.6 concerning the quality of the drinking water, compliance with government standards, and exposure to microbial pathogens appear to be of questionable validity. In that regard, it is requested that the LADWP provide us with test results and/or other documentation showing that the water in Upper Stone does not meet the applicable State or Federal standards.

It is noted in the Initial Study that the proposed project will have "potentially significant impacts" on Air Quality, Biological Resources, Noise, and Traffic. The Initial Study contains Mandatory Findings of Significance which acknowledge that the project has potentially significant impacts including

- **Causing adverse effects on humans in health, safety and quality of life matters** including air quality, noise, traffic, and aesthetics.
- Causing cumulative air quality, noise and traffic impacts.
- Degrading the quality of the environment for wildlife or eliminating a plant or animal community

All of the potentially significant impacts on air quality, noise, traffic and biological resources discussed in the Initial Study are of great concern to us and all available mitigations must be taken if the project goes forward. These impacts and all possible mitigations must be studied and addressed not only in the draft EIR, but additionally by independent consultants selected by the affected communities. Request is hereby made that funding for the independent consultants be provided by the LADWP.

It is also requested that the LADWP and the independent consultants perform a cost-benefit analysis of the proposed project, especially given the magnitude of the risks of harm associated with this project delineated in the Mandatory Findings of Significance. The cost analysis must not be limited to merely the financial cost, but also the costs in terms of the effects on health, safety, quality of life, and the environment.

With respect to air quality, does the LADWP have an estimate as to the amount of particulate matter that will become airborne as a result of the demolition and excavation? Has anyone checked or will anyone check for asbestos or other harmful materials contained in the structures to be demolished? If those materials are found, will they be removed under containment? These issues need to be addressed.

It is also requested that the draft EIR and independent consultants investigate the seismic and geologic risks involved with this project. We do not see how a massive dig and pour project such as this one, which will involve extensive desecration of the terrain in Stone Canyon, cannot result in geologic instability such as hillside failure and/or subsidence or other instability.

We also question whether any mitigations are even possible with respect to the noise and air pollution which obviously will result from the demolition of the existing Upper Reservoir and associated structures, and the subsequent excavation, and construction. Also, are there any mitigations possible with respect to the air pollution resulting from 15,000 truck trips?

With respect to noise, the acoustics and shape of the Canyon are such that noise reverberates off the canyon walls and is amplified to a great extent. Please address in your EIR draft what can be done to mitigate this problem.

We also take issue that with the statement in the Initial Study that the areas surrounding Stone Canyon are "low to very low density residential use." While the surrounding communities are not high density, they are well populated. Moreover, it cannot be ignored that thousands of people drive on a daily basis through these communities on Roscomare, Beverly Glen, and Mulholland, all of which connect the San Fernando Valley with Los Angeles. These commuters will also be impacted by the traffic and degradation of air quality likely to result from this project.

Request is hereby made that no work be performed on Saturdays. For those of us who work Monday thru Friday, we feel we are entitled to peaceful and quiet enjoyment of our homes on the weekend. Those who stay home Monday thru Friday and will have to endure the construction noise on those weekdays are also entitled to two days of peace and quiet with their families on the weekends.

We are opposed to the proposed recreational use of the proposed project after completion. In today's world, where we live with the threat of terrorism all the time, do we really want to allow public access to the area where our water supply is located? Have you considered the type and cost of security measures, personnel and vehicle screening needed to protect against a terrorist or vandalism incident directed at the proposed water storage facility?

Another basis for opposing the recreational use is the increased fire risk it would create in Stone Canyon. We have had a record number of fires over the past few years. The vegetation on the LADWP property in Stone Canyon is dry and overgrown, and the LADWP has never trimmed or otherwise maintained their trees which abut the Glenridge community. The Canyon is a fire disaster waiting to happen if you open it up to the public. In fact, the fire risk in a communy like Glenridge which is next to the Canyon is so severe that most all but one or two insurance companies deem the area a "hazardous fire zone" and will not sell fire insurance to the Glenridge homeowners.

Another concern that needs to be studied and addressed is what mitigations can be provided to minimize the impact on the surrounding communities/residents from snakes, rats and other rodents, and insects who vacate Stone Canyon in response to the demolition, excavation and other construction .

It is obvious from the Initial Study that there is a risk of flooding and/or dam failure resulting from the draining of the Upper Stone. The Study attempts to minimize this risk by stating that the water level will be lowered "at a carefully controlled rate", but neglects to state how the rate will be "carefully controlled." We request that lowering/draining of the water in Upper Stone be addressed in the draft EIR and by independent consultants, and that appropriate measures be instituted to insure that this be done safely.

Also, please note that this letter has been reviewed with Muriel Braufman, who resides at 2874 Bottlebrush Drive, Los Angeles, CA 90077, and that she concurs with our positions and requests set forth in this letter.

Very truly yours,

JAMES R. BRAUFMAN

Sharon P. Braufman

SHARON BRAUFMAN

UPPER STONE CANYON RESERVOIR WATER QUALITY IMPROVEMENT PROJECT
SCOPING MEETING COMMENTS

(Please hand in, mail back, or fax to (213) 367-4710 by Tuesday, July 22, 2008)

Name: Janet Glucksman

Organization (if any):

Address: 2706 Basil Lane

City, State, Zip: LA, CA 90077-2008

Phone (optional):

E-mail (optional): janetglucksman@yahoo.com

Would you like to remain on our mailing list to receive future project updates? Yes [X] No [ ]

Comments 2 parts to this project: (1) Why need to add buried storage at this facility (upper Stone) when its very costly ~~cost~~ for only 81 MG. and (2) NOT to do any park expansion or development at this site.

UPPER STONE CANYON RESERVOIR WATER QUALITY IMPROVEMENT PROJECT
SCOPING MEETING COMMENTS

(Please hand in, mail back, or fax to (213) 367-4710 by Tuesday, July 22, 2008)

Name: Jul & Bernice Cibener
Organization (if any): Beverly Glen Park Homeowner
Address: 2881 Woodwardia Dr.
City, State, Zip: L.A. Cal. 90077
Phone (optional):
E-mail (optional):

	Yes	No
Would you like to remain on our mailing list to receive future project updates?	X	

Comments

We are AGAINST the DWP making a park out of Upper Stone Canyon Reservoir. It will affect our safety & quality of life due to increased traffic; danger in fire situations as far as our water supply goes. It will upset the eco balance in the Glen!

UPPER STONE CANYON RESERVOIR WATER QUALITY IMPROVEMENT PROJECT
SCOPING MEETING COMMENTS

(Please hand in, mail back, or fax to (213) 367-4710 by Tuesday, July 22, 2008)

Name: John Yardum
Organization (if any):
Address: 14810 Mulholland Drive
City, State, Zip: Los Angeles CA 90077
Phone (optional): 310-472-0741
E-mail (optional): Sales@RealBroker.com

Would you like to remain on our mailing list to receive future project updates? Yes ☑ No ☐

Comments: I overlook both reservoirs & the thought of looking at a park as opposed to water is not very appealing to me. I think it is a very bad idea to allow public access to an area that has never had it. The risk of fire & natural habitat destruction is very great. Why don't you do something similar to the upper reservoir as done with lower, submerge storage tanks under water. Then the aesthetics & natural habitat would remain intact.

SCHLEIMER & FREUNDLICH, LLP
ATTORNEYS AND COUNSELORS AT LAW
9100 WILSHIRE BOULEVARD
SUITE 615 - EAST TOWER
BEVERLY HILLS, CALIFORNIA 90212
TELEPHONE: (310) 273-9807
TELECOPIER: (310) 273-9809

July 20, 2008

Via Telecopier No. 213-367-4710

Ms. Sarah Easley Perez
Los Angeles Department of Water & Power
Environmental Services
111 N. Hope Street, Room 1044
Los Angeles, California 90012

Re: Stone Canyon

Dear Ms. Perez:

I am a resident of the Beverly Glen Canyon, which is adjacent to the Stone Canyon Reservoir, and I am writing to object to the proposal to develop Stone Canyon as a park. My objection is for environmental reasons and also because the development will jeopardize fire safety.

The existing configuration provides a critical sanctuary for wildlife, free of human activity and with ample water for wildlife. The proposed capping of the reservoir and opening the area up as a park would deprive the wildlife of water, deteriorate their habitat, and ultimately drive them out through increased human activity.

Fire safety would be jeopardized, since helicopters will no longer be able to use the reservoir to pick up water for fire fighting, and increased human activity will increase the danger a fire will be started by a picknicker.

I am old enough to remember the huge Bel Air fire of the 1960s, when this entire area burned. A similar fire today would cause billions of dollars in damages, not to mention the cost in lives.

I presume that you will prepare a detailed Environmental Impact Report under CEQA and NEPA, which would bring these harmful factors out. Failure to do so could result in litigation.

Please comply with the environmental laws, then cancel the project and retain the status quo.

Very truly yours,

JOSEPH D. SCHLEIMER

JDS:ms

A

JUDITH & ROBERT TUFFIAS
10132 Hollow Glen Circle
Los Angeles, CA 90077
310-273-1047
273-1391 (fax)
bob@tuffias.com

July 18, 2006

Los Angeles Department of Water and Power
Environmental Services
111 North Hope Street, Room 1044
Los Angeles, CA 90012

Attention: Sarah Easley Perez

We live in Beverly Glen Park very near Upper Stone Canyon Reservoir. We are against changing this area into a public park for the following reasons:

1. Wild life and our Air Quality will be turned upside down. Rattlesnakes currently stay toward the bottom half of the reservoir. If the water were drained they would go higher up the mountains into our back yards! Migratory birds would no longer have a haven. It would upset our entire eco balance in the Glen.
2. Removing the water and creating a public park will in fact increase traffic on already deplorably maintained roads ,and also increase crime and potential fires in the Glen. (Last Bel Air fires in 1960's wiped out most of the Glen).
3. Currently if there ever is a fire, fire fighting helicopters can scoop necessary water from the reservoir to save our homes. If the reservoir is covered we have no chance against a fire!
4. Fire Insurance- is almost impossible to obtain from good insurance agencies as it is. With the proposed project it almost assures us of a problem with insurance
5. Property values will be adversely affected.

Please cancel this project. It will be an ecological and financial disaster.

Sincerely,

R. Tuffias J. K. Tuffias

Robert and Judith Tuffias

213-367-4710

To: Attention: Sarah Easley Perez
Los Angeles Department of Water and Power
Environmental Services
111 North Hope Street, Room 1044
Los Angeles, CA 90012

From: **Karen Yadley Cobb, Ph.D., Psy.D.**
10155 Hollow Glen Circle
Los Angeles, California 90977-2111

FAX: 213-367-4710

Re: Upper Stone Canyon Reservoir as public park

Monday through Friday the residents who live in Beverly Glen must tolerate the canyon being turned into a major thoroughfare as drivers wanting to avoid the 405 rush through the Glen going toward West Los Angeles or the Valley. As someone who drives the Glen several times a week, I watch drivers smoke in their cars and throw out cigarettes. There are warning signs about smoking but there are no police enforcing the laws. I honk at those drivers but since the Glen and Mulholland are one lane each way, I am unable to drive next to them and tell them about the danger they are creating. I also watch drivers totally disregard the speed limit and even cross over double yellow lines while passing other drivers on blind curves.

To subject the Glen residents to weekends of dangerous drivers, to intentionally attract people up to Mulholland for recreation would be a great hardship and threat to the residents. Having weekend recreation visitors, some of whom would bring alcohol and drugs to party (whether it is legal or not) would make the roads up the canyon increasingly dangerous. Smoking would occur in the park (whether banned or not), creating an undue additional hazard for the residents of upper Bel Air as well as all of Bel Air in case of fire. Fire know no zip codes. So the risk of a devastating fire would increase and the reservoir that could be used in case of fire would be gone.

No! No! No! Please keep a park from being created in this most vulnerable area.

Thank you,

Karen Cobb

Karen Cobb, Ph.D., Psy.D.
10155 Hollow Glen Circle
Los Angeles, CA 90077

UPPER STONE CANYON RESERVOIR WATER QUALITY IMPROVEMENT PROJECT
SCOPING MEETING COMMENTS

(Please hand in, mail back, or fax to (213) 367-4710 by Tuesday, July 22, 2008)

Name: KARIN AMANTULLAH
Organization (if any):
Address: 10507 WOODFIELD Ct.
City, State, Zip: LOS ANGELES, CA
Phone (optional): 9
E-mail (optional):

Would you like to remain on our mailing list to receive future project updates? Yes ☐ No ☒

Comments I STRONGLY OBJECT TO HAVE THE UPPER STONE CANYON RESERVOIR DEMOLISHED AND HAVE A CONCRETE STORAGE BUILT UNDERNEATH.
5 YEARS OF CONSTRUCTION - HEAVY EQUIPMENT CLOGGING MULHOLLAND, NOISE, ETC.
SURELY COVERING THE RESERVOIR INSTEAD WOULD BE LESS COSTLY AND TAKES ONLY A SHORT TIME TO COMPLETE

I AM VERY CONCERNED ABOUT THE WILDLIFE IN THIS BEAUTIFUL CANYON, ALSO ITS FLORA. ANYTHING DONE ON THIS SCALE AS PROPOSED WILL MOST CERTAINLY BE DISRUPTIVE AND PERHAPS EVEN LEAD TO EXTINCTION OF SOME SPECIES.

SECOND, AND VERY IMPORTANT, IS THE FIREDANGER. AS WE ALL KNOW A SPARK CAN SET THE CANYON ON FIRE!
TO EVEN CONTEMPLATE TO HAVE A RECREATIONAL AREA WITH TRAILS, PICNIC AREA, RESTROOMS AND PARKING LOTS

Comments continued

BUILT IN THE CANYON IS TOTALLY INCOMPREHENSIVE AND INSANE TO ME.

I VOTE FOR COVERING THE EXISTING RESERVOIR IN THE LEAST POSSIBLE TIME. NO EARHMOVING TRUCKS ARE NEEDED FOR THAT. IT IS FAR, FAR LESS EX-PENSIVE, CONGESTION OF THE FREEWAY OFF RAMP AND MULLHOLLAND WILL BE AVOIDED AND

MOST OF ALL:

IT LEAVES THIS PRISTINE AND BEAUTIFUL CANYON AS IT IS. AND THE ONLY REASON WHY IT IS STILL SO PRISTINE IS BECAUSE FOR DECADES NO ONE WAS ALLOWED TO GO EVEN NEAR IT.

PLEAS LEAVE IT THAT WAY!

I STRONGLY OPPOSE THIS PROJECT AS IT IS PROPOSED ON YOUR "NOTICE OF PREPARATION"

Please fold in thirds

Tape it closed, affix a 42-cent stamp and mail by July 22, 2008. Thank you!

Affix $0.42 Stamp

Los Angeles Department of Water and Power
Environmental Services
111 North Hope Street, Room 1044
Los Angeles, CA 90012
Attn: Sarah Easley Perez

UPPER STONE CANYON RESERVOIR WATER QUALITY IMPROVEMENT PROJECT
SCOPING MEETING COMMENTS

(Please hand in, mail back, or fax to (213) 367-4710 by Tuesday, July 22, 2008)

Name: Kenneth & Karen "Haize" Rosen
Organization (if any):
Address: 10378 Sommer Holly Circle
City, State, Zip: LA CA 90077
Phone (optional): 310 475-2701
E-mail (optional): witchhazel@mac.com

Would you like to remain on our mailing list to receive future project updates? Yes [X] No [ ]

Comments I Am opposed to the Public PARK idea!

Law Offices of
Linzer & Associates
Suite 1275
12100 Wilshire Boulevard
Los Angeles, California 90025
Telephone (310) 826-2627
Facsimile (310) 820-3687

July 21, 2008

To:	Sarah Easley Perez	Facsimile No:	(213) 367-4710
Of:	L.A. DWP	Phone No:	(213) 367-1276
From:	Kenneth A. Linzer		
Re:	Stone Canyon Reservoir		

Number of pages including cover page: 3

**PLEASE NOTIFY US IMMEDIATELY
IF THIS DOCUMENT WAS NOT RECEIVED PROPERLY
(310) 826-2627**

Message:

Please see attached correspondence.

LAW OFFICES OF
LINZER & ASSOCIATES
A PROFESSIONAL CORPORATION
SUITE 1275
12100 WILSHIRE BOULEVARD
LOS ANGELES, CALIFORNIA 90025-7155

TELEPHONE (310) 826-2827
FACSIMILE (310) 820-3687

July 21, 2008

Via Facsimile Only
Attention: Sarah Easley Perez
Los Angeles Department of Water and Power
Environmental Services
111 North Hope Street, Room 1044
Los Angeles, CA 90012

FAX: 213-367-4710

Dear Ms. Perez:

We recently attended the public comment meeting in connection with the creation of a public park on the site of the current Stone Canyon Reservoir. We are also residents of the community, who live on Woodwardia Drive in Bel Air.

I understand there is an option to by pass this location and create the storage faculty elsewhere. Covering the existing reservoir would completely disrupt what little natural aesthetic the current open reservoir creates. In today's world preserving what natural serenity so close to a major city I would think would be on the forefront of any environmental review.

The increase in road traffic to an already crumbling Mulholland roadway would be unbearable and dangerous. The disruption for all wildlife which relies upon the current (non-human) inhabitation and undisturbed environment the current reservoir offers needs to be seriously looked at. Removing the water would have an unparallel impacted on the ecologic balance in the Glen.

Fires. Currently with the open waters should a fire as the one in Bel Air in the 1960's occur the fire fighting helicopters can get in there and use the water to save the Glen.

Insurance and liability: will only increase for both the homeowners and the DWP and State.

Crime: will increase. You are looking to bring those who do not live in or have a vested interest in the area to the "candy store".... Why are you looking for trouble?

We would like to know the benefits of this plan? There is limited access in and out of the glen god forbid an emergency happened. Hospitals are at least a half hour away. Increase load on the fire departments needs to be looked at. And at what cost? Who is paying for this entire truly unnecessary project?

We believe we would be far better to all surrounding communities to find another solution and place for water storage and do all that you can to preserve what bit of nature we have left in this world and LA.
escrow.

Please feel free to call with any comments or questions.

Very truly yours,

Kenneth A. Linzer

Kenneth A. Linzer, Esq.
for Linzer & Associates, P.C.

KAL/ws

Kevin Finch
10312 Clusterberry Ct
Los Angeles, CA 90077

July 22, 2008

VIA FACSIMILE (213-367-4710)
Los Angeles Department of Water and Power
Environmental Services
111 North Hope Street, Room 1044
Los Angeles, CA 90012
Attention: Sarah Easley Perez

I am the owner of the residence at 10312 Clusterberry Court in Beverly Glen Park. To my great dismay, it has recently come to my attention that the LADWP has privately developed plans to alter the Stone Canyon reservoir and surroundings, which would include a covering of the reservoir. This plan is so poorly conceived that this brief letter cannot begin to voice the extent of my objection, especially given the absurdly short period of time that you have provided area residents to evaluate and respond to this plan.

This reservoir has served Los Angeles well as a wildlife refuge, while simultaneously affording the area residents with a needed means of protection from catastrophic fire damage by providing an emergency water source for firefighters. The water from this reservoir saved many homes during the prior Bel Air fires, and many homes have been erected in the area in reliance of the availability of this water source. I also suspect it is a critical component of any fire insurance rate structure, including that of the California Fair Plan. Consequently, I feel strongly that the area should remain a wildlife refuge and that the water must remain available to firefighters' helicopters.

I am equally outraged that the LADWP would develop these plans in such apparent secrecy and then propose to take this action with almost no notice to affected area residents. As a municipal utility that has received substantial governmental support (not to mention State-sanctioned monopolistic status), LADWP has an obligation to treat area residents with more respect and to consider more fully the impact of its actions on the City's residents. I also question the legality of these actions under these circumstances, and, should LADWP press forward with this plan, I intend to join in and support every available legal challenge.

Sincerely

Kevin Finch

7/15/08

UPPER STONE CANYON RESERVOIR WATER QUALITY IMPROVEMENT PROJECT
SCOPING MEETING COMMENTS

(Please hand in, mail back, or fax to (213) 367-4710 by Tuesday, July 22, 2008)

Name: LESLIE GALLIN

Organization (if any):

Address: 2761 WOODWARDIA DR.

City, State, Zip: BEL AIR, CA 90077

Phone (optional):

E-mail (optional):

	Yes	No
Would you like to remain on our mailing list to receive future project updates?	☒	☐

Comments

page 1 of 2

To: SARAH EASLEY PEREZ 70 LADWP ENVIORMENTAL SERVICES

RE: STONE CANYON RESERVOIR

I am vehemently opposed to the creation of a public park on the site of the current Stone Canyon Reservoir.

I understand there is an option to by pass this location and create the storage faculty elsewhere.

Covering the existing reservoir would completely disrupt what little natural aesthetic the current open reservoir creates. In today's world preserving what natural serenity so close to a major city I would think would be on the forefront of any environmental review.

The increase in road traffic to an already crumbling Mulholland roadway would be unbearable and dangerous. The disruption for all wildlife which relies upon the current (non-human) inhabitation and undisturbed environment the current reservoir offers needs to be seriously looked at. Removing the water would have an unparallel impacted on the ecologic balance in the Glen.

Fires. Currently with the open waters should a fire as the one in Bel Air in the 1960's occur the fire fighting helicopters can get in there and use the water to save the Glen.

Insurance and liability issues will only increase for both the homeowners and the DWP and State.

Crime will increase. You are looking to bring those who do not live in or have a vested interest in the area to the "candy store"…. Why are you looking for trouble?

I would like to know the benefits of this plan?

This is a very dangerous can of worms being opened. There is limited access in and out of the glen god forbid an emergency happened. Hospitals are at least a half hour away. Increase load on the fire departments needs to be looked at. And at what cost? Who is paying for this entire truly unnecessary project?

It would be far better to all surrounding communities to find another solution and place for water storage and do all that you can to preserve what bit of nature we have left in this world and LA.

Thank You. Leslie Green

7/15/08 2761 WOODWARDIA DR 90077

Los Angeles Department of Water and Power
Environmental Services
111 North Hope Street, Room 1044
Los Angeles, CA 900012
Attn: Sarah Easley Perez
Fax: (213) 367-4710

Re: Los Angeles Department of Water and Power
Upper Stone Canyon Reservoir Water Quality Improvement Project

Dear Ms. Perez:

I am writing to express my **objection** to the proposed conversion of the Upper Stone Canyon Reservoir site to a public park. From our discussion, I understand that the reservoir needs to be covered due to new water quality standards but this can be done without converting the area for public use.

My objections are based on the following conditions which will affect the area negatively:

- **Increased congestion on access streets, Beverly Glen Boulevard, Mulholland Drive, etc.** These streets are already heavily used as thoroughfares by commuters as alternative from the freeways;

- **Overload current infrastructure -** Beverly Glen Boulevard and Mulholland Drive are two-lane streets which are currently in deplorable conditions and thus, will NOT support an additional 15,000+ truck trips and daily worker commutes. This projected additional use will turn these streets into **rubble**;

- **Detrimental effects to our neighborhood** – the increase in pedestrian traffic will generate an increase in crime, noise, etc.;

- **Strain the natural resources** – wildlife and air quality will be turned upside down.

Thank you for your consideration. Should you have any questions, please contact me at.

Sincerely,

Lynn Naylor

2190 N. Bev. Glen Blvd
Los Angeles CA 90077

Mr. & Mrs. William Dietzman
10374 Summer Holly Cir.
Los Angeles, CA 90077

July 16, 2008

VIA FACSIMILE: 213-367-4710

Attention: Sarah Easley Perez
Los Angeles Department of Water and Power
Environmental Services
111 North Hope Street, Room 1044
Los Angeles, CA 90012

Dear Ms. Perez:

I am a resident of Beverly Glen Park in the Stone Canyon area. I and most residents in Beverly Glen Park HOA are vehemently opposed to the ludicrous plan The Department of Public Works (DWP) is proposing:

- **The DWP wants to make Stone Canyon Reservoir into a public park.**
- **The reservoir has NOT been open to the public since 1939.**
  (Fire concerns and terrorism have been the main reasons)
- **The DWP is suggesting covering over the existing exposed reservoir water.**
- **Creating an underground storage facility.**
  The facility will be only for water storage. Our drinking water does not come from this reservoir.

This plan seems to trample over everything residents of the area hold important; wildlife preservation, lowering traffic, lowering crime, reducing fire risk, increasing property values, the list goes on and on.

There are options the DWP has. They can relocate the project and leave the current reservoir as a natural habitat and esthetic lake environment. The water in this reservoir is not used for drinking water currently but rather reserves.

Removing the water and creating a public park will in fact increase traffic on already deplorably maintained roads, crime and potential fires in the Glen. (Last Bel Air fires in 1960's wiped out most of the Glen).

7.162

Mr. & Mrs. William Dietzman
10374 Summer Holly Cir.
Los Angeles, CA 90077

Fire Insurance- is almost impossible to obtain from good insurance agencies as it is. With the proposed project it almost assures us of a problem with insurance.

Property values will be affected negatively.

Wild life and our Air Quality will be turned upside down. Rattlesnakes currently stay toward the bottom half of the reservoir. If the water was drained they would go higher up the mountains into our back yards! Migratory birds would no longer have a haven. It would upset our entire eco balance in the Glen.

Currently if there ever was a fire, fire fighting helicopters can scoop necessary water from the reservoir to save our homes. If the reservoir is covered we have no chance against a fire! If ever actually implemented, I hope DWP is prepared to take responsibility for damage incurred as a result of these stupid proposed actions.

It would be so nice if the residents and community actually impacted by this are heard! DWP's proposal works against every resident in this area.

Sincerely,

Lori Dietzman

CC: Councilman Jack Weiss

To respond please contact me at the following:

Via mail - 2934 ½ N. Beverly Glen Cir.
#770
Los Angeles, CA 90077

Via phone - work 310 · 231 · 3102
home 310 · 470 · 8622

P2. of 2

UPPER STONE CANYON RESERVOIR WATER QUALITY IMPROVEMENT PROJECT
SCOPING MEETING COMMENTS

(Please hand in, mail back, or fax to (213) 367-4710 by Tuesday, July 22, 2008)

Name: Louise Margolis

Organization (if any):

Address: 10316 Clusterberry Ct.

City, State, Zip: L.A, Ca. 90077

Phone (optional):

E-mail (optional):

	Yes	No
Would you like to remain on our mailing list to receive future project updates?	☑	☐

Comments

This project should not be carried forward because of the fire problems in our area. The water should be kept available for use in putting out fires that are a constant danger in our area—

10116 Hollow Glen Circle
Los Angeles, CA 90077
July 21, 2008

Ms. Sarah Easley Perez
Los Angeles Department of Water and Power
Environmental Services
111 North Hope Street, Room 1044
Los Angeles, CA 90012
FAX (213) 367-4710

Dear Ms. Perez:

As homeowners in the Beverly Glen area, we are very much opposed to the DWP's proposal to convert Stone Canyon Reservoir into a public park and create an underground water storage facility. We feel that the change will have a negative impact on traffic flow, fire dangers, and environmental quality.

Thank you,

Marc Glucksman

Marc and Barbara Glucksman

UPPER STONE CANYON RESERVOIR WATER QUALITY IMPROVEMENT PROJECT
SCOPING MEETING COMMENTS

(Please hand in, mail back, or fax to (213) 367-4710 by Tuesday, July 22, 2008)

Name: Martha Kritt
Organization (if any): Beverly Glen Park HOA
Address: 2787 Nicada Drive
City, State, Zip: Los Angeles, Ca. 90077
Phone (optional): 310-475-4244
E-mail (optional):

Would you like to remain on our mailing list to receive future project updates? Yes ☒ No ☐

Comments

Please do not change anything.
It will not improve our environment at all. It will cause traffic that is already unbearable. In case of fires it would be disastrous to the surrounding and adjacent areas.
Do not do anything different.
thank you very much
Martha Kritt

FROM :MARTHA KRITT FAX NO. :310-823-0136 Jul. 18 2008 06:31PM P1
310 823 0136

Martha Longley Witenberg
3112 Nicada Drive
Los Angeles, California 90077

111 North Hope Street, Room 1044
Los Angeles, CA 900012
Attn: Sarah Easley Perez
Fax: (213) 367-4710

Re: Los Angeles Department of Water and Power
Upper Stone Canyon Reservoir Water Quality Improvement Project

Dear Ms. Perez:

I am writing to express my **objection** to the proposed conversion of the Upper Stone Canyon Reservoir site to a public park. Stone Canyon is already a fire hazard to the surrounding neighborhoods because of the inordinate amount of brush that naturally grows there. Opening up this area to the public would only increase the possibility of a devastating fire occurring there and threatening the communities of Bel Air, Glenridge, and Roscomare. For this reason, I strongly recommend that the Department of Water and Power **not** allow public access to the Upper Stone Canyon Resevoir once the reservoir has undergone construction to improve the water quality there.

Additionally, I would like to voice my concerns regarding the construction project that will take place at Upper Stone Canyon Reservoir. It is my understanding that all of the "staging" for the project—parking of trucks, etc.—will take place "on site" at the reservoir and **not** on surrounding neighborhood streets. As a resident of Nicada Drive, I would like to be assured that our street will not be used to park construction trucks.

I would like to stay informed of the progress of Upper Stone Canyon Water Improvement Project. Would you please send me any future correspondence pertaining to this project?

My next door neighbor on Nicada Drive, Ranjit Bhatia, shares my concerns and would also like to voice her objections to the proposed public park and to receive future correspondence at the following address: Ranjit Bhatia, 3100 Nicada Drive, Los Angeles, California, 90077.

Regards,
Martha Longley Witenberg
Martha Longley Witenberg

MARTIN G. LAFFER

Telephone (310) 274-7600

9454 Wilshire Boulevard
Suite 920
Beverly Hills, California 90212-2911

Telecopier (310) 274-2625

July 22, 2008

By Fax Only (213) 367-4710

Los Angeles Department of Water and Power
Environmental Services
Attn: Sarah Easley Perez
111 North Hope Street, Room 1044
Los Angeles, CA 90012

Dear Ms. Perez:

As a long time resident of Beverly Glen and Mulholland, I am very concerned about both traffic and fires in the canyon. Traffic in Los Angeles is horrific, and particularly during the summer on Mulholland Drive. Living in the canyon, fires are a constant concern.

The elimination of the Stone Canyon Reservoir and conversion to a public park will both increase traffic congestion, and also eliminate the reservoir as a source of water in the event of a fire.

I am requesting that the reservoir not be covered, and that any new park be relocated elsewhere.

Sincerely,

Martin G. Laffer

Martin G. Laffer

SARAH EASLEY PEREZ

DATE:37/21/08

Send to: Sarah Easley Perez
Attention:
Office Location:
Fax Number: 213.367.4710

From: Mary Goss Robino
Office Location: JS 376
Phone Number: 310.244.3935
Number of Pages, Including Cover: 3

❑ URGENT ❑ REPLY ASAP ❑ PLEASE COMMENT ❑ PLEASE REVIEW ❑ FOR YOUR INFORMATION

COMMENTS:

Sony Pictures Entertainment
10202 W. Washington Blvd.
310 244.0958 fax
Annie_Wands@spe.sony.com

July 18, 2008

Sarah Easley Perez
DWP
111 N. Hope Street, Room 1044
Los Angeles, CA 90012

RE: Upper Stone Canyon Reservoir Water Quality Improvement Project

Dear Sarah,

As a resident of upper Bel Air, Roscomare Valley, I am writing to you regarding my concern for the proposed water improvement project.

Although a trail and picnic area might sound interesting to some, it concerns me greatly that not only will the current aesthetics and natural-looking beauty of the area be disturbed, but for the additional, following reasons:

DURING CONSTRUCTION
- Security risk. Allows access to lower reservoir during construction.
- Increased traffic and congestion for estimated 5.5 years.
- Worse air quality from trucks exhaust, equipment, dust, etc. for 5.5 years.
- Noise from trucks and equipment.
- Aesthetics/disturbing current beauty.

AFTER CONSTRUCTION
- Security risk. This will allow the public closer proximity and access to the lower reservoir and our public drinking water and poses a serious security risk.
- Increase risk of forest fire (visitors smoking). With so many frequent CA forest fires, we do not need any more public access to/near vulnerable, frequently dry, brittle grass/hills.
- Noise from visitors.
- A potential gathering area for teens or troubled youths.
- Traffic from visitors entering/leaving area.
- Trash, bottles, cigarettes, etc. left behind by visitors.
- Many residents, including myself have purchased homes in this area for the primary purpose of the surrounding beauty and tranquility, including the reservoirs.
- Home prices will be affected. A grave concern to all nearby residents, especially in this

current economy.

I have spoken to many neighbors and although they may not have taken the time to write you, share my above sentiments and concerns. I sincerely hope that you, the Mayor, and all who will review and determine the fate of this project will take my concerns into account.

Thank you for your time and consideration.

Regards,

Mary Goss

UPPER STONE CANYON RESERVOIR WATER QUALITY IMPROVEMENT PROJECT SCOPING MEETING COMMENTS

(Please hand in, mail back, or fax to (213) 367-4710 by Tuesday, July 22, 2008)

Name: Matt Namian + Maryam Borjian
Organization (if any): —
Address: 10350 Summer Holly Circle
City, State, Zip: L.A., CA 90077
Phone (optional): (310) 474-0500
E-mail (optional):

Would you like to remain on our mailing list to receive future project updates? Yes [X] No [ ]

Comments

We oppose The Upper Stone Canyon project. We do not want DWP to make The Reservoir into a public park due to the following reasons:
① Increased traffic
② Wild life and Air Quality will be hurt.
③ No water reserve for fire department to put out fire in our area.
④ Mulholland already has traffic during school hours (having only one lane on each direction) increased traffic due to lengthy construction + after completion due to public ~~pro~~ park will create major problems, delays + possible increased accidents + crime.

UPPER STONE CANYON RESERVOIR WATER QUALITY IMPROVEMENT PROJECT
SCOPING MEETING COMMENTS

(Please hand in, mail back, or fax to (213) 367-4710 by Tuesday, July 22, 2008)

Name: (1) Maureen Kodes, (2) Boris Krutonov

Organization (if any):

Address: 2733 Angelo Drive

City, State, Zip: LA CA 90077

Phone (optional):

E-mail (optional):

Would you like to remain on our mailing list to receive future project updates? Yes ☐ No ☒

Comments

Please DO NOT turn the the reservoir into public park.

Thank you!

Boris & Maureen

July 21, 2008

Attention: Sarah Easley Perez
Los Angeles Dept. of Water & Power
Environmental Services

Dear Ms. Perez,

As a longtime homeowner living near the Stone Canyon Reservoir, I am aghast to read of your department's proposal to turn it into a public park. Clearly you have spent little time in the area or you would appreciate the potential for a major fire there as we had in the 1960s. The Dept. of Parks has neither the money nor personnel to properly supervise a new park. This would result in public drinking and barbeques in a very dry tinder area. In addition, it would destroy the area as a wildlife habitat and you can rest assured that we will fight back through the appropriate federal agencies. Finally, Mulholland is already in poor shape as a result of your heavy truck traffic. A park would bring only more traffic to a narrow street with no signals. Please find somewhere else more appropriate for a new park that won't affect water storage.

Sincerely,

Michael Kearin
10315 Clusterberry Ct.
Los Angeles, CA 9007

July 22, 2008

To:
Attn: Sarah Easley Perez
Los Angeles Department of Water and Power
Environmental Services
111 North Hope Street, Room 1044
Los Angeles, CA 90012

Sent via fax to: 213-367-4710: Total number of pages including this cover sheet: 3

From:
Michael A. Kemp, AIA
2366 Roscomare Road
Los Angeles, CA 90077
Phone: 310-471-3142
E-mail: michael.kemp.aia@gmail.com

I would like to remain on your mailing list to receive future project updates.

Upper Stone Canyon Reservoir Water Quality Improvement Project Scoping Meeting Comments:

Comments:

As a homeowner with property directly above the Upper Stone Canyon Reservoir, on the West ridge of the Canyon, I am extremely concerned about the proposed DWP project for this reservoir, and feel at a minimum the proposed Draft Environmental Impact Report for this project must address the following issues.

I. Public Access to the site:
   A. I attended the local homeowners meeting in March 2008 regarding this project and there was no mention of opening up the site to public access. It is my understanding that the site has been closed to public access since the 1930's; however, it now appears that DWP and its Board has decided to open up the site to the public with no input from the surrounding Community.
   B. Fire Hazard: What actions will be taken to mitigate the increased wild fire hazard if the DWP opens up the site to the public?
      1. Currently LAFD requires homeowners annually to clear brush a minimum of 200' from their structures. It does not appear that DWP currently performs any significant brush clearance on this property. What is the current brush clearance plan that DWP is providing for this property?
      2. What is the proposed annual brush clearance plan should DWP be allowed to go forward with this project.

3. LAFD should provide in writing their opinion on the effects of opening up this site to the public.
4. LAFD should provide a detailed plan on how they proposed to fight a significant canyon fire on this site.
5. The adjacent Community almost burnt completely down in the 1950's due to a wild fire. Opening up this narrow canyon to the public only increases the likelihood that another catastrophic fire would occur again.

C. Appropriateness of passive recreational activity in this canyon:
   1. Has the Santa Monica Mountain Conservancy been consulted as to their opinion on the appropriateness of opening up this canyon to the public?
   2. Has the Los Angeles Parks & Recreation Dept. been consulted as to their opinion on the appropriateness of opening up this canyon to the public?
   3. What provisions will be put in place to restrict LA Parks & Rec. Dept. from installing active uses such as ball fields, tennis courts, etc.
   4. Will Lower Stone Canyon Reservoir also be opened up to public use, and the proposed trail system? Considering it has been placed off line by DWP. If not, then the proposed trail system will be a 'dead end' trail with access only from the North end of the canyon. This trail configuration could easily present an even greater public hazard in regards to evacuation from fires, earthquakes, etc.

D. Crime Increase;
   1. Has LAPD been consulted on their opinion of opening up this site to the public.
   2. What is the LAPD's proposed plan for patrolling this site, and dealing with crime and offenders on this site.

E. Delineation of Public and Private Land:
   1. The majority of the private land adjoining the DWP site extends down from the ridge top homes into the canyon. Most of these private properties have never erected fences in the canyon to differentiate their private property from that of DWP; in my belief, to maintain the pristine wilderness canyon, and it's views; and to not interfere with the natural migration of the local wildlife. Should DWP open up it's site to the public what provisions will it take to delineate the public land from the private property? Will DWP erect fences to delineate this division of property rights? Or, will they compensate private property owners for the cost of erecting such fences? If not, what liability will DWP assume for criminal acts, such as theft, burglary, arson; and non-intentional acts such as fire, caused by the public having free access to the adjacent private property.

II. Construction impact.

A. What will be the air quality impact on the surrounding community during the proposed 5.5 years of construction?

B. What will the construction traffic impact be on the surrounding community?
C. An independent outside consultant should review the construction schedule proposed by DWP. Public Agencies have a history of going significantly over the time periods that are originally proposed.

III. Impact on natural wildlife:
A. Since the site has been maintained as a wilderness area for at least the last 70+ years what will the impact be on the native wildlife? I have personally observed deer, foxes, coyotes, bob-cats, possums, raccoons, skunks and many species of birds and reptiles, as residing in this canyon.

July/19/2008

Attention: Sarah Easley Perez
Los Angeles Department of Water and Power
Environmental Services
111 North Hope Street, Room 1044
Los Angeles, CA 90012

FAX: 213-367-4710

I am the owner of 2703 Angelo Drive LA CA 90077 in Beverly Glen Park. I object to the plans to cover Stone Canyon reservoir. to make a public park. I think it should remain a wildlife refuge. I think the water needs to be available to firefighters' helicopters. I remember the Bel Air Fires. Our insurance cost will increase. The park will increase traffic and it will decrease our property Values.

Thank you.

Mohammad & Tayebeh Kamrava

2703 Angelo Drive
LA . CA, 90077

LAW OFFICES OF

MONTE S. GORDON

TELEPHONE:
(310) 914-9500

FACSIMILE:
(310) 914-3399

11355 WEST OLYMPIC BOULEVARD
SUITE 300
LOS ANGELES, CALIFORNIA 90064
E-MAIL: msg@gordonlawoffice.net

COVER SHEET FOR FACSIMILE TRANSMISSION

Date: July 18, 2008 **No. pages inc. cover sheet: 1**

To: **Sarah Easley Perez/LA DWP - Environmental Services**

From: MONTE S. GORDON

At: **213-367-4710**

Re: Upper Stone Canyon Reservoir

Ms. Easley; I reside at 10311 Clusterberry Court LA 90077 in an area affected by any changes to the present reservoir and want to strongly and emphatically object to any changes whatsoever.

Any other planned usage such as a public park would interrupt the natural habitat, increase fire danger, encourage crime and further impact our already crowded roads.

11355 W. Olympic Blvd., Suite 300, Los Angeles, CA 90064
TELEPHONE: (310)914-9500 FACSIMILE: (310)914-3399
EMAIL ADDRESS: msg@gordonlawoffice.net

Mrs. Leonard D. Hess
2348 Roscomare Road
Los Angeles, California 90077

July 14, 2008

Attn: Sarah Perez

Since 1958 We have lived facing the canyon on the east side of Roscomare Rd. near the grammer School. We were here when the Bel Air Fire swept through the canyon in a matter of minutes. A spark from a tractor did it!

Please don't even think of creating a park down there! It would be a danger for us all!

Muriel K. Hess

FAX

10120 Hollow Glen Circle • Los Angeles • CA • 90077
Phone: (310) 271-4474 • *Fax:* (310) 271-5456
E-mail: PattiRGreen@aol.com

ATTN: Sara Easley Perez

RE: DWP Project

DATE: 7/22/08

Page 1 of 2 including cover sheet

Please replace the fax I sent earlier (with our comments) with the attached. You will note that the attached "Comments" say TO: & FROM:

thank you!

UPPER STONE CANYON RESERVOIR WATER QUALITY IMPROVEMENT PROJECT SCOPING MEETING COMMENTS

TO: MS. SARAH EASLEY PEREZ (213) 367-4710

FROM: Elliot & Patti Green

Address: 10120 Hollow Glen Circle, Los Angeles, CA 90077

Phone: (310) 271-4474

E-mail: PattiRGreen@aol.com

Would you like to remain on our mailing list to receive future project updates? Yes_X_ No___

COMMENTS:

WE ARE STRONGLY OPPOSED TO THE DWP'S PROPOSAL TO TURN THE STONE CANYON RESERVOIR INTO A PUBLIC PARK!!!

We have lived in Beverly Glen Canyon since 1970 and prior to that, we lived off Roscomare Road, with a view of this beautiful Reservoir, which is an environmentally and ecologically sensitive area. Many efforts have been made over the years to protect and maintain it, as well as the properties and environment surrounding it.

Draining the water would seriously change the entire ecosystem and harm the wild life in the area. The beautiful view and peaceful and esthetic environment surrounding the Reservoir would be totally destroyed and replaced with kids screaming and yelling, loud music, and noisy cars.

This is already a high risk fire area and most homeowners, especially those overlooking the Reservoir, can only obtain insurance through the CA Fair Plan. The creation of a public park would greatly increase the risk of fires in all the surrounding areas, and would make it difficult, if not impossible for any of us to procure fire insurance other than through the CA Fair Plan. North Beverly Glen Blvd. and Roscomare Road are canyon roads with access only at Sunset and Mulholland. Converting the Reservoir into a park would pose a huge fire risk in these areas, which would have disastrous consequences, due to the lack of access. Many homes were destroyed in the Bel Air fire in 1963, even though there were fewer homes at that time (and thus less traffic) and they had access to the water in the Reservoir, which was used by helicopters to extinguish the fires. If the Reservoir was covered up, this water source not be available in case of a fire, and the traffic generated by a park would result in catastrophic consequences.

No. Beverly Glen Blvd. and Roscomare Road cannot even handle the current traffic, and during *rush hours*, it can take almost one hour to get onto Mulholland Drive (p.m.) or Sunset Blvd. (a.m.) from either road. There are cracks and bumps all along Mulholland. which has never been well maintained. When something happens on the San Diego Freeway, and/or when traffic is backed up, people use Roscomare and/or Beverly Glen Blvd. and very often, they use Mulholland Drive when the 101 is backed up. We cannot accommodate one more extra vehicle on these streets or in this area as it is, and we certainly couldn't accommodate the traffic that would result from the creation of a park. If pedestrians were present, there would be gridlock congestion!

In addition to the security and fire risks a park would impose, it would destroy the eco balance, negatively effect our environment and our community, significantly lower the values of our homes and hurt real estate sales.

PLEASE DEMAND THAT THE DWP RELOCATE THEIR PROJECT!!!

Confidential FAX Transmission - Cover Page

To: Sarah Easley Perez
Phone:
Fax: 213 367 4710
From: Phyllis Gottlieb
Phone: 310-472-5551
Fax: 310-472-9225

UPPER STONE CANYON RESERVOIR WATER QUALITY IMPROVEMENT PROJECT
SCOPING MEETING COMMENTS

July 21, 2008

I AM WRITING TO COMMENT ON THE PROJECT PROPOSED FOR THE UPPER STONE CANYON RESERVOIR.
I BELIEVE THAT THE BURIED TANK SOLUTION, COUPLED WITH AN EARTH COVERING THAT WIL ALLOW THE GROWTH OF NATIVE VEGETATION, IS BY FAR THE BEST SOLUTION, FOR THOSE LIVING IN PROXIMITY TO THE CANYON AND FOR THE CITIZENS OF THE CITY AS A WHOLE .

THIS PROPOSAL REPRESENTS A LONG-TERM SOLUTION. IT ADDRESSES CONCERNS FOR THE SAFETY OF THE WATER SUPPLY, FOR MINIMIZING MAINTENANCE, AND FOR ACHIEVING THE RESTORATION OF THE NATURAL AESTHETICS OF THE CANYON, NOT JUST FOR PEOPLE, BUT ALSO FOR THE NATIVE WILDLIFE AND PLANTS.

THE PROPOSAL FOR COMMUNITY ACCESS TO STONE CANYON BY PROVIDING SOME HIKING TRAILS, BOTH NEW ONES AND JOINING WITH EXISTING FIRE BREAKS AND OTHER LIGHTLY USED TRAILS THAT HAVE BEEN THERE FOR YEARS, SEEMS A WONDERFUL WAY FOR THE PUBLIC TO ENJOY THIS LARGE OPEN SPACE. I BELIEVE THIS HIKING PROPOSAL CAN BE IMPLEMENTED WITH MINIMUM COST BY MAKING IT A MINIMUM, PASSIVE TYPE TRAIL SYSTEM, WITH CONTROLLED ACCESS, LIMITED TO DAYLIGHT HOURS, AND WITH PARK RANGER PATROLS AS EXIST IN FRANKLIN CANYON TO THE EAST. THE DANGER OF FIRE IN THE SANTA MONICA MOUNTAINS IS REAL, AND SURROUNDING RESIDENTS ARE REALISTICALLY CONCERNED ABOUT UNMONITORED USE OF THIS FACILITY. ANY REQUIRED PARKING SHOULI ALSO BE LIMITED TO CONTROL THE NUMBER OF POTENTIAL USERS. ALL OF THIS DEVELOPMENT SHOULD BE DONE IN A WAY THAT MINIMIZES SCARRING OF THE LAND, INTRUSIONS INTO THE VIEWSHED, AND CONFLICT WITH THE NATIVE WILDLIFE.

SINCERELY,
PHYLLIS L. GOTTLIEB
3170 ANTELO ROAD
LOS ANGELES, CA 90077

UPPER STONE CANYON RESERVOIR WATER QUALITY IMPROVEMENT PROJECT
SCOPING MEETING COMMENTS

(Please hand in, mail back, or fax to (213) 367-4710 by Tuesday, July 22, 2008)

Name: Punita Khanna & John Yates

Organization (if any):

Address: 10354 Summer Holly Circle

City, State, Zip: LA CA 90077

Phone (optional): (310) 234-0022

E-mail (optional): punita.khanna@verizon.net; yatesjohnr@gmail.com

Would you like to remain on our mailing list to receive future project updates? Yes [X] No [ ]

Comments We object to the proposed development converting the Upper Stone Canyon reservoir into a public park.

Punita Khanna
10354 Summer Holly Circle
Los Angeles, CA 90077

Los Angeles Department of Water and Power
Environmental Services
111 North Hope Street, Room 1044
Los Angeles, CA 900012
Attn: Sarah Easley Perez
Fax: (213) 367-4710

*Re: Los Angeles Department of Water and Power
Upper Stone Canyon Reservoir Water Quality Improvement Project*

Dear Ms. Perez:

I am writing to express my **objection** to the proposed conversion of the Upper Stone Canyon Reservoir site to a public park. From our discussion, I understand that the reservoir needs to be covered due to new water quality standards but this can be done without converting the area for public use.

My objections are based on the following conditions which will affect the area negatively:

- **Increased congestion on access streets, Beverly Glen Boulevard, Mulholland Drive, etc.** These streets are already heavily used as thoroughfares by commuters as alternative from the freeways;
- **Overload current infrastructure -** Beverly Glen Boulevard and Mulholland Drive are two-lane streets which are currently in deplorable conditions and thus, will NOT support an additional 15,000+ truck trips and daily worker commutes. This projected additional use will turn these streets into **rubble**;
- **Detrimental effects to our neighborhood** – the increase in pedestrian traffic will generate an increase in crime, noise, etc.;
- **Strain the natural resources** – wildlife and air quality will be turned upside down.

Thank you for your consideration. Should you have any questions, please contact me at (310) 234-0022.

Sincerely,

Punita Khanna

Punita Khanna

UPPER STONE CANYON RESERVOIR WATER QUALITY IMPROVEMENT PROJECT
SCOPING MEETING COMMENTS

(Please hand in, mail back, or fax to (213) 367-4710 by Tuesday, July 22, 2008)

Name: RAKESH K. SARIN

Organization (if any): University of California, Los Angeles

Address: 10207 CLEMATIS CT

City, State, Zip: Los Angeles, Ca 90077

Phone (optional): 310-271-6355

E-mail (optional): RSARIN@ANDERSON.UCLA.EDU

Would you like to remain on our mailing list to receive future project updates? Yes ☒ No ☐

Comments We strongly recommend that the DWP relocate the above project and leave the current reservoir as a natural habitat and esthetic lake environment.

We are concerned about:

1 Increase in Traffic

2 Wild Life and Air Quality

3 Fire Insurance and Property Values

Thank you for your consideration.

UPPER STONE CANYON RESERVOIR WATER QUALITY IMPROVEMENT PROJECT
SCOPING MEETING COMMENTS

(Please hand in, mail back, or fax to (213) 367-4710 by Tuesday, July 22, 2008)

Name: RICHARD + JUDY NESS

Organization (if any):

Address: 2807 ANGELO DRIVE

City, State, Zip: LOS ANGELES, CA 90077

Phone (optional):

E-mail (optional): NessJudy@msn.com

Would you like to remain on our mailing list to receive future project updates? Yes [X] No [ ]

Comments We are opposed to the proposed DWP project to cover the Stone Canyon Reservoir and turn the area into a public park.

This is a beautiful, natural area as it is now. We live in the Beverly Glen area and appreciate the availability of water for fire-fighting heli-copters during fire season. Covering the water would put our hills in greater fire danger. We believe that opening this space to the public also will place our area in greater danger from fire.

The traffic impact during any construction would make a poor situation even worse. Beverly Glen, Sepulveda, the 405, Sunset and Mulholland are already strained and in need of repair. Any additional traffic or disruption would be problematic.

The environmental impact on wildlife would also be significant. Where will the deer, coyote, birds, snakes, etc. go when their habitat is destroyed?

UPPER STONE CANYON RESERVOIR WATER QUALITY IMPROVEMENT PROJECT
SCOPING MEETING COMMENTS

(Please hand in, mail back, or fax to (213) 367-4710 by Tuesday, July 22, 2008)

Name: Robert Aruj & Ruth Polan Aruj
Organization (if any):
Address: 2566 Roscomare Rd
City, State, Zip: L.A., CA. 90077
Phone (optional):
E-mail (optional): robert.Aruj@robertaruj.com

Would you like to remain on our mailing list to receive future project updates? Yes ☑ No ☐

Comments As residents of Upper Stone Canyon for the past 23 years, we are shocked to learn that public access is being considered for this natural and pristine wildlife habitat. Fire dangers aside the impact will be dissastrous for the remaining wildlife that maintains the natural balance of this living canyon.

Further, the impact will be far reaching in that the sorrounding neighborhoods will be greatly impacted by added traffic, noise and congest

We strongly oppose this plan and the propos to cover the reservoir. The water element helps to maintain the natural beauty of Stone Canyon. The areas and especially the Canyo are not so big or sparsely populated as to introduce public structures or large groups of people on a regular basis. Thank you. OVE

UPPER STONE CANYON RESERVOIR WATER QUALITY IMPROVEMENT PROJECT
SCOPING MEETING COMMENTS

(Please hand in, mail back, or fax to (213) 367-4710 by Tuesday, July 22, 2008)

Name: Dr. Robert N. Cleaves

Organization (if any):

Address: 1224 Roberto Lane

City, State, Zip: Los Angeles, CA 90077-2334

Phone (optional): 310-472-2593

E-mail (optional): bob@wildcon.org

Would you like to remain on our mailing list to receive future project updates? Yes [X] No [ ]

Comments (1) Assuming that LADWP is mandated to building this project, please do not open the area to any type of recreational use. I do not want people to have access. Walking trails, etc., mean potential fire danger from smokers and or day campers, and opens our back yards to possible threats from anyone who might climb the hill side. In addition, if opened to any type of recreation, there will have to a parking lot built and employees assigned to police the area and to maintain it which will cost more money and more rate hikes.

(2) I am opposed to the project as it will involve a huge waste of resources. In addition, the polution from trucks, road damage to Mulholland, noise, dirt and traffic congestion on Mulholland from construction vehicles for many years.

(3) If available to public access, just remember the Bel Air fire that destroyed over 500 homes. Everyone who lives above the proposed project are very much afraid of fire.

UPPER STONE CANYON RESERVOIR WATER QUALITY IMPROVEMENT PROJECT
SCOPING MEETING COMMENTS

(Please hand in, mail back, or fax to (213) 367-4710 by Tuesday, July 22, 2008)

Name: ROBERTA BROWN

Organization (if any):

Address: 2870 Woodwardia Dr

City, State, Zip: LA CA 90077

Phone (optional):

E-mail (optional):

	Yes	No
Would you like to remain on our mailing list to receive future project updates?	☒	☐

Comments Creating a public park will increase traffic on deplorably maintained roads + could further potential fires in the Glen + along Mulholland.

Wildlife in this area, including rattlesnakes, will be negatively affected causing their migration onto private properties.

The reservoir would no longer provide a source of water in the event of fires.

Our security will be compromised, as people + traffic crowd into a public park.

Robin E. Schleimer
2793 Woodwardia Drive
Los Angeles, CA 90077

Los Angeles Department of Water and Power
Environmental Services
111 North Hope Street, Room 1044
Los Angeles, CA 900012
Attn: Sarah Easley Perez
Fax: (213) 367-4710

Re: Upper Stone Canyon Reservoir Water Quality Improvement Project

Dear Ms. Perez:

Please hear my **objections** to the proposed conversion of the Upper Stone Canyon Reservoir site to a public park. The reservoir should be covered due to new water quality standards *without* converting the area for public use.

Consider the **serious and negative impact** this will have on the area:

- **Increased congestion on access streets** - Beverly Glen Boulevard, Mulholland Drive, etc. These streets are already in heavy use by commuters as the primary alternate thoroughfare from overcrowded freeways.

- **Overload current infrastructure** - Beverly Glen Blvd and Mulholland Drive are winding, two-lane streets currently in hazardous condition and **will not support** the numerous additional truck trips and construction worker commutes required for conversion of the Upper Stone Canyon area for public use.

  Strain local natural resources – Wildlife and air quality will be severely compromised.

  Detrimental effects to residential neighborhoods – Increased noise, pollution and pedestrian traffic will generate an increase in crime and lead to a deterioration in the health and productivity of the residential community.

Thank you for your time. We're counting on you!

Respectfully,

Robin E. Schleimer

UPPER STONE CANYON RESERVOIR WATER QUALITY IMPROVEMENT PROJECT
SCOPING MEETING COMMENTS

(Please hand in, mail back, or fax to (213) 367-4710 by Tuesday, July 22, 2008)

Name: SHAHIN & MEHDI MANAVI

Organization (if any):

Address: 2514 ROSCOMARE ROAD

City, State, Zip: LOS ANGELES CA 90077

Phone (optional): (310) 471-7766

E-mail (optional):

Would you like to remain on our mailing list to receive future project updates? Yes [X] No [ ]

Comments

AS long Term Residence of The above address (Since 1985) we strongly are opposed and against having a public trail with any facility close to our property.

1- it will take away our privacy.
2- it will ruine wild life in The area
3- it will increase The danger of fire by careless public.
4. it will increase the traffic in Mulholland drive and specially in Roscomare Road That they already have more than enough traffic.

UPPER STONE CANYON RESERVOIR WATER QUALITY IMPROVEMENT PROJECT
SCOPING MEETING COMMENTS

(Please hand in, mail back, or fax to (213) 367-4710 by Tuesday, July 22, 2008)

Name: Shay Maghame
Organization (if any):
Address: 2995 Beverly Glen Circle
City, State, Zip: Los Angeles, CA 90077
Phone (optional):
E-mail (optional): shaymaghame@msn.com

Would you like to remain on our mailing list to receive future project updates? Yes ☐ No ☑

Comments See attached

This proposed project seems to suggest no real justification for the cost and consequences that such an undertaking entails. The water being stored is not regularly used for drinking purposes, and the DWP has not suggested that it will be in the future. To add to the congestion, disturb the scenery, inconvenient the residences and add to the fire danger in this area, without reasonable and economically feasible justification is absurd.

As a private citizen, I would be prevented, by the provision of Mulholland Scenic Ordinance, to construct anything within the Mulholland Scenic Corridor, whereby the scenery might be affected in any possible way. This proposed project will substantially alter the view and the scenery in total contradiction and violation of the intent and the letter of the ordinance. If this project is allowed to proceed, the Mulholland Scenic Committee should also immediately be abolished and the ordinance deemed null and void.

Shay Maghame

July 22, 08

UPPER STONE CANYON RESERVOIR WATER QUALITY IMPROVEMENT PROJECT SCOPING MEETING COMMENTS

(Please hand in, mail back, or fax to (213) 367-4710 by Tuesday, July 22, 2008)

Name: SHIRLEY C. COHEN
Organization (if any): ROSCOMARE VALLEY ASSOCIATION
Address: 939 ROSCOMARE ROAD
City, State, Zip: LOS ANGELES CA 90077-2225
Phone (optional): 310-472-5144
E-mail (optional): cashcohen@earthlink.net

Would you like to remain on our mailing list to receive future project updates? Yes [X] No [ ]

Comments

1. SHOULDN'T KEY ENVIRONMENTAL ISSUES INCLUDE SAFETY?

2. THE PUBLIC SEEMS TO HAVE A WRONG CONCEPT OF THE PROPOSED RECREATION USE OF STONE CANYON. THE SUGGESTION IS JUST FOR HIKING TRAILS. THE SANTA MONICA CONSERVANCY ALREADY HAS AN EASEMENT FOR HIKING TRAILS AT THE NORTHERN END OF DWP PROPERTY. WE ARE PROPOSING THAT THESE BE TIED IN TO EXISTING FIRE ROADS AND OTHER EXISTING ROADS.
THE FACILITIES WOULD BE CLOSED AT NIGHT, AS AT FRANKLIN CANYON.

Comments continued

FOR SAFETY OF THE AREA, THE TRACKS SHOULD BE MONITORED BY PARK RANGERS.

THE EIR SHOULD HAVE SOME DETAIL ABOUT THIS, EVEN THOUGH IT MIGHT NOT HAVE THE FINAL DESIGN.

TWO PAGES

-----Please fold in thirds-----

Tape it closed, affix a 42-cent stamp and mail by July 22, 2008. Thank you!

Affix $0.42 Stamp

Los Angeles Department of Water and Power
Environmental Services
111 North Hope Street, Room 1044
Los Angeles, CA 90012
Attn: Sarah Easley Perez

UPPER STONE CANYON RESERVOIR WATER QUALITY IMPROVEMENT PROJECT
SCOPING MEETING COMMENTS

(Please hand in, mail back, or fax to (213) 367-4710 by Tuesday, July 22, 2008)

Name: Shoreen + Philip Paccione
Organization (if any):
Address: 2878 Angelo Dr.
City, State, Zip: LA CA 90077
Phone (optional): 310 271 6936
E-mail (optional): shoreen@hotmail.com

Would you like to remain on our mailing list to receive future project updates? Yes ☐ No ☑

Comments We strongly oppose the proposed project. It would severly impact congestion, disturb the surrounding environment and fundamentally increase the fire danger in the area.

We have lived in the area for 20+ year and despite much growth, the areas pristine beauty has been protected throug the Mulholland Scenic Ordinance + Committee. This should continue to be upheld.

July 18, 2008

Sarah Easley Perez
DWP
111 N. Hope Street, Room 1044
Los Angeles, CA 90012

RE: Upper Stone Canyon Reservoir Water Quality Improvement Project

Dear Sarah,

As a resident of Bel Air, Roscomare Valley, I am writing to you regarding my concern for the proposed water improvement project.

I am concerned about the proposed plans for the following reasons:

- Security risk. This will allow the public closer proximity and access to the lower reservoir and our public drinking water and poses a serious security risk.
- Increased traffic and congestion for estimated 5.5 years of construction, plus after completion.
- Worse air quality from trucks exhaust, equipment, dust, etc. for 5.5 years.
- Noise from trucks and equipment and visitors
- Aesthetics/disturbing current beauty.
- Increase risk of forest fire (visitors smoking). With so many frequent CA forest fires, we do not need any more public access to/near vulnerable, frequently dry, brittle grass/hills.
- A potential gathering area for teens or troubled youths.
- Trash, bottles, cigarettes, etc. left behind by visitors.
- Many residents, including myself have purchased homes in this area for the primary purpose of the surrounding beauty and tranquility, including the reservoirs.
- Home prices will be affected. A grave concern to all nearby residents, especially in this current economy.

I sincerely hope that you and all who will review and determine the fate of this project will take my concerns into account.

Thank you for your time and consideration.

Regards,

SJ Morrison

USC
UNIVERSITY OF SOUTHERN CALIFORNIA

FAX COVER

Date • 7/21/08
Number of pages including cover sheet • 2

To • Sarah Casley Perez

From • (Stephen) Markell Cohen

Phone •

Fax • 213-367-4710

CC •

Phone • 213-740-4794

Fax • 213-740-5502

REMARKS

☐ Urgent ☑ For your review ☐ Reply ASAP ☐ Please comment

Thanks
(S) Markell Cohen

To: Sarah Easley Perez
LA Dept. of W & P
Environmental Services
111 N. Hope St., Rm 1044
LA, CA 90012
FAX: 213-367-4710

From: Stephen M. Cohen
FAX: 213-740-5502

Subject: Stone Canyon
Date: 7/21/08

Dear Ms. Perez,

I am the owner of 10218 Autumn Leaf Circle in Beverly Glen Park. I very much object to the plans to cover Stone Canyon reservoir to make a public park. I think it should remain a wildlife refuge quite aside from other objections I have. I am particularly concerned that a park will greatly increase the likelihood of fires starting in this very vulnerable area. The Bel Air fire in the past was devastating & every measure must be taken to avoid another. Certainly, the water needs to be available to firefighters if one should start! It is already very difficult to get adequate fire insurance in this area & this development will only worsen an already very bad situation. At very least insurance costs will increase if we can get it at all. Certainly property values will decline. This is really a very disturbing proposal.

Sincerely yours,
Stephen M. Cohen

UPPER STONE CANYON RESERVOIR WATER QUALITY IMPROVEMENT PROJECT
SCOPING MEETING COMMENTS

(Please hand in, mail back, or fax to (213) 367-4710 by Tuesday, July 22, 2008)

Name: Steve Amanatullah

Organization (if any):

Address: 10507 Woodfield ct.

City, State, Zip: Los Angeles, CA 90077

Phone (optional): (310) 475-4825

E-mail (optional): Amantullah@AOL.com

Would you like to remain on our mailing list to receive future project updates? Yes [X] No [ ]

Comments The replacement of the Upper Stone Canyon Reservoir with buried concrete storage tanks is unnecessary expensive and disruptive. A better choice would have been to cover the reservoir. The scaling down of the project to 81 million gallons of potable water storage indicates that the DWP is misinformed about the actual projected water needs for the area. The best thing that will happen to this project is to take the reservoir out of service.

The other disruptive factor is the development of passive recreational area" atop the tanks at additional cost to the consumer and the DWP. Periodic water rate increases, or a portion thereof" could be avoided by doing away with the development of the recreational area.

In addition, there are many hazards involved with this project. Foremost is the fire danger. Fires can be started by careless workers and hikers in the canyon. 15000

(over)

Comments continued truck trips to the site are a hazard of a magnificent proportion to the traffic and commuters on the 405 Freeway and on Mullholland. It is a disaster waiting to happen because of the traffic and congestion.

The habitat in the canyon is pristine and ecologically sensitive. Any activity in the canyon is going to have a very negative effect on the flora and fauna of the canyon. The canyon is a major paths for many species of migratory birds. Any activity in the canyon will have a disruptive effect on those migratory routes.

Another important factor in permitting the development of the area for recreational use is permitting the terrorist to come closer to our water supply and the danger that entails.

Activity in the canyon and moving the earth and soil is disruptive to the reptiles and raptors and their food source that might cause the rattlesnakes to abandon their nests and migrate elsewhere that might become a danger to people and animal. A liability issue to the DWP.

The community is opposed to this project and particularly to the recreational use aspect. We will oppose this project by all legal means including federal and state courts.

Please fold in thirds

Tape it closed, affix a 42-cent stamp and mail by July 22, 2008. Thank you!

Affix $0.42
Stamp

Los Angeles Department of Water and Power
Environmental Services
111 North Hope Street, Room 1044
Los Angeles, CA 90012
Attn: Sarah Easley Perez

Fax

To:	Sarah Easley Perez / LADWP	**From:**	
Fax:	213-367-4710	**Pages:**	03
Phone:		**Date:**	7/21/08
Re:		**CC:**	

☐ **Urgent** ☐ **For Review** ☐ **Please Comment** ☐ **Please Reply** ☐ **Please Recycle**

● **Comments:.**

July 19, 2008

Sarah Easley Perez
DWP
111 N. Hope Street, Room 1044
Los Angeles, CA 90012

RE: Upper Stone Canyon Reservoir Water Quality Improvement Project

Dear Sarah,

As a resident of upper Bel Air, Roscomare Valley, I am writing to you regarding my concern for the proposed water improvement project.

I hope that you respect and review my concerns, listed below:

DURING CONSTRUCTION

- Security risk. Allows access to lower reservoir during construction.
- Increased traffic and congestion for estimated 5.5 years.
- Worse air quality from trucks exhaust, equipment, dust, etc. for 5.5 years.
- Noise from trucks and equipment.
- Disturbing the current beauty and aesthetics of the location and surrounding area.

AFTER CONSTRUCTION

- Poses a serious security risk. This will allow the public closer proximity and access to the lower reservoir and our public drinking water.
- Increase risk of forest fire (visitors smoking). With so many frequent CA forest fires, we do not need any more public access to/near vulnerable, frequently dry, brittle grass/hills.
- Noise from visitors.
- A potential gathering area for teens or troubled youths.
- Traffic from visitors entering/leaving area.
- Trash, bottles, cigarettes, etc. left behind by visitors.
- Many residents, including myself have purchased homes in this area for the primary purpose of the surrounding beauty and tranquility, including the reservoirs.
- Home prices will be affected. A grave concern to all nearby residents, especially in this current economy.

I sincerely hope that you, and all who will review and determine the fate of this project will take my concerns into account.

Thank you for your time and consideration.

Resident of Stradella Road - overlooking the Reservoir

July 19, 2008

Sarah Easley Perez
DWP
111 N. Hope Street, Room 1044
Los Angeles, CA 90012

RE: Upper Stone Canyon Reservoir Water Quality Improvement Project

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Thank you for your time and consideration.

Resident of Stradella Road - overlooking the Reservoir

UPPER STONE CANYON RESERVOIR WATER QUALITY IMPROVEMENT PROJECT SCOPING MEETING COMMENTS

(Please hand in, mail back, or fax to (213) 367-4710 by Tuesday, July 22, 2008)

Name: Sue Zaret
Organization (if any):
Address: 2737 Angelo Dr.
City, State, Zip: L. A. CA 90077
Phone (optional): 310-550-8424
E-mail (optional):

Would you like to remain on our mailing list to receive future project updates? Yes ☐ No ☑

Comments

I lived through the fire of 1970 and what destruction it caused! I would not be in favor of anything that would prevent a fire from being controlled and put out speedily. Therefore I would not be in favor of a park

UPPER STONE CANYON RESERVOIR WATER QUALITY IMPROVEMENT PROJECT
SCOPING MEETING COMMENTS

(Please hand in, mail back, or fax to (213) 367-4710 by Tuesday, July 22, 2008)

Name: Sydney Ann Smith-Kee

Organization (if any):

Address:

City, State, Zip:

Phone (optional):

E-mail (optional):

	Yes	No
Would you like to remain on our mailing list to receive future project updates?	☐	☐

Comments

PLEASE DO NOT LET THIS HAPPEN. IT IS A ~~A~~ TRAVESTY. IT WILL WORK AGAINST EVERYTHING ~~THAT IS~~ faithful, dependable, reliable, honest, & TRUSTWORTHY TO THIS VAlley.

Comments continued

THERE ARE OVER 500 reasons NOT YOU SHOULD DO THIS

Please fold in thirds

Tape it closed, affix a 42-cent stamp and mail by July 22, 2008. Thank you!

USA 42

17 JUL 2008 PM 1 L

Los Angeles Department of Water and Power

Environmental Services

111 North Hope Street, Room 1044

Los Angeles, CA 90012

Attn: Sarah Easley Perez

90012+2607

July 17, 2008

DWP:

I am very concerned about the proposal to replace the existing reservoir at Upper Stone Canyon with three holding tanks and a passive recreation area. I GREATLY OPPOSE IT.

I've lived above Stone Canyon reservoir for fifteen years. In the last several years we've already had to endure DWP construction and truck activity in the area. I honestly thought you were done. Now you're asking us to endure ten more years of development involving a much larger scope of construction.

I remember my dismay when I first heard Upper Stone Canyon reservoir would be covered… now after hearing your new plan that involves years of disruption to the community and destruction of the canyon environment (to enhance it?) I long for the days of simply covering up Upper Stone Canyon reservoir. Wouldn't you save millions of dollars and years of aggravation by covering the existing reservoir and planting some trees on top? With your current plan you are decreasing the water capacity… what is gained here? A couple more trails for the public? You are the DWP not the Department of Parks and Recreation.

Every night I hear coyotes and wildlife outside. Don't you think five years of the destruction of their home and the presence of heavy equipment will change the face of the environment you wish to enhance? I wouldn't be surprised if you drive everything away in the process.

I am GREATLY concerned about the fire hazard you are inviting into our community. I can control what happens in my own backyard but not what happens below it. I have brush three feet high outside my fence that the city hasn't bothered to clear this year. And yet the DWP is clearing land that nobody uses when the most basic services for the public have not been fulfilled. This is the worst season for wildfires in California history. This canyon is not a controlled environment. It doesn't make sense. Do you plan to hire full time park rangers to keep this under control? I've seen people throw cigarettes out their window on Roscomare Road while passing signs that state No Smoking in the canyons. Now we're inviting them into the canyon to smoke? Or picnic and bbq? Even if that's not allowed, how do you plan to stop them? You are proposing a flat park-like environment with a parking lot not a rugged off-road trail for hiking. Will the DWP be picking up the tab for our through-the-roof fire insurance premiums? Please look at pictures of the Bel Air Fire of the 1950's. We are a community with narrow one-lane roads (then and NOW) making fire truck access very difficult. Newly installed speed bumps further delay response time.

I am an avid hiker. I hike the trails off Mulholland in the Santa Monica Mountains all the time. But Upper Stone Canyon is not open land it surrounds residential land. If you put in hiking trails that means the hikers are hiking up to the houses. There is no place else to go.

In the twenty years I've lived in this area I've heard the familiar buzz of helicopters telling swimmers to get out of the Lower Stone Canyon reservoir. It's been highly policed over the years. Imagine how this new open access will draw people to swim there. As a community we've never been allowed on to this land. Now you're inviting everybody in. Surely there must have been a reason for never allowing this access before.

I also wonder why DWP came up with this plan without any input from the community? Whatever was discussed in previous meetings had no bearing on this plan. We are tired of DWP presence and disruption, why do we go to these meetings if you go ahead and do whatever you want?

I was at the meeting July 14th and while your representatives were very cordial don't you think it makes matters worse to have people write down our concerns without having anyone there with the authority to answer them? Allowing people to speak their fears without allaying them only causes more fear. This is not the way to get the community on your side.

I moved to Roscomare Road because it was a peaceful, serene environment. A canyon with wildlife and privacy. That is why people live here. None of us chose to live above a recreation area. This is not an accessible area to most people in the city and the people in the area don't want it. Wouldn't it serve the public interest (if that is your goal?) to have a public area where the public needs one? Surely creating a park in a highly flammable canyon does not serve anyone's best interests.

I urge you to listen to the community. We don't want this. This is a disaster waiting to happen.

Sincerely,

Teresa O'Neill

Teresa O'Neill
2580 Roscomare Road
L.A. Ca 90077

July 17, 2008

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I urge you to listen to the community. We don't want this. This is a disaster waiting to happen.

Sincerely,

T O'Neill

Teresa O'Neill
2580 Roscomare Road
L.A. Ca 90077

UPPER STONE CANYON RESERVOIR WATER QUALITY IMPROVEMENT PROJECT
SCOPING MEETING COMMENTS

(Please hand in, mail back, or fax to (213) 367-4710 by Tuesday, July 22, 2008)

Name: TIMOTHY STEELE

Organization (if any):

Address: 2732 ANGELO DRIVE

City, State, Zip: LOS ANGELES, CA 90077

Phone (optional):

E-mail (optional): timothyrsteele@sbcglobal.net

Would you like to remain on our mailing list to receive future project updates? Yes ☑ No ☐

Comments

As residents of the Stone Canyon/Beverly Glen neighborhood, my wife and I are alarmed at the prospect of the Stone Canyon Reservoir's being turned into a public park.

At the very least, the project and park will increase the already horrendous traffic in a neighborhood whose main roads are narrow, windy, and poorly maintained. More seriously, the project and park will increase the fire hazard in this high-risk area and will, at the same time, remove or make less accessible waters with which fires in the area might be fought.

Finally, additional public parkland is not something this particular part of the city needs. There are extensive areas of state-owned lands, with easy public access and hiking trails, immediately to our west on the other side of the 405 Freeway. Just to east of us, in Franklin Canyon, is a Santa Monica Mountains National Recreation Area. And near where Mulholland Drive meets Coldwater Canyon Drive are the Coldwater Canyon Park and the Wilacre Park.

(over, please)

Comments continued

In brief, this proposal to convert the Stone Canyon Reservoir into a public park is both a recipe for possible catastrophe and something that would not significantly benefit members of the neighborhood or the larger community of Los Angeles.

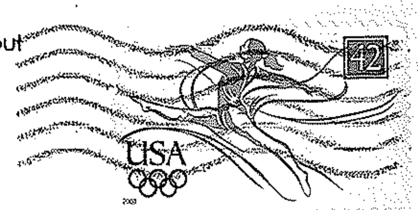
Timothy Steele

---Please fold in thirds---

Tape it closed, affix a 42-cent stamp and mail by July 22, 2008. Thank you!

LOS ANGELES CA 900

19 JUL 2008 PM 5 T



Los Angeles Department of Water and Power

Environmental Services

111 North Hope Street, Room 1044

Los Angeles, CA 90012

Attn: Sarah Easley Perez

90012+2607

UPPER STONE CANYON RESERVOIR WATER QUALITY IMPROVEMENT PROJECT
SCOPING MEETING COMMENTS

(Please hand in, mail back, or fax to (213) 367-4710 by Tuesday, July 22, 2008)

Name: Tom or Denise Decker

Organization (if any):

Address: 870 Stone Canyon Road

City, State, Zip: Los Angeles CA 90077

Phone (optional):

E-mail (optional):

	Yes	No
Would you like to remain on our mailing list to receive future project updates?	X	

Comments

I am completely opposed to any public park (active or inactive activity). This area is a resevoir and at a time when there is limited funds available ~~foo~~ other more pressing ~~poo~~ problems — eg schools, roads, fires — putting in a park which will require security, facilities and other costs not even considered is ludicrous and irresponsible. No park. Keep area closed to the public.

UPPER STONE CANYON RESERVOIR WATER QUALITY IMPROVEMENT PROJECT
SCOPING MEETING COMMENTS

(Please hand in, mail back, or fax to (213) 367-4710 by Tuesday, July 22, 2008)

Name: TONY AND LYNDA GARTSHORE
Organization (if any):
Address: 2550 ROSCOMARE RD.
City, State, Zip: LOS ANGELES, CA. 90077
Phone (optional): 310 476-3912
E-mail (optional):

Lynda Gartshore
7/17/08

Would you like to remain on our mailing list to receive future project updates? Yes [X] No [ ]

* See 7 photos enclosed

Comments

OPTION FOR RESERVOIR: BURY TANKS IN EXISTING RESERVOIR (DO NOT ADD SOIL AND TOP WITH LANDSCAPING AND TRAILS) BUT ADD BACK THE WATER - ALOT CHEAPER AND STILL VISUALLY PLEASING TO NEIGHBORHOODS. A WIN - WIN FOR ALL CONCERNED!! (NO 5½ YEAR CONSTRUCTION FOR THIS PLAN)

DO NOT OPEN FOR PUBLIC USE:

1) EXTREME FIRE AREA (SEE PHOTOS OF FRANKLIN CYN WHERE NO SMOKING SIGNS ARE POSTED ALL OVER) 35 BUTTS FOUND IN ¼ OF MILE!
2) POSSIBLE TAMPERING (TERRORISM) WITH WATER SUPPLY - BEING OPEN TO PUBLIC!
3) NEIGHBORHOOD FIRE INSURANCE WILL SKY-ROCKET (IF WE CAN GET IT AT ALL)

WILL DWP BE FINANCIALLY RESPONSIBLE FOR INSURANCE OR REPLACEMENT OF OUR PROPERTIES IF A FIRE OCCURS OR CRIME??

Comments continued

(4) WHAT ABOUT THE DISRUPTION OF WILDLIFE? A NEW ANIMAL WALKWAY IS PLANNED ON MULHULLAND BRIDGE TO GET ANIMALS ON THE OTHER SIDE - NOW YOU WANT TO INHABIT THEIR HABITAT? THERE ARE DANGEROUS COYOTES - RATTLESNAKES THAT ARE VERY AGGRESSIVE!

(5) THE PROPOSED PROJECTS WILL TAKE 5 1/2 YEARS - REMOVE SOIL (EROSION WILL OCCUR!) WE WILL HAVE TO LIVE WITH DUST, NOISE, TOXINS, FUMES FROM 15,000 TRUCKS AND FRIGHTENED ANIMALS TAKING REFUGE IN OUR YARDS.

(6) THE COST OF THIS PROJECT IS PROHIBITIVE!

(7) CRIME (SEE PHOTOS) WILL THERE BE CAMERAS TO MONITER SMOKING OR ILLICIT BEHAVIOR?

(8) MORE TRAFFIC (TRUCKS) ON OUR ALREADY POT-HOLED MULHULLAND HWY.

(9) NOISE AND FIRE TRAVEL UPHILL. TOO MANY HOMES IN THE AREA TO CONSIDER. THIS IS AN INSANE PROPOSAL!!

Please fold in thirds

Tape it closed, affix a 42-cent stamp and mail by July 22, 2008. Thank you!

SANTA CLARITA CA 913 2 L
18 JUL 2008 PM

USA FIRST-CLASS FOREVER

Mr. Anthony Gartshore
2550 Roscomare Rd.
Los Angeles, CA 90077

Los Angeles Department of Water and Power
Environmental Services
111 North Hope Street, Room 1044
Los Angeles, CA 90012
Attn: Sarah Easley Perez

90012+2607

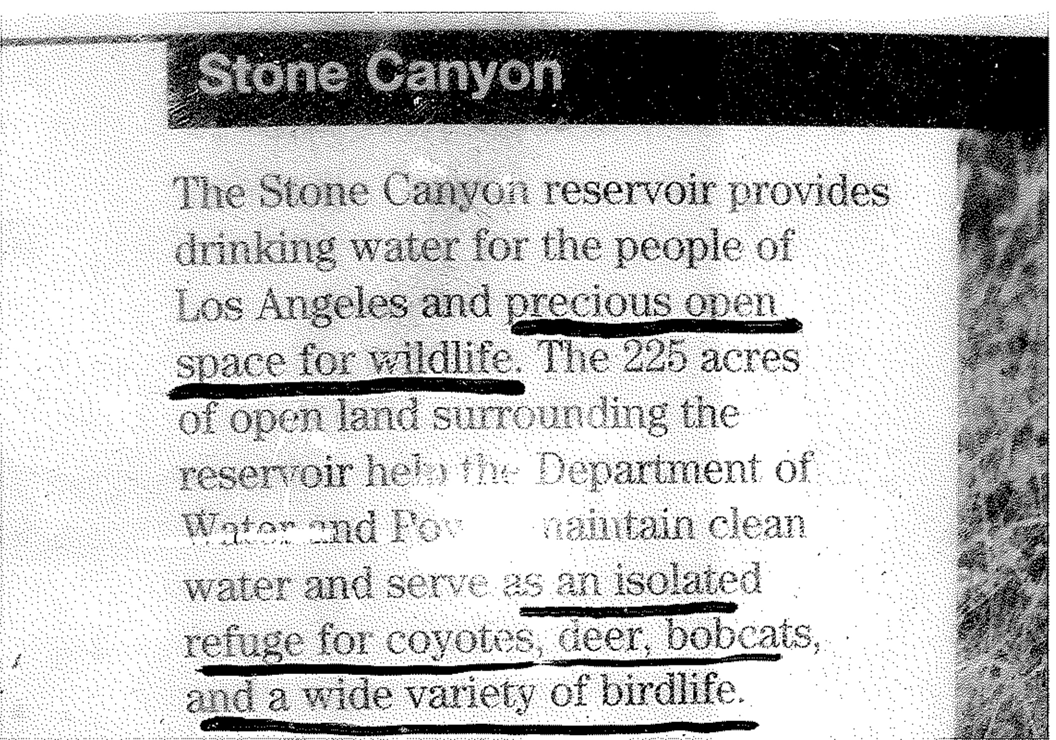
35 BUTTS FOUND IN 1/4 MILE AREA

FRANKLIN CYN.


NO HOMES IN THIS AREA


Los Angeles Times
Some voters see it as win-win
Is this paroled killer still a threat?
A warning from the sea
Oyster 'seeds' are dying as Pacific Coast waters grow warmer


Please do not
leave valuables
in your vehicle
CRIME???


Stone Canyon
The Stone Canyon reservoir provides
drinking water for the people of
Los Angeles and precious open
space for wildlife. The 225 acres
of open land surrounding the
reservoir he the Department of
and Po maintain clean
water and serve as an isolated
refuge for coyotes, deer, bobcats,
and a wide variety of birdlife.

Lynda & Tony Gartshore
2550 Roscomare Road
Los Angeles, CA 90077

July 8, 2008

Ms. Sarah Perez
L.A. Department of Water
Environmental Services
111 N. Hope Street, Rm. 1044
Los Angeles, CA 90012

RE: Upper Stone Canyon Reservoir

Dear Ms. Perez:

Regarding our call on July 3, 2008, I had inquired about a Public Meeting regarding the Upper Stone Canyon Reservoir Project. Upon receiving the notice of the meeting (July 14th), the wording in the notice was extremely disturbing to us. I called regarding the statement in the notice "developed for passive recreational uses."

First of all, we have lived on the ridge at 2550 Roscomare since 1971. We purchased the home because of the exquisite view of the mountains and the reservoir. Prior to escrow, I personally called the DWP and inquired as to the future of the reservoir and the surrounding mountainscape. I was told that the whole property belonged to the DWP and that it would remain so. So we felt confident to go ahead with the purchase of the home.

Not only are we disappointed to having the reservoir covered and our view compromised, but now we have learned your proposal is for the whole area to be opened to the public, with parking, public restrooms and walking trails. You also indicated that the "Department of Recreation and Parks will be running this open park." HOW CRAZY ARE YOU TO EVEN CONSIDER THIS . . . Here are the objections that we consider this proposal so OUTRAGEOUS . . .

1. THIS AREA IS AN EXTREME FIRE AREA. There is an elementary school in the area of this hillside community. In case of fire, evacuation on hillside roadways would be extremely hazardess. People in public areas WILL SMOKE, regardless of posted signs.

2. We have extensive wildlife that would be disrupted with the human element added on a daily basis with hiking trails. Not only that, the wildlife consists of rattlesnakes, aggressive coyotes, and in some areas of the Santa Monica Mountains, there are mountain lions. The deer are being constantly killed (we

hear them) because of overpopulation of the species of dangerous coyotes and the invasion of humans closing in on their space. Not only that, but their water supply is dwindling with limited rainfall, which will add to their aggressiveness. Are you going to provide a gun-toting protective ranger with each individual hiker? Will you provide a first aid facility and ambulance-ready service when a hiker is attacked?

3. The proposed construction and covering of the reservoir will also create dirt and dust, which we will have to live with for years. Creating trails and parking lots will only add to continuing dust in our open space. WE HAVE ENOUGH BAD AIR AND POLLUTION; you do not need to add to this by your ill conceived ideas.

4. Once you open this area for "recreational uses," the Mulholland corridor will be experiencing more traffic. It is crowded enough as it is.

5. The Clean Water Act is something other than creating a "Disaster in Waiting" scenario for the areas surrounding your project. The Dept. of Parks and Recreation should not be involved at all in the deception of the "Clean Water Act." This was not in the original plan for the reservoir.

6. Terrorism is possible in such close proximity to our water supply if open to the public.

7. Further, what type of element of people will be using this area? It is too large of an area to monitor. With the hidden deep canyons, what is going to prevent drugs and crime, especially to homeowners that undesirables now have open access to? Will you install cameras all along the pathways for observation, to watch for smoking, crime and possible animal induced injuries?

8. You mentioned the proposal is for day-use only. Perhaps a hiker gets lost, does that mean you will have to send in search parties and helicopters searching for them? The noise factor of helicopters in a canyon is DEAFENING.

9. What about the natural plants and shrubberies that will be trampled with these hikers? What about trash that will be left behind by careless hikers? Are you or the Dept. of Parks and Recreation going to have full-time maintenance to replace what humans tend to destroy?

We have lived here for many years in peace and serenity, which is now seriously being compromised by your reckless plans and proposals. We strenuously object to development in this area of the Upper Stone Canyon Reservoir.

Sincerely yours,

Lynda Gartshore

Lynda & Tony Gartshore

URGENT

Att: SARAH EASLEY PEREZ

UPPER STONE CANYON RESERVOIR WATER QUALITY IMPROVEMENT PROJECT
SCOPING MEETING COMMENTS

(Please hand in, mail back, or fax to (213) 367-4710 by Tuesday, July 22, 2008)

Name: TRACY & ALFRED PENHASKASHI

Organization (if any):

Address: 2808 Angelo Dr.

City, State, Zip: LA CA 90077

Phone (optional): (310) 625-6260

E-mail (optional):

Would you like to remain on our mailing list to receive future project updates? Yes [X] No [ ]

Comments Please DO NOT transform the coldwater Canyon Reservoir into a PUBLIC Park OR ELSE

(1) most likely chance of fire
(2) increase in traffic
(3) increase in crime
(4) Rattlesnakes in our backyard
(5) Our kids will not be safe!

- Aesthetics
- air quality
- Biological Resources
- Cultural Resources
- Noise
- Traffic

NO PUBLIC PARK

UPPER STONE CANYON RESERVOIR WATER QUALITY IMPROVEMENT PROJECT SCOPING MEETING COMMENTS

(Please hand in, mail back, or fax to (213) 367-4710 by Tuesday, July 22, 2008)

Name: WINSLOW UEBEL

Organization (If any):

Address: 10228 Mossy Rock Circle

City, State, Zip: Los Angeles, CA 90077

Phone (optional):

E-mail (optional):

	Yes	No
Would you like to remain on our mailing list to receive future project updates?	☑	☐

Comments

We strongly oppose the creation of a public park in Stone Canyon reservoir on the basis of increased fire possibilities increased traffic congestion and crime in our area.

Upper Stone Canyon Reservoir Water Quality Improvement Project

Scoping Meeting Comments

July 14, 2008

1. How old is the existing reservoir? Is it in good condition?
2. Would it be less expensive to cover the existing reservoir?
3. With the very first project it was not wanted by the community and none of these additional projects were ever told to us. It is always about the water quality? Why wasn't it taken care of in our first project?
4. We were told we would never know it was there. It was only going to be one or two people operating on the site. Now it will be open to the public, fires, terrorists, animal attacks.
5. Will endanger entire community.
6. DWP has not been a good neighbor.
7. Used to have an illegal asphalt reclamation facility onsite. Still smell strange smells. Cannot trust what the DWP says to us.
8. Discussion about fire and smoking when first project started. Some workers were fired because of smoking. Passive recreation would be similar to Franklin Canyon. Found lots of trash and cigarette butts at Franklin. What is going to prevent people from doing that at this site. Would be dangerous to consider public access.
9. Whose idea was it to make the site open to the public.
10. Have not considered the opinions of the community.
11. Fire is the major issue concerned about. 300 fires raging in California so do not want to encourage fires in our backyards.
12. Totally against Board's opinion that the most expensive and disruptive alternative is the way to go. Hope common sense will prevail.

13. Existing storage 138 mg and will go down to 81 mg. Does not make sense when California is drier.
14. All of these factors are important and will impact neighborhood.
15. Already limited in the amount of insurance can get.
16. Will not open the site up to trails. This meeting represents a limited number of community members that would oppose public access.
17. Left-turn of trucks. Does not want a light on Mulholland, especially to alleviate traffic associated with public access.
18. Complement DWP for what it has done so far on these projects. NIMBYism because covered reservoir would be a worse option.
19. Part of larger community.
20. Pleased with DWP to solicit opinion and make aesthetic benefit.
21. Bought into neighborhood for property values and want to see values increase, not decrease by putting in public park.
22. What is Jack Weiss position on the project?
23. Will the project increase rates?
24. DWP will probably do the project. But if going to have recreational use, it will increase our rates. Will entry fee be charged?
25. Please close off the gate so would be no public access.
26. Water is a matter of supply and demand. The more demand for water and the limited supply of water we are told is available then as the demand for water increases with population we will all be paying more. Is DWP working with other governmental agencies to limit the amount of development that serve to increase demand for limited supply of water?
27. Since the plan for recreation arose with no public input, do our comments have any possibility of stopping that?
28. Please don’t plant nonnative species at the site. Should look as integrated into the site as possible.
29. Currently park off of Mulholland where you can and hike. Now public would be hiking up to our houses. How will they put in the paths?
30. Is the EIR report external? Is the preparation of the report hired out?

31. 5.5 years 160 million dollar project.
32. Assumed that treatment plant would take care of upper and lower reservoirs and it did not.
33. The project site has been closed to the public since it was built (1938 or 1939). People currently at the site are monitored.
34. Fire in 1968. Wind comes up the canyon 98% of the time. Construction activity could start a fire that would hit the homes along the crest on Mulholland.
35. All of the dust and air pollutants will travel up the canyon
36. What will happen to the contamination of the lower reservoir from the construction dust and pollutants?
37. What would the impacts be to wildlife?
38. Why didn't we build the plant to clean upper stone now lower?
39. Will lower stone still be filled with water?
40. Is Upper Stone still filled with water?
41. If lower stone will not be used as a drinking water source, will still be disturbed. The entire property and surrounding areas would be disturbed.
42. Have hired environmental companies outside to do own testing. Want to know exactly what the results are.
43. Construction will put the community more in jeopardy.
44. How do we get into direct contact with DWP?
45. 3 environmental impacts prepared for the project at lower stone that is about to be completed. Many trucks for many years have been travelling along Mulholland because that was the mitigation.
46. Closest building at lower stone is 50 feet from homes.
47. Public should know that have been very limited impacts from the construction at lower stone.
48. Carefully monitored mitigation.
49. This project may not be the best solution. Should go and visit other covered reservoirs, like aluminum and floating covers.
50. Go see Hollywood where the homes are closer. 2 tanks were constructed.
51. Worked with DWP and commented on the EIR.

52. If any one of these projects go through we would be much less impacted than at Hollywood Reservoir.
53. One of the biggest properties DWP has and the public has never had access.
54. We are always a fire area.
55. Have you tested the air in your home during the construction project?
56. The air is tested frequently. Should read EIR when it is done and public can object to it.
57. Project is not determined yet. Bigger picture than what has been presented tonight.
58. Upper reservoir has to be covered one way or the other because water quality regulations have tightened up. Wanted to keep the reservoir uncovered. Now federal and state require covering.
59. Nothing gorgeous about Upper reservoir. Now has a bottom on it.
60. Don't use the very bottom of the reservoir so don't actually use 138 mg.
61. Project that has been ongoing has been a much smaller project.
62. Was involved with the filtration plant and now DWP does not need it because would not suit todays requirements.
63. Need to look at this carefully and sensibly.
64. Can you confirm that approximately 50.5 acres of hillside will be temporarily disturbed during construction?
65. Why can't the upper reservoir have what the lower reservoir has?
66. Can a helicopter land on the upper reservoir?
67. Why do we have to reduce 138 mg to 81 mg and spend millions to do it. Were able to bypass the reservoir in lower Bel Air.
68. It is lovely to look at. Leave the water there in case of fire. Then would be using the canyon for storage. Just build storage tanks.
69. Can build the tanks elsewhere in another canyon?
70. DWP said had to cover reservoir because of regulations out of Washington DC and Homeland Security. Someone far away thinks this is a security issue. Now will give public access to the site. Are there other security issues associated with contaminating the water?

What else is DWP doing about it besides covering the reservoir? Used to be a concern about chlorine tanks.

71. Echo effect on Woodfield Court. Very concerned to hear more construction for another 5 years. Can it be covered for a lot less time and money?
72. In terms of mitigation, Mulholland seems to be deteriorating. Perhaps because of the construction trucks traveling on it. Increased mitigation efforts with respect to truck traffic.
73. As part of the public comment, as one of the two principal homeowners associations, we will oppose it and will exert our influence on Weiss.
74. If the construction is so important that will take 5.5 years or 6 years, how is DWP going to manage without all this water during this time?
75. EIR should address moving large amounts of earth when there is periodic flooding and mudslides in the area. Could potentially undermine other areas.
76. Built a road to the waterway and went through 2 years of hell. People would come from all over and have no respect for our property. Had wild parties, had to hire a guard, and will close it up. Fires were created. Trash. Drunken brawls. Gunshots. The house got burned down four times and had to rebuild. I think the project is terrible and I am against it.
77. Government took over management for a year before they gave up.
78. I love it and I think it is beautiful.
79. Love the air quality.
80. Why does DWP want to spend millions of dollars of our money on this?
81. It does not sound like the public has much of a say to change that is in effect? The public’s appeal would be useless.
82. If the project does go through, DWP should be responsible for ill effects that are created.
83. The canyon is a major pass for migratory birds. Any activity in the canyon will disrupt migration.

84. Any activity in the canyon will disturb and activate the reptiles and rattlesnakes. They will end up in the backyards of the property neighbors.
85. Opening the site to a public park will increase the crime rate. This should be studied in the EIR.
86. Has anyone consulted with Calfire? Would this project help or hinder protection of the area?
87. There is a lot of natural wildlife at the site. EIR should study the impacts to the wildlife.
88. Input from insurance companies. How will this affect how they charge us?
89. Going to have an issue with security. How will people get out of the site during an emergency?
90. Construction will disturb wildlife and they will be running all over the site.
91. Who is the responsible party?

APPENDIX B

CONSTRUCTION SPREADSHEETS

USCR_buried structure_ESTIMATED VEHICLE TRIPS

	Item		QTY	Trips Per Mon	Trips Total	Month 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	Mob/Demob		1 ls		41	41														
All	Other																			
All	Construction Support Supplies			50			50	50	50	50	50	50	50	50	50	50	50	50	50	50
2	Explosives				2		1	1												
6	Pipe				8							3	3	2						
4	Rock Anchors				2				1	1										
2	Demolitions Haul to dump		9000 CY		1,800		600	600	600											
7	Construct Retaining & Shear Walls		41,963 CY		5,770															
8	Concrete - Bottom Lining		22,643 CY		3,113															
9	Concrete - Columns, Roof Cap and Roof Slab		27,761 CY		3,817															
(10)	Earth on top		63,685 FCY		6,368															
7 - 9	Resteeel	9,352,168 lb	4,676 tons		390															
5 & 6	Cement	50,297,890 lb	25,149 tons		1,257											251	251	251	251	251
7 - 8	Gravel, Drainage	21,228 cy			2,123															
7 - 9	Forms				40															
(2.5 & 10)	Soil Import trips	-62,347 **export**			6,390		915	915	915	915	915									
All	Fuel (Diesel)			20		10	20	20	20	20	20	20	20	20	20	20	20	20	20	20
4 - 8	Misc. Concrete Operations			44											44	44	44	44	44	44
All	**Average Daily Total Personnel - Commute Vehicle Trips**					338	953	953	953	1332	1332	832	780	780	780	689	689	689	689	689

Item	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Mob/Demob															
Other															
Construction Support Supplies	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
Explosives															
Pipe															
Rock Anchors															
Demolitions Haul to dump															
Construct Retaining & Shear Walls		824	824	824	824	824	824	824							
Concrete - Bottom Lining									389	389	389	389	389	389	389
Concrete - Columns, Roof Cap and Roof Slab															
Earth on top															
Resteeel			15	15	15	15	15	15	15	15	15	15	15	15	15
Cement															
Gravel, Drainage		163	163	163	163	163	163	163	163	163	163	163	163	163	
Forms		20	20												
Soil Import trips															
Fuel (Diesel)	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
Misc. Concrete Operations	44	44	44	44	44	44	44	44	44	44	44	44	44	44	
Average Daily Total Personnel - Commute Vehicle Trips	556	2,139	2,139	2,139	2,139	2,139	2,139	2,139	954	954	954	954	954	954	954

Item	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	Total Trips
Mob/Demob																41
Other																0
Construction Support Supplies	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	2,200
Explosives																2
Pipe																8
Rock Anchors																2
Demolitions Haul to dump																1,800
Construct Retaining & Shear Walls																5,770
Concrete - Bottom Lining	389															3,113
Concrete - Columns, Roof Cap and Roof Slab		318	318	318	318	318	318	318	318	318	318	318	318			3,817
Earth on top														3,184	3,184	6,368
Resteeel	15	15	15	15	15	15	15	15	15	15	15	15	15			390
Cement																1,257
Gravel, Drainage																2,123
Forms																40
Soil Import trips											605	605	605			6,390
Fuel (Diesel)	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	890
Misc. Concrete Operations																880
Average Daily Total Personnel - Commute Vehicle Trips	954	1,737	1,737	1,737	1,737	1,737	1,737	1,737	1,737	1,737	1,737	1,737	1,737	941	941	58,372

General Construction Schedule

			CY	WD	Months	Start	Finish
1	**Drain Reservoir / Mobilization / Constr. Roads, Yards, Etc.**			20	1.00	0.0	1.0
2	**Demolition of Existing Facilities**			66	3.31	1.0	4.3
2.5	**Landslide Mitigation**		46,570	95	4.75	1.0	5.8
3	**Rough Shaping of Reservoir Bottom - Excavate & Stockpile**	**BCY**	118,535	59	2.96	4.3	7.3
4	**Excavate for Retaining Walls - Rock & Common Excavation**	**BCY**	32,328	65	3.23	7.3	10.5
5	**Overexcavate, Mix Soil-Cement & Re-Lay**	**BCY**	212,283	106	5.31	10.5	15.8
6	**Build-Up Reservoir Bottom to 5:1 @ Dam Toe w/ Soil-Cement**	**FCY**	46,451	23	1.16	15.8	17.0
7	**Construct Retaining & Shear Walls**		41,963	134	6.70	17.0	23.7
8	**Concrete - Bottom Lining**		22,643	153	7.64	23.7	31.3
9	**Concrete - Columns, Roof Cap and Roof Slab**		27,761	229	11.46	31.3	42.8
10	**Backfill Retaining Walls & Gap Upstream of Dam - Final Landscapin**		86,265	42	2.12	42.8	44.9

Note: The Gantt Chart representation is schematic. Accuracy of representation is to within approximately 0.5 months.

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	**Total Vehicles**	389	2,539	2,539	2,539	2,318	2317	905	853	852	894	1055	1055	1055	1055	1055
2	**Ave Daily "Delivery" Vehicle Trips**	3	79	79	79	49	49	4	4	4	6	18	18	18	18	18
3	**Average Daily Commuter Vehicle Trips**	17	48	48	48	67	67	42	39	39	39	34	34	34	34	34
4	**Average Daily Total Vehicle Trips**	19	127	127	127	116	116	45	43	43	45	53	53	53	53	53

	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Total Vehicles	670	3260	3275	3255	3255	3255	3255	3255	1636	1636	1636	1636	1636	1636	1429
Ave Daily "Delivery" Vehicle Trips	6	56	57	56	56	56	56	56	34	34	34	34	34	34	24
Average Daily Commuter Vehicle Trips	28	107	107	107	107	107	107	107	48	48	48	48	48	48	48
Average Daily Total Vehicle Trips	34	163	164	163	163	163	163	163	82	82	82	82	82	82	71

	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	
Total Vehicles	1429	2140	2140	2140	2140	2140	2140	2140	2140	2140	2745	2745	2745	4196	4196	**93,464**
Ave Daily "Delivery" Vehicle Trips	24	20	20	20	20	20	20	20	20	20	50	50	50	163	163	
Average Daily Commuter Vehicle Trips	48	87	87	87	87	87	87	87	87	87	87	87	87	47	47	
Average Daily Total Vehicle Trips	71	107	107	107	107	107	107	107	107	107	137	137	137	210	210	93,464

Note that all these vehicles require a return trip. Multiply by 2.

ESTIMATED EQUIPMENT OPERATIONS

20 WD/Month

Item	Qty	Operating Hrs/WD/each	Operating Hours per Month	Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
1 1/2 Ton Pickup (Commute Vehicle)	6	4	480		480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480
2 3/4 Ton Pickup	4	8	640			640	640	640	640	640	640	640	640	640	640	640	640	640	640	640	640	640	640	640	640	640
3 1 Ton Pickup	2	8	320			320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320
4 4000 Gallon Water Truck	2	8	320		320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	80	80	80	80	80	80
5 Dump Trucks	14	8	2240			2,240	2,240	2,240	2,240	2,240	2,240	2,240	2,240	2,240	2,240	2,240	2,240	2,240	2,240	2,240						
6 Yard Crane, ATV	2	8	320		160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	320	320	320	320	320	320
7 Loader/ForksCat 966,	2	8	320		320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320
8 Job Trailers	3	8	480		480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	120	120	120	120	120	120
9 Grader, Cat 16G	1	8	160		160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160
10 Dozer, D10	2	8	320			320	320	320	320	320	320	320	320	320	320	320	320	320	320	320						
11 Excavator, Cat 365 (1)	2	6	240			240	240	240	240	240	240	240	240	240	240	240	240	240	240	240						
12 Roller/Compactor	1	4	80			80	80	80	80	80	80	80	80	80	80	80	80	80	80	80						
13 Manitowoc Crane	2	8	320																		320	320	320	320	320	320
14 Hydraulic Breaker	2	8	320			320	320	320																		
15 Misc.	10	2	400			400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400
16 1/2 Ton Pickup (Commute Vehicle)(2)	6	4	480			480	480	480	480	480																
17 4000 Gallon Water Truck (2)	2	8	320			320	320	320	320	320																
18 Excavator, Cat 365 (2)	2	8	320			320	320	320	320	320																
19 Truck Tractor	2	8	320			320	320	320	320	320																
20 Dump Trucks (2)	2	8	320			320	320	320	320	320																
21 Crawler Loader	2	8	320			320	320	320	320	320																
22 Front End Loader	2	8	320			320	320	320	320	320																
23 Sheepsfoot Roller	2	8	320			320	320	320	320	320																
24 Chipping Machine	2	8	320			320	320	320	320	320																
25 Chain Saw 36"	4	8	640			640	640	640	640	640																
26 Air Compressor, 260 cfm	1	8	160			160	160	160	160	160																
27 Air Track Drill	1	8	160			160	160	160	160	160																
28 Grout Pump	1	8	160			160	160	160	160	160																
29 Hydraulic Jack	1	8	160			160	160	160	160	160																
30 Air Pump	1	8	160			160	160	160	160	160																
				TOTAL Hours	1,920	10,960	10,960	10,960	10,640	10,640	6,160	6,160	6,160	6,160	6,160	6,160	6,160	6,160	6,160	6,160	3,160	3,160	3,160	3,160	3,160	3,160
				TOTAL Ave. Daily Equip. Units	12	69	69	69	67	67	39	39	39	39	39	39	39	39	39	39	20	20	20	20	20	20

Item	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	Totals, Operating Hours
1 1/2 Ton Pickup (Commute Vehicle)	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	21,600
2 3/4 Ton Pickup	640	640	640	640	640	640	640	640	640	640	640	640	640	640	640	640	640	640	640	640	640			26,880
3 1 Ton Pickup	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320			13,440
4 4000 Gallon Water Truck	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	7,440
5 Dump Trucks																								33,600
6 Yard Crane, ATV	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	11,840
7 Loader/ForksCat 966,	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	14,400
8 Job Trailers	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	11,160
9 Grader, Cat 16G	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	7,200
10 Dozer, D10																						320	320	5,440
11 Excavator, Cat 365 (1)																								3,600
12 Roller/Compactor																								1,200
13 Manitowoc Crane	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	9,280
14 Hydraulic Breaker																								960
15 Misc.	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	17,600
16 1/2 Ton Pickup (Commute Vehicle)(2)																								2,400
17 4000 Gallon Water Truck (2)																								1,600
18 Excavator, Cat 365 (2)																								1,600
19 Truck Tractor																								1,600
20 Dump Trucks (2)																								1,600
21 Crawler Loader																								1,600
22 Front End Loader																								1,600
23 Sheepsfoot Roller																								1,600
24 Chipping Machine																								1,600
25 Chain Saw 36"																								3,200
26 Air Compressor, 260 cfm																								800
27 Air Track Drill																								800
28 Grout Pump																								800
29 Hydraulic Jack																								800
30 Air Pump																								800
TOTAL Hours	3,160	3,160	3,160	3,160	3,160	3,160	3,160	3,160	3,160	3,160	3,160	3,160	3,160	3,160	3,160	3,160	3,160	3,160	3,160	3,160	3,160	2,520	2,520	208,040
TOTAL Ave. Daily Equip. Units	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	16	16	1,300

General Construction Schedule

1	**Drain Reservoir / Mobilization / Constr. Roads, Yards, Etc.**	
2	**Demolition of Existing Facilities**	
2.5	**Landslide Mitigation**	
3	**Rough Shaping of Reservoir Bottom - Excavate & Stockpile**	**BCY**
4	**Excavate for Retaining Walls - Rock & Common Excavation**	**BCY**
5	**Overexcavate, Mix Soil-Cement & Re-Lay**	**BCY**
6	**Build-Up Reservoir Bottom to 5:1 @ Dam Toe w/ Soil-Cement**	**FCY**
7	**Construct Retaining & Shear Walls**	
8	**Concrete - Bottom Lining**	
9	**Concrete - Columns, Roof Cap and Roof Slab**	
10	**Backfill Retaining Walls & Gap Upstream of Dam - Final Landscaping**	

Note: The Gantt Chart representation is schematic. Accuracy of representation is to within approximately 0.5 months.

ESTIMATED PERSONNEL

Civil Work

MANDAYS

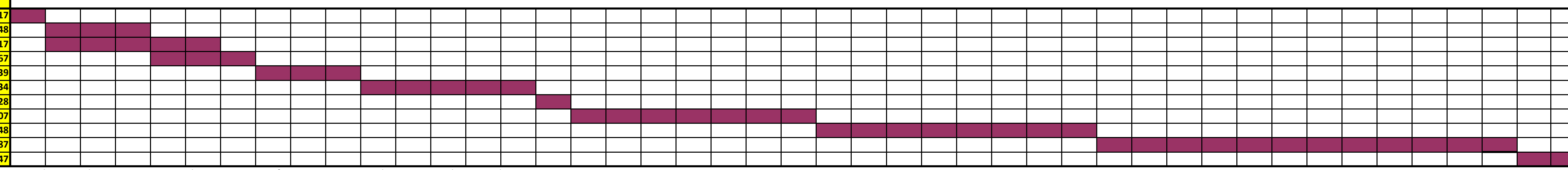
Phase	Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1 Drain Reservoir / Mobilization / Constr. Roads, Yards, Etc.		238														
2 Demolition of Existing Facilities			293	293	293											
2.5 Landslide Mitigation			340	340	340	340	340									
3 Rough Shaping of Reservoir Bottom - Excavate & Stockpile BCY						672	672	672								
4 Excavate for Retaining Walls - Rock & Common Excavation BCY									540	540	540					
5 Overexcavate, Mix Soil-Cement & Re-Lay BCY												449	449	449	449	449
6 Build-Up Reservoir Bottom to 5:1 @ Dam Toe w/ Soil-Cement FCY																
7 Construct Retaining & Shear Walls																
8 Concrete - Bottom Lining																
9 Concrete - Columns, Roof Cap and Roof Slab																
10 Backfill Retaining Walls & Gap Upstream of Dam - Final Landscaping																
Office and Supervision WD/Month 20		100	320	320	320	320	320	160	240	240	240	240	240	240	240	240
TOTAL MD/Month		338	953	953	953	1,332	1,332	832	780	780	780	689	689	689	689	689
Ave. Field Workers MDs		12	32	32	32	51	51	34	27	27	27	22	22	22	22	22
Office and Supervision		5	16	16	16	16	16	8	12	12	12	12	12	12	12	12
Ave. Daily Personnel		17	48	48	48	67	67	42	39	39	39	34	34	34	34	34

Phase	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
1 Drain Reservoir / Mobilization / Constr. Roads, Yards, Etc.															
2 Demolition of Existing Facilities															
2.5 Landslide Mitigation															
3 Rough Shaping of Reservoir Bottom - Excavate & Stockpile BCY															
4 Excavate for Retaining Walls - Rock & Common Excavation BCY															
5 Overexcavate, Mix Soil-Cement & Re-Lay BCY															
6 Build-Up Reservoir Bottom to 5:1 @ Dam Toe w/ Soil-Cement FCY	316														
7 Construct Retaining & Shear Walls		1,899	1,899	1,899	1,899	1,899	1,899	1,899							
8 Concrete - Bottom Lining									714	714	714	714	714	714	714
9 Concrete - Columns, Roof Cap and Roof Slab															
10 Backfill Retaining Walls & Gap Upstream of Dam - Final Landscaping															
Office and Supervision	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240
TOTAL MD/Month	556	2,139	2,139	2,139	2,139	2,139	2,139	2,139	954	954	954	954	954	954	954
Ave. Field Workers MDs	16	95	95	95	95	95	95	95	36	36	36	36	36	36	36
Office and Supervision	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Ave. Daily Personnel	28	107	107	107	107	107	107	107	48	48	48	48	48	48	48

Phase	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	Totals
1 Drain Reservoir / Mobilization / Constr. Roads, Yards, Etc.																238
2 Demolition of Existing Facilities																878
2.5 Landslide Mitigation																1,700
3 Rough Shaping of Reservoir Bottom - Excavate & Stockpile BCY																2,017
4 Excavate for Retaining Walls - Rock & Common Excavation BCY																1,620
5 Overexcavate, Mix Soil-Cement & Re-Lay BCY																2,245
6 Build-Up Reservoir Bottom to 5:1 @ Dam Toe w/ Soil-Cement FCY																316
7 Construct Retaining & Shear Walls																13,292
8 Concrete - Bottom Lining	714															5,716
9 Concrete - Columns, Roof Cap and Roof Slab		1,497	1,497	1,497	1,497	1,497	1,497	1,497	1,497	1,497	1,497	1,497	1,497			17,966
10 Backfill Retaining Walls & Gap Upstream of Dam - Final Landscaping														781	781	1,563
Office and Supervision	240	240	240	240	240	240	240	240	240	240	240	240	240	160	160	10,820
TOTAL MD/Month	954	1,737	1,737	1,737	1,737	1,737	1,737	1,737	1,737	1,737	1,737	1,737	1,737	941	941	58,372
Ave. Field Workers MDs	36	75	75	75	75	75	75	75	75	75	75	75	75	39	39	2,378
Office and Supervision	12	12	12	12	12	12	12	12	12	12	12	12	12	8	8	541
Ave. Daily Personnel	48	87	87	87	87	87	87	87	87	87	87	87	87	47	47	2,919

General Construction Schedule

Phase		Field Worker MDs	Total Ave MDs
1	**Drain Reservoir / Mobilization / Constr. Roads, Yards, Etc.**	12	17
2	**Demolition of Existing Facilities**	15	48
2.5	**Landslide Mitigation**	17	17
3	**Rough Shaping of Reservoir Bottom - Excavate & Stockpile BCY**	34	67
4	**Excavate for Retaining Walls - Rock & Common Excavation BCY**	27	39
5	**Overexcavate, Mix Soil-Cement & Re-Lay BCY**	22	34
6	**Build-Up Reservoir Bottom to 5:1 @ Dam Toe w/ Soil-Cement FCY**	16	28
7	**Construct Retaining & Shear Walls**	95	107
8	**Concrete - Bottom Lining**	36	48
9	**Concrete - Columns, Roof Cap and Roof Slab**	75	87
10	**Backfill Retaining Walls & Gap Upstream of Dam - Final Landscaping**	39	47



Note: The Gantt Chart representation is schematic. Accuracy of representation is to within approximately 0.5 months.

USCR Floating Cover Estimated Vehicle Trips

This schedule uses 20 Workdays per month to account for 12 Holidays and 12 Rain days

		QTY		Total	Mons	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
Phase 1	Task 1 - Drain and Drying of Reservoir/Mobilization			41		41																41
	Task 2 - Demolition of inlet/outlet & reservoir liner	9,000 CY		1,953			651	651	651													1,953
Phase 2	Task 1 - Installation of CAB, Asphalt Liner, and Vaults for Reservoir	21,915 CY	Materials	1,834						262	262	262	262	262	262	262						1,834
Phase 3	Task 1 - Construction of Floating Cover			14													3	3	4	4		14
Phase 4	Task 1 - Fill Reservoir			0																		0
	Fuel (Diesel)			318		10	22	22	22	22	22	22	22	22	22	22	22	22	22	22		318
	Ave. Daily Total Personnel - Commute Vehicle Trips			8,140		338	454	454	454	680	680	680	680	680	680	680	400	400	400	400	80	8,140
																						12,300

General Construction Schedule

		WD	Mons	Start	Finish	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
Phase 1	Task 1 - Drain and Drying of Reservoir/Mobilization	20	1.0	0.0	1.0																	
	Task 2 - Demolition of inlet/outlet & reservoir liner	66	3.0	1.0	4.0																	
Phase 2	Task 1 - Installation of CAB, Asphalt Liner, and Vaults for Reservoir	143	7.0	4.0	11.0																	
Phase 3	Task 1 - Construction of Floating Cover	70	4.0	11.0	15.0																	
Phase 4	Task 1 - Fill Reservoir	20	1.0	15.0	16.0																	
	Total Vehicles per Month					**389**	**1,127**	**1,127**	**1,127**	**964**	**964**	**964**	**964**	**964**	**964**	**964**	**425**	**425**	**426**	**426**	**80**	**12,300**
	Ave. Daily Delivery Vehicle Trips					**3**	**34**	**34**	**34**	**14**	**14**	**14**	**14**	**14**	**14**	**14**	**1**	**1**	**1**	**1**	**0**	
	Ave. Daily Commuter Trips					**17**	**23**	**23**	**23**	**34**	**34**	**34**	**34**	**34**	**34**	**34**	**20**	**20**	**20**	**20**	**4**	
	Ave. Daily Total Vehicle Trips					**19**	**56**	**56**	**56**	**48**	**48**	**48**	**48**	**48**	**48**	**48**	**21**	**21**	**21**	**21**	**4**	

Note that all these vehicles require a return trip. Multiply by 2.

USCR Floating Cover Estimated Equipment Operations

20 WD/Month

		QTY	Operating Hrs/WD/each	Operating Hrs/WD/Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Total Oper. Hours	Unit Days
1	1/2 Ton Pickup (Commute Vehicle)	6	4	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	7,680	48
2	3/4 Ton Pickup	4	8	640		640	640	640													1,920	12
3	1 Ton Pickup	2	8	320		320	320	320													960	6
4	4,000 Gallon Water Truck	2	8	320	320	320	320	320	160	160	160	160	160	160	160						2,400	15
5	Yard Crane, ATV	2	8	320	160	160	160	160													640	4
6	Loader/ForksCat 966	2	8	320	320	320	320	320													1,280	8
7	Job Trailers (3)	3	8	480	480	480	480	480													1,920	12
8	Grader, Cat 16G	1	8	160	160	160	160	160	160	160	160	160	160	160	160						1,760	11
9	Dozer, D10	2	8	320		320	320	320	160	160	160	160	160	160	160						2,080	13
10	Excavator, Cat 365	2	6	240		240	240	240													720	5
11	Roller/Compactor (Vibratory)	1	8	160		80	80	80	160	160	160	160	160	160	160						1,360	9
12	Hydraulic Breaker	2	8	320		320	320	320													960	6
13	Truck Tractor	1	8	160					160	160	160	160	160	160	160						1,120	7
14	Asphalt Paver	2	8	320					320	320	320	320	320	320	320						2,240	14
15	Tandem Rollers	2	8	320					320	320	320	320	320	320	320						2,240	14
16	Pulley Grader System	2	8	320					320	320	320	320	320	320	320						2,240	14
17	Gas Engine Vibrator	1	8	160					160	160	160	160	160	160	160						1,120	7
18	Concrete Pump	1	8	160					160	160	160	160	160	160	160						1,120	7
19	Crane, Truck-Mounted	1	8	160					160	160	160	160	160	160	160						1,120	7
20	Off-Road Forklift	1	8	160												160	160	160	160		640	4
21	Generator	1	8	160												160	160	160	160		640	4
22	Drill	1	8	160												160	160	160	160		640	4
23	Air Compressor	1	8	160												160	160	160	160		640	4
24	Misc.	10	2	400		400	400	400	400	400	400	400	400	400	400	400	400	400	400		5,600	35
	TOTAL Hours				1,920	4,240	4,240	4,240	3,120	3,120	3,120	3,120	3,120	3,120	3,120	1,520	1,520	1,520	1,520	480	**43,040**	**Sum**
	Ave. Daily Equip. Units				12	27	27	27	20	20	20	20	20	20	20	10	10	10	10	3		
	Ave. Daily Onsite Delivery Trucks				3	10	10	10	11	11	11	11	11	11	11	1	1	1	1	0		
	Total Ave. Daily Equip. Units & Daily Delivery Vehicle Used				15	37	37	37	31	31	31	31	31	31	31	11	11	11	11	3		

USCR Floating Cover Estimated Personnel

MANDAYS

		Mons	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Phase 1	Task 1 - Drain and Drying of Reservoir/Mobilization		238															
	Task 2 - Mobilization/Demolition of inlet/outlet & reservoir liner			294	294	294												
Phase 2	Task 1 - Installation of CAB, Asphalt Liner, and Vaults for Reservoir						520	520	520	520	520	520	520					
Phase 3	Task 1 - Construction of Floating Cover													240	240	240	240	
Phase 4	Task 1 - Fill Reservoir																	0
	Office and Supervision WD/Month 20		100	160	160	160	160	160	160	160	160	160	160	160	160	160	160	80
	TOTAL WD/Month		338	454	454	454	680	680	680	680	680	680	680	400	400	400	400	80
	Ave. Daily Field Workers MDs		12	15	15	15	26	26	26	26	26	26	26	12	12	12	12	0
	Ave. Daily Office and Supervision		5	8	8	8	8	8	8	8	8	8	8	8	8	8	8	4
	Ave. Daily Total Personnel		17	23	23	23	34	34	34	34	34	34	34	20	20	20	20	4

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Phase 1	Task 1 - Drain and Drying of Reservoir/Mobilization																
	Task 2 - Mobilization/Demolition of inlet/outlet & reservoir liner																
Phase 2	Task 1 - Installation of CAB, Asphalt Liner, and Vaults for Reservoir																
Phase 3	Task 1 - Construction of Floating Cover																
Phase 4	Task 1 - Fill Reservoir																

Revised 4/22/2010

USCR Aluminum Cover w/ Landslides Mitigation Estimated Vehicle Trips

This schedule uses 20 Workdays per month to account for 12 Holidays and 12 Rain days

		QTY	Total	Mons	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	
Phase 1	Task 1 - Drain and Drying of Reservoir/Mobilization		41		41																																							41
	Task 2 - Demolition of inlet/outlet & reservoir liner	9,000 CY	1,953			651	651	651																																				1,953
	Task 3 - Landslides Mitigation - Commence	44,200 CY	2,745			915	915	915																																				2,745
Phase 2	Task 1 - Landslides Mitigation - Complete		1,830						915	915																																		1,830
	Task 2 - Installation of CAB, Asphalt Liner, and Vaults for Reservoir	21,915 CY Materials	1,796						256	256	256	257	257	257	257																													1,796
Phase 3	Task 1 - Construction of Aluminum Cover		1,613													62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	63			1,613
Phase 4	Task 1 - Fill Reservoir and Landscaping		43																																							21	22	43
	Fuel (Diesel)		846		10	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	846
	Ave. Daily Total Personnel - Commute Vehicle Trips		23,596		338	954	954	954	1,180	1,180	680	680	680	680	680	546	546	546	546	546	546	546	546	546	546	546	546	546	546	546	546	546	546	546	546	546	546	546	546	546	546	220	220	23,596
																																												34,463

General Construction Schedule

		WD	Mons	Start	Finish	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	
Phase 1	Task 1 - Move in and Construct Roads, Construction Yards, Etc.	20	1.0	0.0	1.0																																								
	Task 2 - Sink/Construct Shafts	66	3.0	1.0	4.0																																								
	Task 3 - Construct Tunnels	60	3.0	1.0	4.0																																								
	Task 4 - Connect Tunnel/Shaft to Water Bypass Systems																																												
Phase 2	Task 1 - Drain Reservoir	140	7.0	4.0	11.0																																								
	Task 2 - Installation of CAB, Asphalt Liner, and Vaults for Reservoir	143	7.0	4.0	11.0																																								
Phase 3	Task 1 - Construction of Aluminum Cover	521	26.0	11.0	37.0																																								
Phase 4	Task 1 - Fill Reservoir & Landscaping	39	2.0	37.0	39.0																																								
	Total Vehicles per Month					389	2,542	2,542	2,542	2,373	2,373	958	959	959	959	959	630	630	630	630	630	630	630	630	630	630	630	630	630	630	630	630	630	630	630	630	630	630	630	630	630	631	263	264	34,463
	Ave. Daily Delivery Vehicle Trips					3	79	79	79	60	60	14	14	14	14	14	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	2	2	
	Ave. Daily Commuter Trips					17	48	48	48	59	59	34	34	34	34	34	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	11	11	
	Ave. Daily Total Vehicle Trips					19	127	127	127	119	119	48	48	48	48	48	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	13	13	

Note that all these vehicles require a return trip. Multiply by 2.

USCR Aluminum Cover w/ Landslides Mitigation Estimated Equipment Operations

20 WD/Month

		QTY	Operating Hrs/WD/each	Operating Hrs/WD/Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	Total Oper. Hours	Unit Days
1	1/2 Ton Pickup (Commute Vehicle)	6	4	480	480	960	960	960	960	960	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	21,120	132
2	3/4 Ton Pickup	4	8	640		640	640	640																																				1,920	12
3	1 Ton Pickup	2	8	320		320	320	320																																				960	6
4	4,000 Gallon Water Truck	4	8	640	320	640	640	640	480	480	160	160	160	160	160																													4,000	25
5	Yard Crane, ATV	1	8	160	160	160	160	160																																				640	4
6	Loader/ForksCat 966	2	8	320	320	320	320	320								160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	320	320	6,080	38
7	Job Trailers (3)	3	8	480	480	480	480	480																																				1,920	12
8	Grader, Cat 16G	1	8	160	160	160	160	160	160	160	160	160	160	160	160																													1,760	11
9	Dozer, D10	2	8	320		320	320	320	160	160	160	160	160	160	160																													2,080	13
10	Excavator, Cat 365	4	7	560		560	560	560	320	320						160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160			6,480	41
11	Roller/Compactor (Vibratory)	1	8	160		80	80	80	160	160	160	160	160	160	160																													1,360	9
12	Hydraulic Breaker	2	8	320		320	320	320																																				960	6
13	Truck Tractor	3	8	480		320	320	320	480	480	160	160	160	160	160																													2,720	17
14	Dump Truck	2	8	320		320	320	320	320	320																																		1,600	10
15	Crawler Loader	2	8	320		320	320	320	320	320																																		1,600	10
16	Front End Loader	2	8	320		320	320	320	320	320																																		1,600	10
17	Sheepsfoot Roller	2	8	320		320	320	320	320	320																																		1,600	10
18	Chipping Machine	2	8	320		320	320	320	320	320																																		1,600	10
19	Chain Saw 36"	4	8	640		640	640	640	640	640																																		3,200	20
20	Air Compressor, 260 cfm	1	8	160		160	160	160	160	160																																		800	5
21	Air Track Drill	1	8	160		160	160	160	160	160																																		800	5
22	Grout Pump	1	8	160		160	160	160	160	160																																		800	5
23	Hydraulic Jack	1	8	160		160	160	160	160	160																																		800	5
24	Air Pump	1	8	160		160	160	160	160	160																																		800	5
25	Asphalt Paver	2	8	320					320	320	320	320	320	320	320																													2,240	14
26	Tandem Rollers	2	8	320					320	320	320	320	320	320	320																													2,240	14
27	Pulley Grader System	2	8	320					320	320	320	320	320	320	320																													2,240	14
28	Gas Engine Vibrator	1	8	160												160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160			4,160	26
29	Concrete Pump	1	8	160												160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160			4,160	26
30	Hydraulic Crane (25 Ton)	2	8	320												320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320			8,320	52
31	Drill Rig with Augers	1	8	160												160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160			4,160	26
32	Cherry Pickers (boom lifts)	2	8	320												320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320			8,320	52
33	Backhoe Loader	1	8	160												160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160			4,160	26
34	Misc.	10	2	400		400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	200	200	14,800	93
	TOTAL Hours				1,920	8,720	8,720	8,720	7,120	7,120	2,640	2,640	2,640	2,640	2,640	2,480	2,480	2,480	2,480	2,480	2,480	2,480	2,480	2,480	2,480	2,480	2,480	2,480	2,480	2,480	2,480	2,480	2,480	2,480	2,480	2,480	2,480	2,480	2,480	2,480	2,480	1,000	1,000	122,000	Sum
	Ave. Daily Equip. Units				12	55	55	55	45	45	17	17	17	17	17	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	6	6		
	Ave. Daily Onsite Delivery Trucks				3	14	14	14	14	14	9	9	9	9	9	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	2	2		
	Total Ave. Daily Equip. Units & Delivery Vehicle Trips				15	69	69	69	59	59	26	26	26	26	26	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	8	8		

USCR Aluminum Cover w/ Landslides Mitigation Estimated Personnel

MANDAYS

			Mons 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39
Phase 1	Task 1 - Drain and Drying of Reservoir/Mobilization		238																																						
	Task 2 - Mobilization/Demolition of inlet/outlet & reservoir liner			294	294	294																																			
	Task 3 - Landslides Mitigation - Commence			340	340	340																																			
Phase 2	Task 1 - Landslides Mitigation - Complete						340	340																																	
	Task 2 - Installation of CAB, Asphalt Liner, and Vaults for Reservoir						520	520	520	520	520	520	520																												
Phase 3	Task 1 - Construction of Aluminum Cover													306	306	306	306	306	306	306	306	306	306	306	306	306	306	306	306	306	306	306	306	306	306	306	306	306	306		
Phase 4	Task 2 - Fill Reservoir and Landscaping																																							140	140
	Office and Supervision	WD/Month 20	100	320	320	320	320	320	160	160	160	160	160	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	80	80
	TOTAL WD/Month		338	954	954	954	1,180	1,180	680	680	680	680	680	546	546	546	546	546	546	546	546	546	546	546	546	546	546	546	546	546	546	546	546	546	546	546	546	546	546	220	220
	Ave. Daily Field Workers MDs		12	32	32	32	43	43	26	26	26	26	26	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	7	7
	Ave. Daily Office and Supervision		5	16	16	16	16	16	8	8	8	8	8	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	4	4
	Ave. Daily Total Personnel		17	48	48	48	59	59	34	34	34	34	34	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	11	11

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39
Phase 1	Task 1 - Drain and Drying of Reservoir/Mobilization																																							
	Task 2 - Mobilization/Demolition of inlet/outlet & reservoir liner																																							
	Task 3 - Landslides Mitigation - Commence																																							
Phase 2	Task 1 - Landslides Mitigation - Complete																																							
	Task 2 - Installation of CAB, Asphalt Liner, and Vaults for Reservoir																																							
Phase 3	Task 1 - Construction of Aluminum Cover																																							
Phase 4	Task 2 - Fill Reservoir and Landscaping																																							

Revised 4/22/2010

APPENDIX C
VIEWSHED ANALYSIS

VIEWSHED ANALYSIS

There is only one public view of Upper Stone Reservoir. It is provided from the Santa Monica Mountains Conservancy public overlook near Nicada Drive, which is located off of Mulholland Drive approximately approximately 0.75 miles east of the SCRC property entrance. There are no other public views of Upper Stone Reservoir. The remaining views are entirely private and are experienced by the adjacent property owners located along the surrounding ridgelines. However, not all of the adjacent properties have views of the reservoir surface because of the topography of the canyon and intervening terrain and vegetation. In order to assess the number, location, and limit of the views available to the reservoir surface, a viewshed analysis was conducted.

Methodology

As part of the viewshed analysis, Upper Stone Reservoir was divided into eight sections to determine which portions of the reservoir are visible from various viewpoints. Based on the topography of the canyon and using Geographic Information System (GIS) software, the views from surrounding properties to the upper reservoir were modeled. Those areas that have a view of the reservoir were shaded in red, as shown on in the section maps contained on the following pages. Model runs were prepared for all eight sections of the reservoir. This viewshed analysis did not account for vegetation, fencing, and other structures that may block a view from the property line to the reservoir section. Thus, the viewshed analysis was used to conservatively determine the properties likely to have some view of the surface of Upper Stone Reservoir and guide the selection of private viewpoints. The results of viewshed analysis are contained on the following pages.

Based on the viewshed analysis shown in the following pages, it was determined that no individual private property has an unobstructed view of the entire upper reservoir due to terrain. Vegetation and structures would further limit this view. Approximately 10 properties located northeast of Upper Stone Reservoir, which have views of the northwestern two sections of the reservoir, no properties along the eastern boundary of the SCRC have a view of the upper reservoir. Only 2 of the 12 properties have views of the middle section of the reservoir. These views are similar to the view from the public overlook shown in Chapter 3.1, Aesthetics. Approximately 13 properties located west-northwest of the reservoir see the eastern half of Upper Stone Reservoir, but none of these properties can see the southwestern portion of the reservoir and only about 4 properties have a view of some part of the northwest corner. However, the majority of views of Upper Stone Reservoir are experienced from those properties located generally west of the reservoir. Approximately 30 properties located in this general area have views of the southernmost portion of the reservoir, and many properties have a view of most of the reservoir. Approximately 8 properties have views of the southeast section of the reservoir, but only a couple of properties have views of the northeast corner.

Because the greatest concentration of properties with views of some portions of Upper Stone Reservoir is located to the west, this area was selected to represent a typical private view of Upper Stone Reservoir. The actual view of the reservoir, the canyon surrounding the reservoir, adjacent residential development, and distant background elements will vary depending on the exact location of the viewpoint surrounding Upper Stone Canyon. However, the selected viewpoint typifies views of Upper Stone Reservoir for the purposes of visual resource impact assessment.

Upper Stone Canyon Reservoir

Viewshed Analysis - Reservoir Section 1

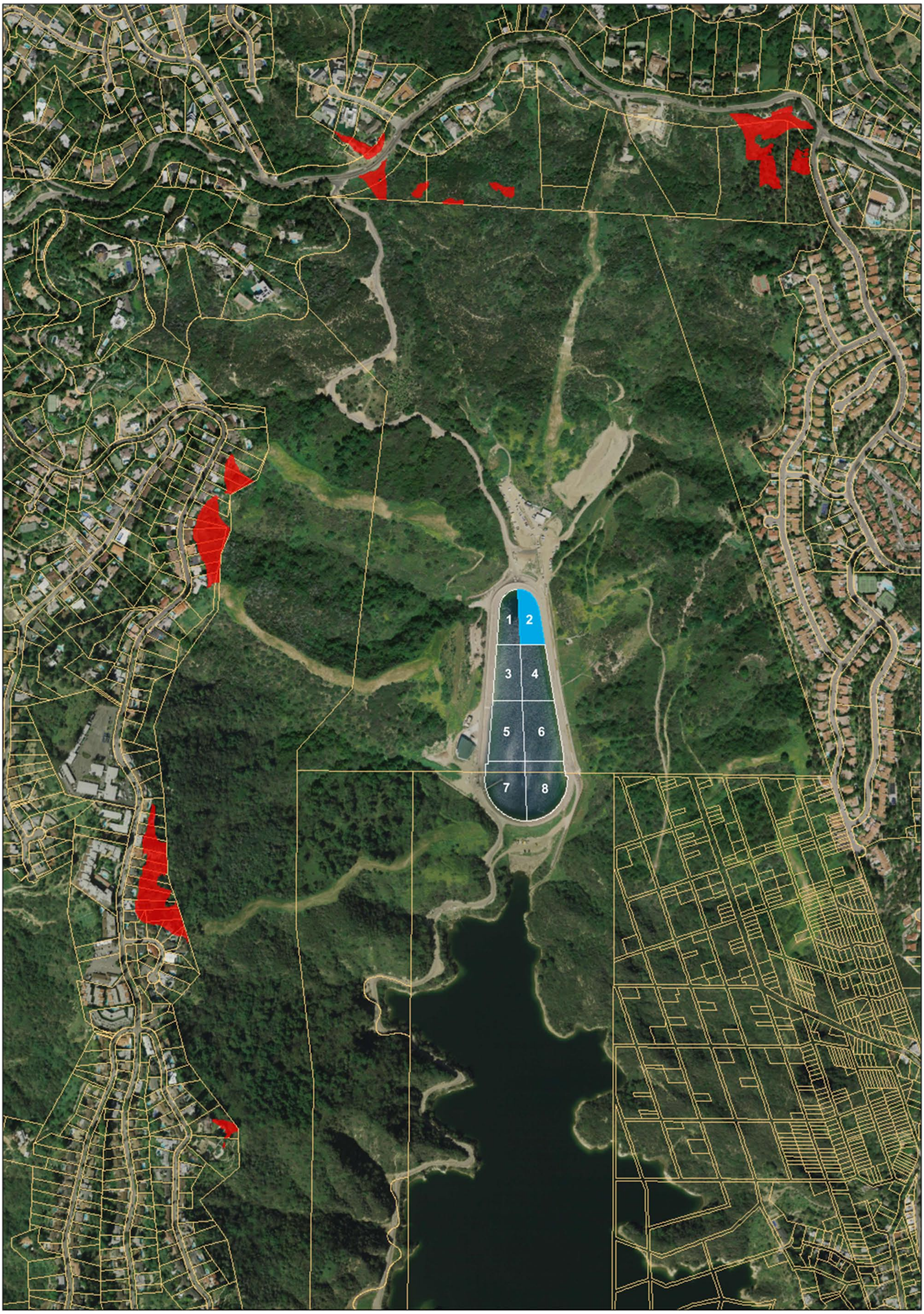
Areas with view of reservoir - section 1

Note: Areas are beyond DWP property

600 0 600 1,200 Feet

Source: Parcels, Los Angeles County Assessors; Aerial, GlobeXplorer - March 2008

Upper Stone Canyon Reservoir



Viewshed Analysis - Reservoir Section 2

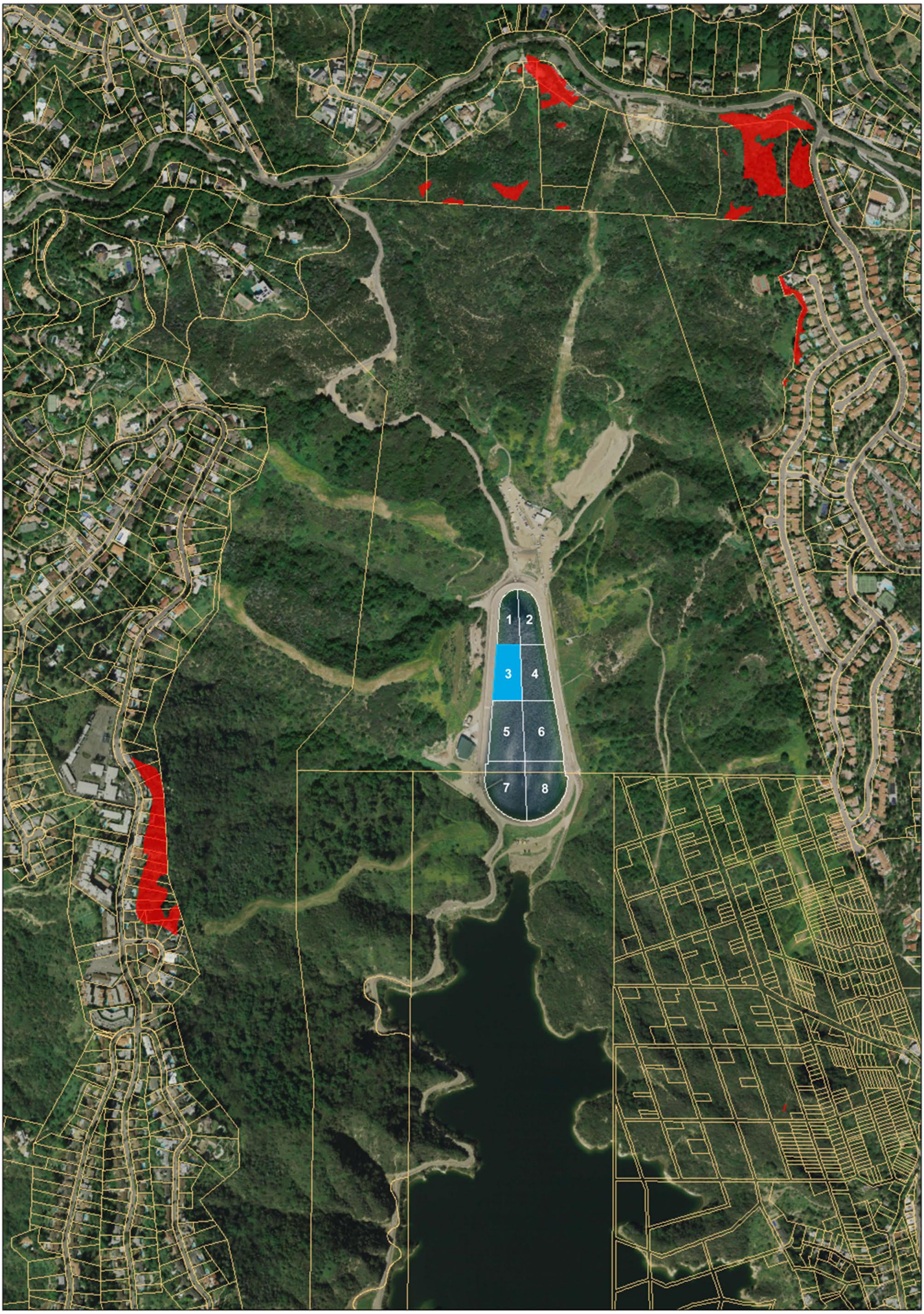
Areas with view of reservoir - section 2

Note: Areas are beyond DWP property

600 0 600 1,200 Feet

Source: Parcels, Los Angeles County Assessors; Aerial, GlobeXplorer - March 2008

Upper Stone Canyon Reservoir



Viewshed Analysis - Reservoir Section 3

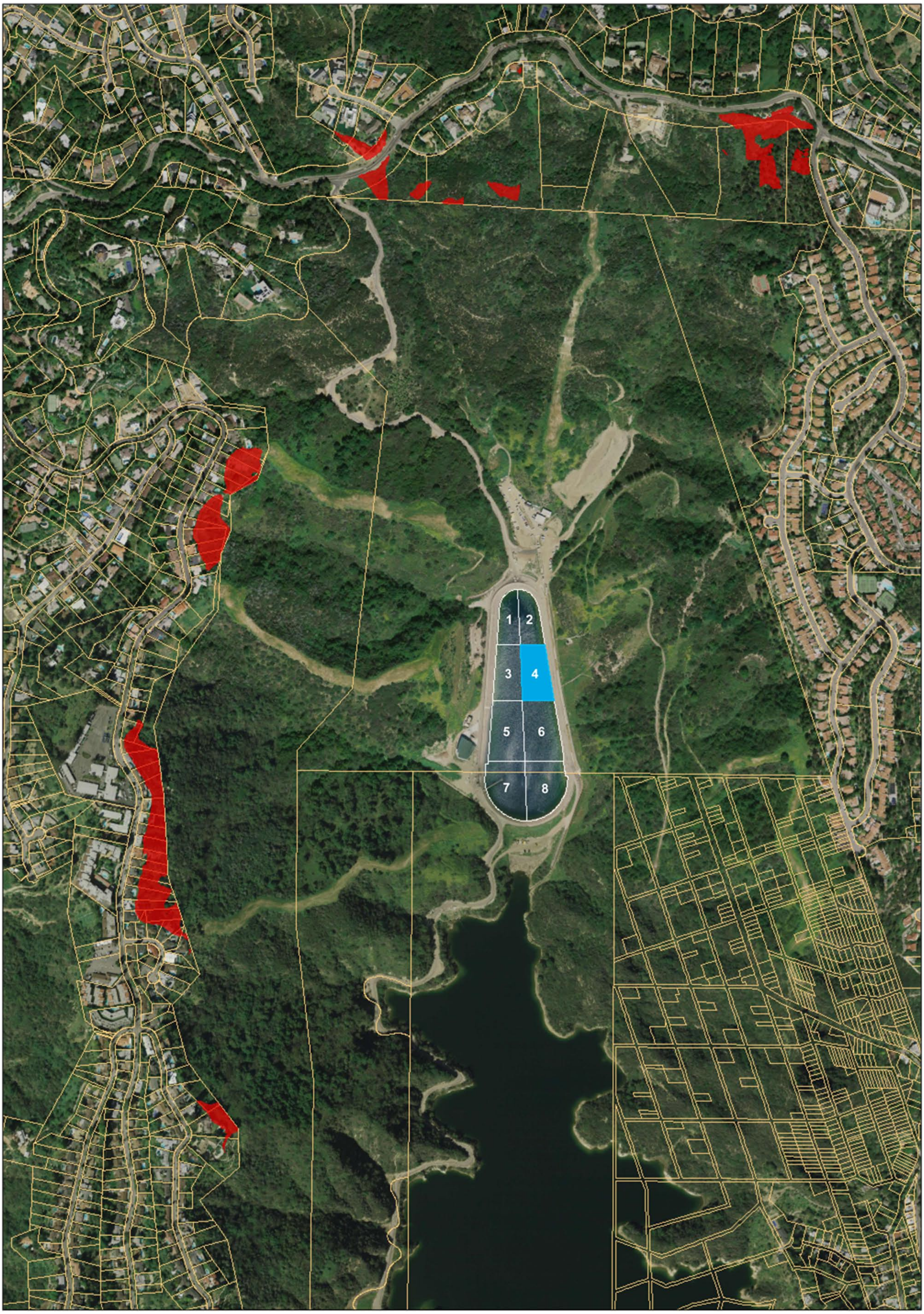
Areas with view of reservoir - section 3

Note: Areas are beyond DWP property

600 0 600 1,200 Feet

Source: Parcels, Los Angeles County Assessors; Aerial, GlobeXplorer - March 2008

Upper Stone Canyon Reservoir



Viewshed Analysis - Reservoir Section 4

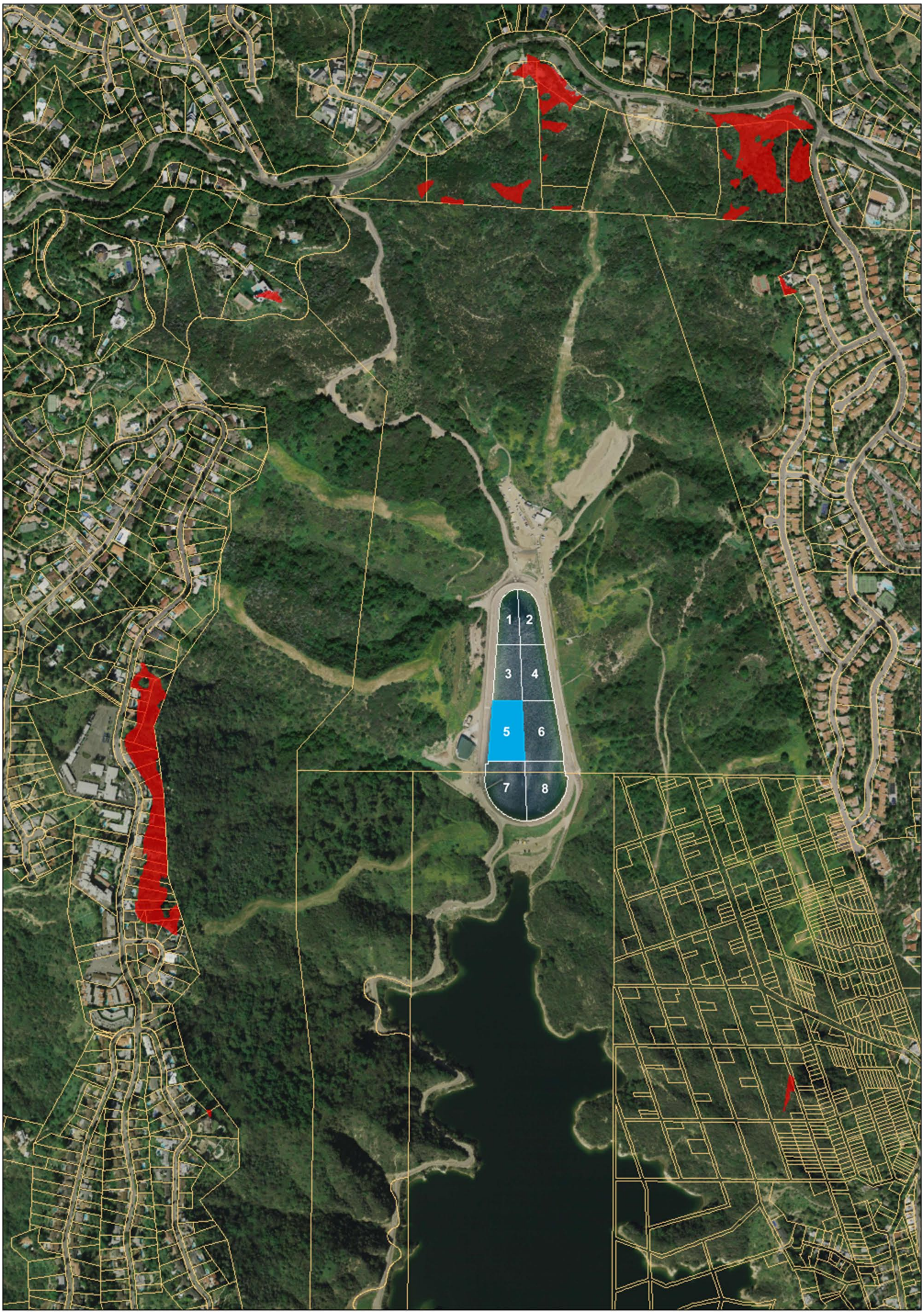
Areas with view of reservoir - section 4

Note: Areas are beyond DWP property

600 0 600 1,200 Feet

Source: Parcels, Los Angeles County Assessors; Aerial, GlobeXplorer - March 2008

Upper Stone Canyon Reservoir



Viewshed Analysis - Reservoir Section 5

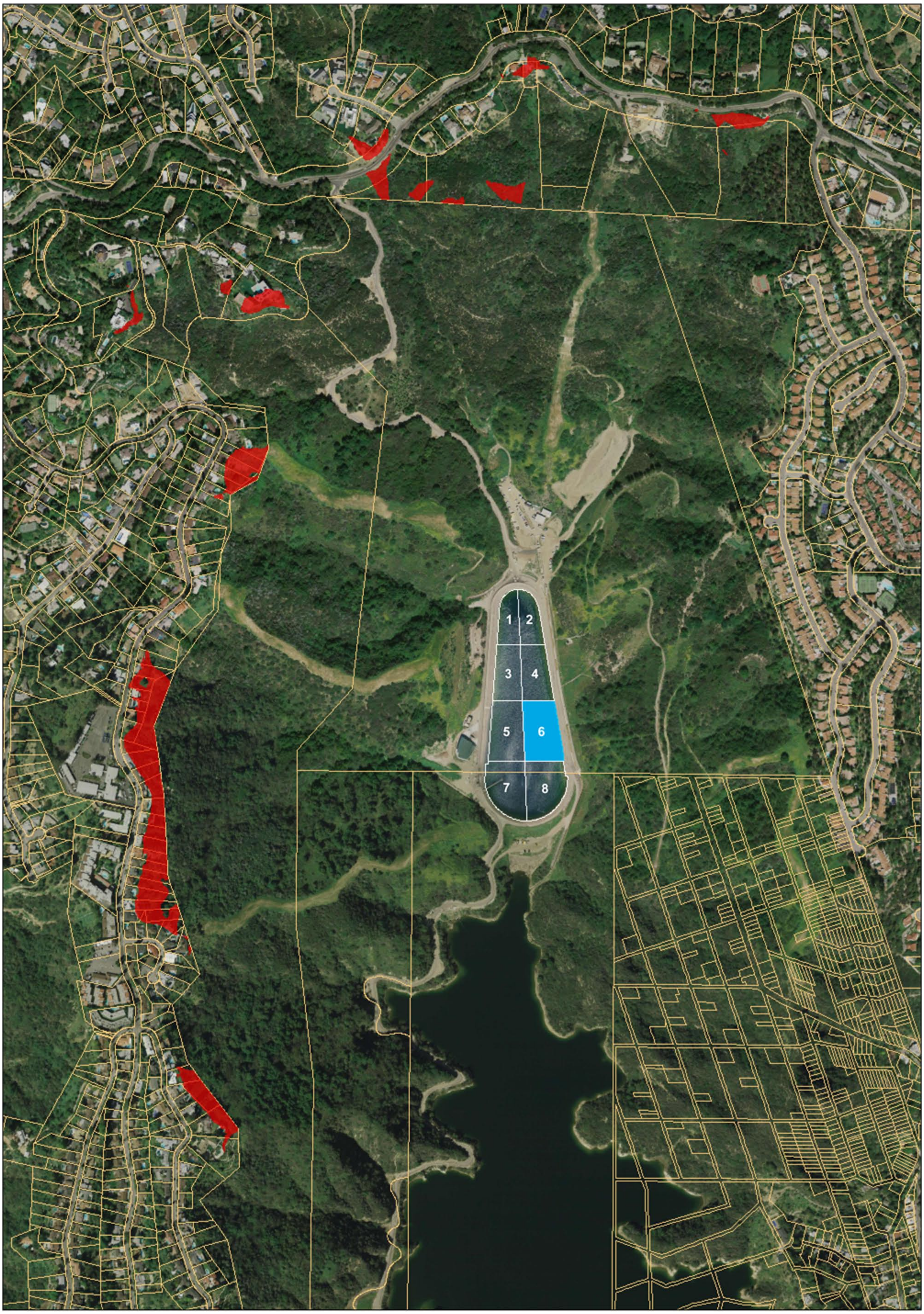
Areas with view of reservoir - section 5

Note: Areas are beyond DWP property

600 0 600 1,200 Feet

Source: Parcels, Los Angeles County Assessors; Aerial, GlobeXplorer - March 2008

Upper Stone Canyon Reservoir



Viewshed Analysis - Reservoir Section 6

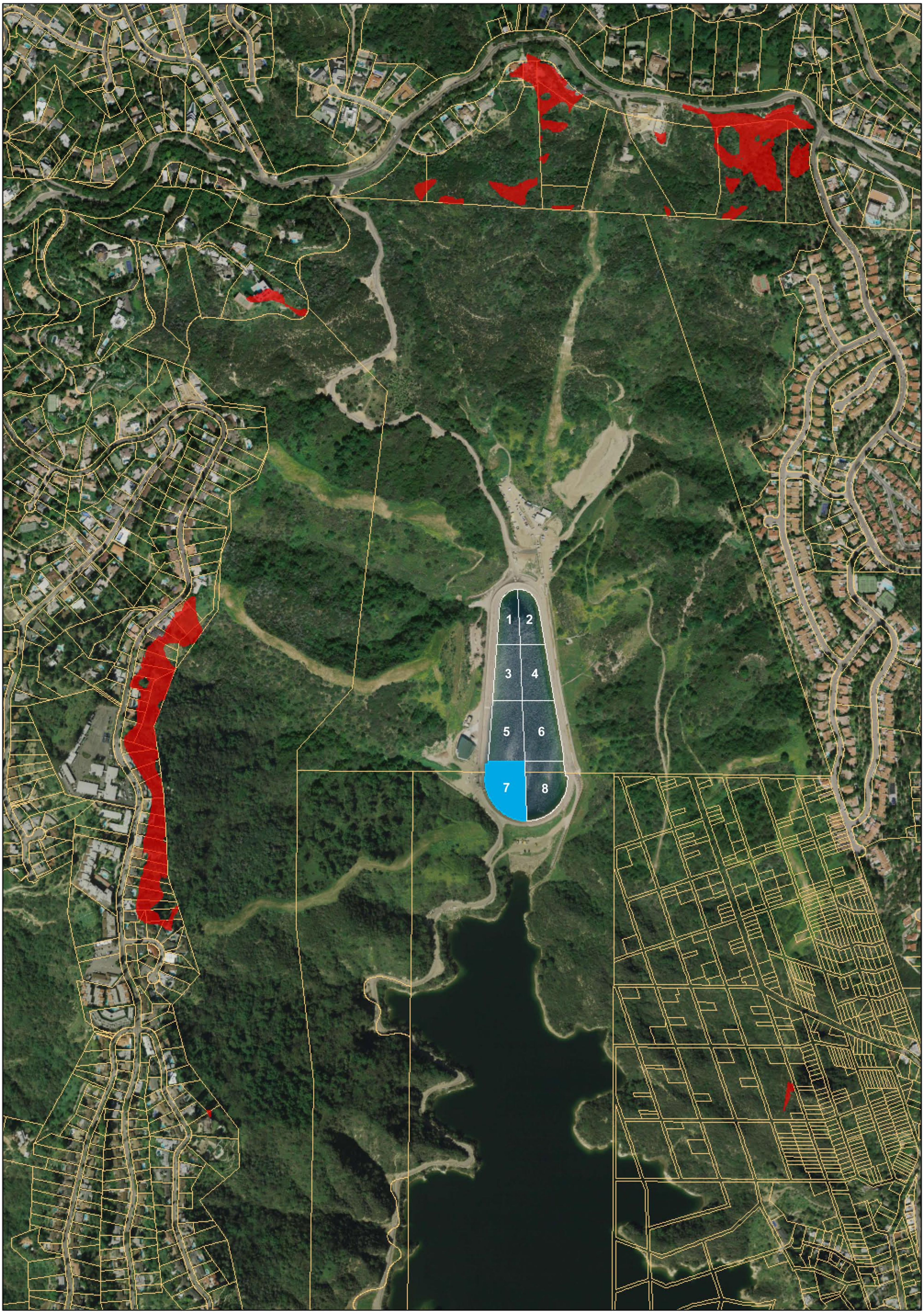
Areas with view of reservoir - section 6

Note: Areas are beyond DWP property

600 0 600 1,200 Feet

Source: Parcels, Los Angeles County Assessors; Aerial, GlobeXplorer - March 2008

Upper Stone Canyon Reservoir



Viewshed Analysis - Reservoir Section 7

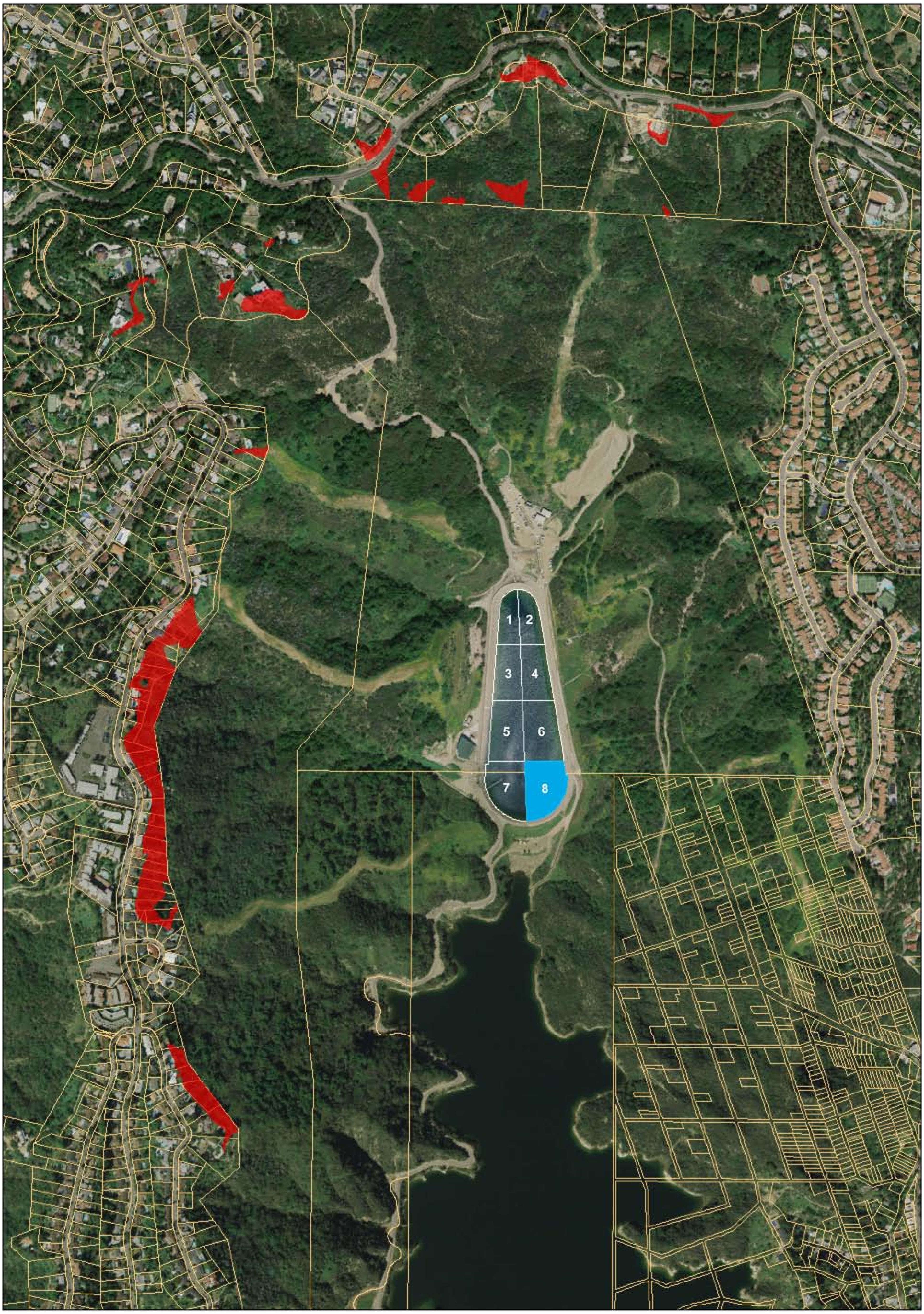
Areas with view of reservoir - section 7

Note: Areas are beyond DWP property

600 0 600 1,200 Feet

Source: Parcels, Los Angeles County Assessors; Aerial, GlobeXplorer - March 2008

Upper Stone Canyon Reservoir



Viewshed Analysis - Reservoir Section 8

Areas with view of reservoir - section 8

Note: Areas are beyond DWP property

600 0 600 1,200 Feet

Source: Parcels, Los Angeles County Assessors; Aerial, GlobeXplorer - March 2008

APPENDIX D

AIR QUALITY AND NOISE TECHNICAL REPORT

UPPER STONE CANYON RESERVOIR PROJECT AIR QUALITY AND NOISE IMPACT REPORT

taha
environmental planners

Prepared for

AECOM

Prepared by

TERRY A. HAYES ASSOCIATES INC.

March 2011
taha 2008-057

UPPER STONE CANYON RESERVOIR PROJECT

AIR QUALITY AND NOISE IMPACT REPORT

Prepared for

AECOM
515 S Flower Street, 9th Floor
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Culver City, CA 90232

March 3, 2011

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1.0 SUMMARY OF FINDINGS

Terry A. Hayes Associates Inc. has completed an air quality and noise impact analysis for the Upper Stone Canyon Reservoir Project. Key findings are listed below.

1.1 AIR QUALITY

- Regional construction emissions would result in significant and unavoidable nitrogen oxides (NO_X), inhalable particulate matter (PM_{10}), and fine particulate matter ($PM_{2.5}$) impacts for each alternative. Mitigation Measures **AQ1** through **AQ15** are recommended to reduce emissions.

- Localized construction emissions would result in significant and unavoidable PM_{10} and $PM_{2.5}$ impacts for each alternative. Mitigation Measures **AQ1** through **AQ15** are recommended to reduce emissions.

- Construction toxic air contaminant emissions would result in significant and unavoidable PM_{10} and $PM_{2.5}$ impacts under Alternatives 1 and 3. Mitigation Measures **AQ11** through **AQ15** are recommended to reduce emissions.

- Regional operational emissions would result in a less-than-significant impact and no mitigation is required.

- Localized operational emissions (off-site carbon monoxide concentrations) would result in a less-than-significant impact and no mitigation is required.

- Operational toxic air contaminant emissions would result in a less-than-significant impact and no mitigation measure is required.

- Odors would result in a less-than-significant impact and no mitigation measure is required.

- The proposed project would be consistent with the South Coast Air Quality Management District's 2007 Air Quality Management Plan and would result in a less-than-significant impact.

- Cumulative construction air quality emissions would result in a regionally significant impact as a result of NO_X, PM_{10}, and $PM_{2.5}$.

- Cumulative operational air quality emissions would result in a less-than-significant impact.

- The proposed project would not exceed 10,000 metric tons of carbon dioxide equivalents (CO_2e) per year, and would result in a less-than-significant global climate change impact.

1.2 NOISE AND VIBRATION

- Construction activity would result in a less-than-significant impact and no mitigation measure is required.

- On-site haul truck noise would result in a significant and unavoidable impact. Mitigation Measures **N1** and **N2** are recommended to reduce emissions.

- Operational activity (i.e., on-road vehicles, stationary equipment, loading equipment, and loading activity) would result in a less-than-significant impact and no mitigation measure is required.

- Construction and operational vibration impacts would result in a less-than-significant impact and no mitigation measure is required.

- Cumulative noise would result in a less-than-significant noise or vibration impact and no mitigation measure is required.

2.0 INTRODUCTION

2.1 PURPOSE

The purpose of this report is to evaluate the potential for air quality and noise impacts of the proposed Upper Stone Canyon Reservoir Water Quality Improvement Project. Potential air quality emissions and noise levels are analyzed for construction and operation of the proposed project. Mitigation measures for potentially significant impacts are recommended when appropriate to reduce air quality emissions and noise and vibration levels.

2.2 PROJECT DESCRIPTION

Alternative 1 – Buried Concrete Cover

The Upper Stone Reservoir is part of the 750-acre Stone Canyon Reservoir Complex (SCRC) located approximately 0.5 miles south of Mulholland Drive between Roscomare Road and Beverly Glen Boulevard. The site is owned and maintained by the Los Angeles Department of Water and Power (LADWP) and not currently accessible to the public. The site's main access point is a non-public road accessed via Mulholland Drive 1.5 miles east of the San Diego Freeway (I-405).

The site includes both the lower and upper reservoirs and is undeveloped with the exception of the reservoirs and related facilities. The Upper Stone Reservoir is approximately 1,600 feet long and 600 feet across at its widest southern end and 330 feet wide at its narrow northern end. The reservoir has a surface area of 14 acres at the high water elevation with a maximum depth of 49 feet and has a total storage capacity of 138 million gallons. The bottom and sides of the reservoir are paved with asphaltic concrete and the reservoir is enclosed entirely by an eight foot tall chain link fence and 15- to 20-foot wide paved maintenance road.

The project will occur entirely within SCRC boundaries that are surrounded by low to very low density residential uses. These uses are further buffered from the project site to the north by the Outer Corridor zone of the Mulholland Scenic Parkway Specific Plan Area which limits development and preserves the natural scenic vistas.

The proposed project involves the construction of a concrete roof over the currently uncovered Upper Stone Creek Reservoir. The project will require demolition of the existing reservoir bottom, side inlet structure, and outlet tower. A new reinforced concrete liner, concrete perimeter retaining wall, and a system of interior concrete sheer walls/columns would be required to support the new roof. Once complete, the LADWP site operations would involve maintenance of the reservoir pipelines and ancillary elements similar to the sites current level of activity.

In order to retain the natural character of the site, a maximum of three feet of soil will be placed over the new concrete roof that will include shallow rooting plant species typically found in the canyon environment. After project completion, public access intended for passive recreational activities, would be provided to the SCRC and maintained an operated by the Los Angeles Department of Recreation and Parks (LADRP) and/or the Santa Monica Mountains Conservancy. To support these uses restrooms, offices, informational displays, and maintenance storage would be constructed as would parking for approximately 25 vehicles all north of the Upper reservoir.

Project construction will consist of several phases: mobilization, demolition, landslide stabilization, excavation, reshaping of the reservoir, and landscaping. 62,000 cubic yards (CY) of soil is anticipated to be removed from the site. 64,000 CY of top soil will be imported to layer the concrete roof, while an additional 249,000 CY of soil will be stockpiled on-site and used during the construction process. The general truck route during the construction process will occur between I-405 and the north SCRC entrance off Mullholland Drive via Skirball Center Drive.

Alternative 2 – Floating Cover

Under the floating cover alternative, Upper Stone Reservoir would be retained in basically its existing configuration, and an approximately 700,000-square-foot flexible membrane floating cover would be installed over the entire water surface and anchored to the edge of the reservoir basin. The floating cover would be larger in area than the reservoir itself at the high-water elevation to allow the cover to float on the water surface as the level of the water in the reservoir rises and falls.

The floating cover would require minimal ground disturbance and a low level of construction activity. It would be the least expensive means of covering the Upper Stone Reservoir. The floating cover alternative would require that the reservoir be removed from service for the least amount of time compared to the proposed project. No landslide stabilization in the areas east of the reservoir would be included as part of the floating cover alternative because the cost of repairs and the downtime for the reservoir related to a potential landslide event are considered relatively low.

Construction of this alternative would take approximately one and a half years to complete, and is anticipated to start in 2014 and be completed in 2015. The general truck route during construction would be the same as the buried concrete alternative. Construction activities would consist of several tasks, including mobilization, demolition, construction of a new reservoir liner, and the installation of the floating cover itself. Each of these tasks would require truck deliveries and/or haul trips and the operation of heavy equipment, including excavators, graders, dozers, cranes, and various types of trucks.

Alternative 3 – Aluminum Cover

Under the aluminum cover alternative, Upper Stone Reservoir would be retained in its existing configuration, and a lightweight aluminum cover would be installed over the entire surface of the reservoir. The aluminum cover would consist of a standing seam roof, situated several feet above the water surface, and side walls. Although the reservoir liner and appurtenant facilities would be removed and replaced under this alternative, the reservoir would retain its existing shape and volume.

The aluminum cover would create less ground disturbance and require less construction activity than the proposed project. It would also be a less expensive means than the proposed project to cover the Upper Stone Reservoir water supply. The aluminum cover would require approximately three and a half years for construction compared to five and a half years for the proposed project. The aluminum cover would be less durable than the concrete cover, but still require relatively little maintenance or replacement of components.

Similar to the floating cover alternative, the aluminum cover alternative would not achieve the secondary objective of the proposed project to help restore the natural character of those portions of the canyon involved in the project. Likewise, public access to the SCRC would not be a component of the aluminum cover alternative.

The slopes immediately east of the reservoir have experienced several relatively recent and moderately significant landslides. If a similar landslide were to occur in this area after the implementation of the aluminum cover alternative, the structure could be severely damaged. Because of the relatively significant cost of the aluminum cover and because repairs necessitated by such a landslide event could remove the reservoir from service for a relatively long period and require major construction activity and investment, including entirely rebuilding the aluminum cover, the slopes east of the reservoir must be stabilized as part of this alternative, similar to the proposed project.

Construction of this alternative would take approximately three and a half years to complete. Construction activities would start in 2014 and be completed in 2018. The general truck route during construction would be the same as the buried concrete alternative. Construction of the aluminum cover alternative would consist of several tasks, including mobilization, demolition, landslide stabilization, construction of a new reservoir liner, and the installation of the aluminum cover itself. Each of these tasks would require truck deliveries and/or haul trips and the operation of heavy equipment, including excavators, graders, dozers, cranes, and various types of trucks.

3.0 AIR QUALITY

This section examines the degree to which the proposed project may cause significant adverse changes to air quality. Both short-term construction emissions occurring from activities, such as site grading and haul truck trips, and long-term effects related to the ongoing operation of the proposed project are discussed in this section. This analysis focuses on air pollution from two perspectives: daily emissions and pollutant concentrations. “Emissions” refer to the quantity of pollutants released into the air, measured in pounds per day (ppd). “Concentrations” refer to the amount of pollutant material per volumetric unit of air, measured in parts per million (ppm) or micrograms per cubic meter ($\mu g/m^3$).

3.1 POLLUTANTS & EFFECTS

Criteria air pollutants are defined as pollutants for which the federal and State governments have established ambient air quality standards for outdoor concentrations to protect public health. The federal and State standards have been set at levels above which concentrations could be harmful to human health and welfare. These standards are designed to protect the most sensitive persons from illness or discomfort. Pollutants of concern include carbon monoxide (CO), ozone (O_3), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter 2.5 microns or less in diameter ($PM_{2.5}$), particulate matter ten microns or less in diameter (PM_{10}), and lead (Pb). These pollutants are discussed below.

Carbon Monoxide. CO is a colorless and odorless gas formed by the incomplete combustion of fossil fuels. CO is emitted almost exclusively from motor vehicles, power plants, refineries, industrial boilers, ships, aircraft, and trains. In urban areas such as the project location, automobile exhaust accounts for the majority of CO emissions. CO is a non-reactive air pollutant that dissipates relatively quickly, so ambient CO concentrations generally follow the spatial and temporal distributions of vehicular traffic. CO concentrations are influenced by local meteorological conditions, primarily wind speed, topography, and atmospheric stability. CO from motor vehicle exhaust can become locally concentrated when surface-based temperature inversions are combined with calm atmospheric conditions, a typical situation at dusk in urban areas between November and February.[1] The highest levels of CO typically occur during the colder months of the year when inversion conditions are more frequent. In terms of health, CO competes with oxygen, often replacing it in the blood, thus reducing the blood’s ability to transport oxygen to vital organs. The results of excess CO exposure can be dizziness, fatigue, and impairment of central nervous system functions.

Ozone. O_3 is a colorless gas that is formed in the atmosphere when reactive organic gases (ROG), which includes volatile organic compounds (VOC), and nitrogen oxides (NO_X) react in the presence of ultraviolet sunlight. O_3 is not a primary pollutant; it is a secondary pollutant formed by complex interactions of two pollutants directly emitted into the atmosphere. The primary sources of ROG and NO_X, the components of O_3, are automobile exhaust and industrial sources. Meteorology and terrain play major roles in O_3 formation. Ideal conditions occur during summer and early autumn, on days with low wind speeds or stagnant air, warm temperatures, and cloudless skies. The greatest source of smog-producing gases is the automobile. Short-term exposure (lasting for a few hours) to O_3 at levels typically observed in Southern California can result in breathing pattern changes, reduction of breathing capacity,

[1] Inversion is an atmospheric condition in which a layer of warm air traps cooler air near the surface of the earth, preventing the normal rising of surface air.

increased susceptibility to infections, inflammation of the lung tissue, and some immunological changes.

Nitrogen Dioxide. NO_2, like O_3, is not directly emitted into the atmosphere but is formed by an atmospheric chemical reaction between nitric oxide (NO) and atmospheric oxygen. NO and NO_2 are collectively referred to as NO_X and are major contributors to O_3 formation. NO_2 also contributes to the formation of PM_{10}. High concentrations of NO_2 can cause breathing difficulties and result in a brownish-red cast to the atmosphere with reduced visibility. There is some indication of a relationship between NO_2 and chronic pulmonary fibrosis. Some increase of bronchitis in children (two and three years old) has also been observed at concentrations below 0.3 ppm.

Sulfur Dioxide. SO_2 is a colorless, pungent gas formed primarily by the combustion of sulfur-containing fossil fuels. Main sources of SO_2 are coal and oil used in power plants and industries. Generally, the highest levels of SO_2 are found near large industrial complexes. In recent years, SO_2 concentrations have been reduced by the increasingly stringent controls placed on stationary source emissions of SO_2 and limits on the sulfur content of fuels. SO_2 is an irritant gas that attacks the throat and lungs. It can cause acute respiratory symptoms and diminished ventilator function in children. SO_2 can also yellow plant leaves and erode iron and steel.

Particulate Matter. Particulate matter pollution consists of very small liquid and solid particles floating in the air, which can include smoke, soot, dust, salts, acids, and metals. Particulate matter also forms when gases emitted from industries and motor vehicles undergo chemical reactions in the atmosphere. $PM_{2.5}$ and PM_{10} represent fractions of particulate matter. Fine particulate matter, or $PM_{2.5}$, is roughly 1/28 the diameter of a human hair. $PM_{2.5}$ results from fuel combustion (e.g. motor vehicles, power generation, and industrial facilities), residential fireplaces, and wood stoves. In addition, $PM_{2.5}$ can be formed in the atmosphere from gases such as SO_2, NO_X, and VOC. Inhalable particulate matter, or PM_{10}, is about 1/7 the thickness of a human hair. Major sources of PM_{10} include crushing or grinding operations; dust stirred up by vehicles traveling on roads; wood burning stoves and fireplaces; dust from construction, landfills, and agriculture; wildfires and brush/waste burning; industrial sources; windblown dust from open lands; and atmospheric chemical and photochemical reactions.

$PM_{2.5}$ and PM_{10} pose a greater health risk than larger-size particles. When inhaled, these tiny particles can penetrate the human respiratory system's natural defenses and damage the respiratory tract. $PM_{2.5}$ and PM_{10} can increase the number and severity of asthma attacks, cause or aggravate bronchitis and other lung diseases, and reduce the body's ability to fight infections. Very small particles of substances, such as lead, sulfates, and nitrates can cause lung damage directly. These substances can be absorbed into the blood stream and cause damage elsewhere in the body. These substances can transport absorbed gases, such as chlorides or ammonium, into the lungs and cause injury. Whereas PM_{10} tends to collect in the upper portion of the respiratory system, $PM_{2.5}$ is so tiny that it can penetrate deeper into the lungs and damage lung tissues. Suspended particulates also damage and discolor surfaces on which they settle, as well as produce haze and reduce regional visibility.

Lead. Pb in the atmosphere occurs as particulate matter. Sources of lead include leaded gasoline; the manufacturers of batteries, paint, ink, ceramics, and ammunition; and secondary lead smelters. Prior to 1978, mobile emissions were the primary source of atmospheric lead. Between 1978 and 1987, the phase-out of leaded gasoline reduced the overall inventory of airborne lead by nearly 95 percent. With the phase-out of leaded gasoline, secondary lead smelters, battery recycling, and manufacturing facilities have become lead-emission sources of greater concern.

Prolonged exposure to atmospheric lead poses a serious threat to human health. Health effects associated with exposure to lead include gastrointestinal disturbances, anemia, kidney disease, and in severe cases, neuromuscular and neurological dysfunction. Of particular concern are low-level lead exposures during infancy and childhood. Such exposures are associated with decrements in neurobehavioral performance, including intelligence quotient performance, psychomotor performance, reaction time, and growth.

Toxic Air Contaminants. A substance is considered toxic if it has the potential to cause adverse health effects in humans. A toxic substance released into the air is considered a toxic air contaminant (TAC). TACs are identified by State and federal agencies based on a review of available scientific evidence. In the State of California, TACs are identified through a two-step process that was established in 1983 under the Toxic Air Contaminant Identification and Control Act. This two-step process of risk identification and risk management was designed to protect residents from the health effects of toxic substances in the air.

Greenhouse Gases. Greenhouse gas (GHG) emissions refer to a group of emissions that are generally believed to affect global climate conditions. The greenhouse effect compares the Earth and the atmosphere surrounding it to a greenhouse with glass panes. The glass panes in a greenhouse let heat from sunlight in and reduce the amount of heat that escapes. GHGs, such as carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O), keep the average surface temperature of the Earth close to 60 degrees Fahrenheit (°F). Without the greenhouse effect, the Earth would be a frozen globe with an average surface temperature of about 5°F.

In addition to CO_2, CH_4, and N_2O, GHGs include hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, and water vapor. Of all the GHGs, CO_2 is the most abundant pollutant that contributes to climate change through fossil fuel combustion. CO_2 comprised 83.3 percent of the total GHG emissions in California in 2002.[2] The other GHGs are less abundant but have higher global warming potential than CO_2. To account for this higher potential, emissions of other GHGs are frequently expressed in the equivalent mass of CO_2, denoted as CO_2e. The CO_2e of CH_4 and N_2O represented 6.4 and 6.8 percent, respectively, of the 2002 California GHG emissions. Other high global warming potential gases represented 3.5 percent of these emissions.[3] In addition, there are a number of human-made pollutants, such as CO, NO_X, non-methane VOC, and SO_2, that have indirect effects on terrestrial or solar radiation absorption by influencing the formation or destruction of other climate change emissions.

3.2 REGULATORY SETTING

Federal

United States Environmental Protection Agency. The Federal Clean Air Act (CAA) governs air quality in the United States. The United States Environmental Protection Agency (USEPA) is responsible for enforcing the CAA. USEPA is also responsible for establishing the National Ambient Air Quality Standards (NAAQS). NAAQS are required under the 1977 CAA and subsequent amendments. USEPA regulates emission sources that are under the exclusive

[2]California Environmental Protection Agency, *Climate Action Team Report to Governor Schwarzenegger and the Legislature*, March 2006, p. 11.
[3]*Ibid*.

authority of the federal government, such as aircraft, ships, and certain types of locomotives. USEPA has jurisdiction over emission sources outside State waters (e.g., beyond the outer continental shelf) and establishes various emission standards, including those for vehicles sold in States other than California. Automobiles sold in California must meet stricter emission standards established by CARB.

As required by the CAA, NAAQS have been established for seven major air pollutants: CO, NO_2, O_3, $PM_{2.5}$, PM_{10}, SO_2, and Pb. The CAA requires USEPA to designate areas as attainment, nonattainment, or maintenance (previously nonattainment and currently attainment) for each criteria pollutant based on whether the NAAQS have been achieved. The federal standards are summarized in **Table 3-1**. The USEPA has classified the South Coast Air Basin as maintenance for CO and nonattainment for O_3, $PM_{2.5}$, and PM_{10}.

State

California Air Resources Board. In addition to being subject to the requirements of CAA, air quality in California is also governed by more stringent regulations under the California Clean Air Act (CCAA). In California, the CCAA is administered by the California Air Resources Board (CARB) at the State level and by the air quality management districts and air pollution control districts at the regional and local levels. The CARB, which became part of the California Environmental Protection Agency in 1991, is responsible for meeting the State requirements of the CAA, administering the CCAA, and establishing the California Ambient Air Quality Standards (CAAQS). The CCAA, as amended in 1992, requires all air districts in the State to endeavor to achieve and maintain the CAAQS. CAAQS are generally more stringent than the corresponding federal standards and incorporate additional standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. CARB regulates mobile air pollution sources, such as motor vehicles. CARB is responsible for setting emission standards for vehicles sold in California and for other emission sources, such as consumer products and certain off-road equipment. CARB established passenger vehicle fuel specifications, which became effective in March 1996. CARB oversees the functions of local air pollution control districts and air quality management districts, which, in turn, administer air quality activities at the regional and county levels. The State standards are summarized in **Table 3-1**.

The CCAA requires CARB to designate areas within California as either attainment or nonattainment for each criteria pollutant based on whether the CAAQS have been achieved. Under the CCAA, areas are designated as nonattainment for a pollutant if air quality data shows that a State standard for the pollutant was violated at least once during the previous three calendar years. Exceedances that are affected by highly irregular or infrequent events are not considered violations of a State standard and are not used as a basis for designating areas as nonattainment. Under the CCAA, the Los Angeles County portion of the Basin is designated as a nonattainment area for O_3, $PM_{2.5}$, and PM_{10}, Nitrogen Oxide, and Lead.[4]

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[4]CARB, Area Designation Maps, available at http://www.arb.ca.gov/desig/adm/adm.htm, accessed June 16, 2010.

TABLE 3-1: STATE AND NATIONAL AMBIENT AIR QUALITY STANDARDS AND ATTAINMENT STATUS FOR THE SOUTH COAST AIR BASIN

Pollutant	Averaging Period	California		Federal	
		Standards	Attainment Status	Standards	Attainment Status
Ozone (O_3)	1-hour	0.09 ppm (180 μg/m^3)	Nonattainment	--	--
	8-hour	0.070 ppm (137 μg/m^3)	n/a	0.075 ppm (147 μg/m^3)	Nonattainment
Respirable Particulate Matter (PM_{10})	24-hour	50 μg/m^3	Nonattainment	150 μg/m^3	Nonattainment
	Annual Arithmetic Mean	20 μg/m^3	Nonattainment	--	--
Fine Particulate Matter ($PM_{2.5}$)	24-hour	--	--	35 μg/m^3	Nonattainment
	Annual Arithmetic Mean	12 μg/m^3	Nonattainment	15.0 μg/m^3	Nonattainment
Carbon Monoxide (CO)	8-hour	9.0 ppm (10 mg/m^3)	Attainment	9 ppm (10 mg/m^3)	Unclassified
	1-hour	20 ppm (23 mg/m^3)	Attainment	35 ppm (40 mg/m^3)	Unclassified
Nitrogen Dioxide (NO_2)	Annual Arithmetic Mean	0.030 ppm (57 μg/m^3)	Nonattainment	53 ppb (100 μg/m^3)	Unclassified
	1-hour	0.18 ppm (338 μg/m^3)	Nonattainment	100 ppb (188 μg/m^3)	n/a
Sulfur Dioxide (SO_2)	24-hour	0.04 ppm (105 μg/m^3)	Attainment	0.14 ppm (365 μg/m^3)	Attainment
	1-hour	0.25 ppm (655 μg/m^3)	Attainment	75 ppb (196 μg/m^3)	Attainment
Lead (Pb)	30-day average	1.5 μg/m^3	Nonattainment	--	--
	Calendar Quarter	--	--	0.15 μg/m^3	Attainment

n/a = not available
SOURCE: CARB, *Ambient Air Quality Standards*, and *attainment status*, September 8, 2010.

Local

South Coast Air Quality Management District. The 1977 Lewis Air Quality Management Act created the SCAQMD to coordinate air quality planning efforts throughout Southern California. This Act merged four county air pollution control agencies into one regional district to better address the issue of improving air quality in Southern California. Under the Act, renamed the Lewis-Presley Air Quality Management Act in 1988, the SCAQMD is the agency principally responsible for comprehensive air pollution control in the region. Specifically, the SCAQMD is responsible for monitoring air quality, as well as planning, implementing, and enforcing programs designed to attain and maintain State and federal ambient air quality standards in the district. Programs that were developed include air quality rules and regulations that regulate stationary sources, area sources, point sources, and certain mobile source emissions. The SCAQMD is also responsible for establishing stationary source permitting requirements and for ensuring that new, modified, or relocated stationary sources do not create net emission increases.

The SCAQMD monitors air quality within the project area. The SCAQMD has jurisdiction over an area of 10,743 square miles, consisting of Orange County; the non-desert portions of Los Angeles, Riverside, and San Bernardino counties; and the Riverside County portion of the Salton Sea Air Basin and Mojave Desert Air Basin. The Basin is a subregion of the SCAQMD and covers an area of 6,745 square miles. The Basin includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino counties. The Basin is bounded by the Pacific Ocean to the west; the San Gabriel, San Bernardino and San Jacinto mountains to the north and east; and the San Diego County line to the south (**Figure 3-1**).

Air Quality Management Plan. All areas designated as nonattainment under the CCAA are required to prepare plans showing how the area would meet the State air quality standards by its attainment dates. The AQMP is the SCAQMD plan for improving regional air quality. It addresses CAA and CCAA requirements and demonstrates attainment with State and federal ambient air quality standards. The AQMP is prepared by SCAQMD and the Southern California Association of Governments (SCAG). The AQMP provides policies and control measures that reduce emissions to attain both State and federal ambient air quality standards by their applicable deadlines. Environmental review of individual projects within the Basin must demonstrate that daily construction and operational emissions thresholds, as established by the SCAQMD, would not be exceeded. The environmental review must also demonstrate that individual projects would not increase the number or severity of existing air quality violations.

The 2007 AQMP was adopted by the SCAQMD on June 1, 2007. The 2007 AQMP proposes attainment demonstration of the federal $PM_{2.5}$ standards through a more focused control of SO_X, directly-emitted $PM_{2.5}$, and NO_X supplemented with VOC by 2015. The eight-hour ozone control strategy builds upon the $PM_{2.5}$ strategy, augmented with additional NO_X and VOC reductions to meet the standard by 2024. The 2007 AQMP also addresses several federal planning requirements and incorporates significant new scientific data, primarily in the form of updated emissions inventories, ambient measurements, new meteorological episodes, and new air quality modeling tools. The 2007 AQMP is consistent with and builds upon the approaches taken in the 2003 AQMP. However, the 2007 AQMP highlights the significant amount of reductions needed and the urgent need to identify additional strategies, especially in the area of mobile sources, to meet all federal criteria pollutant standards within the time frames allowed under the CAA.

LEGEND:

South Coast Air Basin

State of California

SOURCE: California Air Resources Board, State and Local Air Monitoring Network Plan, May 2008

Upper Stone Canyon Reservoir Project
Air Quality and Noise Impact Report

taha 2008-057

AECOM

FIGURE 3-1

SOUTH COAST AIR BASIN

Toxic Air Contaminants. The SCAQMD has a long and successful history of reducing air toxics and criteria emissions in the South Coast Air Basin (Basin). SCAQMD has an extensive control program, including traditional and innovative rules and policies. These policies can be viewed in the SCAQMD's *Air Toxics Control Plan for the Next Ten Years* (March 2000). To date, the most comprehensive study on air toxics in the Basin is the Multiple Air Toxics Exposure Study (MATES-III), conducted by the SCAQMD. The monitoring program measured more than 30 air pollutants, including both gases and particulates. The monitoring study was accompanied by a computer modeling study in which SCAQMD estimated the risk of cancer from breathing toxic air pollution throughout the region based on emissions and weather data. MATES-III found that the cancer risk in the region from carcinogenic air pollutants ranges from about 870 in a million to 1,400 in a million, with an average regional risk of about 1,200 in a million.

An addendum to the plan was completed in March 2004 that included a status update on the implementation of the various mobile and stationary source strategies. Revised projections were based on accomplishments thus far and a new inventory was included to reflect the updated 2003 Air Quality Management Plan.

Global Climate Change

In response to growing scientific and political concern with global climate change, California has recently adopted a series of laws to reduce emissions of GHGs into the atmosphere. In September 2002, Assembly Bill (AB) 1493 was enacted, requiring the development and adoption of regulations to achieve "the maximum feasible reduction of greenhouse gases" emitted by noncommercial passenger vehicles, light-duty trucks, and other vehicles used primarily for personal transportation in the State. California Governor Arnold Schwarzenegger announced, on June 1, 2005, through Executive Order S-3-05, the following GHG emission reduction targets: by 2010, reduce GHG emissions to 2000 levels; by 2020, reduce GHG emissions to 1990 levels; and by 2050, reduce GHG emissions to 80 percent below 1990 levels.

In response to the Executive Order, the Secretary of the California Environmental Protection Agency created the Climate Action Team (CAT), which, in March 2006, published the *Climate Action Team Report to Governor Schwarzenegger and the Legislature* (2006 CAT Report). The 2006 CAT Report identifies a recommended list of strategies that the State could pursue to reduce climate change GHG emissions. These are strategies that could be implemented by various State agencies to ensure that the Governor's targets are met and can be met with existing authority of the State agencies.

Assembly Bill 32. In September 2006, Governor Arnold Schwarzenegger signed the California Global Warming Solutions Act of 2006, also known as AB 32, into law. AB 32 focuses on reducing GHG emissions in California, and requires the CARB to adopt rules and regulations that would achieve greenhouse gas emissions equivalent to statewide levels in 1990 by 2020. To achieve this goal, AB 32 mandates that the CARB establish a quantified emissions cap, institute a schedule to meet the cap, implement regulations to reduce statewide GHG emissions from stationary sources, and develop tracking, reporting, and enforcement mechanisms to ensure that reductions are achieved. Because the intent of AB 32 is to limit 2020 emissions to the equivalent of 1990, it is expected that the regulations would affect many existing sources of GHG emissions and not just new general development projects. Senate Bill (SB) 1368, a companion bill to AB 32, requires the California Public Utilities Commission and the California Energy Commission to establish GHG emission performance standards for the generation of electricity. These standards will also apply to power that is generated outside of California and imported into the State.

AB 32 charges the CARB with the responsibility to monitor and regulate sources of GHG emissions in order to reduce those emissions. On June 1, 2007, the CARB adopted three discrete early action measures to reduce GHG emissions. These measures involved complying with a low carbon fuel standard, reducing refrigerant loss from motor vehicle air conditioning maintenance, and increasing methane capture from landfills.[5] On October 25, 2007, the CARB tripled the set of previously approved early action measures. The approved measures include improving truck efficiency (i.e., reducing aerodynamic drag), electrifying port equipment, reducing perfluorocarbons from the semiconductor industry, reducing propellants in consumer products, promoting proper tire inflation in vehicles, and reducing sulfur hexaflouride emission from the non-electricity sector. The CARB has determined that the total statewide aggregated greenhouse gas 1990 emissions level and 2020 emissions limit is 427 million metric tons of CO_2e. The 2020 target reductions are currently estimated to be 174 million metric tons of CO_2e.

The CARB AB 32 Scoping Plan contains the main strategies to achieve the 2020 emissions cap. The Scoping Plan was developed by the CARB with input from the Climate Action Team and proposes a comprehensive set of actions designed to reduce overall carbon emissions in California, improve the environment, reduce oil dependency, diversify energy sources, and enhance public health while creating new jobs and improving the State economy. The GHG reduction strategies contained in the Scoping Plan include direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, and market-based mechanisms such as a cap-and-trade system. The measures in the Scoping Plan adopted by the Board will be developed and put in place by 2012.

The CARB has also developed the greenhouse gas mandatory reporting regulation, which required reporting beginning on January 1, 2008 pursuant to requirements of AB 32. The regulations require reporting for certain types of facilities that make up the bulk of the stationary source emissions in California. The regulation language identifies major facilities as those that generate more than 25,000 metric tons of CO_2 per year. Cement plants, oil refineries, electric generating facilities/providers, co-generation facilities, and hydrogen plants and other stationary combustion sources that emit more than 25,000 metric tons of CO_2 per year, make up 94 percent of the point source CO_2 emissions in California.

CEQA Guideline Amendments. California Senate Bill (SB) 97 required the Governor's Office of Planning and Research (OPR) to develop CEQA guidelines "for the mitigation of greenhouse gas emissions or the effects of greenhouse gas emissions." The CEQA Guideline amendments provide guidance to public agencies regarding the analysis and mitigation of the effects of GHG emissions in CEQA documents. Noteworthy revisions to the CEQA Guidelines include:

- Lead agencies should quantify all relevant GHG emissions and consider the full range of project features that may increase or decrease GHG emissions as compared to the existing setting;
- Consistency with the CARB Scoping Plan is not a sufficient basis to determine that a project's GHG emissions would not be cumulatively considerable;

[5] California Air Resources Board, *Proposed Early Action Measures to Mitigate Climate Change in California*, April 20, 2007.

- A lead agency may appropriately look to thresholds developed by other public agencies, including the CARB's recommended CEQA thresholds;
- To qualify as mitigation, specific measures from an existing plan must be identified and incorporated into the project. General compliance with a plan, by itself, is not mitigation;
- The effects of GHG emissions are cumulative and should be analyzed in the context of CEQA's requirements for cumulative impact analysis; and
- Given that impacts resulting from GHG emissions are cumulative, significant advantages may result from analyzing such impacts on a programmatic level. If analyzed properly, later projects may tier, incorporate by reference, or otherwise rely on the programmatic analysis.

Senate Bill 375. California Senate Bill (SB) 375, passed September 30, 2008, provides a means for achieving AB 32 goals through regulation of cars and light trucks. SB 375 aligns three critical policy areas of importance to local government: (1) regional long-range transportation plans and investments; (2) regional allocation of the obligation for cities and counties to zone for housing; and (3) a process to achieve greenhouse gas emissions reductions targets for the transportation sector. SB 375 establishes a process for CARB to develop the GHG emissions reductions targets for each region (as opposed to individual local governments or households). CARB must take certain factors into account before setting the targets, such as considering the likely reductions that will result from actions to improve the fuel efficiency of the Statewide fleet and regulations related to the carbon content of fuels (low carbon fuels). CARB must also convene a Regional Targets Advisory Committee, which includes representation from the League of California Cities, California State Association of Counties, metropolitan planning organizations, developers, planning organizations and other stakeholder groups. Furthermore, before setting the targets for each region, CARB is required to exchange technical information with the Metropolitan Planning Organizations (MPOs) for that region and with the affected air district. SB 375 provides that the MPOs may recommend a target for its region.

SB 375 relies upon regional planning processes already underway in the 17 MPOs in the State to accomplish its objectives. The provisions related to GHG emissions only apply to the MPOs in the State, which includes 37 of the 58 counties. Most notably, the measure requires the MPO to prepare a Sustainable Communities Strategy (SCS) within the Regional Transportation Plan (RTP), which sets forth a vision for growth for the region taking into account the transportation, housing, environmental, and economic needs of the region. The SCS is the blueprint by which the region will meet its GHG emissions reductions target if there is a feasible way to do so.

SB 375 indirectly addresses another longstanding issue: single purpose State agencies. The new law will require the cooperation of CARB, the California Transportation Commission (CTC), the California Department of Transportation (Caltrans) and the State Department of Housing and Community Development (HCD). For example, SB 375 takes a first step to counter this problem by connecting the Regional Housing Needs Allocation (RHNA) to the transportation planning process. While these State agencies will be involved in setting the targets and adopting new guidelines, local governments and the MPOs will not only provide input into setting the targets, but will serve as the lead on implementation. Member cities and counties working through their MPOs are tasked with development of the new integrated regional planning and transportation strategies designed to meet the GHG targets.

SB 375 also includes a provision that applies to all regional transportation planning agencies in the State that recognizes the rural contribution towards reducing GHGs. More specifically, the bill requires regional transportation agencies to consider financial incentives for cities and counties that have rural areas or farmland, for the purposes of, for example, transportation investments for the preservation and safety of the city street or county road system, farm to market, and interconnectivity transportation needs. An MPO or county transportation agency shall also consider financial assistance for counties to address countywide service responsibilities in counties that contribute towards the GHG emissions reductions targets by implementing policies for growth to occur within their cities.

SB 375 uses California Environmental Quality Act (CEQA) streamlining as an incentive to encourage residential projects, which help achieve AB 32 goals to reduce GHG emissions. Cities and counties that find the CEQA streamlining provisions attractive have the opportunity (but not the obligation) to align their planning decisions with the decisions of the region.

SB 375 provides more certainty for local governments and developers by framing how AB 32's reduction goal from transportation for cars and light trucks will be established. It should be noted, however, that SB 375 does not prevent CARB from adopting additional regulations under its AB 32 authority. However, based on the degree of consensus around SB 375 and early indications from CARB, such actions are not anticipated in the foreseeable future.[6]

CARB Guidance. The CARB has published draft guidance for setting interim GHG significance thresholds (October 24, 2008). The guidance is the first step toward developing the recommended Statewide interim thresholds of significance for GHG emissions that may be adopted by local agencies for their own use. The guidance does not attempt to address every type of project that may be subject to CEQA, but instead focuses on common project types that are responsible for substantial GHG emissions (i.e., industrial, residential, and commercial projects). The CARB believes that thresholds in these important sectors will advance climate objectives, streamline project review, and encourage consistency and uniformity in the CEQA analysis of GHG emissions throughout the State.

SCAQMD Guidance. The SCAQMD has convened a GHG CEQA Significance Threshold Working Group to provide guidance to local lead agencies on determining significance for GHG emissions in their CEQA documents. Members of the working group include government agencies implementing CEQA and representatives from various stakeholder groups that will provide input to the SCAQMD staff on developing GHG CEQA significance thresholds. On December 5, 2008, the SCAQMD Governing Board adopted the staff proposal for an interim GHG significance threshold for projects where the SCAQMD is lead agency. The SCAQMD has not adopted guidance for CEQA projects under other lead agencies.

Green LA Action Plan. The City of Los Angeles has issued guidance promoting green building to reduce GHG emissions. The goal of the Green LA Action Plan (Plan) is to reduce greenhouse gas emissions 35 percent below 1990 levels by 2030.[7] The Plan identifies objectives and actions designed to make the City a leader in confronting global climate change. The measures would reduce emissions directly from municipal facilities and operations, and create a framework to address City-wide GHG emissions. The Plan lists various focus areas in which to implement GHG reduction strategies. Focus areas listed in the Plan include energy, water, transportation, land use, waste, port, airport, and ensuring that changes to the local

[6] American Planning Association, California Chapter, *Analysis of SB 375*, http://www.calapa.org/-en/cms/?2841, accessed March 30, 2009.

[7] City of Los Angeles, *Green LA: An Action Plan to Lead the Nation in Fighting Global Warming*, May 2007.

climate are incorporated into planning and building decisions. The Plan discusses City goals for each focus area, as follows:

Energy

- Increase the generation of renewable energy;
- Encourage the use of mass transit;
- Develop sustainable construction guidelines;
- Increase City-wide energy efficiency; and
- Promote energy conservation.

Water

- Decrease per capita water use to reduce electricity demand associated with water pumping and treatment.

Transportation

- Power the City vehicle fleet with alternative fuels; and
- Promote alternative transportation (e.g., mass transit and rideshare).

Other Goals

- Create a more livable City through land use regulations;
- Increase recycling, reducing emissions generated by activity associated with the Port of Los Angeles and regional airports;
- Create more City parks, promoting the environmental economic sector; and
- Adapt planning and building policies to incorporate climate change policy.

The City adopted an ordinance to establish a green building program in April 2008. The ordinance establishes green building requirements for projects involving 50 or more dwelling units. The Green Building Program was established to reduce the use of natural resources, create healthier living environments and minimize the negative impacts of development on local, regional, and global ecosystems. The program addresses the following five areas:

- Site: location, site planning, landscaping, storm water management, construction and demolition recycling
- Water Efficiency: efficient fixtures, wastewater reuse, and efficient irrigation
- Energy and Atmosphere: energy efficiency, and clean/renewable energy
- Materials and Resources: materials reuse, efficient building systems, and use of recycled and rapidly renewable materials
- Indoor Environmental Quality: improved indoor air quality, increased natural lighting, and thermal comfort/control

3.3 EXISTING AIR QUALITY

3.3.1 Air Pollution Climatology

The project site is located within the Los Angeles County portion of the Basin. Ambient pollution concentrations recorded in Los Angeles County are among the highest in the four counties comprising the Basin.

The Basin is in an area of high air pollution potential due to its climate and topography. The general region lies in the semi-permanent high pressure zone of the eastern Pacific, resulting in a mild climate tempered by cool sea breezes with light average wind speeds. The Basin experiences warm summers, mild winters, infrequent rainfalls, light winds, and moderate humidity. This usually mild climatological pattern is interrupted infrequently by periods of extremely hot weather, winter storms, or Santa Ana winds. The Basin is a coastal plain with connecting broad valleys and low hills, bounded by the Pacific Ocean to the west and high mountains around the rest of its perimeter. The mountains and hills within the area contribute to the variation of rainfall, temperature, and winds throughout the region.

The Basin experiences frequent temperature inversions. Temperature typically decreases with height. However, under inversion conditions, temperature increases as altitude increases, thereby preventing air close to the ground from mixing with the air above it. As a result, air pollutants are trapped near the ground. During the summer, air quality problems are created due to the interaction between the ocean surface and the lower layer of the atmosphere. This interaction creates a moist marine layer. An upper layer of warm air mass forms over the cool marine layer, preventing air pollutants from dispersing upward. Additionally, hydrocarbons and NO_2 react under strong sunlight, creating smog. Light, daytime winds, predominantly from the west, further aggravate the condition by driving air pollutants inland, toward the mountains. During the fall and winter, air quality problems are created due to CO and NO_2 emissions. CO concentrations are generally worse in the morning and late evening (around 10:00 p.m.). In the morning, CO levels are relatively high due to cold temperatures and the large number of cars traveling. High CO levels during the late evenings are a result of stagnant atmospheric conditions trapping CO in the area. Since CO emissions are produced almost entirely from automobiles, the highest CO concentrations in the Basin are associated with heavy traffic. NO_2 concentrations are also generally higher during fall and winter days.

3.3.2 Local Climate

The mountains and hills within the Basin contribute to the variation of rainfall, temperature, and winds throughout the region. Within the project site and its vicinity, the average wind speed, as recorded at the West Los Angeles Wind Monitoring Station, is approximately 1.2 miles per hour, with calm winds occurring approximately 19 percent of the time. Wind in the vicinity of the project site predominately blows from the southwest.

The annual average temperature in the project area is 76°F.[8] The project area experiences an average winter temperature of approximately 67°F and an average summer temperature of approximately 85°F. Total precipitation in the project area averages approximately 16 inches annually. Precipitation occurs mostly during the winter and relatively infrequently during the summer. Precipitation averages approximately ten inches during the winter, approximately four

[8]Western Regional Climate Center, Historical Climate Information, available at http://www.wrcc.dri.edu, accessed June 16, 2010.

inches during the spring, approximately two inches during the fall, and less than one inch during the summer.[9]

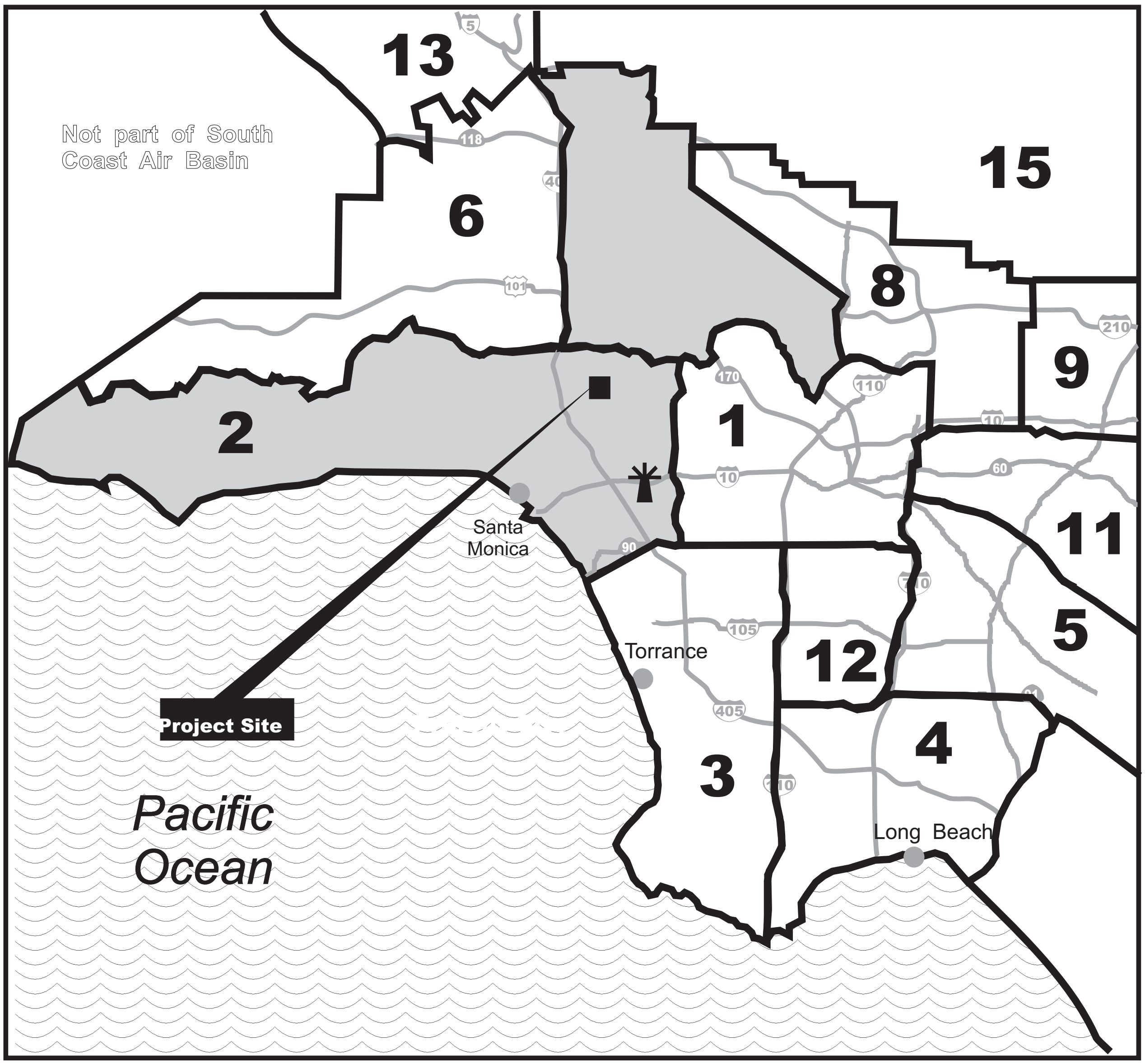
3.3.3 Air Monitoring Data

The SCAQMD monitors air quality conditions at 37 locations throughout the Basin. The project site is located in SCAQMD's Coastal Air Monitoring Subregion, which is served by the Los Angles VA Hospital Monitoring Station, and located approximately five miles southwest of the project site in the City of Los Angeles (**Figure 3-2**). Historical data from the Los Angles VA Hospital Monitoring Station was used to characterize existing conditions in the vicinity of the project area. Criteria pollutants monitored at the Los Angles VA Hospital Monitoring Station include O_3, CO, and NO_2. However, the Los Angles VA Hospital Monitoring Station did not monitor SO_2, $PM_{2.5}$ and PM_{10}. The next most representative monitoring stations located in the project vicinity, that measure the remaining criteria pollutants, include the Reseda Monitoring Station located seven miles northwest of the project area and the Burbank Monitoring Station located nine miles from the project site in the adjacent San Fernando Valley Subregion. Historical data from these stations was used to characterize existing $SO_{2,}$ $PM_{2.5}$ and PM_{10} levels.

Table 3-2 shows pollutant levels, the State and federal standards, and the number of exceedances recorded at the Los Angles VA Hospital, Reseda, and Burbank Monitoring Stations compared to the highest figures derived from both the Coastal General Forecast Area and San Fernando Valley Forecast Area from 2007 to 2009, The SCAQMD has only provided information through 2008.

The CAAQS for the criteria pollutants are also shown in the table. As **Table 3-2** indicates, criteria pollutants CO, NO_2, and SO_2 did not exceed the CAAQS during the 2007 to 2009 period. When compared to the Forecast area the selected monitoring stations recorded average concentrations of the CO, NO_2, and SO_2 that were higher than the average concentrations of the Forecast Area's monitoring areas. The one-hour State standard for O_3 was exceeded two to three times during this period. The 24-hour State standard for PM_{10} was exceeded one to five days while the annual State standard for $PM_{2.5}$ was also exceeded between the 2007 to 2009 period. When compared to the Forecast Area, the selected monitoring stations recorded concentrations of O_3 and PM_{10} that were lower than the Forecast Areas.

[9] *Ibid*.



LEGEND: Los Angeles VA Monitoring Station   Burbank Monitoring Station

Air Monitoring Areas in Los Angeles County:

1. Central Los Angeles
2. Northwest Coastal
3. Southwest Coastal
4. South Coastal
5. Southeast Los Angeles County
6. West San Fernando Valley
7. East San Fernando Valley
8. West San Gabriel Valley
9. East San Gabriel Valley
10. Pomona/Walnut Valley (not shown)
11. South San Gabriel Valley
12. South Central Los Angeles
13. Santa Clarita Valley
15. San Gabriel Mountains

Approx. Scale

N

0 3.0 6.0 9.0 Miles

SOURCE: South Coast Air Quality Management District Air Monitoring Areas Map, 1999

taha

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AECOM

FIGURE 3-2

AIR MONITORING LOCATIONS

TABLE 3-2: 2007-2009 AMBIENT AIR QUALITY DATA IN PROJECT VICINITY

Pollutant	Pollutant Concentration & Standards	Los Angeles VA, and Burbank Monitoring Stations /a/			Coastal General Forecast Area Forecast Area /a,b/		
		Number of Days Above State Standard					
		2007	2008	2009 /c/	2007	2008	2009 /d/
Ozone	Maximum 1-hr Concentration (ppm) Days > 0.09 ppm (State 1-hr standard) Days > 0.12 ppm (Federal 1-hr standard)	0.12 2 0	0.11 3 0	0.13 6 1	0.10 2 0	0.10 3 0	-
Carbon Monoxide	Maximum 1-hr concentration (ppm) Days > 20 ppm (State1-hr standard) Maximum 8-hr concentration (ppm) Days > 9.0 ppm (State 8-hr standard)	3 0 2 0	3 0 2 0	n/a n/a 2 0	3.5 0 2.5 0	3.3 0 2.3 0	- -
Nitrogen Dioxide	Maximum 1-hr Concentration (ppm) Days > 0.18 ppm (State 1-hr standard)	0.08 0	0.09 0	0.08 0	0.09 0	0.10 0	-
PM_{10}	Maximum 24-hr concentration (μg/m^3) Days > 50 μg/m^3 (State 24-hr standard)	109 11	66 7	76 10	86 5	56 1	-
$PM_{2.5}$	Annual Arithmetic Mean (μg/m^3) Exceed State Standard (12 μg/m^3)	17 Yes	14 Yes	15 Yes	15 Yes	14 Yes	-
Sulfur Dioxide	Maximum 24-hr Concentration (ppm) Days > 0.04 ppm (State 24-hr standard)	0.01 0	0.01 0	<0.01 0	<0.01 0	<0.01 0	-

/a/ The Coastal General Forecast Area includes the Northwest Los Angeles County, Southwest Los Angeles County, South Los Angeles County, North Orange County, and Central Orange County air monitoring areas of the SCAQMD.
/b/ An average of the maximum concentration of each criteria pollutant of the air monitoring areas of the Coastal General Forecast Area was used to represent maximum concentrations in the Coastal General Forecast Area.
/c/ 2009 data provided by CARB Air Quality Data Statistics. West Los Angeles VA Hospital air monitoring station data was used for each pollutant, except SO_2, $PM_{2.5}$, and PM_{10} which used the Burbank air monitoring station. Available at http://www.arb.ca.gov/adam/index.html, accessed July 20, 2010.
/d/ 2009 data was not available whent his report was completed.
SOURCE: SCAQMD, Historical Data by Year, available at http://www.aqmd.gov/smog/historicaldata.htm, accessed July 20, 2010.

3.3.4 Sensitive Receptors

Some land uses are considered more sensitive to changes in air quality than others, depending on the population groups and the activities involved. CARB has identified the following typical groups who are most likely to be affected by air pollution: children under 14, the elderly over 65 years of age, athletes, and people with cardiovascular and chronic respiratory diseases. According to the SCAQMD, sensitive receptors include residences, schools, playgrounds, child care centers, athletic facilities, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes.

As shown in **Figure 3-3**, sensitive receptors near the project site and along the intended truck route and upslope of the canyon that include:

- A single-family residential home located on Antelo Place, set back approximately 650 feet west of the project site
- Single-family residences located on Roscomare Road Place, set back approximately 650 feet west of the project site
- Single-family residences upslope from the project site
- Single-family residences located along the haul route

- Roscomare Road Elementary School, approximately 2,150 feet upslope of the project site.
- American Jewish University located along the haul route
- Stephen S. Wise Elementary School located along the haul route

The above sensitive receptors represent the nearest sensitive receptors with the potential to be impacted by air emissions. Additional sensitive receptors are located in the surrounding community and may be impacted by air emissions.

3.4 METHODOLOGY AND SIGNIFICANCE CRITERIA

3.4.1 Methodology

Construction

This air quality analysis is consistent with the methods described in the SCAQMD *CEQA Air Quality Handbook* (1993 edition), as well as the updates to the *CEQA Air Quality Handbook*, as provided on the SCAQMD website.[10]

The localized construction analysis followed guidelines published by the SCAQMD in the Localized Significance Methodology for CEQA Evaluations (SCAQMD Localized Significance Threshold (LST) Guidance Document).[11] In January 2005, the SCAQMD supplemented the SCAQMD LST Guidance Document with Sample Construction Scenarios for Projects Less than Five Acres in Size.

Assumptions used for the construction calculations are as follows:

Alternative 1 – Buried Concrete Cover

Phase 1: Reservoir Draining, Mobilization, Reservoir Demolition, and Landslide Stabilization
- Duration: 4 months
- Demolition Amount: 9,000 cubic yards (CY) of debris
- On-site Workers: 17 to 48
- Full-time Operating Equipment: 12 during mobilization to 69 during concurrent stabilization
- Haul Trucks: 79 trips per day

Phase 2: Landslide Stabilization, Sub-Grade Preparation, and Reservoir Rough Shaping
- Duration: 12 months
- On-site Workers: 28 to 67
- Full-time Operating Equipment: 39 to 67
- Haul Trucks: 49 trips per day
- Volume to be Excavated: 212,000 CY of soil during sub-grade preparation; 118,500 CY of soil during reservoir bottom reshaping

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[11]SCAQMD, *Localized Significance Methodology*, June 2003, revised July 2008.

LEGEND:

Upper Stone Canyon Reservoir

Sensitive Receptor Locations

1. Single-Family Residence	**5**. Single-Family Residences
2. Single-Family Residences	**6**. Roscomare Road Elementary
3. Single-Family Residences	**7**. American Jewish University
4. Single-Family Residences	**8**. Stephen S. Wise Elementary School

APPROX. SCALE
0 395 790 1,580 2,370 FEET

SOURCE: TAHA, 2011

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FIGURE 3-3

AIR QUALITY SENSITIVE RECEPTOR LOCATIONS

Phase 4: Backfilling and Landscaping
- Duration: 2 months
- On-site Workers: 47
- Full-time Operating Equipment: 16
- Haul Trucks: 163 trips per day

Phase 5: Recreation Improvements
- Duration: 3 months
- On-site Workers: 12
- Full-time Operating Equipment: 4
- Haul Trucks: 4 trips on any day

Alternative 2 – Floating Cover

Phase 1: Reservoir Draining, Mobilization, and Reservoir Demolition
- Duration: 4 months
- Demolition Amount: 9,000 cubic yards (CY) of debris
- On-site Workers: 17 to 23
- Full-time Operating Equipment: 15 during mobilization to 37 during demolition
- Haul Trucks: 34 trips per day

Phase 2: Construction of Asphalt Reservoir Liner
- Duration: 7 months
- On-site Workers: 34
- Full-time Operating Equipment: 31
- Haul Trucks: 14 trips per day

Phase 3: Installation of Floating Cover
- Duration: 6 months
- On-site Workers: 20
- Full-time Operating Equipment: 11
- Haul Trucks: 1 trip per day

Alternative 3 – Aluminum Cover

Phase 1: Reservoir Draining, Mobilization, Reservoir Demolition, and Landslide Stabilization
- Duration: 4 months
- Demolition Amount: 9,000 cubic yards (CY) of debris
- On-site Workers: 17 to 48
- Full-time Operating Equipment: 15 during mobilization to 69 during concurrent stabilization
- Haul Trucks: 79 trips per day

Phase 2: Landslide Stabilization and Construction of Asphalt Reservoir Liner
- Duration: 7 months
- On-site Workers: 24 to 49
- Full-time Operating Equipment: 26 to 59
- Haul Trucks: 60 trips per day

Phase 3: Aluminum Cover Construction

- Duration: 26 months
- On-site Workers: 27
- Full-time Operating Equipment: 20
- Haul Trucks: 4 trips per day

Phase 4: Replanting Landslide Stabilization Areas

- Duration: 2 months
- On-site Workers: 11
- Full-time Operating Equipment: 8
- Haul Trucks: 2 trips per day

Phase 5: Solar Panel Installation

- Duration: 7 months
- On-site Workers: 35
- Full-time Operating Equipment: 4
- Haul Trucks: 3 trips per day

Health Risk Assessment

A health risk assessment (HRA) was completed using emissions factors from EMFAC2007 and OFFROAD2007 for haul truck and on-site heavy equipment emissions, respectively. AERMOD dispersion modeling software was used to determine the concentrations of diesel particulate matter generated from haul truck trips and heavy equipment used in and around the project site.

The HRA was prepared based on emissions from haul trucks and diesel-powered construction equipment. The first step was to calculate the mass emissions from these sources. Construction activity would generate 140,364 truck trips under Alternative 1, 16,640 truck trips under Alternative 2, and 43,468 truck trips under Alternative 3. On-road truck emissions were calculated based on the haul route from the project site to I-405 Freeway and emission rates from the EMFAC2007 model. It was assumed that each truck would idle on the project site for 5 minutes, and the idle emission rate was also obtained from the EMFAC2007 model. Equipment emissions were obtained from the OFFROAD model.

The truck and equipment emission rates were input into the AERMOD dispersion model to obtain annual exposure concentrations. The model is a steady state Gaussian plume model for estimating ground level impacts from point, area, and volume sources in simple and complex terrain. The model offers additional flexibility by allowing the user to assign initial vertical and lateral dispersion parameters for stationary sources. Truck emissions were modeled based on SCAQMD Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis (August 2003). Idle emissions were treated as an area source with a five-meter release height. On-road emissions along the haul route were input as a line source with a release height of five meters.

Operations

EMFAC2007 was used to calculate operational mobile source emissions. EMFAC2007 is the latest emission inventory model for motor vehicles operating on roads in California. This model reflects the CARB's current understanding of how vehicles travel and how much they pollute.

The EMFAC2007 model can be used to show how California motor vehicle emissions have changed over time and are projected to change in the future.

Greenhouse Gas Emissions

For the purpose of this analysis, GHG emissions were quantified from construction and mobile sources from operations of the facility. GHG emissions were estimated using the same methodology presented above for construction and operational emissions.

3.4.2 Significance Criteria

The following are the significance criteria SCAQMD has established to determine project impacts.

Construction Phase Significance Criteria

The proposed project would have a significant impact if:

- Daily regional construction emissions were to exceed SCAQMD construction emissions thresholds for VOC, NO_X, CO, SO_X, $PM_{2.5}$, or PM_{10}, as presented in **Table 3-3**;
- Localized concentrations of CO exceed the one-hour standard of 20 ppm or the eight-hour standard of 9.0 ppm;
- Localized concentrations of NO_2 exceed the one-hour standard of 0.18 ppm;
- Localized concentrations of $PM_{2.5}$ or PM_{10} exceed 10.4 μg/m_3;
- The proposed project would generate TAC emissions that generate a health risk that exceeds ten persons in one million; and/or
- The proposed project would create an odor nuisance.

TABLE 3-3: SCAQMD DAILY CONSTRUCTION EMISSIONS THRESHOLDS

Criteria Pollutant	Regional Emissions (Pounds Per Day)
Volatile Organic Compounds (VOC)	75
Nitrogen Oxides (NO_X)	100
Carbon Monoxide (CO)	550
Sulfur Oxides (SO_X)	150
Fine Particulates ($PM_{2.5}$)	55
Particulates (PM_{10})	150

SOURCE: SCAQMD, 2010.

Operations Phase Significance Criteria

The proposed project would have a significant impact if:

- Daily operational emissions were to exceed SCAQMD operational emissions thresholds for VOC, NO_X, CO, SO_X, $PM_{2.5}$, or PM_{10}, as presented in **Table 3-4**;

TABLE 3-4: SCAQMD DAILY OPERATIONAL EMISSIONS THRESHOLDS	
Criteria Pollutant	**Pounds Per Day**
Volatile Organic Compounds (VOC)	55
Nitrogen Oxides (NO_X)	55
Carbon Monoxide (CO)	550
Sulfur Oxides (SO_X)	150
Fine Particulates ($PM_{2.5}$)	55
Particulates (PM_{10})	150
SOURCE: SCAQMD, 2010.	

- Project-related traffic causes CO concentrations at study intersections to violate the CAAQS for either the one- or eight-hour period. The CAAQS for the one- and eight-hour periods are 20 ppm and 9.0 ppm, respectively;
- The proposed project would generate significant emissions of TACs;
- The proposed project would create an odor nuisance; and/or
- The proposed project would not be consistent with the AQMP.

Greenhouse Gas Significance Criteria

The significance threshold is based on the methodologies recommended by the CAPCOA January 2008 *CEQA and Climate Change* white paper. CAPCOA conducted an analysis of various approaches and significance thresholds, ranging from a zero threshold (all projects are cumulatively considerable) to a high of 40,000 to 50,000 metric tons of CO_2e per year. For example, an approach assuming a zero threshold and compliance with AB 32 2020 targets would require all discretionary projects to achieve a 33 percent reduction from projected "business-as-usual" emissions to be considered less than significant. A zero threshold approach could be considered on the basis that climate change is a global phenomenon, and not controlling small source emissions would potentially neglect a major portion of the GHG inventory. However, the CEQA Guidelines also recognize that there may be a point where a project's contribution, although above zero, would not be a considerable contribution to the cumulative impact (CEQA Guidelines, Section 15130 (a)). Therefore, a threshold of greater than zero is considered more appropriate for the analysis of GHG emissions under CEQA.

Another method would use a quantitative threshold of greater than 900 metric tons CO_2e per year based on a market capture approach that requires mitigation for greater than 90 percent of likely future discretionary development. This threshold would generally correspond to office projects of approximately 35,000 square feet, retail projects of approximately 11,000 square feet, or supermarket space of approximately 6,300 square feet. Another potential threshold would be the 10,000 metric tons standard used by the Market Advisory Committee for inclusion in a GHG Cap and Trade System in California. A 10,000 metric ton significance threshold would correspond to the GHG emissions of approximately 550 residential units, 400,000 square feet of office space, 120,000 square feet of retail, and 70,000 square feet of supermarket space. This threshold would capture roughly half of new residential or commercial development. 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."

The SCAQMD has adopted GHG significance thresholds for projects where the SCAQMD is lead agency but not for general development. The Bay Area Air Quality Management District (BAAQMD) has adopted a threshold of 1,100 metric tons of CO_2e per year or 4.6 metric tons of

CO_2e per service population (residents and employees) per year. These thresholds were specifically developed based on the meteorological and transit characteristics of the BAAQMD region (e.g., higher transit than the SCAQMD region). The BAAQMD thresholds are not considered representative of the SCAQMD region.

Because the majority of emissions would result from construction activity, it was determined that the most conservative (i.e., lowest) thresholds, suggested by CAPCOA, would not be appropriate for the proposed project. Similarly, the 900-ton threshold was also determined to be too conservative for general development in the South Coast Air Basin. Consequently, the threshold of 10,000 metric tons CO_2e is used as a quantitative benchmark for significance. A project's contribution to cumulative impacts to global climate change is considered cumulatively considerable if the project would generate 10,000 metric tons CO_2e per year.

3.5 ENVIRONMENTAL IMPACTS

3.5.1 Construction Phase

Regional Impacts

Construction of the proposed project has the potential to create air quality impacts through the use of heavy-duty construction equipment and through vehicle trips generated by construction workers traveling to and from the project site. Fugitive dust emissions would primarily result from demolition and site preparation (e.g., excavation) activities. NO_X emissions would primarily result from the use of construction equipment. The assessment of construction air quality impacts considers each of these potential sources. Construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of operation and, for dust, the prevailing weather conditions.

It is mandatory for all construction projects in the Basin to comply with SCAQMD Rule 403 for Fugitive Dust. Specific Rule 403 control requirements include, but are not limited to, applying water in sufficient quantities to prevent the generation of visible dust plumes, applying soil binders to uncovered areas, reestablishing ground cover as quickly as possible, utilizing a wheel washing system to remove bulk material from tires and vehicle undercarriages before vehicles exit the project site, and maintaining effective cover over exposed areas. Compliance with Rule 403 would reduce $PM_{2.5}$ and PM_{10} emissions associated with construction activities by approximately 61 percent.[12]

Alternative 1 – Buried Concrete Cover

Table 3-5 shows the estimated daily emissions associated with each construction phase. Daily $NO_{X,}$ PM_{10}, and $PM_{2.5}$ emissions would exceed the SCAQMD regional threshold, and regional construction emissions would result in a significant impact without mitigation.

[12]SCAQMD, *Overview – Fugitive Dust Mitigation Measure Tables*, April 2007.

TABLE 3-5: ALTERNATIVE 1 (BURIED CONCRETE COVER) ESTIMATED DAILY CONSTRUCTION EMISSIONS - UNMITIGATED

Construction Phase	Pounds Per Day					
	VOC	NO_X	CO	SO_X	$PM_{2.5}$ /a/	PM_{10} /a/
Phase 1	48	378	209	1	64	251
Phase 2	44	321	192	1	62	252
Phase 3	25	178	119	1	55	238
Phase 4	26	220	123	1	56	260
Phase 5	7	47	36	<1	16	69
Maximum Regional Total	48	378	209	1	64	260
Regional Significance Threshold	**75**	**100**	**550**	**150**	**55**	**150**
Exceed Threshold?	No	Yes	No	No	Yes	Yes

/a/ Emissions for fugitive dust were adjusted to account for a 61 percent control efficiency associated with SCAQMD Rule 403.
SOURCE: TAHA, 2011 (Appendix C).

Alternative 2 - Floating Cover

Under the Floating Cover Alternative, the reservoir would be retained and LADWP would install a flexible membrane floating cover over the entire surface of the reservoir that would be secured to the edge of the reservoir. It is anticipated that construction activities would start in 2014 and be completed in 2015. The first phase of construction would consist of reservoir draining, mobilization, and reservoir demolition. The second phase of construction would consist of the construction of asphalt reservoir liner. The third phase of construction would consist of the installation of the floating cover. **Table 3-6** shows the estimated daily emissions associated with each construction phase. Daily NO_X, PM_{10}, and $PM_{2.5}$ emissions would exceed the SCAQMD regional thresholds, and regional construction emissions would result in a significant impact without mitigation.

TABLE 3-6: ALTERNATIVE 2 (FLOATING COVER) ESTIMATED DAILY CONSTRUCTION EMISSIONS - UNMITIGATED

Construction Phase	Pounds Per Day					
	VOC	NO_X	CO	SO_X	$PM_{2.5}$ /a/	PM_{10} /a/
Phase 1	21	180	84	<1	55	239
Phase 2	20	152	85	<1	55	238
Phase 3	6	37	28	<1	2	4
Maximum Regional Total	21	180	85	<1	55	239
Regional Significance Threshold	**75**	**100**	**550**	**150**	**55**	**150**
Exceed Threshold?	No	Yes	No	No	Yes	Yes

/a/ Emissions for fugitive dust were adjusted to account for a 61 percent control efficiency associated with SCAQMD Rule 403.
SOURCE: TAHA, 2011 (Appendix C).

Alternative 3 - Aluminum Cover

Under the Aluminum Cover Alternative, the reservoir would be retained in its existing configuration and LADWP would install a lightweight aluminum cover over the entire surface of the reservoir. Construction of the proposed project would take approximately two years to complete. It is anticipated that construction activities would start in 2014 and be completed in 2018. The first phase of construction would consist of reservoir draining, mobilization, reservoir demolition, and landslide stabilization. The second phase of construction would consist of further landslide stabilization, and construction of asphalt reservoir liner. The third phase of construction would consist of the construction of the aluminum cover. The fourth phase would consist of replanting landslide stabilization areas. The fifth phase would consist of solar panel installation. **Table 3-7** shows the estimated daily emissions associated with each construction phase. Daily NO_X, PM_{10}, and $PM_{2.5}$ emissions would exceed the SCAQMD regional thresholds, and regional construction emissions would result in a significant impact without mitigation.

TABLE 3-7: ALTERNATIVE 3 (ALUMINUM COVER) ESTIMATED DAILY CONSTRUCTION EMISSIONS - UNMITIGATED

Construction Phase	Pounds Per Day					
	VOC	**NO_X**	**CO**	**SO_X**	**$PM_{2.5}$ /a/**	**PM_{10} /a/**
Phase 1	48	396	201	1	65	253
Phase 2	44	336	195	1	63	250
Phase 3	15	115	62	<1	5	7
Phase 4	5	33	19	<1	2	4
Phase 5	2	7	14	<1	1	3
Maximum Regional Total	48	396	201	1	65	253
Regional Significance Threshold	**75**	**100**	**550**	**150**	**55**	**150**
Exceed Threshold?	No	Yes	No	No	Yes	Yes

/a/ Emissions for fugitive dust were adjusted to account for a 61 percent control efficiency associated with SCAQMD Rule 403.
SOURCE: TAHA, 2011 (Appendix C).

Localized Impacts

Localized construction concentrations were modeled using the USEPA AERMOD dispersion model. Per SCAQMD guidance, the model used regulatory default options and urban dispersion. The model runs included terrain data to account for the varied topography at the project site.

Alternative 1 – Buried Concrete Cover

The maximum localized construction concentrations for the Alternative 1 of the proposed project are presented in **Table 3-8**. Localized $PM_{2.5}$ and PM_{10} concentrations would exceed the SCAQMD significance thresholds, and would result in a significant impact without mitigation.

TABLE 3-8: ALTERNATIVE 1 (BURIED CONCRETE COVER) LOCALIZED CONSTRUCTION EMISSIONS - UNMITIGATED

Pollutant	Estimated Emissions (lbs/day)	Concentration at nearest sensitive receptor	Significance Threshold	Significant Impact?
$PM_{2.5}$	60	46 ug/m^3	10.4 ug/m^3	Yes
PM_{10}	246	212 ug/m^3	10.4 ug/m^3	Yes
NO_2	28	0.04 ppm	0.18 ppm	No
CO (1-Hour)	155	0.4 ppm	20 ppm	No
CO (8-Hour)	155	0.1 ppm	9 ppm	No
SOURCE: TAHA, 2011 (Appendix D).				

Alternative 2 - Floating Cover

The maximum localized construction concentrations for the Alternative 2 of the proposed project are presented in **Table 3-9**. Localized $PM_{2.5}$ and PM_{10} concentrations would exceed the SCAQMD significance thresholds, and would result in a significant impact without mitigation.

TABLE 3-9: ALTERNATIVE 2 (FLOATING COVER) LOCALIZED CONSTRUCTION EMISSIONS - UNMITIGATED

Pollutant and Scenario	Estimated Emissions (lbs/day)	Concentration at nearest sensitive receptor	Significance Threshold	Significant Impact?
$PM_{2.5}$	54	44 ug/m^3	10.4 ug/m^3	Yes
PM_{10}	237	208 ug/m^3	10.4 ug/m^3	Yes
NO_2	13	0.02 ppm	0.18 ppm	No
CO (1-Hour)	64	0.2 ppm	20 ppm	No
CO (8-Hour)	64	<0.1 ppm	9 ppm	No
SOURCE: TAHA, 2011 (Appendix D).				

Alternative 3 - Aluminum Cover

The maximum localized construction concentrations for the Alternative 3 of the proposed project are presented in **Table 3-10**. Localized $PM_{2.5}$ and PM_{10} concentrations would exceed the SCAQMD significance thresholds, and would result in a significant impact without mitigation.

TABLE 3-10: ALTERNATIVE 3 (ALUMINUM COVER) LOCALIZED CONSTRUCTION EMISSIONS - UNMITIGATED				
Pollutant and Scenario	**Estimated Emissions (lbs/day)**	**Concentration at nearest sensitive receptor**	**Significance Threshold**	**Significant Impact?**
$PM_{2.5}$	62	46 ug/m^3	10.4 ug/m^3	Yes
PM_{10}	247	212 ug/m^3	10.4 ug/m^3	Yes
NO_2	28	0.04 ppm	0.18 ppm	No
CO (1-Hour)	149	0.4 ppm	20 ppm	No
CO (8-Hour)	149	0.1 ppm	9 ppm	No
SOURCE: TAHA, 2011 (Appendix D).				

Toxic Air Contaminant Impacts

The greatest potential for TAC emissions during construction would be from diesel particulate emissions associated with heavy equipment operations and haul trucks during the import and export of materials to the project site. The haul truck route travels along Mulholland Drive to the I-405 Freeway. According to SCAQMD methodology, health effects from carcinogenic air toxics are usually described in terms of individual cancer risk. "Individual Cancer Risk" is the likelihood that a person continuously exposed to concentrations of TACs over a 70-year lifetime will contract cancer based on the use of standard risk assessment methodology.

Carcinogenic compounds are not considered to have threshold levels (i.e., dose levels below which there are no risks). Any exposure, therefore, will have some associated risk. As a result, the State of California has established a threshold of one in one hundred thousand (1.0E-05) as a level posing no significant risk for exposures to carcinogens regulated under the Safe Drinking Water and Toxic Enforcement Act (Proposition 65).

Health risks associated with exposure to carcinogenic compounds can be defined in terms of the probability of developing cancer as a result of exposure to a chemical at a given concentration. Under a deterministic approach (i.e., point estimate methodology), the cancer risk probability is determined by multiplying the chemical's annual concentration by its unit risk factor (URF). The URF is a measure of the carcinogenic potential of a chemical when a dose is received through the inhalation pathway. It represents an upper bound estimate of the probability of contracting cancer as a result of continuous exposure to an ambient concentration of one microgram per cubic meter (μg/m^3) over a 70-year lifetime.

The carcinogenic risk was calculated based on the SCAQMD Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis. According to this document, the cancer risks from diesel particulate matter associated with motor vehicles occur exclusively through the inhalation pathway. Therefore, the cancer risks can be estimated from the following equation:

$$CR_{DPM} = C_{DPM} \times URF_{DPM} \times LEA$$

where,

CR_{DPM}	Cancer risks from diesel particulate matter; the probability of an individual developing cancer as a result of exposure to diesel particulate matter.
C_{DPM}	Annual average diesel particulate matter concentration in µg/m^3.
URF_{DPM}	Unit risk factor for diesel particulate matter; estimated probability that a person will contract cancer as a result of inhalation of a diesel particulate matter concentration of 1 µg/m^3 continuously over a period of 70 years.
LEA	Lifetime exposure adjustment.

The URF utilized in the assessment and corresponding cancer potency factors was obtained from California Office of Environmental Health Hazard Assessment (OEHHA) guidance. The LEA accounts for the fact that exposure would be less than 70 years. The LEA was adjusted to correctly represent each alternative.

Alternative 1 – Buried Concrete Cover

Alternative 1 would generate 140,364 truck trips. Based on information provided by the project design and engineering team, the exposure level was adjusted to account for 8 hours per day, 5 days per week, 48 weeks per year, and 4 years. The results of the HRA indicated that:

- Residential land uses would be exposed to a maximum off-site annual concentration of 3.75 µg/m^3, resulting in a carcinogenic risk of 14 persons in one million;
- American Jewish University would be exposed to a maximum off-site annual concentration of 0.68 µg/m^3, resulting in a carcinogenic risk of three persons in one million; and
- Roscomare Road Elementary School would be exposed to a maximum off-site annual concentration of 1.41 µg/m^3, resulting in a carcinogenic risk of five persons in one million.
- Stephen S. Wise Elementary School would be exposed to a maximum off-site annual concentration of 0.78 µg/m^3, resulting in a carcinogenic risk of three persons in one million.

The estimated risk would exceed ten persons in one million at the residential land uses. Alternative 1 construction-related diesel emissions would result in a significant impact without mitigation.

Alternative 2 – Floating Cover

Alternative 2 would generate 16,640 truck trips. Based on information provided by the project design and engineering team, the exposure level was adjusted to account for 8 hours per day, 5 days per week, 48 weeks per year, and 1.4 years. The results of the HRA indicated that:

- Residential land uses would be exposed to a maximum off-site annual concentration of 1.84 µg/m^3, resulting in a carcinogenic risk of two persons in one million;

- American Jewish University would be exposed to a maximum off-site annual concentration of 0.33 μg/m^3, resulting in a carcinogenic risk of less than one person in one million; and
- Roscomare Road Elementary School would be exposed to a maximum off-site annual concentration of 0.69 μg/m^3, resulting in a carcinogenic risk of one person in one million.
- Stephen S. Wise Elementary School would be exposed to a maximum off-site annual concentration of 0.38 μg/m^3, resulting in a carcinogenic risk of one persons in one million.

The estimated risk would not exceed ten persons in one million at each of the identified receptors. Alternative 2 construction-related diesel emissions would result in a less-than-significant impact.

Alternative 3 – Aluminum Cover

Alternative 3 would generate 43,468 truck trips. Based on information provided by the project design and engineering team, the exposure level was adjusted to account for 10 hours per day, 5 days per week, 48 weeks per year, and 3.8 years. The results of the HRA indicated that:

- Residential land uses would be exposed to a maximum off-site annual concentration of 4.02 μg/m^3, resulting in a carcinogenic risk of 15 persons in one million;
- American Jewish University would be exposed to a maximum off-site annual concentration of 0.84 μg/m^3, resulting in a carcinogenic risk of three persons in one million; and
- Roscomare Road Elementary School would be exposed to a maximum off-site annual concentration of 1.81 μg/m^3, resulting in a carcinogenic risk of seven persons in one million.
- Stephen S. Wise Elementary School would be exposed to a maximum off-site annual concentration of 0.99 μg/m^3, resulting in a carcinogenic risk of four persons in one million.

The estimated risk would exceed ten persons in one million at the residential land uses. Alternative 3 construction-related diesel emissions would result in a significant impact without mitigation.

Odor Impacts

Potential sources that may emit odors during construction activities include equipment exhaust and architectural coatings. Odors from these sources would be localized and generally confined to the immediate area surrounding the project site. The proposed project would utilize typical construction techniques, and the odors would be typical of most construction sites and temporary in nature. Construction of each alternative would not cause an odor nuisance. Construction odors would result in a less-than-significant impact.

Construction Phase Mitigation Measures

Mitigation Measures **AQ1** through **AQ6** would ensure compliance with SCAQMD Rule 403. These mitigation measures shall be implemented for all areas (both on- and off-site) of construction activity.

AQ1 Water or a stabilizing agent shall be applied to exposed surfaces at least two times per day to prevent generation of dust plumes.

AQ2 The construction contractor shall utilize at least one of the following measures at each vehicle egress from the project site to a paved public road:

- Install a pad consisting of washed gravel maintained in clean condition to a depth of at least six inches and extending at least 30 feet wide and at least 50 feet long;
- Pave the surface extending at least 100 feet and at least 20 feet wide;
- Utilize a wheel shaker/wheel spreading device consisting of raised dividers at least 24 feet long and 10 feet wide to remove bulk material from tires and vehicle undercarriages; or
- Install a wheel washing system to remove bulk material from tires and vehicle undercarriages.

AQ3 All haul trucks hauling soil, sand, and other loose materials shall be covered (e.g., with tarps or other enclosures that would reduce fugitive dust emissions).

AQ4 Construction activity on unpaved surfaces shall be suspended when wind speed exceed 25 miles per hour (such as instantaneous gusts).

AQ5 Ground cover in disturbed areas shall be replaced as quickly as possible.

AQ6 Appoint a construction relations officer to act as a community liaison concerning on-site construction activity including resolution of issues related to PM_{10} generation.

AQ7 Apply non-toxic soil stabilizers according to manufacturers' specifications to all inactive construction areas (previously graded areas inactive for ten days or more).

AQ8 Traffic speeds on all unpaved roads to be reduced to 15 mph or less.

AQ9 Sweep streets at the end of the day if visible soil is carried onto adjacent public paved roads. If feasible, use water sweepers with reclaimed water.

AQ10 Heavy-duty equipment operations shall be suspended during first and second stage smog alerts.

AQ11 Equipment and vehicle engines shall be maintained in good condition and in proper tune per manufacturers' specifications.

AQ12 All diesel-powered construction equipment shall meet USEPA Tier 2 or higher emissions standards according to the following:

- **April 1, 2010, to December 31, 2011**: All offroad diesel-powered construction equipment greater than 50 horsepower shall meet USEPA Tier 2 offroad emissions standards. In addition, all construction equipment shall be outfitted with the BACT devices certified by CARB. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a CARB-defined Level 2 or Level 3 diesel emissions control strategy for a similarly sized engine.

- **January 1, 2012, to December 31, 2014**: All offroad diesel-powered construction equipment greater than 50 horsepower shall meet USEPA Tier 3 offroad emissions standards. In addition, all construction equipment shall be outfitted with BACT devices certified by CARB. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a CARB-defined Level 3 diesel emissions control strategy for a similarly sized engine.

- **Post-January 1, 2015**: All offroad diesel-powered construction equipment greater than 50 horsepower shall meet the USEPA Tier 4 emission standards, where available. In addition, all construction equipment shall be outfitted with BACT devices certified by CARB. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a CARB-defined Level 3 diesel emissions control strategy for a similarly sized engine.

AQ13 Electricity shall be utilized from power supply sources rather than temporary gasoline or diesel power generators, as feasible.

AQ14 Heavy-duty trucks shall be prohibited from idling in excess of five minutes, both on- and off-site.

AQ15 The construction contractor shall coordinate with Roscomare Road Elementary and Stephen S. Wise Elementary Schools during days of intense heavy-equipment activity to minimize students' exposure to air pollution.

Impacts After Mitigation

Regional Emissions

Alternative 1 – Buried Concrete Cover. Implementation of Mitigation Measures **AQ1** through **AQ9** would ensure that fugitive dust emissions would be reduced by approximately 61 percent. A five percent reduction in construction equipment exhaust was used to estimate emissions reductions due to the implementation of Mitigation Measures **AQ10** through **AQ14**. Mitigation Measure **AQ15** would control student exposure to air emissions at Roscomare Road Elementary School. As demonstrated in **Table 3-11**, construction emissions of CO, VOC and SO_X would be less than the SCAQMD significance thresholds. NO_X, PM_{10} and $PM_{2.5}$ would remain over SCAQMD significance thresholds. Construction emissions would result in a significant and unavoidable impact.

TABLE 3-11: ALTERNATIVE 1 (BURIED CONCRETE COVER) ESTIMATED DAILY CONSTRUCTION EMISSIONS - MITIGATED						
	Pounds Per Day					
Construction Year, Phase	**VOC**	**NO_X**	**CO**	**SO_X**	**$PM_{2.5}$ /a/**	**PM_{10} /a/**
Phase 1	46	359	198	1	63	250
Phase 2	41	305	182	1	61	251
Phase 3	24	169	113	<1	55	238
Phase 4	25	209	116	<1	56	259
Phase 5	7	45	34	<1	16	69
Maximum Regional Total	46	359	198	1	63	259
Regional Significance Threshold	**75**	**100**	**550**	**150**	**55**	**150**
Exceed Threshold?	No	Yes	No	No	Yes	Yes
/a/ Emissions for fugitive dust were adjusted to account for a 61 percent control efficiency associated with SCAQMD Rule 403. **SOURCE**: TAHA, 2011 (Appendix C).						

Alternative 2 – Floating Cover. Implementation of Mitigation Measures **AQ1** through **AQ9** would ensure that fugitive dust emissions would be reduced by approximately 61 percent. A five percent reduction in construction equipment exhaust was used to estimate emissions reductions due to the implementation of Mitigation Measures **AQ10** through **AQ14**. As demonstrated in **Table 3-12**, construction emissions of VOC, CO, and SO_X would be less than the SCAQMD significance thresholds. However NO_X, PM_{10} and $PM_{2.5}$ would remain over SCAQMD significance thresholds. Construction emissions would result in a significant and unavoidable impact.

TABLE 3-12: ALTERNATIVE 2 (FLOATING COVER) ESTIMATED DAILY CONSTRUCTION EMISSIONS - MITIGATED						
	Pounds Per Day					
Construction Year, Phase	**VOC**	**NO_X**	**CO**	**SO_X**	**$PM_{2.5}$ /a/**	**PM_{10} /a/**
Phase 1	20	171	79	<1	55	238
Phase 2	19	144	81	<1	54	238
Phase 3	5	35	26	<1	2	4
Maximum Regional Total	24	221	90	<1	56	237
Regional Significance Threshold	**75**	**100**	**550**	**150**	**55**	**150**
Exceed Threshold?	No	Yes	No	No	Yes	Yes
/a/ Emissions for fugitive dust were adjusted to account for a 61 percent control efficiency associated with SCAQMD Rule 403. **SOURCE**: TAHA, 2011 (Appendix C).						

Alternative 3 – Aluminum Cover. Implementation of Mitigation Measures **AQ1** through **AQ9** would ensure that fugitive dust emissions would be reduced by approximately 61 percent. A five percent reduction in construction equipment exhaust was used to estimate emissions reductions due to the implementation of Mitigation Measures **AQ10** through **AQ14**. As demonstrated in **Table 3-13**, construction emissions of VOC, CO, and SO_X would be less than the SCAQMD significance thresholds. However NO_X, PM_{10} and $PM_{2.5}$ would remain over

SCAQMD significance thresholds. Construction emissions would result in a significant and unavoidable impact.

TABLE 3-13: ALTERNATIVE 3 (ALUMINUM COVER) ESTIMATED DAILY CONSTRUCTION EMISSIONS - MITIGATED						
	Pounds Per Day					
Construction Year, Phase	**VOC**	**NO_X**	**CO**	**SO_X**	**$PM_{2.5}$ /a/**	**PM_{10} /a/**
Phase 1	46	376	191	1	65	252
Phase 2	42	319	185	1	63	249
Phase 3	15	110	59	<1	5	7
Phase 4	4	32	18	<1	2	3
Phase 5	2	7	14	<1	1	3
Maximum Regional Total	46	376	191	1	65	252
Regional Significance Threshold	**75**	**100**	**550**	**150**	**55**	**150**
Exceed Threshold?	No	Yes	No	No	Yes	No
/a/ Emissions for fugitive dust were adjusted to account for a 61 percent control efficiency associated with SCAQMD Rule 403. **SOURCE**: TAHA, 2011 (Appendix C).						

Localized Emissions

Alternative 1 – Buried Concrete Cover

The reductions achieved by the mitigation measures are explained above. As demonstrated in **Tables 3-14**, mitigated construction localized emissions for Alternative 1 would continue to exceed the SCAQMD localized thresholds for $PM_{2.5}$ and PM_{10}. Localized construction emissions would result in a significant and unavoidable impact.

TABLE 3-14: ALTERNATIVE 1 (BURIED CONCRETE COVER) LOCALIZED CONSTRUCTION EMISSIONS - MITIGATED				
Pollutant	**Estimated Emissions (lbs/day)**	**Concentration at nearest sensitive receptor**	**Significance Threshold**	**Significant Impact?**
$PM_{2.5}$	59	45 ug/m^3	10.4 ug/m^3	Yes
PM_{10}	245	212 ug/m^3	10.4 ug/m^3	Yes
NO_2	26	0.04 ppm	0.18 ppm	No
CO (1-Hour)	147	0.4 ppm	20 ppm	No
CO (8-Hour)	147	0.1 ppm	9 ppm	No
SOURCE: TAHA, 2011 (Appendix D).				

Alternative 2 – Floating Cover

The reductions achieved by the mitigation measures are explained above. As demonstrated in **Tables 3-15**, mitigated construction localized emissions for Alternative 2 would continue to exceed the SCAQMD localized thresholds for $PM_{2.5}$ and PM_{10}. Localized construction emissions would result in a significant and unavoidable impact.

TABLE 3-15: ALTERNATIVE 2 (FLOATING COVER) LOCALIZED CONSTRUCTION EMISSIONS - MITIGATED

Pollutant	Estimated Emissions (lbs/day)	Concentration at nearest sensitive receptor	Significance Threshold	Significant Impact?
$PM_{2.5}$	53	44 ug/m^3	10.4 ug/m^3	Yes
PM_{10}	237	208 ug/m^3	10.4 ug/m^3	Yes
NO_2	12	0.02 ppm	0.18 ppm	No
CO (1-Hour)	61	0.2 ppm	20 ppm	No
CO (8-Hour)	61	<0.1 ppm	9 ppm	No
SOURCE: TAHA, 2011 (Appendix D).				

Alternative 3 – Aluminum Cover

The reductions achieved by the mitigation measures are explained above. As demonstrated in **Tables 3-16**, mitigated construction localized emissions for Alternative 3 would continue to exceed the SCAQMD localized thresholds for $PM_{2.5}$ and PM_{10}. Localized construction emissions would result in a significant and unavoidable impact.

TABLE 3-16: ALTERNATIVE 3 (ALUMINUM COVER) LOCALIZED CONSTRUCTION EMISSIONS - MITIGATED

Pollutant	Estimated Emissions (lbs/day)	Concentration at nearest sensitive receptor	Significance Threshold	Significant Impact?
$PM_{2.5}$	63	47 ug/m^3	10.4 ug/m^3	Yes
PM_{10}	246	212 ug/m^3	10.4 ug/m^3	Yes
NO_2	27	0.04 ppm	0.18 ppm	No
CO (1-Hour)	141	0.3 ppm	20 ppm	No
CO (8-Hour)	141	0.1 ppm	9 ppm	No
SOURCE: TAHA, 2011 (Appendix D).				

Toxic Air Contaminant Emissions

Mitigation Measures **AQ11** through **AQ14**, although difficult to quantify, would reduce TAC exposure. However, heavy-duty trucks would continue to emit diesel particulate matter resulting in an increased health risk to nearby sensitive land uses. Construction TAC emissions would result in a significant and unavoidable impact under Alternatives 1 and 3.

3.5.2 Operational Phase

Regional Impacts

Alternative 1 – Buried Concrete Cover

Motor vehicles that access the project site would be the predominate source of long-term project emissions. Worker trips for the proposed project are not expected to increase compared to existing conditions. Operational emissions are expected to be emitted primarily from vehicles accessing the project site for recreational activities. On weekend days, the average occupancy for vehicles would be 1.5 people with an average rate of two full turnovers per weekend day and one full turnover per weekday. Weekends would generate more trips than weekdays and it was assumed the typical weekend day would generate 150 average daily trips. Mobile source emissions were estimated using URBEMIS2007. Weekend activity would generate more vehicle trips and associated emissions when compared to weekday emissions. Therefore, worst-case daily emissions are represented by the weekend operational emissions shown in **Table 3-17**. Regional operational emissions would not exceed SCAQMD significance thresholds, and would result in a less-than-significant impact.

TABLE 3-17: ALTERNATIVE 1 (BURIED CONCRETE COVER) ESTIMATED DAILY OPERATIONS EMISSIONS

	Pounds per Day					
Emission Source	**VOC**	**NO_X**	**CO**	**SO_X**	**$PM_{2.5}$**	**PM_{10}**
Mobile Sources	1	1	7	<1	<1	2
SCAQMD Threshold	**55**	**55**	**550**	**150**	**55**	**150**
Exceed Threshold?	No	No	No	No	No	No

SOURCE: TAHA, 2011 (Appendix E).

Alternative 2 – Floating Cover

The reconstructed reservoir with the floating cover would not create the need for LADWP personnel to be located permanently on site. LADWP operations on site would involve maintenance of the reservoir, pipelines, and ancillary elements at a similar level of activity as current operations at Upper Stone Reservoir. Occasional washing of the cover to remove dirt and debris would be necessary to protect drinking water supply. These operations would generate minimal traffic to and from the site, similar to current levels. Every 15 to 20 years, the floating cover may require replacement, which would entail activity similar to that described under Construction Phase 3. No public access would be provided to the SCRC under this alternative. Because there would be no traffic generated by the public, and no net increase in traffic generated by LADWP employees, this impact would be less than significant.

Alternative 3 – Aluminum Cover

The reconstructed reservoir with the aluminum cover would not create the need for LADWP personnel to be located permanently on site. LADWP operations on site would involve maintenance of the reservoir, pipelines, and ancillary elements at a similar level of activity as current operations at Upper Stone Reservoir. Little actual maintenance of the aluminum cover itself is necessary. These operations would generate minimal traffic to and from the site, similar to current levels. No public access would be provided to the SCRC under this alternative. Because there would be no traffic generated by the public, and no net increase in traffic generated by LADWP employees, this impact would be less than significant.

Localized Impacts

The State one- and eight-hour CO standards may potentially be exceeded at congested intersections with high traffic volumes. An exceedance of the State CO standards at an intersection is referred to as a CO hotspot. The SCAQMD recommends a CO hotspot evaluation of potential localized CO impacts when V/C ratios are increased by two percent at intersections with a LOS of D or worse. SCAQMD also recommends a CO hotspot evaluation when an intersection decreases in LOS by one level beginning when LOS changes from C to D.

No project intersections will increase by two percent at intersections with a LOS of D or worse under any alternative. Additionally, no project intersections decrease by one or more levels from a LOS C to D under any alternative. No further analysis is necessary. Alternatives 1 through 3 would result in less-than-significant impacts.

Toxic Air Contaminant Impacts

The SCAQMD recommends that health risk assessments be conducted for substantial sources of diesel particulate emissions (e.g., truck stops and warehouse distribution facilities) and has provided guidance for analyzing mobile source diesel emissions.[13] Alternative 1 would locate recreational uses on the project site. The reservoir is not anticipated to generate a substantial number of daily trips. Based on the limited activity of TAC sources, the proposed project would not warrant the need for a health risk assessment associated with on-site activities, and potential TAC impacts are expected to be less than significant.

Typical sources of acutely and chronically hazardous TACs include industrial manufacturing processes and automotive repair facilities. The proposed project would not include any of these potential sources, although minimal emissions may result from the use of consumer products (e.g., aerosol sprays). It was expected that the proposed project would not release substantial amounts of TACs, and no significant impact on human health would occur.

Alternatives 2 and 3 would not include operational uses, and would not generate TAC emissions.

Odor Impacts

According to the SCAQMD *CEQA Air Quality Handbook*, land uses and industrial operations that are associated with odor complaints include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies and fiberglass molding. The current operation of Upper Stone Canyon Reservoir does not generate adverse odors. Each the alternatives would cover the water supply, further reducing odor potential. Alternatives 1 through 3 would not result in activities that create objectionable odors. No significant impacts would occur.

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[13]SCAQMD, *Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Emissions*, December 2002.

Operational Phase Mitigation Measures

Operational air quality impacts would be less than significant, and no mitigation measures are required.

Impacts After Mitigation

Not applicable. The project-related operational emissions would result in a less-than-significant impact without mitigation.

3.5.3 Consistency with the Air Quality Management Plan

The 2007 AQMP was prepared to accommodate growth, to reduce the high levels of pollutants within areas under the jurisdiction of SCAQMD, to return clean air to the region, and to minimize the impact on the economy. The alternatives assessed in this analysis would not increase regional population, housing, or employment. The recreational area would not generate an inordinate amount of vehicle miles traveled and associated emissions that would interfere with implementation of the AQMP. Alternatives 2 and 3 would not generate operational emissions and would also not interfere with implementation of the AQMP. Consistency with the AQMP would result in a less-than-significant impact under each alternative,

3.6 CUMULATIVE IMPACTS

3.6.1 SCAQMD Methodology

Construction

Each of the alternatives would result in a regionally significant impact during construction relative to NO_X, $PM_{2.5}$, and PM_{10}. It is anticipated that related project development would also result in significant regional impacts. While SCAQMD-required mitigation measures would reduce air quality impacts, it is forecasted that the construction of the related projects, in addition to the alternatives, would result in a regionally significant impact.

Operations

The SCAQMD's approach for assessing cumulative operational impacts is based on the AQMP forecasts of attainment of ambient air quality standards in accordance with the requirements of the federal and state CAAs. The SCQAMD has set forth regional significance thresholds designed to assistant in the attainment of ambient air quality standards. The alternatives would not result in a significant VOC, $PM_{2.5}$, PM_{10}, NO_X or CO impact during operations. Each alternatives contribution would not be cumulatively considerable because it is less than significant on a project basis. Cumulative air quality would result in a less-than-significant impact.

3.6.2 Global Climate Change

Greenhouse gas emissions were calculated for construction activity and on-road mobile vehicle operations. Based on SCAQMD guidance, the emissions summary includes construction emissions averaged over a 30-year span. As shown in **Table 3-18**, Alternative 1 would result in 1,030 metric tons of CO_2e per year. GHG emissions would not exceed the 10,000 metric tons of CO_2e per year significance threshold, and would result in a less-than-significant impact.

Alternatives 2 (**Table 3-19**) and 3 (**Table 3-20**) have no net increases in vehicle traffic, and therefore only construction emissions are quantified. Power usage does not change with any alternatives except for Alternative 3, which includes a solar panel grid, which would have a beneficial impact on electricity use. However, this conservative emissions analysis did not account for the solar panels. Alternatives 2 and 3 would not exceed the 10,000 metric tons per year significance threshold, and would also result in a less-than-significant impact.

TABLE 3-18: ESTIMATED ANNUAL GREENHOUSE GAS EMISSIONS - ALTERNATIVE 1 (BURIED CONCRETE COVER)

Scenario and Source	Carbon Dioxide Equivalent (Metric Tons per Year)
Proposed Project	
Construction Phase 1	2,543
Construction Phase 2	6,826
Construction Phase 3	11,038
Construction Phase 4	1,175
Construction Phase 5	650
Total Construction Emissions Amortized /a/	**741**
Mobile Source /b/	**143**
Total Emissions	**884**
Significance Threshold	**10,000**
Exceed Threshold?	No

/a/ Based on SCAQMD guidance, the emissions summary also includes construction emissions amortized over a 30-year span.
/b/ Mobile source emissions were weighted to account for both weekday and weekend emissions.
SOURCE: TAHA, 2011.

TABLE 3-19: ESTIMATED ANNUAL GREENHOUSE GAS EMISSIONS - ALTERNATIVE 2 (FLOATING COVER)

Scenario and Source	Carbon Dioxide Equivalent (Metric Tons per Year)
Proposed Project	
Construction Phase 1	1,085
Construction Phase 2	1,525
Construction Phase 3	256
Total Construction Emissions Amortized /a/	**96**
Significance Threshold	**10,000**
Exceed Threshold?	No

/a/ Based on SCAQMD guidance, the emissions summary also includes construction emissions amortized over a 30-year span.
SOURCE: TAHA, 2011.

TABLE 3-20: ESTIMATED ANNUAL GREENHOUSE GAS EMISSIONS - ALTERNATIVE 3 (ALUMINUM COVER)

Scenario and Source	Carbon Dioxide Equivalent (Metric Tons per Year)
Proposed Project	
Construction Phase 1	2,277
Construction Phase 2	3,681
Construction Phase 3	4,845
Construction Phase 4	121
Construction Phase 5	226
Total Construction Emissions Amortized /a/	**372**
Significance Threshold	**10,000**
Exceed Threshold?	No

/a/ Based on SCAQMD guidance, the emissions summary also includes construction emissions amortized over a 30-year span.
SOURCE: TAHA, 2011.

4.0 NOISE AND VIBRATION

This section evaluates noise and vibration levels associated with the implementation of the proposed project. The noise and vibration analysis in this section assesses: existing noise and vibration conditions at the project site and its vicinity, as well as short-term construction and long-term operational noise and vibration impacts associated with the proposed project. Mitigation measures for potentially significant impacts are recommended when appropriate to reduce noise and vibration levels.

4.1 NOISE AND VIBRATION CHARACTERISTICS AND EFFECTS

4.1.1 Noise

Characteristics of Sound

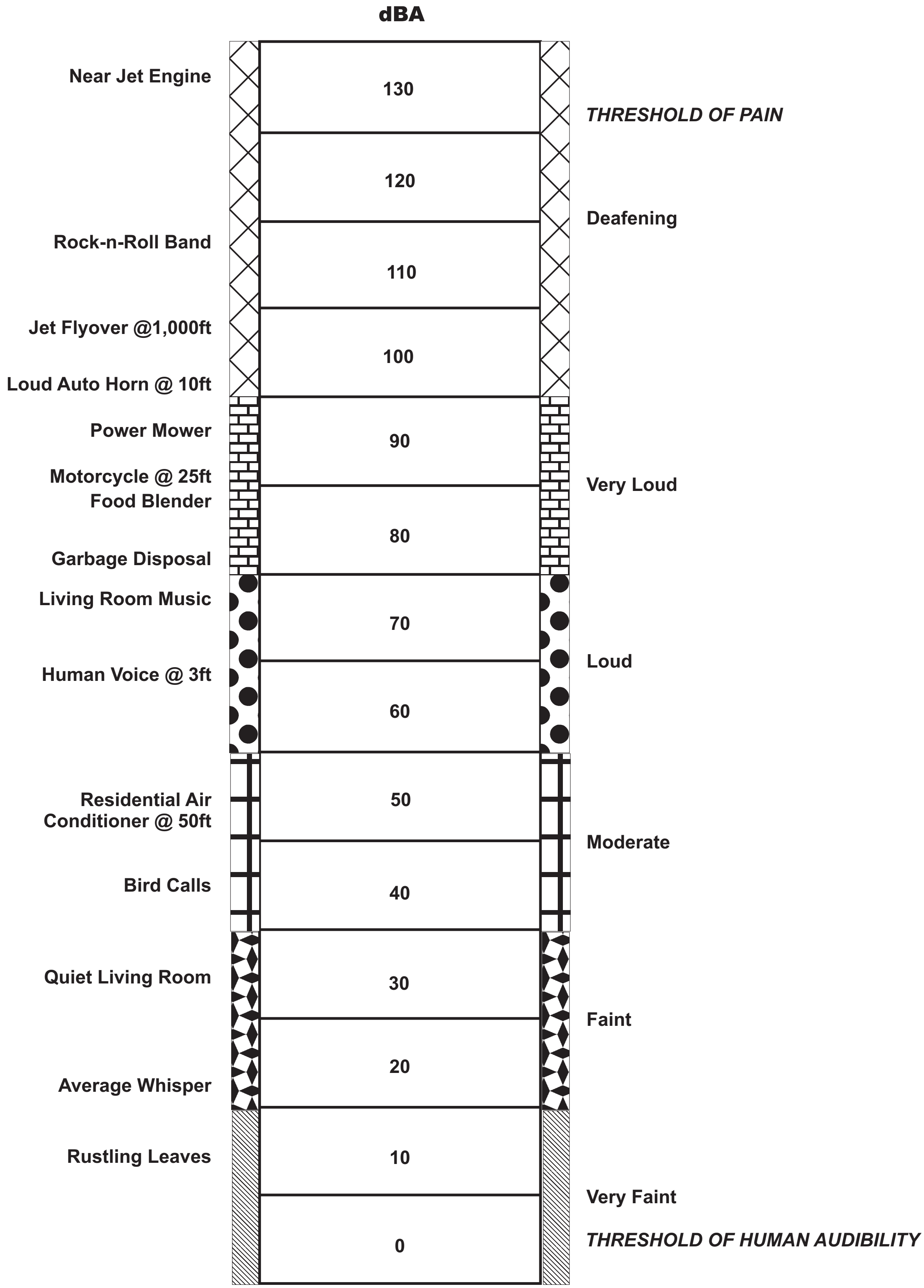
Sound is technically described in terms of the loudness (amplitude) and frequency (pitch) of the sound. The standard unit of measurement for sound is the decibel (dB). The human ear is not equally sensitive to sound at all frequencies. The "A-weighted scale," abbreviated dBA, reflects the normal hearing sensitivity range of the human ear. On this scale, the range of human hearing extends from approximately 3 to 140 dBA. **Figure 4-1** provides examples of A-weighted noise levels from common sounds.

Noise Definitions

This noise analysis discusses sound levels in terms of Community Noise Equivalent Level (CNEL) and Equivalent Noise Level (L_{eq}).

Community Noise Equivalent Level. CNEL is an average sound level during a 24-hour period. CNEL is a noise measurement scale, which accounts for noise source, distance, single event duration, single event occurrence, frequency, and time of day. Human reaction to sound between 7:00 p.m. and 10:00 p.m. is as if the sound were actually 5 dBA higher than if it occurred from 7:00 a.m. to 7:00 p.m. From 10:00 p.m. to 7:00 a.m., humans perceive sound as if it were 10 dBA higher due to the lower background level. Hence, the CNEL is obtained by adding an additional 5 dBA to sound levels in the evening from 7:00 p.m. to 10:00 p.m. and 10 dBA to sound levels in the night from 10:00 p.m. to 7:00 a.m. Because CNEL accounts for human sensitivity to sound, the CNEL 24-hour figure is always a higher number than the actual 24-hour average.

Equivalent Noise Level. L_{eq} is the average noise level on an energy basis for any specific time period. The L_{eq} for one hour is the energy average noise level during the hour. The average noise level is based on the energy content (acoustic energy) of the sound. L_{eq} can be thought of as the level of a continuous noise which has the same energy content as the fluctuating noise level. The equivalent noise level is expressed in units of dBA.



SOURCE: Cowan, James P., *Handbook of Environmental Acoustics*

FIGURE 4-1

A-WEIGHTED DECIBEL SCALE

Effects of Noise

Noise is generally defined as unwanted sound. The degree to which noise can impact the human environment ranges from levels that interfere with speech and sleep (annoyance and nuisance) to levels that cause adverse health effects (hearing loss and psychological effects). Human response to noise is subjective and can vary greatly from person to person. Factors that influence individual response include the intensity, frequency, and pattern of noise, the amount of background noise present before the intruding noise, and the nature of work or human activity that is exposed to the noise source.

Audible Noise Changes

Studies have shown that the smallest perceptible change in sound level for a person with normal hearing sensitivity is approximately 3 dBA. A change of at least 5 dBA would be noticeable and would likely evoke a community reaction. A 10-dBA increase is subjectively heard as a doubling in loudness and would cause a community response.

Noise levels decrease as the distance from the noise source to the receiver increases. Noise generated by a stationary noise source, or "point source," will decrease by approximately 6 dBA over hard surfaces (e.g., reflective surfaces such as parking lots or smooth bodies of water) and 7.5 dBA over soft surfaces (e.g., absorptive surfaces such as soft dirt, grass, or scattered bushes and trees) for each doubling of the distance. For example, if a noise source produces a noise level of 89 dBA at a reference distance of 50 feet, then the noise level would be 83 dBA at a distance of 100 feet from the noise source, 77 dBA at a distance of 200 feet, and so on. Noise generated by a mobile source will decrease by approximately 3 dBA over hard surfaces and 4.5 dBA over soft surfaces for each doubling of the distance.

Generally, noise is most audible when traveling by direct line-of-sight.[14] Barriers, such as walls, berms, or buildings that break the line-of-sight between the source and the receiver greatly reduce noise levels from the source since sound can only reach the receiver by bending over the top of the barrier (diffraction). Sound barriers can reduce sound levels by up to 20 dBA. However, if a barrier is not high or long enough to break the line-of-sight from the source to the receiver, its effectiveness is greatly reduced.

Applicable Regulations

The City of Los Angeles has established policies and regulations concerning the generation and control of noise that could adversely affect its citizens and noise sensitive land uses. Regarding construction, the Los Angeles Municipal Code (LAMC) indicates that no construction or repair work shall be performed between the hours of 9:00 p.m. and 7:00 a.m. the following day, since such activities would generate loud noises and disturb persons occupying sleeping quarters in any adjacent dwelling, hotel, apartment or other place of residence.[15] No person, other than an individual home owner engaged in the repair or construction of his/her single-family dwelling, shall perform any construction or repair work of any kind or perform such work within 500 feet of land so occupied before 8:00 a.m. or after 6:00 p.m. on any Saturday or on a federal holiday, or at any time on any Sunday. Under certain conditions, the City may grant a waiver to allow limited construction activities to occur outside of the limits described above.

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[14] Line-of-sight is an unobstructed visual path between the noise source and the noise receptor.

[15] LAMC, Chapter IV, Article 1, Section 41.40, January 29, 1984 and Chapter XI, Article 2, Section 112.04, August 8, 1996.

The LAMC also specifies the maximum noise level of powered equipment or powered hand tools.[16] Any powered equipment or hand tool that produces a maximum noise level exceeding 75 dBA at a distance of 50 feet is prohibited. However, this noise limitation does not apply where compliance is technically infeasible. Technically infeasible means the above noise limitation cannot be met despite the use of mufflers, shields, sound barriers and/or any other noise reduction device or techniques during the operation of equipment.

The City of Los Angeles has published significance thresholds to be used in noise analyses.[17] The significance thresholds, which are further discussed below, include thresholds for construction and operational noise levels.

4.1.2 Vibration

Characteristics of Vibration

Vibration is an oscillatory motion through a solid medium in which the motion's amplitude can be described in terms of displacement, velocity, or acceleration. Vibration can be a serious concern, causing buildings to shake and rumbling sounds to be heard. In contrast to noise, vibration is not a common environmental problem. It is unusual for vibration from sources such as buses and trucks to be perceptible, even in locations close to major roads. Some common sources of vibration are trains, buses on rough roads, and construction activities, such as blasting, pile driving, and heavy earth-moving equipment.

Vibration Definitions

There are several different methods that are used to quantify vibration. The peak particle velocity (PPV) is defined as the maximum instantaneous peak of the vibration signal. The PPV is most frequently used to describe vibration impacts to buildings and is usually measured in inches per second. The root mean square (RMS) amplitude is most frequently used to describe the effect of vibration on the human body. The RMS amplitude is defined as the average of the squared amplitude of the signal. Decibel notation (Vdb) is commonly used to measure RMS. The decibel notation acts to compress the range of numbers required to describe vibration.[18]

Effects of Vibration

High levels of vibration may cause physical personal injury or damage to buildings. However, ground-borne vibration levels rarely affect human health. Instead, most people consider ground-borne vibration to be an annoyance that may affect concentration or disturb sleep. In addition, high levels of ground-borne vibration may damage fragile buildings or interfere with equipment that is highly sensitive to ground-borne vibration (e.g., electron microscopes). To counter the effects of ground-borne vibration, the Federal Transit Administration (FTA) has published guidance relative to vibration impacts. According to the FTA, fragile buildings can be exposed to ground-borne vibration levels of 0.3 inches per second without experiencing structural damage.[19]

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[16] LAMC, Chapter XI, Article 2, Section 112.05, August 8, 1996.
[17] City of Los Angeles, *L.A. CEQA Thresholds Guide*, 2006.
[18] Federal Transit Administration, *Transit Noise and Vibration Impact Assessment*, May 2006.
[19] *Ibid*.

Perceptible Vibration Changes

In contrast to noise, ground-borne vibration is not a phenomenon that most people experience every day. The background vibration velocity level in residential areas is usually 50 RMS or lower, well below the threshold of perception for humans which is around 65 RMS.[20] Most perceptible indoor vibration is caused by sources within buildings, such as operation of mechanical equipment, movement of people, or slamming of doors. Typical outdoor sources of perceptible ground-borne vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. If the roadway is smooth, the vibration from traffic is rarely perceptible.

Applicable Regulations

There are no adopted City standards for ground-borne vibration.

4.2 EXISTING SETTING

4.2.1 Existing Noise Environment

The existing noise environment of the project area is characterized by vehicular traffic along Mulholland Drive. Vehicular traffic is the primary source of noise in the project vicinity.

Sound measurements were taken using a SoundPro DL Sound Level Meter between 11:00 a.m. and 1:00 p.m. on June 7, 2010 to determine existing ambient daytime off-peak noise levels in the project vicinity. These readings were used to establish existing ambient noise conditions and to provide a baseline for evaluating construction and operational noise impacts. Noise monitoring locations are shown in **Figure 4-2**. As shown in **Table 4-1**, existing ambient sound levels range between 53.7 and 61.3 dBA L_{eq}. A noise measurement was also taken on the project site. The existing project site noise level was approximately 47 dBa L_{eq}.

TABLE 4-1: EXISTING NOISE LEVELS

Key to Figure 4-2	Noise Monitoring Location	Distance from Project Site (feet)	Sound Level (dBA, L_{eq})
1	Single-family Residences West of Project Site	1,800	53.7
2	Roscomare Road Elementary School	2,300	57.7
3	Single-family Residence at Mulholland Drive and Antelo View Drive	3,800	61.1
4	American Jewish University/Stephen S. Wise Elementary School	5,000	61.3

SOURCE: TAHA, 2011 (Appendix H).

[20] *Ibid*.

LEGEND:

Upper Stone Canyon Reservoir

Noise Monitoring Locations

1. Roscomare Road Elementary
2. Single-Family Residences
3. Mulholland Drive and Antelo Road
4. American Jewish University/Stephen S. Wise Elementary School
5. On-Site Haul Road

SOURCE: TAHA, 2011

APPROX. SCALE 0 395 790 1,580 2,370 FEET

FIGURE 4-2

NOISE MONITORING LOCATIONS

4.2.2 Existing Vibration Environment

There are no stationary sources of vibration located near the project site. Heavy-duty trucks can generate ground-borne vibrations that vary depending on vehicle type and weight, and pavement conditions. However, vibration levels from adjacent roadways are not typically perceptible at the project site.

4.2.3 Sensitive Receptors

Noise- and vibration-sensitive land uses are locations where people reside or where the presence of unwanted sound could adversely affect the use of the land. Residences, schools, hospitals, guest lodging, libraries, and some passive recreation areas would each be considered noise- and vibration-sensitive and may warrant unique measures for protection from intruding noise. As shown in **Figure 3-3**, sensitive receptors near the project site include the following:

- A single-family residential home located on Antelo Place, set back approximately 650 feet west of the project site
- Single-family residences located on Roscomare Road, set back approximately 650 feet west of the project site
- Single-family residences upslope from the project site
- Single-family residences located along the haul route
- Roscomare Road Elementary School, approximately 2,150 feet upslope of the project site.
- American Jewish University located along the haul route
- Stephen S. Wise Elementary School located along the haul route

The above sensitive receptors represent the nearest sensitive receptors with the potential to be impacted by the proposed project. Additional sensitive receptors are located in the surrounding community within one-quarter mile of the project site and may be impacted by the proposed project.

4.2.4 Vehicular Traffic

Vehicular traffic is the predominant noise source in the project vicinity. Using existing traffic volumes provided by the project traffic consultant and the Federal Highway Administration (FHWA) RD-77-108 noise calculation formulas, the CNEL was calculated for various roadway segments near the project site. Existing weekday and weekend mobile noise levels are shown in **Table 4-2**. As shown in **Table 4-2**, mobile noise levels in the project area range from 68.0 to 67.8 dBA CNEL.

TABLE 4-2: EXISTING ESTIMATED MOBILE SOURCE NOISE LEVELS

Roadway Segment	Estimated CNEL (dBA)
Mulholland Drive from Roscomare Road to Casiano Road	68.0
Mulholland Drive from Casiano Road to Skirball Center Drive	67.8
Mulholland Drive from Roscomare Road to Stone Canyon Road	67.0
Mulholland Drive from Stone Canyon Road to Nicada Drive	67.3

SOURCE: TAHA, 2011 (Appendix H).

4.3 METHODOLOGY AND SIGNIFICANCE CRITERIA

4.3.1 Methodology

The noise analysis considers construction, operational, and vibration sources. Construction noise levels are based on information obtained from the *L.A. CEQA Thresholds Guide*.[21] The noise level during the construction period at each receptor location was calculated by (1) making a distance adjustment to the construction source sound level and (2) logarithmically adding the adjusted construction noise source level to the ambient noise level. Operational noise levels were calculated based on information provided in the traffic study and stationary noise sources located on the project site (e.g., mechanical equipment). Vibration levels were estimated based on information provided by the FTA.[22]

4.3.2 Noise Significance Criteria

Construction Phase Significance Criteria

Based on the City of Los Angeles *L.A. CEQA Threshold Guide*, the proposed project would result in significant noise impacts if:

- Construction activities lasting more than one day would exceed existing ambient noise levels by 10 dBA or more at a noise sensitive use;
- Construction activities lasting more than ten days in a three-month period would exceed existing ambient noise levels by 5 dBA or more at a noise sensitive use; and/or
- Construction activities would exceed the ambient noise level by 5 dBA at a noise sensitive use between the hours of 9:00 p.m. and 7:00 a.m. Monday through Friday, before 8:00 a.m. or after 6:00 p.m. on Saturday, or anytime on Sunday.

Operational Phase Significance Criteria

A significant operational noise impact would result if:

- The proposed project causes the ambient noise level measured at the property line of the affected uses to increase by 3 decibels CNEL to or within the “normally unacceptable” or “clearly unacceptable” categories, as shown in **Table 4-3**, or any 5-dBA or more increase in noise level.

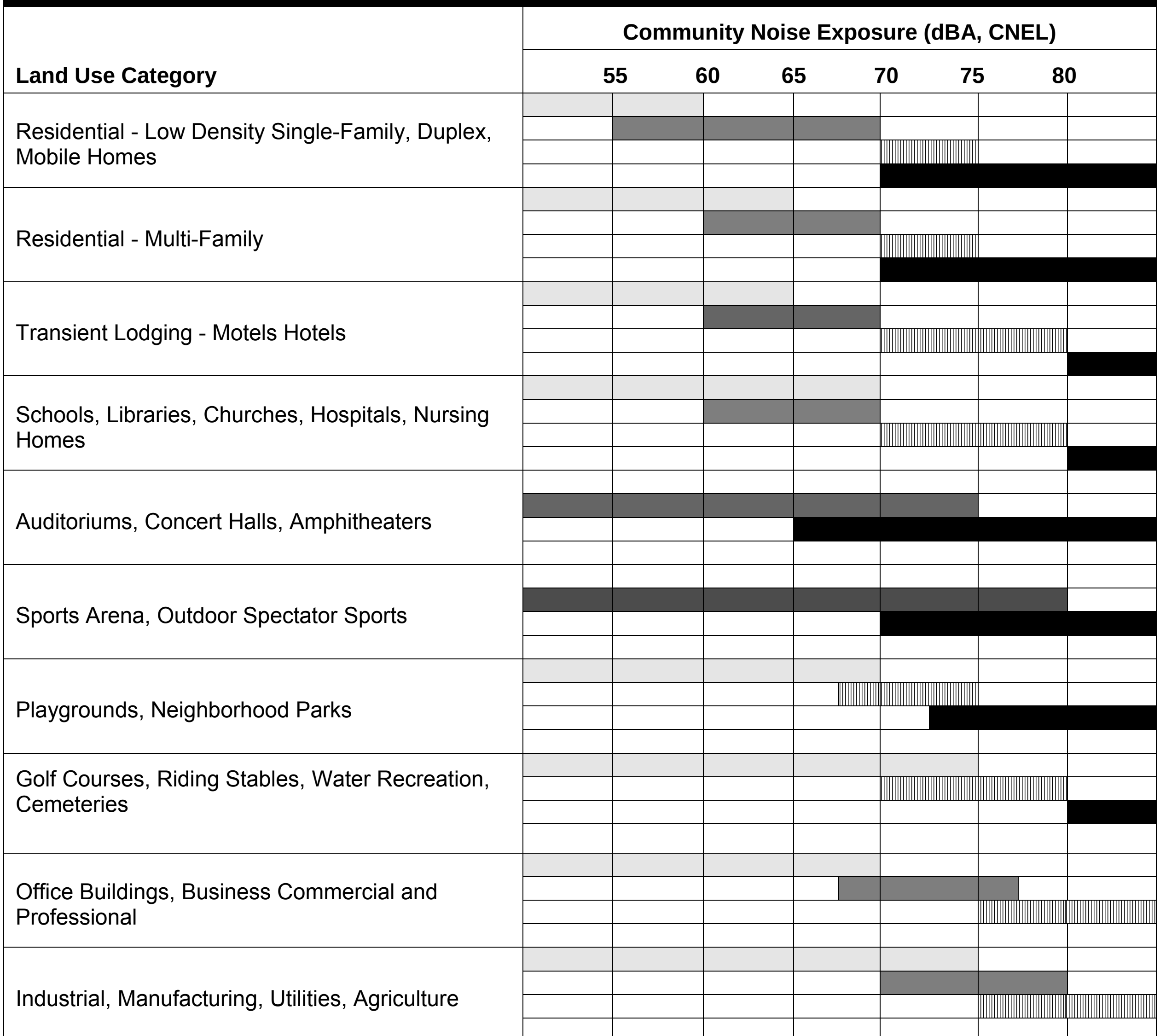
4.3.3 Ground-borne Vibration Significance Criteria

There are no adopted State or City of Los Angeles ground-borne vibration standards. Based on federal guidelines, the proposed project would result in a significant construction or operational vibration impact if:

- The proposed project would expose buildings to the FTA building damage threshold level of 0.3 inches per second.

[21] City of Los Angeles, *L.A. CEQA Thresholds Guide*, 2006.
[22] Federal Transit Administration, *Transit Noise and Vibration Impact Assessment*, May 2006.

TABLE 4-3: LAND USE COMPATIBILITY FOR COMMUNITY NOISE ENVIRONMENTS



Normally Acceptable - Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction without any special noise insulation requirements.

Conditionally Acceptable - New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply system or air conditionally will normally suffice.

Normally Unacceptable - New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.

Clearly Unacceptable - New construction or development should generally not be undertaken.

SOURCE: California Office of Noise Control, Department of Health Services.

4.4 ENVIRONMENTAL IMPACTS

4.4.1 Noise Impacts

Construction Phase Noise Impacts

Construction activity would result in temporary increases in ambient noise levels in the project area on an intermittent basis. Noise levels would fluctuate depending on the construction phase, equipment type and duration of use, distance between the noise source and receptor, and presence or absence of noise attenuation barriers. Typical noise levels from various types of equipment that may be used during construction are listed in **Table 4-4**. The table shows noise levels at distances of 50 and 100 feet from the construction noise source.

TABLE 4-4: MAXIMUM NOISE LEVELS OF COMMON CONSTRUCTION MACHINES

	Noise Level (dBA)	
Noise Source	**50 Feet**	**100 Feet /a/**
Front Loader	80	72.5
Trucks	89	81.5
Cranes (derrick)	88	80.5
Jackhammers	90	82.5
Generators	77	69.5
Back Hoe	84	76.5
Tractor	88	80.5
Scraper/Grader	87	79.5
Paver	87	79.5
Impact Pile Driving	101	93.5
Auger Drilling	77	69.5

/a/ Assumed a soft-site attenuation rate of 7.5 dB for every doubling of distance.
SOURCE: City of Los Angeles, *L.A. CEQA Thresholds Guide*, 2006.

The noise levels shown in **Table 4-5** take into account the likelihood that more than one piece of construction equipment would be in operation at the same time and lists the typical overall noise levels that would be expected for each phase of construction. The highest noise levels are expected to occur during the grading/excavation and finishing phases of construction. A typical piece of noisy equipment is assumed to be active for 40 percent of the eight-hour workday (consistent with the USEPA studies of construction noise), generating a noise level of 89 dBA L_{eq} at a reference distance of 50 feet.

TABLE 4-5: TYPICAL OUTDOOR CONSTRUCTION NOISE LEVELS

Construction Phase	Noise Level At 50 Feet (dBA)
Ground Clearing	84
Grading/Excavation	89
Foundations	78
Structural	85
Finishing	89

SOURCE: City of Los Angeles, *L.A. CEQA Thresholds Guide*, 2006.

Local sound reflection effects could be present at individual property locations due to the spatial relationship of hardscape (e.g., driveway), balcony overhangs, and buildings that may be present on each given property. For example, a person may experience a higher sound level if standing under a covered patio as opposed to standing in an open backyard, due to local sound reflections from the wall and patio overhang. Because of the topography of the canyon, sound may be slightly amplified as it travels up the canyon walls. However, given the vegetation and distance from the project site, these effects would be insignificant to any nearby sensitive receptors.

General Construction Noise

Table 4-6 presents the estimated noise levels at sensitive receptors during construction activity. Each alternative would have similar construction equipment, and maximum construction noise would be the same for each alternative. Noise level increases would range from approximately 0.2 to 1.7 dBA, L_{eq} and would not exceed the 5-dBA significance threshold. General construction activity would result in a less-than-significant noise impact under each alternative.

TABLE 4-6: CONSTRUCTION NOISE LEVELS

Sensitive Receptor	Distance (feet) /a/	Maximum Construction Noise Level (dBA) /b/	Existing Ambient (dBA, L_{eq}) /c/	New Ambient (dBA, L_{eq}) /d/	Increase
Housing West of Project Site	1,800	50.4	53.7	55.4	1.7
Housing East of Project Site	1,400	50.4	53.7	55.4	2.5
Housing Directly North of Project Site	2,500	47.5	61.1	61.3	0.2
Roscomare Road Elementary School	2,300	48.2	57.7	58.2	0.5
Housing to the Southwest of Project Site	2,150	48.8	53.7	54.9	1.2

/a/ Distance of noise source from receptor.
/b/ Construction noise source's sound level at receptor location with distance adjustment.
/c/ Pre-construction activity ambient sound level at receptor location.
/d/ New sound level at receptor location during the construction period, including noise from construction activity.
/e/ An incremental noise level increase of 5 dBA or more would result in a significant impact.
SOURCE: TAHA, 2011 (Appendix H).

On-Site Haul Truck Noise

Haul trucks for each alternative would utilize a paved road running from the Reservoir to Mulholland Drive. The nearest sensitive land use to the haul road would be a residence located on Antelo Place, as well as residences on Roscomare Road, both located approximately 650 feet to the west of the haul road. As shown in **Table 4-4**, trucks typically generate a noise level of 89 dBA at 50 feet. Truck noise would be approximately 59.2 dBA at this residence using a soft-site attenuation rate of 7.5 dBA for every doubling of distance. Based on a 47 dBA L_{eq} existing ambient noise level, the new ambient noise level would be 59.5 dBA L_{eq}. This would result in a 12.5 dBA incremental increase, which would be greater than the 5 dBA significance threshold. On-site haul truck noise would result in a significant impact without mitigation under each alternative.

Off-Site Haul Truck Noise

Table 4-7 presents the estimated noise levels at sensitive receptors located along the haul route. Existing and project noise levels were calculated based on the FHWA RD-77-108 noise calculation formulas. These receptors would be exposed to noise from trucks hauling dirt from the project site. The truck noise levels were adjusted by 2 dB to account for the roadway gradient. Modeled existing noise levels were estimated to be 69 dBA at each segment analyzed. Future ambient ranges from 70.5 to 70.4. This difference is a result of the lane width on the roadway adjacent to each sensitive receptor. Noise levels would not exceed the 5-dBA significance threshold, and haul truck activity would result in a less-than-significant impact under each alternative.

TABLE 4-7: OFF-SITE CONSTRUCTION HAUL TRUCK NOISE LEVELS

Sensitive Receptor	Existing Roadway (dBA, CNEL)	New Ambient (dBA, CNEL)	Increase (dBA, CNEL)
Housing Along Mulholland Drive	70.0	72.5	3.5
American Jewish University	69.8	72.4	3.4
Stephen S. Wise Elementary School	69.8	72.4	3.4

SOURCE: TAHA, 2011 (Appendix H).

Construction Phase Noise Mitigation Measures

N1 Traffic speeds on the access road shall be limited to 15 mph or less.

N2 Truck activity shall be limited to between the hours of 8:00 a.m. and 5:00 p.m. to minimize disruption to sensitive uses.

Impacts After Mitigation

Mitigation Measures **N1** and **N2**, although difficult to quantify, would control truck noise. The implementation of noise barriers would not be feasible due to site topography and the elevated location of the residential land uses. On-site haul truck noise would result in a significant and unavoidable impact.

Operational Phase Noise Impacts

Vehicular Noise. Alternative 1 is the only alternative that involves an increase in traffic volumes. This increase would result from public access to the project site which would not be included in Alternatives 2 or 3. The proposed project would generate a maximum of 25 new AM and PM peak hour trips. To determine off-site noise impacts, traffic was modeled under future year (2020) “no project” and “with project” conditions utilizing FHWA RD-77-108 noise calculation formulas. AM peak hour and PM peak hour results of the analysis are summarized in **Table 4-8**. The greatest project-related noise increase would be less than one dBA CNEL and would occur along Mulholland Drive.

Mobile noise generated by the proposed project would not cause the ambient noise level measured at the property line of the affected uses to increase by 3 dBA CNEL to or within the “normally unacceptable” or “clearly unacceptable” category (**Table 4-3**) or any 5-dBA or more increase in noise level. Vehicular noise would result in a less-than-significant impact.

TABLE 4-8: 2020 ESTIMATED MOBILE SOURCE NOISE LEVELS

Roadway Segment	Estimated dBA, CNEL		
	No Project (2020)	Project (2020)	Project Impact
Mulholland Drive between Roscomare Road and Stone Canyon Road	67.6	67.8	0.2
Mulholland Drive between Stone Canyon Road and Nicada Drive	67.5	67.5	0.0

SOURCE: TAHA, 2011 (Appendix H).

Outdoor Activity Noise. The project site would include an outdoor recreation area under Alternative 1. The closest sensitive receptors to outdoor activity areas include the residential land uses adjacent to the project site. Outdoor activity would be limited to hikers and similar uses which do not create significant noise levels. The nearby sensitive uses would experience ambient noise level increases well below the 5-dBA threshold from outdoor activity. Outdoor activity noise would result in a less-than-significant impact.

Alternatives 2 and 3 would not include recreational activities, and outdoor activity noise would result in a less-than-significant impact.

Parking Noise. Alternative 1 would provide parking for approximately 25 vehicles. All parking would be located on the north end of Upper Stone Canyon, slightly north of the reservoir. Automobile parking activity typically generates a noise level of approximately 58.1 dBA L_{eq} at 50 feet (e.g., tire noise, engine noise, and door slams).[23] The nearest sensitive receptor would be approximately 800 feet east of the parking area. Based on distance attenuation, parking activity would increase ambient noise levels by less than one dBA at the nearest receptor. Alternative 1 parking activity noise would result in a less-than-significant impact.

Alternatives 2 and 3 would not include generate traffic and associated parking noise, and parking activity noise would result in a less-than-significant impact.

Aluminum Cover Noise. Alternative 3 would include an aluminum cover. The aluminum cover would not typically be a noise source. However, raindrops would create noise when contacting the aluminum cover during inclement weather. This noise would not be audible at sensitive receptors given the distance between the receptors and the aluminum cover and the localized background noise levels created by rainstorms (e.g., wind). The aluminum cover would result in a less-than-significant noise impact.

Operational Phase Noise Mitigation Measures

Operational noise impacts would be less than significant, and no mitigation measures are required.

[23] The reference parking noise level is based on a series of noise measurements completed 50 feet from vehicles accessing a multi-level parking structure.

Impacts After Mitigation

Not applicable. The project-related operational noise would result in a less-than-significant impact without mitigation.

4.4.2 Ground-borne Vibration Impacts

Construction Phase Ground-borne Vibration Impacts

General Construction Activity. As shown in **Table 4-9**, use of heavy equipment (e.g., a large bulldozer) generates vibration levels of 0.089 inches per second at a distance of 25 feet. In addition, there will be added truck traffic to the haul route exiting the project site; however, truck vibration is not typically perceptible. The nearest residential structures to the project site would be approximately 650 feet from occasional heavy equipment activity and would experience vibration levels less than 0.01 inches per second. Vibration levels at these receptors would not exceed the potential building damage threshold of 0.3 inches per second.

TABLE 4-9: VIBRATION VELOCITIES FOR CONSTRUCTION EQUIPMENT

Equipment	PPV at 25 feet (Inches/Second) /a/
Large Bulldozer	0.089
Loaded Trucks	0.076

/a/ Fragile buildings can be exposed to ground-borne vibration levels of 0.5 inches per second without experiencing structural damage.
SOURCE: Federal Transit Administration, *Transit Noise and Vibration Impact Assessment*, May 2006.

Construction Phase Ground-borne Vibration Mitigation Measures

Construction phase ground-borne vibration impacts would be less than significant, and no mitigation measures are required.

Impacts After Mitigation

Not applicable. Construction phase ground-borne vibration impacts would result in a less-than-significant impact without mitigation.

Operational Phase Ground-borne Vibration Impacts

The proposed project would not include significant stationary sources of ground-borne vibration, such as heavy equipment operations. Operational ground-borne vibration in the project vicinity would be generated by vehicular travel on the local roadways. However, similar to existing conditions, project-related traffic vibration levels would not be perceptible by sensitive receptors. Thus, operational vibration would result in a less-than-significant impact.

Operational Phase Ground-borne Vibration Mitigation Measures

Operational ground-borne vibration impacts would be less than significant, and no mitigation measures are required.

Impacts After Mitigation

Not applicable. The project-related operational ground-borne vibration would result in a less-than-significant impact without mitigation.

4.5 CUMULATIVE IMPACTS

When calculating future traffic impacts, the traffic consultant took nine additional projects into consideration. Thus, the future traffic results without and with the proposed project already account for the cumulative impacts from these other projects. Since the noise impacts are generated directly from the traffic analysis results, the future without project and future with project noise impacts described in this report already reflect cumulative impacts.

Table 4-10 presents the cumulative increase in future traffic noise levels at intersections (i.e., 2010 “No Project “conditions plus proposed project traffic). The maximum cumulative roadway noise increase would be 0.6 dBA CNEL and would occur along Mulholland Drive. This would be less than the 3-dBA significance threshold, and cumulative mobile noise would result in a less-than-significant impact.

TABLE 4-10: ESTIMATED CUMULATIVE MOBILE SOURCE NOISE LEVELS

	Estimated dBA, CNEL /b/		
Roadway Segment	**Existing**	**Project**	**Cumulative Impact**
Mulholland Drive between Roscomare Road and Stone Canyon Road	67.0	67.8	0.8
Mulholland Drive between Stone Canyon Road and Nicada Drive	66.9	67.5	0.6
SOURCE: TAHA, 2011 (Appendix H).			

The predominant vibration source near the project site is heavy trucks traveling on the local roadways. Neither the proposed project nor related projects would substantially increase heavy-duty vehicle traffic near the project site and would not cause a substantial increase in heavy-duty trucks on local roadways. The proposed project would not add to a cumulative vibration impact.

Appendix A

Wind and Climate Information

GETTY CENTER, CALIFORNIA (043392)

Period of Record Monthly Climate Summary

Period of Record : 1/ 1/2000 to 12/31/2009

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average Max. Temperature (F)	66.3	65.5	68.2	69.6	73.5	76.1	82.6	82.7	82.4	76.2	72.1	64.7	73.3
Average Min. Temperature (F)	51.7	49.7	50.8	51.5	55.1	57.3	61.3	61.6	62.3	58.4	55.8	50.6	55.5
Average Total Precipitation (in.)	3.76	5.69	2.15	0.84	0.46	0.05	0.02	0.01	0.13	1.20	0.72	2.97	17.99
Average Total SnowFall (in.)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Average Snow Depth (in.)	0	0	0	0	0	0	0	0	0	0	0	0	0

Percent of possible observations for period of record.
Max. Temp.: 61.3% Min. Temp.: 60.9% Precipitation: 97.1% Snowfall: 100% Snow Depth: 100%
Check Station Metadata or Metadata graphics for more detail about data completeness.

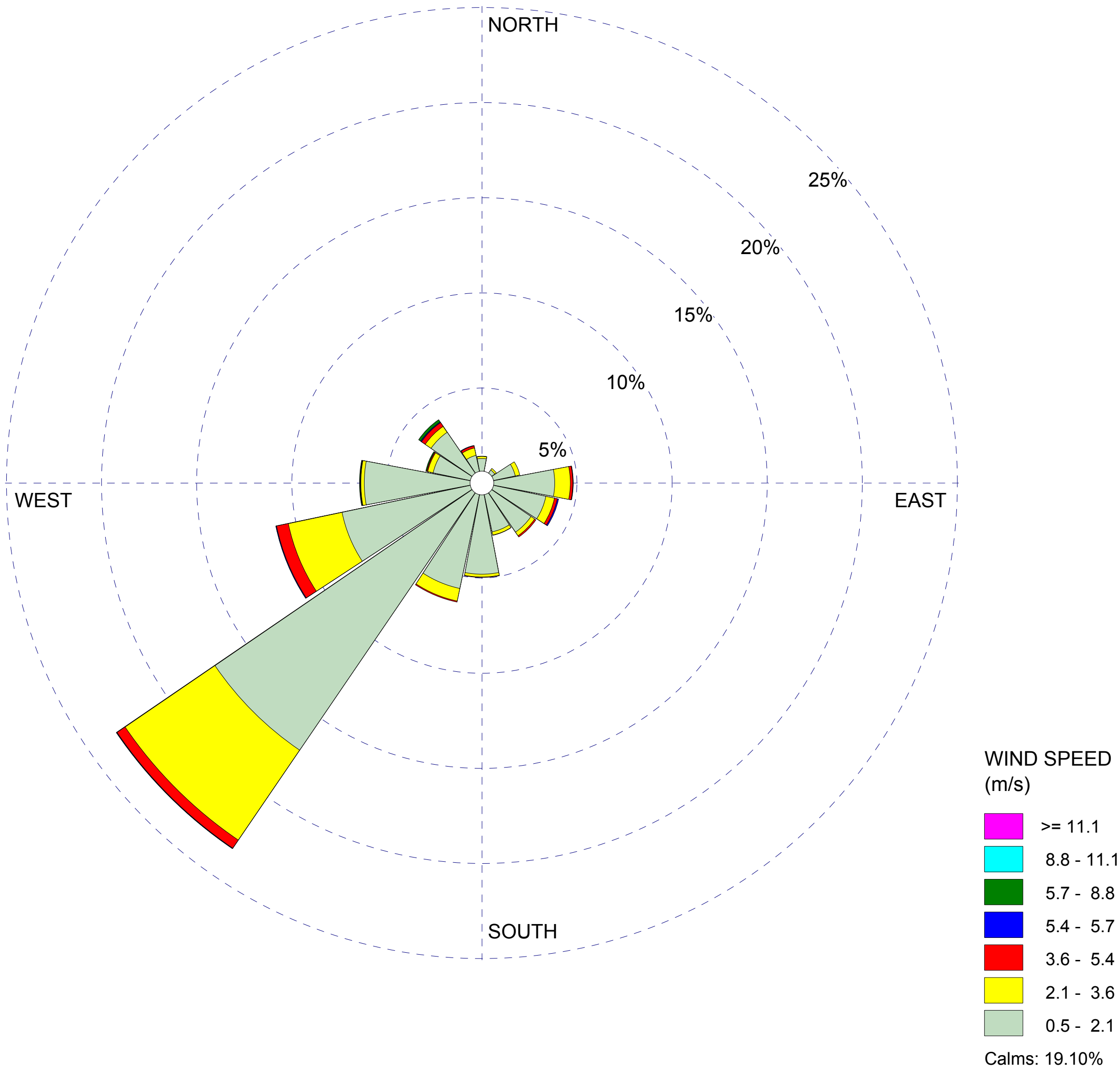
Western Regional Climate Center, wrcc@dri.edu

WIND ROSE PLOT:

Upper Stone Canyon Reservoir Wind Rose

DISPLAY:

Wind Speed
Direction (blowing from)



COMMENTS:

DATA PERIOD:

1981
Jan 1 - Dec 31
00:00 - 23:00

COMPANY NAME:

MODELER:

CALM WINDS:

19.10%

TOTAL COUNT:

8760 hrs.

AVG. WIND SPEED:

1.24 m/s

DATE:

8/3/2010

PROJECT NO.:

2008-57

WRPLOT View - Lakes Environmental Software

Appendix B

Ambient Air Data

2007 AIR QUALITY
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

2007

No.	Source/Receptor Area Location	Station No. State Code	Station No. District Code	Carbon Monoxide a) No. Days of Data	Carbon Monoxide a) Max. Conc. in ppm 1-hour	Carbon Monoxide a) Max Conc. in ppm 8-hour	Ozone No. Days of Data	Ozone Max. Conc. in ppm 1-hour	Ozone Max. Conc. in ppm 8-hour	Ozone Fourth High Conc. ppm 8-hour	No. Days Standard Exceeded: Health Advisory ≥ 0.15 ppm 1-hour	Federal b) > 0.12 ppm 1-hour	Federal b) > 0.08 ppm 8-hour	Federal b) > 0.075 ppm 8-hour	State c) > 0.09 ppm 1-hour	State c) > 0.070 ppm 8-hour	Nitrogen Dioxide d) No. Days of Data	Nitrogen Dioxide d) Max Conc. in ppm 1-hour	Nitrogen Dioxide d) Annual Average AAM Conc. ppm	Sulfur Dioxide e) No. Days of Data	Sulfur Dioxide e) Max. Conc. in ppm 1-hour	Sulfur Dioxide e) Max. Conc. in ppm 24-hour	Sulfur Dioxide e) Annual Average AAM Conc. ppm
	LOS ANGELES COUNTY																						
1	Central LA	70087	087	359	3	2.2	355	0.115	0.102	0.072	0	0	2	3	3	6	360	0.10	0.0299	351	0.01	0.003	0.0009
2	Northwest Coastal LA County	70091	091	365	3	2.0	360	0.117	0.087	0.067	0	0	1	2	2	2	353	0.08	0.0200	--	--	--	--
3	Southwest Coastal LA County	70111	820	361	3	2.4	361	0.087	0.074	0.066	0	0	0	0	0	1	331*	0.08	0.0140	361	0.02	0.009	0.0028
4	South Coastal LA County 1	70072	072	347*	3	2.6	365	0.099	0.073	0.056	0	0	0	0	1	1	365	0.11	0.0207	365	0.11	0.011	0.0027
4	South Coastal LA County 2	70110	077	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
6	West San Fernando Valley	70074	074	358	4	2.8	358	0.129	0.104	0.092	0	1	8	28	21	43	358	0.08	0.0186	--	--	--	--
7	East San Fernando Valley	70069	069	365	4	2.8	365	0.116	0.096	0.088	0	0	6	13	13	19	363	0.09	0.0289	365	0.01	0.003	0.0010
8	West San Gabriel Valley	70088	088	365	3	2.3	365	0.149	0.100	0.089	0	3	6	11	13	21	365	0.09	0.0246	--	--	--	--
9	East San Gabriel Valley 1	70060	060	365	3	1.8	365	0.158	0.112	0.096	1	3	13	20	22	28	365	0.12	0.0253	--	--	--	--
9	East San Gabriel Valley 2	70591	591	365	2	2.0	364	0.147	0.116	0.104	0	3	14	26	25	40	365	0.11	0.0227	--	--	--	--
10	Pomona/Walnut Valley	70075	075	365	3	2.0	365	0.153	0.108	0.102	1	2	10	18	19	25	365	0.10	0.0318	--	--	--	--
11	South San Gabriel Valley	70185	085	365	5	2.9	364	0.135	0.100	0.079	0	2	2	5	6	9	361	0.11	0.0249	--	--	--	--
12	South Central LA County	70084	084	365	8	5.1	365	0.102	0.077	0.056	0	0	0	1	1	2	365	0.10	0.0291	--	--	--	--
13	Santa Clarita Valley	70090	090	361	2	1.2	357	0.135	0.110	0.101	0	2	16	44	31	64	339*	0.08	0.0196	--	--	--	--
	ORANGE COUNTY																						
16	North Orange County	30177	3177	360	6	2.9	365	0.152	0.107	0.082	1	1	2	8	7	9	365	0.08	0.0219	--	--	--	--
17	Central Orange County	30178	3176	346*	4	2.9	365	0.127	0.099	0.073	0	1	1	1	2	7	359	0.10	0.0208	--	--	--	--
18	North Coastal Orange County	30195	3195	362	5	3.1	362	0.082	0.072	0.065	0	0	0	0	0	2	362	0.07	0.0132	358	0.01	0.004	0.0010
19	Saddleback Valley	30002	3812	364	3	2.2	365	0.108	0.089	0.080	0	0	2	5	5	10	--	--	--	--	--	--	
	RIVERSIDE COUNTY																						
22	Norco/Corona	33155	4155	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
23	Metropolitan Riverside County 1	33144	4144	364	4	2.9	365	0.131	0.111	0.099	0	2	15	46	31	69	364	0.07	0.0206	323*	0.02	0.002	0.0017
23	Metropolitan Riverside County 2	33146	4146	365	4	2.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
23	Mira Loma	33165	5214	359	3	2.1	360	0.118	0.104	0.092	0	0	10	23	16	48	349*	0.07	0.0181	--	--	--	--
24	Perris Valley	33149	4149	--	--	--	365	0.139	0.116	0.103	0	4	37	73	66	88	--	--	--	--	--	--	--
25	Lake Elsinore	33158	4158	365	2	1.4	359	0.130	0.108	0.097	0	3	19	35	26	55	358	0.06	0.0174	--	--	--	--
29	Banning Airport	33164	4164	--	--	--	365	0.129	0.113	0.095	0	1	12	43	28	63	363	0.08	0.0147	--	--	--	--
30	Coachella Valley 1**	33137	4137	365	2	0.8	365	0.126	0.101	0.097	0	1	20	58	29	83	365	0.06	0.0103	--	--	--	--
30	Coachella Valley 2**	33155	4157	--	--	--	365	0.106	0.094	0.087	0	0	6	29	8	48	--	--	--	--	--	--	--
	SAN BERNARDINO COUNTY																						
32	Northwest San Bernardino Valley	36175	5175	365	2	1.7	365	0.145	0.115	0.112	0	7	18	35	32	55	327*	0.10	0.0276	--	--	--	--
33	Southwest San Bernardino Valley	36025	5817	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
34	Central San Bernardino Valley 1	36197	5197	359	3	1.8	359	0.144	0.122	0.112	0	9	19	43	40	60	358	0.09	0.0239	359	0.01	0.004	0.0019
34	Central San Bernardino Valley 2	36203	5203	365	4	2.3	365	0.153	0.121	0.117	1	8	24	51	48	74	351	0.08	0.0245	--	--	--	--
35	East San Bernardino Valley	36204	5204	--	--	--	365	0.149	0.124	0.112	0	7	25	58	54	79	--	--	--	--	--	--	--
37	Central San Bernardino Mountains	36181	5181	--	--	--	365	0.171	0.137	0.126	4	13	59	93	67	115	--	--	--	--	--	--	--
38	East San Bernardino Mountains	36001	5818	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	DISTRICT MAXIMUM				8	5.1		0.171	0.137	0.126	4	13	59	93	67	115		0.12	0.0318		0.11	0.011	0.0028
	SOUTH COAST AIR BASIN				8	5.1		0.171	0.137	0.126	5	18	79	108	96	128		0.12	0.0318		0.11	0.011	0.0028

ppm - Parts Per Million parts of air, by volume. AAM = Annual Arithmetic Mean -- - Pollutant not monitored.

* Less than 12 full months of data; may not be representative. ** Salton Sea Air Basin.

a) - The federal 8-hour standard (8-hour average CO > 9 ppm) and state 8-hour standard (8-hour average CO > 9.0 ppm) were not exceeded. The federal and state 1-hour standards (35 ppm and 20 ppm) were not exceeded, either.

b) - The federal 1-hour ozone standard was revoked and replaced by the 8-hour average ozone standard effective June 15, 2005. U.S. EPA has revised the federal 8-hour ozone standard from 0.084 ppm to 0.075 ppm, effective May 27, 2008.

c) - The 8-hour average California ozone standard of 0.070 ppm was established effective May 17, 2006.

d) - The federal standard is annual arithmetic mean NO_2 > 0.0534 ppm. California Air Resources Board has revised the NO_2 1-hour state standard from 0.25 ppm to 0.18 ppm and has established a new annual standard of 0.030 ppm, effective March 20, 2008.

e) - The state standards are 1-hour average SO_2 > 0.25 ppm and 24-hour average SO_2 > 0.04 ppm. The federal standards are annual arithmetic mean SO_2 > 0.03 ppm, 24-hour average > 0.14 ppm, and 3-hour average > 0.50 ppm. The federal and state SO_2 standards were not exceeded.

South Coast
Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765-4182
www.aqmd.gov

The map showing the locations of source/receptor areas can be accessed via the Internet at http://www.aqmd.gov/telemweb/areamap.aspx. Locations of source/receptor areas are shown on the "South Coast Air Quality Management District Air Monitoring Areas" map available free of charge from SCAQMD Public Information.

2007 AIR QUALITY
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

2007

Source/Receptor Area		Station No.		Suspended Particulates PM10 f)					Fine Particulates PM2.5 g)						Particulates h)			Lead h)		Sulfate h)	
No.	Location	State Code	District Code	No. Days of Data	Max. Conc. in µg/m³ 24-hour	No. (%) Samples Exceeding Standards: Federal > 150 µg/m³ 24-hour	No. (%) Samples Exceeding Standards: State > 50 µg/m³ 24-hour	Annual Average Conc. i) (AAM) µg/m³	No. Days of Data	Max. Conc. in µg/m³ 24-hour	98th Percentile Conc. in µg/m³ 24-hour	No. (%) Samples Exceeding Federal Standard: Current > 35 j) µg/m³ 24-hour	No. (%) Samples Exceeding Federal Standard: Old > 65 j) µg/m³ 24-hour	Annual Average Conc. k) (AAM) µg/m³	No. Days of Data	Max. Conc. in µg/m³ 24-hour	Annual Average Conc. (AAM) µg/m³	Max. Monthly Average Conc. l) µg/m³	Max. Quarterly Average Conc. l) µg/m³	Max. Conc. in µg/m³ 24-hour	%Samples Exceeding State Standard ≥ 25 µg/m³ 24-hour
	LOS ANGELES COUNTY																				
1	Central LA	70087	087	56	78	0	5(9)	33.3	324	64.2	51.2	20(0.6)	0	16.8	58	194	73.5	0.04	0.03	10.5	0
2	Northwest Coastal LA County	70091	091	--	--	--	--	--	--	--	--	--	--	--	57	180	57.6	--	--	9.7	0
3	Southwest Coastal LA County	70111	820	56	96	0	2(4)	27.7	--	--	--	--	--	--	55	286	51.8	0.02	0.01	10.5	0
4	South Coastal LA County 1	70072	072	57	75+	0+	5(9)+	30.2+	332	82.9	40.8	12(3.6)	1(0.3)	14.6	59	732	76.5	0.02	0.01	11.1	0
4	South Coastal LA County 2	70110	077	56	123+	0+	17(30)+	41.7+	326	68.0	33.7	6(1.8)	1(0.3)	13.7	58	694	79.4	0.02	0.01	11.7	0
6	West San Fernando Valley	70074	074	--	--	--	--	--	95	43.3	33.4	1(1.1)	0	13.1	--	--	--	--	--	--	--
7	East San Fernando Valley	70069	069	54	109	0	11(20)	40.0	98	56.5	47.7	9(9.2)	0	16.8	--	--	--	--	--	--	--
8	West San Gabriel Valley	70088	088	--	--	--	--	--	108	68.9	45.4	3(2.8)	1(0.9)	14.3	56	123	46.3	--	--	22.4	0
9	East San Gabriel Valley 1	70060	060	55	83+	0+	11(20)+	35.6+	292*	63.8	49.3	19(6.5)	0	15.9	58	243	77.8	--	--	37.0++	1(1.7)++
9	East San Gabriel Valley 2	70591	591	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
10	Pomona/Walnut Valley	70075	075	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
11	South San Gabriel Valley	70185	085	--	--	--	--	--	101	63.6	49.5	5(5.0)	0	16.7	55	196	76.0	0.05	0.02	25.4++	1(1.7)++
12	South Central LA County	70084	084	--	--	--	--	--	106	49.0	46.1	4(3.8)	0	15.9	59	327	78.8	0.03	0.02	12.5	0
13	Santa Clarita Valley	70090	090	57	131+	0+	5(9)+	29.9+	--	--	--	--	--	--	--	--	--	--	--	--	--
	ORANGE COUNTY																				
16	North Orange County	30177	3177	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
17	Central Orange County	30178	3176	58	75+	0+	5(9)+	31.0+	336	79.4	46.5	14(4.2)	1(0.3)	14.5	--	--	--	--	--	--	--
18	North Coastal Orange County	30195	3195	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
19	Saddleback Valley	30002	3812	57	74	0	3(5)	23.0	98	46.9	35.0	2(2.0)	0	11.3	--	--	--	--	--	--	--
	RIVERSIDE COUNTY																				
22	Norco/Corona	33155	4155	58	93+	0+	10(17)+	39.6+	--	--	--	--	--	--	--	--	--	--	--	--	--
23	Metropolitan Riverside County 1	33144	4144	116	118+	0+	66(57)+	54.6+	295*	75.7	54.3	33(11.2)	3(1.0)	19.1	57	237	111.0	0.02	0.01	13.0	0
23	Metropolitan Riverside County 2	33146	4146	--	--	--	--	--	101	68.6	57.3	8(7.9)	1(1.0)	18.1	60	674	88.9	0.02	0.01	9.3	0
23	Mira Loma	33165	5214	56	142	0	41(73)	68.5	110	69.7	60.1	13(11.8)	1(0.9)	21.0	--	--	--	--	--	--	--
24	Perris Valley	33149	4149	57	120+	0+	32(56)+	54.8+	--	--	--	--	--	--	--	--	--	--	--	--	--
25	Lake Elsinore	33158	4158	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
29	Banning Airport	33164	4164	48*	78	0	7(15)	33.3	--	--	--	--	--	--	--	--	--	--	--	--	--
30	Coachella Valley 1**	33137	4137	54	83	0	6(11)	30.5	104	32.5	20.5	0	0	8.7	--	--	--	--	--	--	--
30	Coachella Valley 2**	33155	4157	84*	146+	0+	51(61)+	53.5+	97	26.8	26.5	0	0	9.8	--	--	--	--	--	--	--
	SAN BERNARDINO COUNTY																				
32	Northwest San Bernardino Valley	36175	5175	--	--	--	--	--	--	--	--	--	--	--	60	206	63.5	0.02	0.01	7.6	0
33	Southwest San Bernardino Valley	36025	5817	58	115+	0+	14(24)+	43.4+	102	72.8	53.0	6(5.9)	1(1.0)	17.9	--	--	--	--	--	--	--
34	Central San Bernardino Valley 1	36197	5197	56	111+	0+	33(59)+	54.9+	107	77.5	64.9	10(9.3)	2(1.9)	19.0	58	242	96.2	--	--	20.3	0
34	Central San Bernardino Valley 2	36203	5203	57	136+	0+	28(49)+	51.4+	99	72.1	68.4	11(11.1)	3(3.0)	18.3	59	536	106.9	0.04	0.02	13.6	0
35	East San Bernardino Valley	36204	5204	60	97	0	19(32)	39.7	--	--	--	--	--	--	--	--	--	--	--	--	--
37	Central San Bernardino Mountains	36181	5181	54	89	0	2(4)	27.2	--	--	--	--	--	--	--	--	--	--	--	--	--
38	East San Bernardino Mountains	36001	5818	--	--	--	--	--	54	45.4	34.0	1(1.9)	0	10.4	--	--	--	--	--	--	--
	DISTRICT MAXIMUM				146+	0+	66+	68.5+		82.9	68.4	33	3	21.0		732	111.0	0.05	0.03	37.0	1++
	SOUTH COAST AIR BASIN				142+	0+	79+	68.5+		82.9	68.4	48	8	21.0		732	111.0	0.05	0.03	37.0	1++

µg/m³ - Micrograms per cubic meter of air. AAM = Annual Arithmetic Mean -- - Pollutant not monitored.

* Less than 12 full months of data; may not be representative. ** Salton Sea Air Basin.

f) - PM10 samples were collected every 6 days at all sites except for Station Numbers 4144 and 4157 where samples were collected every 3 days.

g) - PM2.5 samples were collected every 3 days at all sites except for the following sites: Station Numbers 060, 072, 077, 087, 3176, and 4144 where samples were taken every day, and Station Number 5818 where samples were taken every 6 days.

h) - Total suspended particulates, lead, and sulfate were determined from samples collected every 6 days by the high volume sampler method, on glass fiber filter media.

i) - Federal annual PM10 standard (AAM > 50 µg/m³) was revoked effective December 17, 2006. State standard is annual average (AAM) > 20 µg/m³.

j) - U.S. EPA has revised the federal 24-hour PM2.5 standard from 65 µg/m³ to 35 µg/m³; effective December 17, 2006.

k) - Federal PM2.5 standard is annual average (AAM) > 15 µg/m³. State standard is annual average (AAM) > 12 µg/m³.

l) - Federal lead standard is quarterly average > 1.5 µg/m³; and state standard is monthly average ≥ 1.5 µg/m³.

\+ - The following PM10 data samples were excluded from compliance consideration in accordance with the EPA Exceptional Event Regulation: 210 and 157 ug/m3 on March 22 and April 6, respectively, at Coachella Valley 2 (high wind events); 167 ug/m3 on April 12 at Perris Valley (high wind event); 165 and 155 ug/m3 on July 5 at East San Gabriel 1 and Central San Bernardino Valley 1, respectively (fireworks displays); and high concentrations throughout the District on October 21, with a maximum concentration of 559 ug/m3 at Metropolitan Riverside County 1 (high wind and wildfire event).

++ - High sulfate concentrations were recorded on July 5, 2008, due to the 4th of July firework activities.

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2008 AIR QUALITY
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

2008

No.	Source/Receptor Area Location	Station No. State Code	Station No. District Code	Carbon Monoxide[a)] No. Days of Data	Carbon Monoxide Max. Conc. in ppm 1-hour	Carbon Monoxide Max Conc. in ppm 8-hour	Ozone No. Days of Data	Ozone Max. Conc. in ppm 1-hour	Ozone Max. Conc. in ppm 8-hour	Ozone Fourth High Conc. ppm 8-hour	Ozone No. Days Standard Exceeded: Health Advisory ≥ 0.150 ppm 1-hour	Federal[b)] Old > 0.12 ppm 1-hour	Federal Old > 0.08 ppm 8-hour	Federal Current > 0.075 ppm 8-hour	State[c)] Current > 0.09 ppm 1-hour	State Current > 0.070 ppm 8-hour	Nitrogen Dioxide[d)] No. Days of Data	Nitrogen Dioxide Max Conc. in ppm 1-hour	Nitrogen Dioxide Annual Average AAM Conc. ppm	Sulfur Dioxide[e)] No. Days of Data	Sulfur Dioxide Max. Conc. in ppm 1-hour	Sulfur Dioxide Max. Conc. in ppm 24-hour	Sulfur Dioxide Annual Average AAM Conc. ppm
	LOS ANGELES COUNTY																						
1	Central LA	70087	087	366	3	2.1	356	0.109	0.090	0.073	0	0	1	3	3	7	343	0.12	0.0275	366	0.01	0.002	0.0003
2	Northwest Coastal LA County	70091	091	366	3	2.0	366	0.11	0.097	0.073	0	0	1	2	3	8	364	0.09	0.0184	--	--	--	--
3	Southwest Coastal LA County	70111	820	358	4	2.5	360	0.086	0.075	0.065	0	0	0	0	0	1	359	0.09	0.0143	357	0.02	0.005	0.0014
4	South Coastal LA County 1	70072	072	366	3	2.6	366	0.093	0.074	0.064	0	0	0	0	0	1	366	0.13	0.0208	366	0.09	0.012	0.0022
4	South Coastal LA County 2	70110	077	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
6	West San Fernando Valley	70074	074	366	4	2.9	366	0.123	0.103	0.095	0	0	14	25	23	40	366	0.09	0.0180	--	--	--	--
7	East San Fernando Valley	70069	069	366	3	2.6	366	0.133	0.109	0.092	0	1	8	17	20	35	364	0.11	0.0285	366	0.01	0.003	0.0008
8	West San Gabriel Valley	70088	088	366	3	2.1	366	0.122	0.100	0.091	0	0	6	16	16	26	365	0.11	0.0235	--	--	--	--
9	East San Gabriel Valley 1	70060	060	366	2	1.6	366	0.135	0.111	0.101	0	7	14	28	34	39	366	0.10	0.0230	--	--	--	--
9	East San Gabriel Valley 2	70591	591	366	3	3.0	366	0.156	0.118	0.112	2	12	25	45	48	61	366	0.10	0.0182	--	--	--	--
10	Pomona/Walnut Valley	70075	075	366	3	2.0	366	0.141	0.110	0.100	0	5	19	35	32	47	366	0.11	0.0302	--	--	--	--
11	South San Gabriel Valley	70185	085	357	3	2.1	366	0.107	0.093	0.077	0	0	1	5	7	13	341	0.10	0.0263	--	--	--	--
12	South Central LA County+	70084+	084+	310*	6*	4.3*	310*	0.078*	0.060*	0.055*	0*	0*	0*	0*	0*	0*	305*	0.12*	0.0301*	--	--	--	--
13	Santa Clarita Valley	70090	090	363	2	1.1	363	0.160	0.131	0.108	2	8	35	60	54	81	363	0.07	0.0165	--	--	--	--
	ORANGE COUNTY																						
16	North Orange County	30177	3177	366	5	2.9	366	0.104	0.084	0.078	0	0	0	5	7	15	361	0.08	0.0206	--	--	--	--
17	Central Orange County	30178	3176	366	4	3.6	366	0.105	0.086	0.076	0	0	1	4	2	10	366	0.09	0.0203	--	--	--	--
18	North Coastal Orange County	30195	3195	366	3	2.0	366	0.094	0.079	0.075	0	0	0	3	0	6	365	0.08	0.0132	366	0.01	0.003	0.0011
19	Saddleback Valley	30002	3812	365	2	1.1	365	0.118	0.104	0.092	0	0	6	15	9	25	--	--	--	--	--	--	--
	RIVERSIDE COUNTY																						
22	Norco/Corona	33155	4155	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
23	Metropolitan Riverside County 1	33144	4144	366	3	2.0	366	0.146	0.116	0.111	0	8	38	64	54	88	366	0.09	0.0192	366	0.01	0.003	0.0009
23	Metropolitan Riverside County 2	33146	4146	366	7	2.0	--	--	--	--	--	--	--	--	--	--	70*	0.09*	0.0258*	--	--	--	--
23	Mira Loma	33165	5214	366	3	1.9	366	0.135	0.107	0.104	0	4	23	47	38	62	366	0.10	0.0174	--	--	--	--
24	Perris Valley	33149	4149	--	--	--	366	0.142	0.114	0.106	0	4	41	77	65	94	--	--	--	--	--	--	--
25	Lake Elsinore	33158	4158	365	1	1.0	365	0.139	0.118	0.108	0	6	32	69	49	92	362	0.06	0.0129	--	--	--	--
29	Banning Airport	33164	4164	--	--	--	365	0.149	0.120	0.108	0	10	45	74	57	95	366	0.08	0.0128	--	--	--	--
30	Coachella Valley 1**	33137	4137	366	1	0.6	366	0.11	0.101	0.098	0	0	20	51	26	70	366	0.05	0.0093	--	--	--	--
30	Coachella Valley 2**	33157	4157	--	--	--	355	0.12	0.092	0.090	0	0	11	27	11	44	--	--	--	--	--	--	--
	SAN BERNARDINO COUNTY																						
32	Northwest San Bernardino Valley	36175	5175	365	2	1.6	365	0.155	0.122	0.111	2	9	30	50	51	65	365	0.09	0.0235	--	--	--	--
33	Southwest San Bernardino Valley	36025	5817	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
34	Central San Bernardino Valley 1	36197	5197	363	2	1.9	364	0.162	0.124	0.111	1	8	35	58	55	82	364	0.10	0.0207	364	0.01	0.003	0.0018
34	Central San Bernardino Valley 2	36203	5203	366	2	1.8	366	0.157	0.122	0.113	2	11	43	62	62	90	366	0.09	0.0217	--	--	--	--
35	East San Bernardino Valley	36204	5204	--	--	--	366	0.154	0.120	0.112	1	12	50	75	72	100	--	--	--	--	--	--	--
37	Central San Bernardino Mountains	36181	5181	--	--	--	362	0.176	0.126	0.120	2	16	67	97	78	115	--	--	--	--	--	--	--
38	East San Bernardino Mountains	36001	5818	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	DISTRICT MAXIMUM			366	7	4.3	366	0.176	0.131	0.120	2	16	67	97	78	115		0.13	0.0302		0.09	0.012	0.0022
	SOUTH COAST AIR BASIN				7	4.3		0.176	0.131	0.120	7	28	80	120	102	140		0.13	0.0302		0.09	0.012	0.0022

ppm - Parts Per Million parts of air, by volume. AAM = Annual Arithmetic Mean -- - Pollutant not monitored.

* Less than 12 full months of data; may not be representative. ** Salton Sea Air Basin.

+ Site was relocated.

a) - The federal 8-hour standard (8-hour average CO > 9 ppm) and state 8-hour standard (8-hour average CO > 9.0 ppm) were not exceeded. The federal and state 1-hour standards (35 ppm and 20 ppm) were not exceeded, either.

b) - The federal 1-hour ozone standard was revoked and replaced by the 8-hour average ozone standard effective June 15, 2005. U.S. EPA has revised the federal 8-hour ozone standard from 0.084 ppm to 0.075 ppm, effective May 27, 2008.

c) - The 8-hour average California ozone standard of 0.070 ppm was established effective May 17, 2006.

d) - The federal standard is annual arithmetic mean NO_2 > 0.0534 ppm. California Air Resources Board has revised the NO_2 1-hour state standard from 0.25 ppm to 0.18 ppm and has established a new annual standard of 0.030 ppm, effective March 20, 2008.

e) - The state standards are 1-hour average SO_2 > 0.25 ppm and 24-hour average SO_2 > 0.04 ppm. The federal standards are annual arithmetic mean SO_2 > 0.03 ppm, 24-hour average > 0.14 ppm, and 3-hour average > 0.50 ppm. The federal and state SO_2 standards were not exceeded.

AQMD

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Diamond Bar, CA 91765-4182
www.aqmd.gov

Maps showing the source/receptor area boundaries can be accessed via the Internet by entering your address in the AQMD Current Hourly Air Quality Map, accessed from http://www2.aqmd.gov/webappl/gisaqi2/VEMap3D.aspx or at http://www.aqmd.gov/map/MapAQMD2.pdf . A map is also available free of charge from the AQMD Public Information Center at 1-800-CUT-SMOG.

2008 AIR QUALITY
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

2008

Source/Receptor Area No.	Location	Station No. State Code	Station No. District Code	Suspended Particulates PM10 f) No. Days of Data	PM10 Max. Conc. in µg/m³ 24-hour	PM10 No. (%) Samples Exceeding Standards: Federal > 150 µg/m³ 24-hour	PM10 No. (%) Samples Exceeding Standards: State > 50 µg/m³ 24-hour	PM10 Annual Average Conc. i) (AAM) µg/m³	Fine Particulates PM2.5 g) No. Days of Data	PM2.5 Max. Conc. in µg/m³ 24-hour	PM2.5 98th Percentile Conc. in µg/m³ 24-hour	PM2.5 No. (%) Samples Exceeding Federal Standard: Current > 35 j) µg/m³ 24-hour	PM2.5 No. (%) Samples Exceeding Federal Standard: Old > 65 j) µg/m³ 24-hour	PM2.5 Annual Average Conc. k) (AAM) µg/m³	Particulates TSP h) No. Days of Data	TSP Max. Conc. in µg/m³ 24-hour	TSP Annual Average Conc. (AAM) µg/m³	Lead h) Max. Monthly Average Conc. l) µg/m³	Lead Max. Quarterly Average Conc. l) µg/m³	Sulfate h) Max. Conc. in µg/m³ 24-hour	Sulfate %Samples Exceeding State Standard ≥ 25 µg/m³ 24-hour
LOS ANGELES COUNTY																					
1	Central LA	70087	087	45*	66*	0*	2(4%)*	30.9*	337	78.3	40.4	10(3.0)	1(0.3)	15.7	63	112	65.6	0.02	0.02	14.4	0
2	Northwest Coastal LA County	70091	091	--	--	--	--	--	--	--	--	--	--	--	56	88	45.9	--	--	11.1	0
3	Southwest Coastal LA County	70111	820	60	50	0	0(0%)	25.6	--	--	--	--	--	--	54	85	42.4	0.01	0.01	14.0	0
4	South Coastal LA County 1	70072	072	57	62	0	1(2%)	29.1	346	57.2	38.9	8(2.3)	0	14.2	61	117	55.7	0.01	0.01	11.0	0
4	South Coastal LA County 2	70110	077	58	81	0	9(16%)	35.8	349	60.9	36.4	7(2.0)	0	13.7	59	130	61.2	0.01	0.01	13.2	0
6	West San Fernando Valley	70074	074	--	--	--	--	--	113	50.5	26.2	2(1.8)	0	11.9	--	--	--	--	--	--	--
7	East San Fernando Valley	70069	069	54	66	0	7(13%)	35.6	116	57.5	34.6	2(1.7)	0	14.1	--	--	--	--	--	--	--
8	West San Gabriel Valley	70088	088	--	--	--	--	--	118	66.0	32.1	2(1.7)	1(0.9)	12.9	55	108	46.7	--	--	14.1	0
9	East San Gabriel Valley 1	70060	060	49	98	0	13(27%)	35.3	321	53.1	34.8	5(1.6)	0	14.1	59	146	74.9	--	--	18.7	0
9	East San Gabriel Valley 2	70591	591	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
10	Pomona/Walnut Valley	70075	075	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
11	South San Gabriel Valley	70185	085	--	--	--	--	--	114.	47.3	38.0	4(3.5)	0	15.0	57	119	63.2	0.02	0.02	10.1	0
12	South Central LA County+	70084+	084+	--	--	--	--	--	118	44.2	36.5	3(2.5)	0	15.5	51	103	70.4	0.03	0.02	10.6	0
13	Santa Clarita Valley	70090	090	57	91	0	2(4%)	25.8	--	--	--	--	--	--	--	--	--	--	--	--	--
ORANGE COUNTY																					
16	North Orange County	30177	3177	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
17	Central Orange County	30178	3176	58	61	0	3(5%)	28.6	336	67.9	39.4	13(3.9)	1(0.3)	13.7	--	--	--	--	--	--	--
18	North Coastal Orange County	30195	3195	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
19	Saddleback Valley	30002	3812	55	42	0	0(0%)	22.6	120	32.6	27.1	0	0	10.4	--	--	--	--	--	--	--
RIVERSIDE COUNTY																					
22	Norco/Corona	33155	4155	61	86	0	9(15%)	34.4	--	--	--	--	--	--	--	--	--	--	--	--	--
23	Metropolitan Riverside County 1	33144	4144	120	115	0	49(41%)	46.6	348	57.7	41.5	14(4.0)	0	16.4	59	222	100.6	0.01	0.01	9.1	0
23	Metropolitan Riverside County 2	33146	4146	--	--	--	--	--	116	43.0	39.1	4(3.4)	0	13.4	63	130	69.4	0.01	0.01	7.1	0
23	Mira Loma	33165	5214	61	135	0	35(57%)	57.4	111	50.9	47.1	10(9.0)	0	18.2	--	--	--	--	--	--	--
24	Perris Valley	33149	4149	45*	85*	0*	12(27%)*	38.3*	--	--	--	--	--	--	--	--	--	--	--	--	--
25	Lake Elsinore	33158	4158	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
29	Banning Airport	33164	4164	56	51	0	1(2%)	26.1	--	--	--	--	--	--	--	--	--	--	--	--	--
30	Coachella Valley 1**	33137	4137	47*	75*	0*	4(9%)*	23.2*	110	18.1	17.1	0	0	7.2	--	--	--	--	--	--	--
30	Coachella Valley 2**	33157	4157	112	128	0	25(22%)	39.9	113	21.6	18.8	0	0	8.4	--	--	--	--	--	--	--
SAN BERNARDINO COUNTY																					
32	Northwest San Bernardino Valley	36175	5175	--	--	--	--	--	--	--	--	--	--	--	54	87	52.2	0.01	0.01	8.4	0
33	Southwest San Bernardino Valley	36025	5817	62	90	0	15(24%)	38.8	113	54.2	45.0	6(5.3)	0	15.8	--	--	--	--	--	--	--
34	Central San Bernardino Valley 1	36197	5197	60	75	0	14(23%)	40.3	112	49.0	47.1	6(5.4)	0	15.4	57	139	80	--	--	9.5	0
34	Central San Bernardino Valley 2	36203	5203	60	76	0	19(32%)	42.7	110	43.5	40.1	3(2.7)	0	13.5	59	166	83.6	0.02	0.02	8.6	0
35	East San Bernardino Valley	36204	5204	61	58	0	4(7%)	29.0	--	--	--	--	--	--	--	--	--	--	--	--	--
37	Central San Bernardino Mountains	36181	5181	39*	41*	0*	0(0%)*	23.9*	--	--	--	--	--	--	--	--	--	--	--	--	--
38	East San Bernardino Mountains	36001	5818	--	--	--	--	--	58	36.8	33.3	1(1.7)	0	9.2							
	DISTRICT MAXIMUM				135	0	49	57.4		78.3	47.1	14	1	18.2		222	100.6	0.03	0.02	18.7	0
	SOUTH COAST AIR BASIN				135	0	68	57.4		78.3	47.1	28	2	18.2		222	100.6	0.03	0.02	18.7	0

µg/m³ - Micrograms per cubic meter of air. AAM = Annual Arithmetic Mean -- - Pollutant not monitored.

* Less than 12 full months of data; may not be representative. ** Salton Sea Air Basin.

+ Site was relocated.

f) - PM10 samples were collected every 6 days at all sites except for Station Numbers 4144 and 4157 where samples were collected every 3 days.

g) - PM2.5 samples were collected every 3 days at all sites except for the following sites: Station Numbers 060, 072, 077, 087, 3176, and 4144 where samples were taken every day, and Station Number 5818 where samples were taken every 6 days.

h) - Total suspended particulates, lead, and sulfate were determined from samples collected every 6 days by the high volume sampler method, on glass fiber filter media.

i) - Federal annual PM10 standard (AAM > 50 µg/m³) was revoked effective December 17, 2006. State standard is annual average (AAM) > 20 µg/m³.

j) - U.S. EPA has revised the federal 24-hour PM2.5 standard from 65 µg/m³ to 35 µg/m³; effective December 17, 2006.

k) - Federal PM2.5 standard is annual average (AAM) > 15 µg/m³. State standard is annual average (AAM) > 12 µg/m³.

l) - Federal lead standard is quarterly average > 1.5 µg/m³; and state standard is monthly average ≥ 1.5 µg/m³. U.S. EPA has established the federal standard of 0.15 ug/m3, rolling 3-month average, as of October 15, 2008.

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Maps showing the source/receptor area boundaries can be accessed via the Internet by entering your address in the AQMD Current Hourly Air Quality Map, accessed from http://www2.aqmd.gov/webappl/gisaqi2/VEMap3D.aspx or at http://www.aqmd.gov/map/MapAQMD2.pdf . A map is also available free of charge from the AQMD Public Information Center at 1-800-CUT-SMOG.

Highest 4 Daily Maximum 8-Hour Carbon Monoxide Averages

West Los Angeles-VA Hospital

FAQs

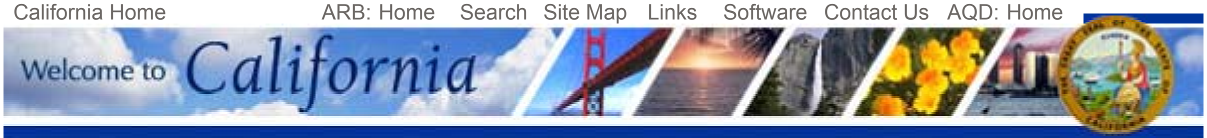
Year:	2007		2008		2009	
	Date	8-Hr Average	Date	8-Hr Average	Date	8-Hr Average
National:						
First High:	Dec 5	1.96	Jan 11	1.76	Mar 18	1.51
Second High:	Oct 26	1.63	Jan 12	1.74	Jan 7	1.40
Third High:	Dec 5	1.61	Nov 14	1.58	Oct 16	1.34
Fourth High:	Nov 15	1.55	Feb 9	1.56	Sep 23	1.30
California:						
First High:	Dec 5	1.96	Jan 11	1.76	Mar 18	1.51
Second High:	Oct 26	1.63	Jan 12	1.74	Jan 7	1.40
Third High:	Nov 14	1.55	Nov 13	1.58	Oct 16	1.34
Fourth High:	Mar 11	1.54	Feb 8	1.56	Sep 23	1.30
# Days Above Nat'l Standard:		0		0		0
# Days Above State Standard:		0		0		0
Year Coverage:		94		96		96

Go Backward One Year | New Top 4 Summary | Go Forward One Year

Notes: All averages are expressed in parts per million.
National exceedances are shown in **orange** . State exceedances are shown in **yellow** .
An exceedance is not necessarily a violation.
Year Coverage indicates the extent to which available monitoring data represent the time of the year when concentrations are expected to be highest. 0 means that data represent none of the high period; 100 means that data represent the entire high period. A high Year Coverage does not mean that there was sufficient data for annual statistics to be considered valid.
* There was insufficient (or no) data available to determine the value.

Switch: Hourly Ozone | 8-Hour Ozone | PM2.5 | PM10 | Nitrogen Dioxide | Sulfur Dioxide | Hydrogen Sulfide

Go to: Data Statistics Home Page | Top 4 Summaries Start Page



Air Resources Board

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Highest 4 Daily Maximum Hourly Nitrogen Dioxide Measurements

West Los Angeles-VA Hospital

FAQs

Year:	2007		2008		2009	
	Date	Measurement	Date	Measurement	Date	Measurement
First High:	Mar 12	0.082	Nov 14	0.090	Mar 18	0.077
Second High:	Jan 24	0.067	Oct 29	0.088	Aug 26	0.070
Third High:	Oct 26	0.067	Nov 13	0.088	Oct 10	0.070
Fourth High:	Feb 7	0.066	Oct 8	0.081	Dec 15	0.070
# Days Above State Standard:		0		0		0
Annual Average:		0.019		0.018		0.017
Year Coverage:		93		96		93

Go Backward One Year | New Top 4 Summary | Go Forward One Year

Notes: All averages are expressed in parts per million.
National exceedances are shown in **orange** . State exceedances are shown in **yellow** .
An exceedance is not necessarily a violation.
Year Coverage indicates the extent to which available monitoring data represent the time of the year when concentrations are expected to be highest. 0 means that data represent none of the high period; 100 means that data represent the entire high period. A high Year Coverage does not mean that there was sufficient data for annual statistics to be considered valid.
* There was insufficient (or no) data available to determine the value.

Switch: Hourly Ozone | 8-Hour Ozone | PM2.5 | PM10 | Carbon Monoxide | Sulfur Dioxide | Hydrogen Sulfide

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Air Resources Board

iADAM

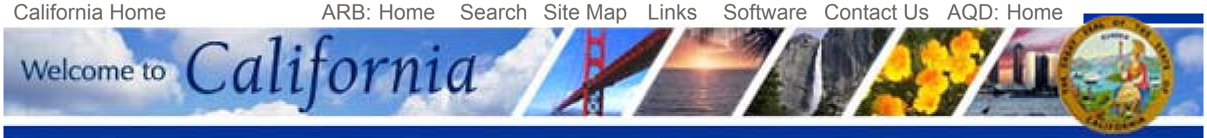
Highest 4 Daily 24-Hour PM10 Averages
Burbank-W Palm Avenue

FAQs

Year:	2007		2008		2009	
	Date	24-Hr Average	Date	24-Hr Average	Date	24-Hr Average
National:						
First High:	Apr 12	109.0	Dec 2	66.0	Jan 1	80.0
Second High:	Nov 20	78.0	Nov 20	65.0	Sep 22	76.0
Third High:	Nov 28	56.0	Jun 5	56.0	Mar 20	65.0
Fourth High:	Jan 6	55.0	Oct 21	53.0	Jan 7	63.0
California:						
First High:	Apr 12	107.0	Dec 2	61.0	Sep 22	76.0
Second High:	Nov 20	77.0	Nov 20	60.0	Jan 1	75.0
Third High:	Nov 28	55.0	Jun 5	55.0	Mar 20	66.0
Fourth High:	Jan 6	54.0	Mar 25	51.0	Aug 11	62.0
Measured:						
# Days Above Nat'l Standard:		0		0		0
# Days Above State Standard:		5		5		10
Estimated:						
3-Yr Avg # Days Above Nat'l Std:		*		*		*
# Days Above Nat'l Standard:		*		0.0		0.0
# Days Above State Standard:		*		*		60.9
State 3-Yr Maximum Average:		33		*		39
State Annual Average:		*		*		38.9
National 3-Year Average:		*30*		*30*		*
National Annual Average:		*24.0*		*35.6*		*
Year Coverage:		44		86		97

Go Backward One Year | New Top 4 Summary | Go Forward One Year

Notes: All concentrations are expressed in micrograms per cubic meter.
The national annual average PM10 standard was revoked in December 2006 and is no longer in effect.
Statistics related to the revoked standard are shown in *italics* or *italics* .
National exceedances are shown in **orange** . State exceedances are shown in **yellow** .
An exceedance is not necessarily a violation.
Statistics may include data that are related to an exceptional event.
State and national statistics may differ for the following reasons:
State statistics are based on California approved samplers, whereas national statistics are based on samplers using federal reference or equivalent methods.
State and national statistics may therefore be based on different samplers.
State statistics for 1998 and later are based on *local* conditions (except for sites in the South Coast Air Basin, where State statistics for 2002 and later are based on *local* conditions).
National statistics are based on *standard* conditions.
State criteria for ensuring that data are sufficiently complete for calculating valid annual averages are more stringent than the national criteria.
Measurements are usually collected every six days. Measured days counts the days that a measurement was greater than the level of the standard; Estimated days mathematically estimates how many days concentrations would have been greater than the level of the standard had each day been monitored.
3-Year statistics represent the listed year and the 2 years before the listed year.
Year Coverage indicates the extent to which available monitoring data represent the time of the year when concentrations are expected to be highest. 0 means that data represent none of the high period; 100 means that data represent the entire high period. A high Year Coverage does not mean that there was sufficient data for annual statistics to be considered valid.
* There was insufficient (or no) data available to determine the value.



Air Resources Board

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Highest 4 Daily 24-Hour PM2.5 Averages

Burbank-W Palm Avenue

FAQs

Year:	2007		2008		2009	
	Date	24-Hr Average	Date	24-Hr Average	Date	24-Hr Average
National:						
First High:	Jul 5	56.5	Jul 5	57.4	Jan 1	67.5
Second High:	Nov 17	50.3	Nov 23	50.4	Mar 20	51.4
Third High:	Nov 8	45.0	Jan 10	34.6	Dec 26	38.2
Fourth High:	Nov 20	40.1	Feb 18	32.5	Dec 27	36.9
California:						
First High:	Jul 5	56.5	Jul 5	68.9	Jan 1	67.5
Second High:	Nov 17	50.3	Jul 4	52.8	Mar 20	51.4
Third High:	Nov 8	45.0	Nov 23	50.4	Dec 26	38.2
Fourth High:	Nov 20	40.1	Jul 7	46.1	Dec 27	36.9
Estimated Days > Nat'l 24-Hr Std:		*		6.1		9.0
Measured Days > Nat'l 24-Hr Std:		9		2		4
Nat'l 24-Hr Std Design Value:		48		43		41
Nat'l 24-Hr Std 98th Percentile:		50.3		34.6		38.2
National Annual Std Design Value:		17.1		15.8		15.0
National Annual Average:		16.8		13.9		14.3
State Ann'l Std Designation Value:		*		14		14
State Annual Average:		*		13.9		14.3
Year Coverage:		80		95		99

Go Backward One Year | New Top 4 Summary | Go Forward One Year

Notes: All concentrations are expressed in micrograms per cubic meter.
National exceedances are shown in **orange** . State exceedances are shown in **yellow** .
An exceedance is not necessarily a violation.
State and national statistics may differ for the following reasons:
State statistics are based on California approved samplers, whereas national statistics are based on samplers using federal reference or equivalent methods.
State and national statistics may therefore be based on different samplers.
State criteria for ensuring that data are sufficiently complete for calculating valid annual averages are more stringent than the national criteria.
Year Coverage indicates the extent to which available monitoring data represent the time of the year when concentrations are expected to be highest. 0 means that data represent none of the high period; 100 means that data represent the entire high period. A high Year Coverage does not mean that there was sufficient data for annual statistics to be considered valid.
* There was insufficient (or no) data available to determine the value.

Switch: Hourly Ozone | 8-Hour Ozone | PM10 | Carbon Monoxide | Nitrogen Dioxide | Sulfur Dioxide | Hydrogen Sulfide

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Welcome to California

Air Resources Board

iADAM

Highest 4 Daily Maximum State 24-Hour Sulfur Dioxide Averages

Burbank-W Palm Avenue

FAQs

Year:	2007		2008		2009	
	Date	24-Hr Average	Date	24-Hr Average	Date	24-Hr Average
First High:	Jun 29	0.003	Jul 5	0.003	Aug 6	0.003
Second High:	Jun 30	0.003	Jan 16	0.003	Aug 5	0.003
Third High:	May 14	0.003	Apr 14	0.003	Aug 2	0.003
Fourth High:	Apr 27	0.003	Jun 22	0.003	Aug 3	0.002
Annual Average:		0.001		0.000		*
Year Coverage:		98		97		49

Go Backward One Year | New Top 4 Summary | Go Forward One Year

Notes: All averages are expressed in parts per million.
State exceedances are shown in **yellow** .
An exceedance is not necessarily a violation.
Year Coverage indicates the extent to which available monitoring data represent the time of the year when concentrations are expected to be highest. 0 means that data represent none of the high period; 100 means that data represent the entire high period. A high Year Coverage does not mean that there was sufficient data for annual statistics to be considered valid.
* There was insufficient (or no) data available to determine the value.

Switch: Hourly Ozone | 8-Hour Ozone | PM2.5 | PM10 | Carbon Monoxide | Nitrogen Dioxide | Hydrogen Sulfide

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Highest 4 Daily Maximum Hourly Ozone Measurements

West Los Angeles-VA Hospital

FAQs

Year:	2007		2008		2009	
	Date	Measurement	Date	Measurement	Date	Measurement
First High:	Sep 3	0.117	May 18	0.111	Aug 26	0.131
Second High:	Sep 2	0.105	Apr 28	0.101	Aug 30	0.118
Third High:	Aug 19	0.090	Oct 27	0.098	Aug 27	0.114
Fourth High:	Jul 26	0.085	Oct 1	0.093	Aug 29	0.108
# Days Above State Standard:		2		3		6
California Designation Value:		0.10		0.10		0.10
Expected Peak Day Conc.:		0.103		0.100		0.103
# Days Above Nat'l Standard:		*0*		*0*		*1*
National Design Value:		*0.109*		*0.101*		*0.114*
Year Coverage:		98		96		99

Go Backward One Year | New Top 4 Summary | Go Forward One Year

Notes: All concentrations are expressed in parts per million.
The national 1-hour ozone standard was revoked in June 2005 and is no longer in effect. Statistics related to the revoked standard are shown in *italics* or *italics* .
State exceedances are shown in **yellow** . Exceedances of the revoked national 1-hour standard are shown in *orange* .
An exceedance is not necessarily a violation.
Year Coverage indicates the extent to which available monitoring data represent the time of the year when concentrations are expected to be highest. 0 means that data represent none of the high period; 100 means that data represent the entire high period. A high Year Coverage does not mean that there was sufficient data for annual statistics to be considered valid.
* There was insufficient (or no) data available to determine the value.

Switch: 8-Hour Ozone | PM2.5 | PM10 | Carbon Monoxide | Nitrogen Dioxide | Sulfur Dioxide | Hydrogen Sulfide

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2007 AIR QUALITY
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

2007

Source/Receptor Area No.	Location	Station No. State Code	Station No. District Code	Carbon Monoxide[a)] No. Days of Data	Carbon Monoxide Max. Conc. in ppm 1-hour	Carbon Monoxide Max Conc. in ppm 8-hour	Ozone No. Days of Data	Ozone Max. Conc. in ppm 1-hour	Ozone Max. Conc. in ppm 8-hour	Ozone Fourth High Conc. ppm 8-hour	Ozone No. Days Standard Exceeded: Health Advisory ≥ 0.15 ppm 1-hour	Federal[b)] > 0.12 ppm 1-hour	Federal[b)] > 0.08 ppm 8-hour	Federal[b)] > 0.075 ppm 8-hour	State[c)] > 0.09 ppm 1-hour	State[c)] > 0.070 ppm 8-hour	Nitrogen Dioxide[d)] No. Days of Data	Nitrogen Dioxide Max Conc. in ppm 1-hour	Nitrogen Dioxide Annual Average AAM Conc. ppm	Sulfur Dioxide[e)] No. Days of Data	Sulfur Dioxide Max. Conc. in ppm 1-hour	Sulfur Dioxide Max. Conc. in ppm 24-hour	Sulfur Dioxide Annual Average AAM Conc. ppm
LOS ANGELES COUNTY																							
1	Central LA	70087	087	359	3	2.2	355	0.115	0.102	0.072	0	0	2	3	3	6	360	0.10	0.0299	351	0.01	0.003	0.0009
2	Northwest Coastal LA County	70091	091	365	3	2.0	360	0.117	0.087	0.067	0	0	1	2	2	2	353	0.08	0.0200	--	--	--	--
3	Southwest Coastal LA County	70111	820	361	3	2.4	361	0.087	0.074	0.066	0	0	0	0	0	1	331*	0.08	0.0140	361	0.02	0.009	0.0028
4	South Coastal LA County 1	70072	072	347*	3	2.6	365	0.099	0.073	0.056	0	0	0	0	1	1	365	0.11	0.0207	365	0.11	0.011	0.0027
4	South Coastal LA County 2	70110	077	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
6	West San Fernando Valley	70074	074	358	4	2.8	358	0.129	0.104	0.092	0	1	8	28	21	43	358	0.08	0.0186	--	--	--	--
7	East San Fernando Valley	70069	069	365	4	2.8	365	0.116	0.096	0.088	0	0	6	13	13	19	363	0.09	0.0289	365	0.01	0.003	0.0010
8	West San Gabriel Valley	70088	088	365	3	2.3	365	0.149	0.100	0.089	0	3	6	11	13	21	365	0.09	0.0246	--	--	--	--
9	East San Gabriel Valley 1	70060	060	365	3	1.8	365	0.158	0.112	0.096	1	3	13	20	22	28	365	0.12	0.0253	--	--	--	--
9	East San Gabriel Valley 2	70591	591	365	2	2.0	364	0.147	0.116	0.104	0	3	14	26	25	40	365	0.11	0.0227	--	--	--	--
10	Pomona/Walnut Valley	70075	075	365	3	2.0	365	0.153	0.108	0.102	1	2	10	18	19	25	365	0.10	0.0318	--	--	--	--
11	South San Gabriel Valley	70185	085	365	5	2.9	364	0.135	0.100	0.079	0	2	2	5	6	9	361	0.11	0.0249	--	--	--	--
12	South Central LA County	70084	084	365	8	5.1	365	0.102	0.077	0.056	0	0	0	1	1	2	365	0.10	0.0291	--	--	--	--
13	Santa Clarita Valley	70090	090	361	2	1.2	357	0.135	0.110	0.101	0	2	16	44	31	64	339*	0.08	0.0196	--	--	--	--
ORANGE COUNTY																							
16	North Orange County	30177	3177	360	6	2.9	365	0.152	0.107	0.082	1	1	2	8	7	9	365	0.08	0.0219	--	--	--	--
17	Central Orange County	30178	3176	346*	4	2.9	365	0.127	0.099	0.073	0	1	1	1	2	7	359	0.10	0.0208	--	--	--	--
18	North Coastal Orange County	30195	3195	362	5	3.1	362	0.082	0.072	0.065	0	0	0	0	0	2	362	0.07	0.0132	358	0.01	0.004	0.0010
19	Saddleback Valley	30002	3812	364	3	2.2	365	0.108	0.089	0.080	0	0	2	5	5	10	--	--	--	--	--	--	
RIVERSIDE COUNTY																							
22	Norco/Corona	33155	4155	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
23	Metropolitan Riverside County 1	33144	4144	364	4	2.9	365	0.131	0.111	0.099	0	2	15	46	31	69	364	0.07	0.0206	323*	0.02	0.002	0.0017
23	Metropolitan Riverside County 2	33146	4146	365	4	2.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
23	Mira Loma	33165	5214	359	3	2.1	360	0.118	0.104	0.092	0	0	10	23	16	48	349*	0.07	0.0181	--	--	--	--
24	Perris Valley	33149	4149	--	--	--	365	0.139	0.116	0.103	0	4	37	73	66	88	--	--	--	--	--	--	--
25	Lake Elsinore	33158	4158	365	2	1.4	359	0.130	0.108	0.097	0	3	19	35	26	55	358	0.06	0.0174	--	--	--	--
29	Banning Airport	33164	4164	--	--	--	365	0.129	0.113	0.095	0	1	12	43	28	63	363	0.08	0.0147	--	--	--	--
30	Coachella Valley 1**	33137	4137	365	2	0.8	365	0.126	0.101	0.097	0	1	20	58	29	83	365	0.06	0.0103	--	--	--	--
30	Coachella Valley 2**	33155	4157	--	--	--	365	0.106	0.094	0.087	0	0	6	29	8	48	--	--	--	--	--	--	--
SAN BERNARDINO COUNTY																							
32	Northwest San Bernardino Valley	36175	5175	365	2	1.7	365	0.145	0.115	0.112	0	7	18	35	32	55	327*	0.10	0.0276	--	--	--	--
33	Southwest San Bernardino Valley	36025	5817	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
34	Central San Bernardino Valley 1	36197	5197	359	3	1.8	359	0.144	0.122	0.112	0	9	19	43	40	60	358	0.09	0.0239	359	0.01	0.004	0.0019
34	Central San Bernardino Valley 2	36203	5203	365	4	2.3	365	0.153	0.121	0.117	1	8	24	51	48	74	351	0.08	0.0245	--	--	--	--
35	East San Bernardino Valley	36204	5204	--	--	--	365	0.149	0.124	0.112	0	7	25	58	54	79	--	--	--	--	--	--	--
37	Central San Bernardino Mountains	36181	5181	--	--	--	365	0.171	0.137	0.126	4	13	59	93	67	115	--	--	--	--	--	--	--
38	East San Bernardino Mountains	36001	5818	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	DISTRICT MAXIMUM				8	5.1		0.171	0.137	0.126	4	13	59	93	67	115		0.12	0.0318		0.11	0.011	0.0028
	SOUTH COAST AIR BASIN				8	5.1		0.171	0.137	0.126	5	18	79	108	96	128		0.12	0.0318		0.11	0.011	0.0028

ppm - Parts Per Million parts of air, by volume. AAM = Annual Arithmetic Mean -- - Pollutant not monitored.

* Less than 12 full months of data; may not be representative. ** Salton Sea Air Basin.

a) - The federal 8-hour standard (8-hour average CO > 9 ppm) and state 8-hour standard (8-hour average CO > 9.0 ppm) were not exceeded. The federal and state 1-hour standards (35 ppm and 20 ppm) were not exceeded, either.

b) - The federal 1-hour ozone standard was revoked and replaced by the 8-hour average ozone standard effective June 15, 2005. U.S. EPA has revised the federal 8-hour ozone standard from 0.084 ppm to 0.075 ppm, effective May 27, 2008.

c) - The 8-hour average California ozone standard of 0.070 ppm was established effective May 17, 2006.

d) - The federal standard is annual arithmetic mean NO_2 > 0.0534 ppm. California Air Resources Board has revised the NO_2 1-hour state standard from 0.25 ppm to 0.18 ppm and has established a new annual standard of 0.030 ppm, effective March 20, 2008.

e) - The state standards are 1-hour average SO_2 > 0.25 ppm and 24-hour average SO_2 > 0.04 ppm. The federal standards are annual arithmetic mean SO_2 > 0.03 ppm, 24-hour average > 0.14 ppm, and 3-hour average > 0.50 ppm. The federal and state SO_2 standards were not exceeded.

South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765-4182
www.aqmd.gov

The map showing the locations of source/receptor areas can be accessed via the Internet at http://www.aqmd.gov/telemweb/areamap.aspx. Locations of source/receptor areas are shown on the "South Coast Air Quality Management District Air Monitoring Areas" map available free of charge from SCAQMD Public Information.

2007 AIR QUALITY
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

2007

No.	Source/Receptor Area Location	Station No. State Code	Station No. District Code	Suspended Particulates PM10 f) No. Days of Data	PM10 Max. Conc. in µg/m3 24-hour	PM10 No. (%) Samples Exceeding Standards Federal > 150 µg/m3 24-hour	PM10 No. (%) Samples Exceeding Standards State > 50 µg/m3 24-hour	PM10 Annual Average Conc. i) (AAM) µg/m3	Fine Particulates PM2.5 g) No. Days of Data	PM2.5 Max. Conc. in µg/m3 24-hour	PM2.5 98th Percentile Conc. in µg/m3 24-hour	PM2.5 No. (%) Samples Exceeding Federal Standard Current > 35 j) µg/m3 24-hour	PM2.5 No. (%) Samples Exceeding Federal Standard Old > 65 j) µg/m3 24-hour	PM2.5 Annual Average Conc. k) (AAM) µg/m3	Particulates h) No. Days of Data	Particulates Max. Conc. in µg/m3 24-hour	Particulates Annual Average Conc. (AAM) µg/m3	Lead h) Max. Monthly Average Conc. l) µg/m3	Lead h) Max. Quarterly Average Conc. l) µg/m3	Sulfate h) Max. Conc. in µg/m3 24-hour	Sulfate h) %Samples Exceeding State Standard ≥ 25 µg/m3 24-hour
	LOS ANGELES COUNTY																				
1	Central LA	70087	087	56	78	0	5(9)	33.3	324	64.2	51.2	20(0.6)	0	16.8	58	194	73.5	0.04	0.03	10.5	0
2	Northwest Coastal LA County	70091	091	--	--	--	--	--	--	--	--	--	--	--	57	180	57.6	--	--	9.7	0
3	Southwest Coastal LA County	70111	820	56	96	0	2(4)	27.7	--	--	--	--	--	--	55	286	51.8	0.02	0.01	10.5	0
4	South Coastal LA County 1	70072	072	57	75+	0+	5(9)+	30.2+	332	82.9	40.8	12(3.6)	1(0.3)	14.6	59	732	76.5	0.02	0.01	11.1	0
4	South Coastal LA County 2	70110	077	56	123+	0+	17(30)+	41.7+	326	68.0	33.7	6(1.8)	1(0.3)	13.7	58	694	79.4	0.02	0.01	11.7	0
6	West San Fernando Valley	70074	074	--	--	--	--	--	95	43.3	33.4	1(1.1)	0	13.1	--	--	--	--	--	--	--
7	East San Fernando Valley	70069	069	54	109	0	11(20)	40.0	98	56.5	47.7	9(9.2)	0	16.8	--	--	--	--	--	--	--
8	West San Gabriel Valley	70088	088	--	--	--	--	--	108	68.9	45.4	3(2.8)	1(0.9)	14.3	56	123	46.3	--	--	22.4	0
9	East San Gabriel Valley 1	70060	060	55	83+	0+	11(20)+	35.6+	292*	63.8	49.3	19(6.5)	0	15.9	58	243	77.8	--	--	37.0++	1(1.7)++
9	East San Gabriel Valley 2	70591	591	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
10	Pomona/Walnut Valley	70075	075	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
11	South San Gabriel Valley	70185	085	--	--	--	--	--	101	63.6	49.5	5(5.0)	0	16.7	55	196	76.0	0.05	0.02	25.4++	1(1.7)++
12	South Central LA County	70084	084	--	--	--	--	--	106	49.0	46.1	4(3.8)	0	15.9	59	327	78.8	0.03	0.02	12.5	0
13	Santa Clarita Valley	70090	090	57	131+	0+	5(9)+	29.9+	--	--	--	--	--	--	--	--	--	--	--	--	--
	ORANGE COUNTY																				
16	North Orange County	30177	3177	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
17	Central Orange County	30178	3176	58	75+	0+	5(9)+	31.0+	336	79.4	46.5	14(4.2)	1(0.3)	14.5	--	--	--	--	--	--	--
18	North Coastal Orange County	30195	3195	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
19	Saddleback Valley	30002	3812	57	74	0	3(5)	23.0	98	46.9	35.0	2(2.0)	0	11.3	--	--	--	--	--	--	--
	RIVERSIDE COUNTY																				
22	Norco/Corona	33155	4155	58	93+	0+	10(17)+	39.6+	--	--	--	--	--	--	--	--	--	--	--	--	--
23	Metropolitan Riverside County 1	33144	4144	116	118+	0+	66(57)+	54.6+	295*	75.7	54.3	33(11.2)	3(1.0)	19.1	57	237	111.0	0.02	0.01	13.0	0
23	Metropolitan Riverside County 2	33146	4146	--	--	--	--	--	101	68.6	57.3	8(7.9)	1(1.0)	18.1	60	674	88.9	0.02	0.01	9.3	0
23	Mira Loma	33165	5214	56	142	0	41(73)	68.5	110	69.7	60.1	13(11.8)	1(0.9)	21.0	--	--	--	--	--	--	--
24	Perris Valley	33149	4149	57	120+	0+	32(56)+	54.8+	--	--	--	--	--	--	--	--	--	--	--	--	--
25	Lake Elsinore	33158	4158	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
29	Banning Airport	33164	4164	48*	78	0	7(15)	33.3	--	--	--	--	--	--	--	--	--	--	--	--	--
30	Coachella Valley 1**	33137	4137	54	83	0	6(11)	30.5	104	32.5	20.5	0	0	8.7	--	--	--	--	--	--	--
30	Coachella Valley 2**	33155	4157	84*	146+	0+	51(61)+	53.5+	97	26.8	26.5	0	0	9.8	--	--	--	--	--	--	--
	SAN BERNARDINO COUNTY																				
32	Northwest San Bernardino Valley	36175	5175	--	--	--	--	--	--	--	--	--	--	--	60	206	63.5	0.02	0.01	7.6	0
33	Southwest San Bernardino Valley	36025	5817	58	115+	0+	14(24)+	43.4+	102	72.8	53.0	6(5.9)	1(1.0)	17.9	--	--	--	--	--	--	--
34	Central San Bernardino Valley 1	36197	5197	56	111+	0+	33(59)+	54.9+	107	77.5	64.9	10(9.3)	2(1.9)	19.0	58	242	96.2	--	--	20.3	0
34	Central San Bernardino Valley 2	36203	5203	57	136+	0+	28(49)+	51.4+	99	72.1	68.4	11(11.1)	3(3.0)	18.3	59	536	106.9	0.04	0.02	13.6	0
35	East San Bernardino Valley	36204	5204	60	97	0	19(32)	39.7	--	--	--	--	--	--	--	--	--	--	--	--	--
37	Central San Bernardino Mountains	36181	5181	54	89	0	2(4)	27.2	--	--	--	--	--	--	--	--	--	--	--	--	--
38	East San Bernardino Mountains	36001	5818	--	--	--	--	--	54	45.4	34.0	1(1.9)	0	10.4	--	--	--	--	--	--	--
	DISTRICT MAXIMUM				146+	0+	66+	68.5+		82.9	68.4	33	3	21.0		732	111.0	0.05	0.03	37.0	1++
	SOUTH COAST AIR BASIN				142+	0+	79+	68.5+		82.9	68.4	48	8	21.0		732	111.0	0.05	0.03	37.0	1++

µg/m3 - Micrograms per cubic meter of air. AAM = Annual Arithmetic Mean -- - Pollutant not monitored.

* Less than 12 full months of data; may not be representative. ** Salton Sea Air Basin.

f) - PM10 samples were collected every 6 days at all sites except for Station Numbers 4144 and 4157 where samples were collected every 3 days.

g) - PM2.5 samples were collected every 3 days at all sites except for the following sites: Station Numbers 060, 072, 077, 087, 3176, and 4144 where samples were taken every day, and Station Number 5818 where samples were taken every 6 days.

h) - Total suspended particulates, lead, and sulfate were determined from samples collected every 6 days by the high volume sampler method, on glass fiber filter media.

i) - Federal annual PM10 standard (AAM > 50 µg/m3) was revoked effective December 17, 2006. State standard is annual average (AAM) > 20 µg/m3.

j) - U.S. EPA has revised the federal 24-hour PM2.5 standard from 65 µg/m3 to 35 µg/m3; effective December 17, 2006.

k) - Federal PM2.5 standard is annual average (AAM) > 15 µg/m3. State standard is annual average (AAM) > 12 µg/m3.

l) - Federal lead standard is quarterly average > 1.5 µg/m3; and state standard is monthly average ≥ 1.5 µg/m3.

\+ - The following PM10 data samples were excluded from compliance consideration in accordance with the EPA Exceptional Event Regulation: 210 and 157 ug/m3 on March 22 and April 6, respectively, at Coachella Valley 2 (high wind events); 167 ug/m3 on April 12 at Perris Valley (high wind event); 165 and 155 ug/m3 on July 5 at East San Gabriel 1 and Central San Bernardino Valley 1, respectively (fireworks displays); and high concentrations throughout the District on October 21, with a maximum concentration of 559 ug/m3 at Metropolitan Riverside County 1 (high wind and wildfire event).

++ - High sulfate concentrations were recorded on July 5, 2008, due to the 4th of July firework activities.

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Appendix C

Regional Construction Emissions

Buried Concrete Cover Phase 1 Regional Construction Emissions

Fugitive Dust Emissions		Site Preparation Activity			
		Excavation	1,742,400	Square Feet[a]	
Schedule -	1	days[a]			

Fugitive Dust Parameters	
Vehicle Speed (mph)[b]	Vehicle Miles Traveled
3	80.00

Fugitive Dust Stockpiling Parameters					
Silt Content[c]	Precipitation Days[d]	Mean Wind Speed Percent[e]	TSP Fraction	Area[f] (acres)	
6.9	10	0.53	0.5	5	

Fugitive Dust Material Handling					
Aerodynamic Particle Size Multiplier [g]	Mean Wind Speed[h]	Moisture Content[i]	Dirt Handled	Dirt Handled	
	mph		cy	lb/day	
0.35	2.8	7.9	973	2,433,333	

Dragline Parameters			
Drop Height (feet)	Moisture Content[j]	PM_{10} Scaling Factor	$PM_{2.5}$ Scaling Factor
3	7.9%	0.75	0.017

		Max Daily Grading (acres)	PM10	PM2.5
Site Prep - Grading		9.50	221.4	46.0

Incremental Increase in Fugitive Dust Emissions from Construction Operations

Equations:

Storage Piles[k]: PM10 Emissions (lb/day) = 1.7 x (silt content/1.5) x ((365-precipitation days)/235) x wind speed percent/15 x TSP fraction x Area) x (1 - control efficiency)

Material Handling[k]: PM10 Emissions (lb/day) = (0.0032 x aerodynamic particle size multiplier x (wind speed (mph)/5)$^{1.3}$/(moisture content/2)$^{1.4}$ x dirt handled (lb/day)/2,000 (lb/ton)
(1 - control efficiency)

Dragline Equation for PM_{10} Emissions[o] (lbs/day) = [((0.0021) x (drop height)$^{0.7}$) / (moisture content)$^{0.3}$] x 0.75 x Dirt Handled x Control Efficiency

Dragline Equation for $PM_{2.5}$ Emissions[o] (lbs/day) = [((0.0021) x (drop height)$^{1.1}$) / (moisture content)$^{0.3}$] x 0.017 x Dirt Handled x Control Efficiency

Grading Equition for PM10 is based on UREBEMIS2007's rate for grading dust of 38.2 pounds per acre, and applied 61% reduction based on Rule 403 compliance.

Phase I	Control Efficiency	PM10[n]	PM2.5[n]
Description	%	lb/day	lb/day
Earthmoving	61	8.590	1.787
Storage Piles	61	0.4	0.083
Material Handling	61	0.04	0.008
Dragline	61	2.763	0.063
Grading	61	221.369	46.045
Total		***233.16***	***47.99***

Notes

a) Assumed 79 haul truck trips a day at 10 cubic yards a load, worst single-day scenerio, 4000 foot long area 12 foot wide.
b) Caterpillar Performance Handbook, Edition 33, October 2003 Operating Speeds, p 2-3.
c) USEPA, AP-42, July 1998, Table 11.9-3 Typical Values for Corection Factors Applicable to the Predictive Emission Factor Equations
d) Table A9-9-E2, SCAQMD CEQA Air Quality Handbook, 1993
e) Mean wind speed percent - percent of time mean wind speed exceeds 12 mph.
f) Assumed storage piles are 5 acres in size
g) USEPA, AP-42, Jan 1995, Section 13.2.4 Aggretate Handling and Storage Piles, p 13.2.4-3 Aerodynamic particle size multiplier for < 10 μm
h) Mean wind speed at the Downtown Los Angeles Wind Monitoring Station.
i) USEPA, Fugitive Dust Background Document and Technical Information Document for Best Available Control Measures, equation 2-13, p 2-28.
j) Assuming 973 cubic yards of dirt handled
k) USEPA, AP-42, July 1998, Table 11.9-1, Equation for Site Grading≤ 10 μm
l) USEPA, AP-42, Jan 1995, Section 13.2.4 Aggretate Handling and Storage Piles, Equation 1
m) USEPA, Fugitive Dust Background Document and Technical Information Document for Best Available Control Measures, Sept 1992, EPA-450/2-92-004, Equation 2-12.
n) Includes watering at least three times a day per Rule 403 (61% control efficiency).
o) Source: USEPA, AP-42, Emission Factor Equations for Uncontrolled Dust Sources at Western Surface Coal Mines, Table 11.9-1, Dragline calculations for PM_{10} and $PM_{2.5}$.

USCR Buried Structure Estimated Equipment Operations

Equipment Type	Qty	Operating Hrs/WD/each	Operating Hours per Day	Rog (lbs/day)	Rog Rate (lbs/hr)	CO (lbs/day)	CO rate (lbs/hr)	NOX (lbs/day)	NOX rate (lbs/hr)	SOX (lbs/day)	SOX rate (lbs/hr)	PM10 (lbs/day)	PM2.5 (lbs/day)	PM (lbs/day)	PM rate (lbs/hr)	CO2 (lbs/day)	CO2 Rate (lbs/hr)	CH4 (lbs/day)	CH4 rate (lbs/hr)
1/2 Ton Pickup (Commute Vehicle)	6	4	24																
3/4 Ton Pickup	4	8	32																
1 Ton Pickup	2	8	16																
4000 Gallon Water Truck	2	8	16	1.46	0.0913	8.05	0.5034	9.19	0.5746	0.01	0.0009	0.6197	0.5701	0.62	0.0387	1256.69	78.5433	0.13	0.0082
Dump Trucks	14	8	112																
Yard Crane, ATV	2	8	16	1.93	0.1204	7.03	0.4395	16.32	1.0200	0.02	0.0014	0.6811	0.6266	0.68	0.0426	2058.09	128.6308	0.17	0.0109
Loader/ForksCat 966,	2	8	16	1.79	0.1118	5.51	0.3444	15.82	0.9890	0.03	0.0017	0.5390	0.4959	0.54	0.0337	2383.63	148.9766	0.16	0.0101
Job Trailers	3	8	24																
Grader, Cat 16G	1	8	8	1.06	0.1326	3.24	0.4046	9.28	1.1596	0.02	0.0019	0.3198	0.2942	0.32	0.0400	1376.91	172.1133	0.10	0.0120
Dozer, D10	2	8	16	4.79	0.2995	16.71	1.0443	34.94	2.1837	0.09	0.0058	1.2126	1.1156	1.21	0.0758	8276.48	517.2803	0.43	0.0270
Excavator, Cat 365 (1)	2	6	12	1.79	0.1496	5.82	0.4851	12.28	1.0236	0.03	0.0023	0.4394	0.4042	0.44	0.0366	2804.82	233.7353	0.16	0.0135
Roller/Compactor	1	4	4	0.32	0.0792	1.58	0.3944	2.11	0.5273	0.00	0.0008	0.1413	0.1300	0.14	0.0353	268.19	67.0483	0.03	0.0071
Manitowoc Crane	2	8	16																
Hydraulic Breaker	2	8	16	0.98	0.0610	5.90	0.3689	6.51	0.4070	0.01	0.0008	0.4130	0.3799	0.41	0.0258	1068.77	66.8	0.09	0.0055
Misc.	10	2	20	2.53	0.1267	9.46	0.4731	20.24	1.0122	0.03	0.0016	0.8501	0.7821	0.85	0.0425	3044.80	152	0.23	0.0114
1/2 Ton Pickup (Commute Vehicle)(2)	6	4	24																
4000 Gallon Water Truck (2)	2	8	16	1.30	0.0810	7.98	0.4988	8.31	0.5192	0.01	0.0009	0.5306	0.4882	0.53	0.0332	1256.69	78.5	0.12	0.0073

Excavator, Cat 365 (2)	2	8	16	2.39	0.1496	7.76	0.4851	16.38	1.0236	0.04	0.0023	0.5858	0.5390	0.59	0.0366	3739.77	234	0.22	0.0135
Truck Tractor	2	8	16	1.46	0.0913	8.05	0.5034	9.19	0.5746	0.01	0.0009	0.6197	0.5701	0.62	0.0387	1256.69	78.5433	0.13	0.0082
Dump Trucks (2)	2	8	16	2.91	0.1816	9.33	0.5831	21.31	1.3322	0.04	0.0027	0.7340	0.6753	0.73	0.0459	4160.83	260	0.26	0.0164
Crawler Loader	2	8	16	2.14	0.1335	8.88	0.5549	14.90	0.9315	0.02	0.0013	0.8733	0.8034	0.87	0.0546	1824.30	114	0.19	0.0120
Front End Loader	2	8	16	1.57	0.0983	7.29	0.4557	11.38	0.7114	0.02	0.0012	0.5999	0.5519	0.60	0.0375	1737.78	109	0.14	0.0089
Sheepsfoot Roller	2	8	16	1.27	0.0792	6.31	0.3944	8.44	0.5273	0.01	0.0008	0.5653	0.5201	0.57	0.0353	1072.77	67.0	0.11	0.0071
Chipping Machine	2	8	16	2.14	0.1337	10.34	0.6461	14.34	0.8965	0.02	0.0015	0.8606	0.7917	0.86	0.0538	2116.94	132	0.19	0.0121
Chain Saw 36"	4	8	32	4.05	0.1267	15.14	0.4731	32.39	1.0122	0.05	0.0016	1.3602	1.2514	1.36	0.0425	4871.68	152	0.37	0.0114
Air Compressor, 260 cfm	1	8	8	0.53	0.0667	1.82	0.2281	1.59	0.1982	0.00	0.0003	0.1319	0.1213	0.13	0.0165	178.17	22.3	0.05	0.0060
Air Track Drill	1	8	8	0.50	0.0623	4.01	0.5016	4.27	0.5340	0.01	0.0017	0.1277	0.1175	0.13	0.0160	1319.27	165	0.04	0.0056
Grout Pump	1	8	8	0.45	0.0562	2.23	0.2785	3.06	0.3830	0.00	0.0006	0.1915	0.1762	0.19	0.0239	396.85	49.6	0.04	0.0051
Hydraulic Jack	1	8	8	0.00		0.00		0.00		0.00		0.0000	0.0000	0.00		0.00		0.00	
Air Pump	1	8	8	0.45	0.0562	2.23	0.2785	3.06	0.3830	0.00	0.0006	0.1915	0.1762	0.19	0.0239	396.85	49.6	0.04	0.0051
Total lbs/day				**37.81**		**154.68**		**275.34**		**0.51**		**12.59**	**11.58**	**12.59**		**46866.99**		**3.41**	

Total On-Site Emissions	ROG (ppd)	CO (ppd)	NOx (ppd)	(SOx ppd)	PM10 (ppd)	PM2.5 (ppd)	CO2 (ppd)	CH4 (ppd)
	38	**155**	**275**	**1**	**246**	**60**	**46867**	**3**

LA County* (Annual) -- Haul/Delivery Phase 1 (2015)				
	lbs/mi	Miles	Trips	Total (lbs/day)
CO	0.00766891	30	158	36.35
NOx	0.02122678	30	158	100.61
ROG	0.00178608	30	158	8.47
SOx	0.00004082	30	158	0.19
PM10	0.00104715	30	158	4.96
PM2.5	0.00087977	30	158	4.17
CO2	4.20902225	30	158	19,950.77
CH4	0.00008369	30	158	0.40

LA County* (Annual) -- Worker Trips Phase 1 (2015)				
	lbs/mi	Miles	Trips	Total (lbs/day)
CO	0.00614108	30	96	17.69
NOx	0.00060188	30	96	1.73
ROG	0.00066355	30	96	1.91
SOx	0.00001070	30	96	0.03
PM10	0.00009259	30	96	0.27
PM2.5	0.00006015	30	96	0.17
CO2	1.10192837	30	96	3,173.55
CH4	0.00005923	30	96	0.17

Total Off-site Emissions (lbs/day)	
CO	54
NOx	102
ROG	10
SOx	0
PM10	5
PM2.5	4
CO2	23,124
CH4	1

Total On-site Plus Off-site GHG Emissions	CO2 (ppd)	CH4 (ppd)
	69991	**4**

Months	4
Workdays Per Phase	80

GHG Emissions	CO2	CH4
lbs/day	69991	4
lbs/day CO2e	69991	84
Total	70075	
Total tonnes/day	32	
Total tonnes/year	2543	

Total On and Off Site Emissions	VOC	NOx	CO	SOx	PM2.5	PM10
On-site	38	275	155	1	60	246
Off-site	10	102	54	0	4	5
Total	48	378	209	1	64	251

Total On and Off Site Mitigated Emissions	VOC	NOx	CO	SOx	PM2.5	PM10
On-site	36	262	147	0	59	245
Off-site	10	97	51	0	4	5
Total	46	359	198	1	63	250

Buried Concrete Cover Phase 2 Regional Construction Emissions

Fugitive Dust Emissions		**Site Preparation Activity**			
		Excavation	1,742,400	Square Feet[a]	
Schedule -	1	**days**[a]			

Fugitive Dust Parameters	
Vehicle Speed (mph)[b]	**Vehicle Miles Traveled**
3	80.00

Fugitive Dust Stockpiling Parameters					
Silt Content[c]	**Precipitation Days**[d]	**Mean Wind Speed Percent**[e]	**TSP Fraction**	**Area**[f] **(acres)**	
6.9	10	0.53	0.5	5	

Fugitive Dust Material Handling					
Aerodynamic Particle Size Multiplier[g]	**Mean Wind Speed**[h]	**Moisture Content**[i]	**Dirt Handled**	**Dirt Handled**	
	mph		cy	lb/day	
0.35	2.8	7.9	2,335	5,837,500	

Dragline Parameters			
Drop Height (feet)	**Moisture Content**[i]	**PM_{10} Scaling Factor**	**$PM_{2.5}$ Scaling Factor**
3	7.9%	0.75	0.017

		Max Daily Grading (acres)	**PM10**	**PM2.5**
Site Prep - Grading		9.50	221.4	46.0

Incremental Increase in Fugitive Dust Emissions from Construction Operations

Equations:

Storage Piles[k]: PM10 Emissions (lb/day) = 1.7 x (silt content/1.5) x ((365-precipitation days)/235) x wind speed percent/15 x TSP fraction x Area) x (1 - control efficiency)

Material Handling[k]: PM10 Emissions (lb/day) = (0.0032 x aerodynamic particle size multiplier x (wind speed (mph)/5)$^{1.3}$/(moisture content/2)$^{1.4}$ x dirt handled (lb/day)/2,000 (lb/ton)
(1 - control efficiency)

Dragline Equation for PM_{10} Emissions[o] (lbs/day) = [((0.0021) x (drop height)$^{0.7}$) / (moisture content)$^{0.3}$] x 0.75 x Dirt Handled x Control Efficiency

Dragline Equation for $PM_{2.5}$ Emissions[o] (lbs/day) = [((0.0021) x (drop height)$^{1.1}$) / (moisture content)$^{0.3}$] x 0.017 x Dirt Handled x Control Efficiency

Grading Equition for PM10 is based on UREBEMIS2007's rate for grading dust of 38.2 pounds per acre, and applied 61% reduction based on Rule 403 compliance.

Phase I	**Control Efficiency**	**PM10**[n]	**PM2.5**[n]
Description	%	lb/day	lb/day
Earthmoving	61	8.590	1.787
Storage Piles	61	0.4	0.083
Material Handling	61	0.09	0.019
Dragline	61	6.627	0.150
Grading	61	221.369	46.045
Total		***237.08***	***48.08***

Notes

a) Assumed 49 haul truck trips a day at 10 cubic yards a load, worst single-day scenerio, 4000 foot long area 12 foot wide.

b) Caterpillar Performance Handbook, Edition 33, October 2003 Operating Speeds, p 2-3.

c) USEPA, AP-42, July 1998, Table 11.9-3 Typical Values for Corection Factors Applicable to the Predictive Emission Factor Equations

d) Table A9-9-E2, SCAQMD CEQA Air Quality Handbook, 1993

e) Mean wind speed percent - percent of time mean wind speed exceeds 12 mph.

f) Assumed storage piles are 5 acres in size

g) USEPA, AP-42, Jan 1995, Section 13.2.4 Aggretate Handling and Storage Piles, p 13.2.4-3 Aerodynamic particle size multiplier for < 10 µm

h) Mean wind speed at the Downtown Los Angeles Wind Monitoring Station.

i) USEPA, Fugitive Dust Background Document and Technical Information Document for Best Available Control Measures, equation 2-13, p 2-28.

j) Assuming 2335 cubic yards of dirt handled

k) USEPA, AP-42, July 1998, Table 11.9-1, Equation for Site Grading ≤ 10 µm

l) USEPA, AP-42, Jan 1995, Section 13.2.4 Aggretate Handling and Storage Piles, Equation 1

m) USEPA, Fugitive Dust Background Document and Technical Information Document for Best Available Control Measures, Sept 1992, EPA-450/2-92-004, Equation 2-12.

n) Includes watering at least three times a day per Rule 403 (61% control efficiency).

o) Source: USEPA, AP-42, Emission Factor Equations for Uncontrolled Dust Sources at Western Surface Coal Mines, Table 11.9-1, Dragline calculations for PM_{10} and $PM_{2.5}$.

USCR Buried Structure Estimated Equipment Operations

Equipment Type	Qty	Operating Hrs/WD/each	Operating Hours per Day	Rog (lbs/day)	Rog Rate (lbs/hr)	CO (lbs/day)	CO rate (lbs/hr)	NOX (lbs/day)	NOX rate (lbs/hr)	SOX (lbs/day)	SOX rate (lbs/hr)	PM10 (lbs/day)	PM2.5 (lbs/day)	PM (lbs/day)	PM rate (lbs/hr)	CO2 (lbs/day)	CO2 Rate (lbs/hr)	CH4 (lbs/day)	CH4 rate (lbs/hr)
1/2 Ton Pickup (Commute Vehicle)	6	4	24																
3/4 Ton Pickup	4	8	32																
1 Ton Pickup	2	8	16																
4000 Gallon Water Truck	2	8	16	1.30	0.0810	7.98	0.4988	8.31	0.5192	0.01	0.0009	0.5306	0.4882	0.53	0.0332	1256.69	78.5	0.12	0.0073
Dump Trucks	14	8	112																
Yard Crane, ATV	2	8	16	1.82	0.1137	6.82	0.4263	15.02	0.9387	0.02	0.0014	0.6206	0.5709	0.62	0.0388	2058.07	129	0.16	0.0103
Loader/ForksCat 966,	2	8	16	1.69	0.1056	5.37	0.3357	14.24	0.8897	0.03	0.0017	0.4839	0.4452	0.48	0.0302	2383.63	149	0.15	0.0095
Job Trailers	3	8	24																
Grader, Cat 16G	1	8	8	1.00	0.1250	3.15	0.3936	8.35	1.0444	0.02	0.0019	0.2868	0.2639	0.29	0.0359	1376.91	172	0.09	0.0113
Dozer, D10	2	8	16	4.79	0.2995	16.71	1.0443	34.94	2.1837	0.09	0.0058	1.2126	1.1156	1.21	0.0758	8276.48	517	0.43	0.0270
Excavator, Cat 365 (1)	2	6	12	1.79	0.1496	5.82	0.4851	12.28	1.0236	0.03	0.0023	0.4394	0.4042	0.44	0.0366	2804.82	234	0.16	0.0135
Roller/Compactor	1	4	4	0.32	0.0792	1.58	0.3944	2.11	0.5273	0.00	0.0008	0.1413	0.1300	0.14	0.0353	268.19	67.0	0.03	0.0071
Manitowoc Crane	2	8	16																
Hydraulic Breaker	2	8	16																
Misc.	10	2	20	2.53	0.1267	9.46	0.4731	20.24	1.0122	0.03	0.0016	0.8501	0.7821	0.85	0.0425	3044.80	152	0.23	0.0114
1/2 Ton Pickup (Commute Vehicle)(2)	6	4	24																
4000 Gallon Water Truck (2)	2	8	16	1.30	0.0810	7.98	0.4988	8.31	0.5192	0.01	0.0009	0.5306	0.4882	0.53	0.0332	1256.69	78.5	0.12	0.0073
Excavator, Cat 365 (2)	2	8	16	2.39	0.1496	7.76	0.4851	16.38	1.0236	0.04	0.0023	0.5858	0.5390	0.59	0.0366	3739.77	234	0.22	0.0135

Truck Tractor	2	8	16	1.30	0.0810	7.98	0.4988	8.31	0.5192	0.01	0.0009	0.5306	0.4882	0.53	0.0332	1256.69	78.5	0.12	0.0073
Dump Trucks (2)	2	8	16	2.91	0.1816	9.33	0.5831	21.31	1.3322	0.04	0.0027	0.7340	0.6753	0.73	0.0459	4160.83	260	0.26	0.0164
Crawler Loader	2	8	16	2.14	0.1335	8.88	0.5549	14.90	0.9315	0.02	0.0013	0.8733	0.8034	0.87	0.0546	1824.30	114	0.19	0.0120
Front End Loader	2	8	16	1.57	0.0983	7.29	0.4557	11.38	0.7114	0.02	0.0012	0.5999	0.5519	0.60	0.0375	1737.78	109	0.14	0.0089
Sheepsfoot Roller	2	8	16	1.27	0.0792	6.31	0.3944	8.44	0.5273	0.01	0.0008	0.5653	0.5201	0.57	0.0353	1072.77	67.0	0.11	0.0071
Chipping Machine	2	8	16	2.14	0.1337	10.34	0.6461	14.34	0.8965	0.02	0.0015	0.8606	0.7917	0.86	0.0538	2116.94	132	0.19	0.0121
Chain Saw 36"	4	8	32	4.05	0.1267	15.14	0.4731	32.39	1.0122	0.05	0.0016	1.3602	1.2514	1.36	0.0425	4871.68	152	0.37	0.0114
Air Compressor, 260 cfm	1	8	8	0.53	0.0667	1.82	0.2281	1.59	0.1982	0.00	0.0003	0.1319	0.1213	0.13	0.0165	178.17	22.3	0.05	0.0060
Air Track Drill	1	8	8	0.50	0.0623	4.01	0.5016	4.27	0.5340	0.01	0.0017	0.1277	0.1175	0.13	0.0160	1319.27	165	0.04	0.0056
Grout Pump	1	8	8	0.45	0.0562	2.23	0.2785	3.06	0.3830	0.00	0.0006	0.1915	0.1762	0.19	0.0239	396.85	49.6	0.04	0.0051
Hydraulic Jack	1	8	8	0.00		0.00		0.00		0.00		0.0000	0.0000	0.00		0.00		0.00	
Air Pump	1	8	8	0.45	0.0562	2.23	0.2785	3.06	0.3830	0.00	0.0006	0.1915	0.1762	0.19	0.0239	396.85	49.6	0.04	0.0051
Total lbs/day				**36.23**		**148.19**		**263.24**		**0.50**		**11.85**	**10.90**	**11.85**		**45798.20**		**3.27**	

Total On-Site Emissions	ROG (ppd)	CO (ppd)	NOx (ppd)	(SOx ppd)	PM10 (ppd)	PM2.5 (ppd)	CO2 (ppd)	CH4 (ppd)
	36	**148**	**263**	**0**	**249**	**59**	**45798**	**3**

LA County* (Annual) -- Haul/Delivery Phase 2 (2016)				
	lbs/mi	Miles**	Trips	Total (lbs/day)
CO	0.00704604	30	98	20.72
NOx	0.01887374	30	98	55.49
ROG	0.00161035	30	98	4.73
SOx	0.00003952	30	98	0.12
PM10	0.00094448	30	98	2.78
PM2.5	0.00078443	30	98	2.31
CO2	4.21063031	30	98	12,379.25
CH4	0.00007508	30	98	0.22

LA County* (Annual) -- Worker Trips Phase 2 (2016)				
	lbs/mi	Miles**	Trips	Total (lbs/day)
CO	0.00575800	30	134	23.15
NOx	0.00055658	30	134	2.24
ROG	0.00063254	30	134	2.54
SOx	0.00001071	30	134	0.04
PM10	0.00009392	30	134	0.38
PM2.5	0.00006131	30	134	0.25
CO2	1.10677664	30	134	4,449.24
CH4	0.00005623	30	134	0.23

Total Off-site Emissions (lbs/day)	
CO	44
NOx	58
ROG	7
SOx	0
PM10	3
PM2.5	3
CO2	16,828
CH4	0

Total Emissions	ROG (ppd)	CO (ppd)	NOx (ppd)	(SOx ppd)	PM10 (ppd)	PM2.5 (ppd)	CO2 (ppd)	CH4 (ppd)
	44	**192**	**321**	**1**	**252**	**62**	**62627**	**4**

Months	12
Workdays Per Phase	240

GHG Emissions	CO2	CH4
lbs/day	62627	4
lbs/day CO2e	62627	78
Total	62705	
Total tonnes/day	28	
Total tonnes/year	6826	

Total On and Off Site Emissions	VOC	NOx	CO	SOx	PM2.5	PM10
On-site	36	263	148	0	59	249
Off-site	7	58	44	0	3	3
Total	44	321	192	1	62	252

Total On and Off Site Mitigated Emissions	VOC	NOx	CO	SOx	PM2.5	PM10
On-site	34	250	141	0	58	248
Off-site	7	55	42	0	2	3
Total	41	305	182	1	61	251

Buried Concrete Cover Phase 3 Regional Construction Emissions

Fugitive Dust Emissions		**Site Preparation Activity**			
		Excavation	1,742,400	Square Feet[a]	
Schedule -	1	**days**[a]			

Fugitive Dust Parameters	
Vehicle Speed (mph)[b]	**Vehicle Miles Traveled**
3	80.00

Fugitive Dust Stockpiling Parameters					
Silt Content[c]	**Precipitation Days**[d]	**Mean Wind Speed Percent**[e]	**TSP Fraction**	**Area**[f] **(acres)**	
6.9	10	0.53	0.5	5	

Fugitive Dust Material Handling					
Aerodynamic Particle Size Multiplier [g]	**Mean Wind Speed**[h]	**Moisture Content**[i]	**Dirt Handled**	**Dirt Handled**	
	mph		cy	lb/day	
0.35	2.8	7.9	0	0	

Dragline Parameters			
Drop Height (feet)	**Moisture Content**[i]	**PM_{10} Scaling Factor**	**$PM_{2.5}$ Scaling Factor**
3	7.9%	0.75	0.017

.		**Max Daily Grading (acres)**	**PM10**	**PM2.5**
Site Prep - Grading		9.50	221.4	46.0

Incremental Increase in Fugitive Dust Emissions from Construction Operations

Equations:

Storage Piles[k]: PM10 Emissions (lb/day) = 1.7 x (silt content/1.5) x ((365-precipitation days)/235) x wind speed percent/15 x TSP fraction x Area) x (1 - control efficiency)

Material Handling[k]: PM10 Emissions (lb/day) = (0.0032 x aerodynamic particle size multiplier x (wind speed (mph)/5)$^{1.3}$/(moisture content/2)$^{1.4}$ x dirt handled (lb/day)/2,000 (lb/ton)
(1 - control efficiency)

Dragline Equation for PM_{10} Emissions[o] (lbs/day) = [((0.0021) x (drop height)$^{0.7}$) / (moisture content)$^{0.3}$] x 0.75 x Dirt Handled x Control Efficiency

Dragline Equation for $PM_{2.5}$ Emissions[o] (lbs/day) = [((0.0021) x (drop height)$^{1.1}$) / (moisture content)$^{0.3}$] x 0.017 x Dirt Handled x Control Efficiency

Grading Equition for PM10 is based on UREBEMIS2007's rate for grading dust of 38.2 pounds per acre, and applied 61% reduction based on Rule 403 compliance.

Phase I	**Control Efficiency**	**PM10**[n]	**PM2.5**[n]
Description	%	lb/day	lb/day
Earthmoving	61	8.590	1.787
Storage Piles	61	0.4	0.083
Material Handling	61	0	0.000
Dragline	61	0.000	0.000
Grading	61	221.369	46.045
Total		***230.36***	***47.91***

Notes

a) Assumed 57 haul truck trips a day at 10 cubic yards a load, worst single-day scenerio, 4000 foot long area 12 foot wide.
b) Caterpillar Performance Handbook, Edition 33, October 2003 Operating Speeds, p 2-3.
c) USEPA, AP-42, July 1998, Table 11.9-3 Typical Values for Corection Factors Applicable to the Predictive Emission Factor Equations
d) Table A9-9-E2, SCAQMD CEQA Air Quality Handbook, 1993
e) Mean wind speed percent - percent of time mean wind speed exceeds 12 mph.
f) Assumed storage piles are 0.21 acres in size
g) USEPA, AP-42, Jan 1995, Section 13.2.4 Aggretate Handling and Storage Piles, p 13.2.4-3 Aerodynamic particle size multiplier for < 10 μm
h) Mean wind speed at the Downtown Los Angeles Wind Monitoring Station.
i) USEPA, Fugitive Dust Background Document and Technical Information Document for Best Available Control Measures, equation 2-13, p 2-28.
j) Assuming 000 cubic yards of dirt handled
k) USEPA, AP-42, July 1998, Table 11.9-1, Equation for Site Grading≤ 10 μm
l) USEPA, AP-42, Jan 1995, Section 13.2.4 Aggretate Handling and Storage Piles, Equation 1
m) USEPA, Fugitive Dust Background Document and Technical Information Document for Best Available Control Measures, Sept 1992, EPA-450/2-92-004, Equation 2-12.
n) Includes watering at least three times a day per Rule 403 (61% control efficiency).
o) Source: USEPA, AP-42, Emission Factor Equations for Uncontrolled Dust Sources at Western Surface Coal Mines, Table 11.9-1, Dragline calculations for PM_{10} and $PM_{2.5}$.

USCR Buried Structure Estimated Equipment Operations

Equipment Type	Qty	Operating Hrs/WD/each	Operating Hours per Day	Rog (lbs/day)	Rog Rate (lbs/hr)	CO (lbs/day)	CO rate (lbs/hr)	NOX (lbs/day)	NOX rate (lbs/hr)	SOX (lbs/day)	SOX rate (lbs/hr)	PM10 (lbs/day)	PM2.5 (lbs/day)	PM (lbs/day)	PM rate (lbs/hr)	CO2 (lbs/day)	CO2 Rate (lbs/hr)	CH4 (lbs/day)	CH4 rate (lbs/hr)
1/2 Ton Pickup (Commute Vehicle)	6	4	24																
3/4 Ton Pickup	4	8	32																
1 Ton Pickup	2	8	16																
4000 Gallon Water Truck	2	8	16	1.18	0.0737	7.94	0.4962	7.56	0.4726	0.01	0.0009	0.4610	0.4241	0.46	0.0288	1256.69	78.5	0.11	0.0067
Dump Trucks	14	8	112																
Yard Crane, ATV	2	8	16	1.72	0.1073	6.64	0.4152	13.80	0.8625	0.02	0.0014	0.5635	0.5184	0.56	0.0352	2058.05	129	0.15	0.0097
Loader/ForksCat 966,	2	8	16	1.60	0.1000	5.26	0.3290	12.77	0.7984	0.03	0.0017	0.4347	0.3999	0.43	0.0272	2383.63	149	0.14	0.0090
Job Trailers	3	8	24																
Grader, Cat 16G	1	8	8	0.94	0.1180	3.08	0.3848	7.51	0.9383	0.02	0.0019	0.2569	0.2363	0.26	0.0321	1376.91	172	0.09	0.0106
Dozer, D10	2	8	16	4.55	0.2842	16.46	1.0286	30.46	1.9040	0.09	0.0058	1.0692	0.9837	1.07	0.0668	8276.48	517	0.41	0.0256
Excavator, Cat 365 (1)	2	6	12	1.70	0.1415	5.71	0.4762	10.79	0.8988	0.03	0.0023	0.3874	0.3564	0.39	0.0323	2804.82	234	0.15	0.0128
Roller/Compactor	1	4	4	0.29	0.0736	1.57	0.3913	1.95	0.4866	0.00	0.0008	0.1286	0.1184	0.13	0.0322	268.18	67.0	0.03	0.0066
Manitowoc Crane	2	8	16	1.72	0.1073	6.64	0.4152	13.80	0.8625	0.02	0.0014	0.5635	0.5184	0.56	0.0352	2058.05	129	0.15	0.0097
Hydraulic Breaker	2	8	16																
Misc.	10	2	20	2.37	0.1187	9.30	0.4650	18.28	0.9138	0.03	0.0016	0.7583	0.6977	0.76	0.0379	3044.80	152	0.21	0.0107
1/2 Ton Pickup (Commute Vehicle)(2)	6	4	24																
4000 Gallon Water Truck (2)	2	8	16																

Excavator, Cat 365 (2)	2	8	16																
Truck Tractor	2	8	16																
Dump Trucks (2)	2	8	16																
Crawler Loader	2	8	16																
Front End Loader	2	8	16																
Sheepsfoot Roller	2	8	16																
Chipping Machine	2	8	16																
Chain Saw 36"	4	8	32																
Air Compressor, 260 cfm	1	8	8																
Air Track Drill	1	8	8																
Grout Pump	1	8	8																
Hydraulic Jack	1	8	8																
Air Pump	1	8	8																
Total lbs/day				**16.07**		**62.61**		**116.92**		**0.26**		**4.62**	**4.25**	**4.62**		**23527.61**		**1.45**	

Total On-Site Emissions	ROG (ppd)	CO (ppd)	NOx (ppd)	(SOx ppd)	PM10 (ppd)	PM2.5 (ppd)	CO2 (ppd)	CH4 (ppd)
	16	**63**	**117**	**0**	**235**	**52**	**23528**	**1**

LA County* (Annual) -- Haul/Delivery Phase 3 (2017)				
	lbs/mi	**Miles**	**Trips**	**Total (lbs/day)**
CO	0.00650533	30	114	22.25
NOx	0.01690387	30	114	57.81
ROG	0.00145203	30	114	4.97
SOx	0.00004033	30	114	0.14
PM10	0.00084894	30	114	2.90
PM2.5	0.00069721	30	114	2.38
CO2	4.20820129	30	114	14,392.05
CH4	0.00006722	30	114	0.23

LA County* (Annual) -- Worker Trips Phase 3 (2017)				
	lbs/mi	Miles	Trips	Total (lbs/day)
CO	0.00537891	30	214	34.53
NOx	0.00051297	30	214	3.29
ROG	0.00060109	30	214	3.86
SOx	0.00001079	30	214	0.07
PM10	0.00009446	30	214	0.61
PM2.5	0.00006192	30	214	0.40
CO2	1.10627489	30	214	7,102.28
CH4	0.00005300	30	214	0.34

Total Off-site Emissions (lbs/day)	
CO	57
NOx	61
ROG	9
SOx	0
PM10	4
PM2.5	3
CO2	21,494
CH4	1

Total Emissions	ROG (ppd)	CO (ppd)	NOx (ppd)	(SOx ppd)	PM10 (ppd)	PM2.5 (ppd)	CO2 (ppd)	CH4 (ppd)
	25	**119**	**178**	**0**	**238**	**55**	**45022**	**2**

Months	27
Workdays Per Phase	540

GHG Emissions	CO2	CH4
lbs/day	45022	2
lbs/day CO2e	45022	42
Total	45064	
Total tonnes/day	20	
Total tonnes/year	11038	

Total On and Off Site Emissions	**VOC**	**NOx**	**CO**	**SOx**	**PM2.5**	**PM10**
On-site	16	117	63	0	52	235
Off-site	9	61	57	0	3	4
Total	25	178	119	0	55	238

Total On and Off Site Mitigated Emissions	**VOC**	**NOx**	**CO**	**SOx**	**PM2.5**	**PM10**
On-site	15	111	59	0	52	235
Off-site	8	58	54	0	3	3
Total	24	169	113	0	55	238

Buried Concrete Cover Phase 4 Regional Construction Emissions

Fugitive Dust Emissions		**Site Preparation Activity**			
		Excavation	1,742,400	Square Feet[a]	
Schedule -	1	days[a]			

Fugitive Dust Parameters	
Vehicle Speed (mph)[b]	**Vehicle Miles Traveled**
3	80.00

Fugitive Dust Stockpiling Parameters					
Silt Content[c]	**Precipitation Days[d]**	**Mean Wind Speed Percent[e]**	**TSP Fraction**	**Area[f] (acres)**	
6.9	10	0.53	0.5	5	

Fugitive Dust Material Handling					
Aerodynamic Particle Size Multiplier [g]	**Mean Wind Speed[h]**	**Moisture Content[i]**	**Dirt Handled**	**Dirt Handled**	
	mph		cy	lb/day	
0.35	2.8	7.9	6,825	17,062,500	

Dragline Parameters			
Drop Height (feet)	**Moisture Content[i]**	**PM_{10} Scaling Factor**	**$PM_{2.5}$ Scaling Factor**
3	7.9%	0.75	0.017

		Max Daily Grading (acres)	PM10	PM2.5
Site Prep - Grading		9.50	221.4	46.0

Incremental Increase in Fugitive Dust Emissions from Construction Operations

Equations:

Storage Piles[k]: PM10 Emissions (lb/day) = 1.7 x (silt content/1.5) x ((365-precipitation days)/235) x wind speed percent/15 x TSP fraction x Area) x (1 - control efficiency)

Material Handling[k]: PM10 Emissions (lb/day) = (0.0032 x aerodynamic particle size multiplier x (wind speed (mph)/5)$^{1.3}$/(moisture content/2)$^{1.4}$ x dirt handled (lb/day)/2,000 (lb/ton)
(1 - control efficiency)

Dragline Equation for PM_{10} Emissions[o] (lbs/day) = [((0.0021) x (drop height)$^{0.7}$) / (moisture content)$^{0.3}$] x 0.75 x Dirt Handled x Control Efficiency

Dragline Equation for $PM_{2.5}$ Emissions[o] (lbs/day) = [((0.0021) x (drop height)$^{1.1}$) / (moisture content)$^{0.3}$] x 0.017 x Dirt Handled x Control Efficiency

Grading Equition for PM10 is based on UREBEMIS2007's rate for grading dust of 38.2 pounds per acre, and applied 61% reduction based on Rule 403 compliance.

Phase I	**Control Efficiency**	**PM10[n]**	**PM2.5[n]**
Description	%	lb/day	lb/day
Earthmoving	61	8.590	1.787
Storage Piles	61	0.4	0.083
Material Handling	61	0.25	0.052
Dragline	61	19.371	0.439
Grading	61	221.369	46.045
Total		***249.98***	***48.41***

Notes

a) Assumed 163 haul truck trips a day at 10 cubic yards a load, worst single-day scenerio, 4000 foot long area 12 foot wide.
b) Caterpillar Performance Handbook, Edition 33, October 2003 Operating Speeds, p 2-3.
c) USEPA, AP-42, July 1998, Table 11.9-3 Typical Values for Corection Factors Applicable to the Predictive Emission Factor Equations
d) Table A9-9-E2, SCAQMD CEQA Air Quality Handbook, 1993
e) Mean wind speed percent - percent of time mean wind speed exceeds 12 mph.
f) Assumed storage piles are 0.21 acres in size
g) USEPA, AP-42, Jan 1995, Section 13.2.4 Aggretate Handling and Storage Piles, p 13.2.4-3 Aerodynamic particle size multiplier for < 10 μm
h) Mean wind speed at the Downtown Los Angeles Wind Monitoring Station.
i) USEPA, Fugitive Dust Background Document and Technical Information Document for Best Available Control Measures, equation 2-13, p 2-28.
j) Assuming 6825 cubic yards of dirt handled
k) USEPA, AP-42, July 1998, Table 11.9-1, Equation for Site Grading≤ 10 μm
l) USEPA, AP-42, Jan 1995, Section 13.2.4 Aggretate Handling and Storage Piles, Equation 1
m) USEPA, Fugitive Dust Background Document and Technical Information Document for Best Available Control Measures, Sept 1992, EPA-450/2-92-004, Equation 2-12.
n) Includes watering at least three times a day per Rule 403 (61% control efficiency).
o) Source: USEPA, AP-42, Emission Factor Equations for Uncontrolled Dust Sources at Western Surface Coal Mines, Table 11.9-1, Dragline calculations for PM_{10} and $PM_{2.5}$.

USCR Buried Structure Estimated Equipment Operations

Equipment Type	Qty	Operating Hrs/WD/each	Operating Hours per Day	Rog (lbs/day)	Rog Rate (lbs/hr)	CO (lbs/day)	CO rate (lbs/hr)	NOX (lbs/day)	NOX rate (lbs/hr)	SOX (lbs/day)	SOX rate (lbs/hr)	PM10 (lbs/day)	PM2.5 (lbs/day)	PM (lbs/day)	PM rate (lbs/hr)	CO2 (lbs/day)	CO2 Rate (lbs/hr)	CH4 (lbs/day)	CH4 rate (lbs/hr)
1/2 Ton Pickup (Commute Vehicle)	6	4	24																
3/4 Ton Pickup	4	8	32																
1 Ton Pickup	2	8	16																
4000 Gallon Water Truck	2	8	16	1.01	0.0632	7.89	0.4933	6.27	0.3919	0.01	0.0009	0.3473	0.3195	0.35	0.0217	1256.69	78.5433	0.09	0.0057
Dump Trucks	14	8	112																
Yard Crane, ATV	2	8	16	1.53	0.0954	6.37	0.3982	11.58	0.7236	0.02	0.0014	0.0000	0.0000	0.00	0.0286118	2058.06	128.6288	0.14	0.0086
Loader/ForksCat 966,	2	8	16	1.43	0.0896	5.11	0.3194	10.19	0.6366	0.03	0.0017	0.0000	0.0000	0.00	0.0217711	2383.63	148.9767	0.13	0.0081
Job Trailers	3	8	24																
Grader, Cat 16G	1	8	8	0.84	0.1055	2.98	0.3726	6.01	0.7518	0.02	0.0019	0.2057	0.1892	0.21	0.0257093	1376.91	172.1132	0.08	0.0095
Dozer, D10	2	8	16	4.07	0.2545	16.08	1.0047	22.88	1.4302	0.09	0.0058	0.8153	0.7501	0.82	0.0510	8276.48	517	0.37	0.0230
Excavator, Cat 365 (1)	2	6	12																
Roller/Compactor	1	4	4																
Manitowoc Crane	2	8	16	1.53	0.0954	6.37	0.3982	11.58	0.7236	0.02	0.0014	0.4578	0.4212	0.46	0.0286118	2058.06	128.6288	0.14	0.0086
Hydraulic Breaker	2	8	16																
Misc.	10	2	20	2.09	0.1044	9.10	0.4549	14.84	0.7419	0.03	0.0016	0.5941	0.5466	0.59	0.029706	3044.80	152.2399	0.19	0.0094
1/2 Ton Pickup (Commute Vehicle)(2)	6	4	24																
4000 Gallon Water Truck (2)	2	8	16																

Excavator, Cat 365 (2)	2	8	16																
Truck Tractor	2	8	16																
Dump Trucks (2)	2	8	16																
Crawler Loader	2	8	16																
Front End Loader	2	8	16																
Sheepsfoot Roller	2	8	16																
Chipping Machine	2	8	16																
Chain Saw 36"	4	8	32																
Air Compressor, 260 cfm	1	8	8																
Air Track Drill	1	8	8																
Grout Pump	1	8	8																
Hydraulic Jack	1	8	8																
Air Pump	1	8	8																
Total lbs/day				**12.50**		**53.90**		**83.35**		**0.23**		**2.42**	**2.23**	**2.42**		**20454.63**		**1.13**	

Total On-Site Emissions	ROG (ppd)	CO (ppd)	NOx (ppd)	(SOx ppd)	PM10 (ppd)	PM2.5 (ppd)	CO2 (ppd)	CH4 (ppd)
	12	**54**	**83**	**0**	**252**	**51**	**20455**	**1**

LA County* (Annual) -- Haul/Delivery Phase 4 (2019)				
	lbs/mi	**Miles**	**Trips**	**Total (lbs/day)**
CO	0.00565433	30	326	55.30
NOx	0.01389113	30	326	135.86
ROG	0.00120235	30	326	11.76
SOx	0.00004032	30	326	0.39
PM10	0.00070198	30	326	6.87
PM2.5	0.00056085	30	326	5.49
CO2	4.20637830	30	326	41,138.38
CH4	0.00005499	30	326	0.54

LA County* (Annual) -- Worker Trips Phase 4 (2019)				
	lbs/mi	**Miles**	**Trips**	**Total (lbs/day)**
CO	0.00471820	30	94	13.31
NOx	0.00043716	30	94	1.23
ROG	0.00054654	30	94	1.54
SOx	0.00001072	30	94	0.03
PM10	0.00009523	30	94	0.27
PM2.5	0.00006259	30	94	0.18
CO2	1.10496100	30	94	3,115.99
CH4	0.00004743	30	94	0.13

Total Off-site Emissions (lbs/day)	
CO	69
NOx	137
ROG	13
SOx	0
PM10	7
PM2.5	6
CO2	44,254
CH4	1

Total Emissions	ROG (ppd)	CO (ppd)	NOx (ppd)	(SOx ppd)	PM10 (ppd)	PM2.5 (ppd)	CO2 (ppd)	CH4 (ppd)
	26	**123**	**220**	**1**	**260**	**56**	**64709**	**2**

Months	2
Workdays Per Phase	40

GHG Emissions	CO2	CH4
lbs/day	64709	2
lbs/day CO2e	64709	38
Total	64747	
Total tonnes/day	29	
Total tonnes/year	1175	

Total On and Off Site Emissions	**VOC**	**NOx**	**CO**	**SOx**	**PM2.5**	**PM10**
On-site	12	83	54	0	51	252
Off-site	13	137	69	0	6	7
Total	26	220	123	1	56	260

Total On and Off Site Mitigated Emissions	**VOC**	**NOx**	**CO**	**SOx**	**PM2.5**	**PM10**
On-site	12	79	51	0	51	252
Off-site	13	130	65	0	5	7
Total	25	209	116	1	56	259

Buried Concrete Cover Phase 5 Regional Construction Emissions

Fugitive Dust Emissions		Site Preparation Activity			
		Excavation	1,742,400	Square Feet[a]	
Schedule -	1	days[a]			

Fugitive Dust Parameters	
Vehicle Speed (mph)[b]	Vehicle Miles Traveled
3	80.00

Fugitive Dust Stockpiling Parameters					
Silt Content[c]	Precipitation Days[d]	Mean Wind Speed Percent[e]	TSP Fraction	Area[f] (acres)	
6.9	10	0.53	0.5	5	

Fugitive Dust Material Handling					
Aerodynamic Particle Size Multiplier[g]	Mean Wind Speed[h]	Moisture Content[i]	Dirt Handled	Dirt Handled	
	mph		cy	lb/day	
0.35	2.8	7.9	0	0	

Dragline Parameters			
Drop Height (feet)	Moisture Content[i]	PM_{10} Scaling Factor	$PM_{2.5}$ Scaling Factor
3	7.9%	0.75	0.017

		Max Daily Grading (acres)	PM10	PM2.5
Site Prep - Grading		2.50	58.3	12.1

Incremental Increase in Fugitive Dust Emissions from Construction Operations

Equations:

Storage Piles[k]: PM10 Emissions (lb/day) = 1.7 x (silt content/1.5) x ((365-precipitation days)/235) x wind speed percent/15 x TSP fraction x Area) x (1 - control efficiency)

Material Handling[k]: PM10 Emissions (lb/day) = (0.0032 x aerodynamic particle size multiplier x (wind speed (mph)/5)$^{1.3}$/(moisture content/2)$^{1.4}$ x dirt handled (lb/day)/2,000 (lb/ton)
(1 - control efficiency)

Dragline Equation for PM_{10} Emissions[o] (lbs/day) = [((0.0021) x (drop height)$^{0.7}$) / (moisture content)$^{0.3}$] x 0.75 x Dirt Handled x Control Efficiency

Dragline Equation for $PM_{2.5}$ Emissions[o] (lbs/day) = [((0.0021) x (drop height)$^{1.1}$) / (moisture content)$^{0.3}$] x 0.017 x Dirt Handled x Control Efficiency

Grading Equition for PM10 is based on UREBEMIS2007's rate for grading dust of 38.2 pounds per acre, and applied 61% reduction based on Rule 403 compliance.

Phase I	Control Efficiency	PM10[n]	PM2.5[n]
Description	%	lb/day	lb/day
Earthmoving	61	8.590	1.787
Storage Piles	61	0.4	0.083
Material Handling	61	0	0.000
Dragline	61	0.000	0.000
Grading	61	58.255	12.117
Total		***67.25***	***13.99***

Notes

a) Assumed 4 haul truck trips a day at 10 cubic yards a load, worst single-day scenerio, 4000 foot long area 12 foot wide.
b) Caterpillar Performance Handbook, Edition 33, October 2003 Operating Speeds, p 2-3.
c) USEPA, AP-42, July 1998, Table 11.9-3 Typical Values for Corection Factors Applicable to the Predictive Emission Factor Equations
d) Table A9-9-E2, SCAQMD CEQA Air Quality Handbook, 1993
e) Mean wind speed percent - percent of time mean wind speed exceeds 12 mph.
f) Assumed storage piles are 0.21 acres in size
g) USEPA, AP-42, Jan 1995, Section 13.2.4 Aggretate Handling and Storage Piles, p 13.2.4-3 Aerodynamic particle size multiplier for < 10 μm
h) Mean wind speed at the Downtown Los Angeles Wind Monitoring Station.
i) USEPA, Fugitive Dust Background Document and Technical Information Document for Best Available Control Measures, equation 2-13, p 2-28.
j) Assuming 000 cubic yards of dirt handled
k) USEPA, AP-42, July 1998, Table 11.9-1, Equation for Site Grading≤ 10 μm
l) USEPA, AP-42, Jan 1995, Section 13.2.4 Aggretate Handling and Storage Piles, Equation 1
m) USEPA, Fugitive Dust Background Document and Technical Information Document for Best Available Control Measures, Sept 1992, EPA-450/2-92-004, Equation 2-12.
n) Includes watering at least three times a day per Rule 403 (61% control efficiency).
o) Source: USEPA, AP-42, Emission Factor Equations for Uncontrolled Dust Sources at Western Surface Coal Mines, Table 11.9-1, Dragline calculations for PM_{10} and $PM_{2.5}$.

USCR Buried Structure Estimated Equipment Operations

Equipment Type	Qty	Operating Hrs/WD/each	Operating Hours per Day	Rog (lbs/day)	Rog Rate (lbs/hr)	CO (lbs/day)	CO rate (lbs/hr)	NOX (lbs/day)	NOX rate (lbs/hr)	SOX (lbs/day)	SOX rate (lbs/hr)	PM10 (lbs/day)	PM2.5 (lbs/day)	PM (lbs/day)	PM rate (lbs/hr)	CO2 (lbs/day)	CO2 Rate (lbs/hr)	CH4 (lbs/day)	CH4 rate (lbs/hr)
1/2 Ton Pickup (Commute Vehicle)	6	4	24																
3/4 Ton Pickup	4	8	32																
1 Ton Pickup	2	8	16																
4000 Gallon Water Truck	2	8	16	0.93	0.0584	7.87	0.4916	5.70	0.3563	0.01	0.0009	0.2936	0.2701	0.29	0.0183	1256.69	78.5	0.08	0.0053
Dump Trucks	14	8	112																
Yard Crane, ATV	2	8	16	1.44	0.0898	6.27	0.3917	10.58	0.6610	0.02	0.0014	0.4098	0.3770	0.41	0.0256	2058.09	129	0.13	0.0081
Loader/ForksCat 966,	2	8	16	1.36	0.0848	5.05	0.3159	9.05	0.5655	0.03	0.0017	0.3107	0.2858	0.31	0.0194	2383.63	149	0.12	0.0077
Job Trailers	3	8	24																
Grader, Cat 16G	1	8	8	0.80	0.0999	2.95	0.3683	5.36	0.6701	0.02	0.0019	0.1838	0.1691	0.18	0.0230	1376.91	172	0.07	0.0090
Dozer, D10	2	8	16	3.85	0.2409	15.93	0.9959	19.82	1.2387	0.09	0.0058	0.7088	0.6521	0.71	0.0443	8276.48	517	0.35	0.0217
Excavator, Cat 365 (1)	2	6	12	1.44	0.1198	5.51	0.4591	7.23	0.6028	0.03	0.0023	0.2629	0.2419	0.26	0.0219	2804.82	234	0.13	0.0108
Roller/Compactor	1	4	4	0.23	0.0584	1.53	0.3837	1.52	0.3793	0.00	0.0008	0.0929	0.0855	0.09	0.0232	268.16	67.0	0.02	0.0053
Manitowoc Crane	2	8	16																
Hydraulic Breaker	2	8	16																
Misc.	10	2	20	1.97	0.0983	9.03	0.45173387	13.32	0.6661	0.03	0.001600105	0.5240	0.4821	0.52	0.0262	3044.80	152.23991	0.18	0.0089
1/2 Ton Pickup (Commute Vehicle)(2)	6	4	24																
4000 Gallon Water Truck (2)	2	8	16																

Excavator, Cat 365 (2)	2	8	16																
Truck Tractor	2	8	16																
Dump Trucks (2)	2	8	16																
Crawler Loader	2	8	16																
Front End Loader	2	8	16																
Sheepsfoot Roller	2	8	16																
Chipping Machine	2	8	16																
Chain Saw 36"	4	8	32																
Air Compressor, 260 cfm	1	8	8																
Air Track Drill	1	8	8																
Grout Pump	1	8	8																
Hydraulic Jack	1	8	8																
Air Pump	1	8	8																
Total lbs/day				**6.49**		**31.17**		**44.01**		**0.11**		**1.72**	**1.58**	**1.72**		**10120.11**		**0.59**	

Total On-Site Emissions	ROG (ppd)	CO (ppd)	NOx (ppd)	(SOx ppd)	PM10 (ppd)	PM2.5 (ppd)	CO2 (ppd)	CH4 (ppd)
	6	**31**	**44**	**0**	**69**	**16**	**10120**	**1**

LA County* (Annual) -- Haul/Delivery Phase 5 (2020)				
	lbs/mi	**Miles**	**Trips**	**Total (lbs/day)**
CO	0.00532242	30	8	1.28
NOx	0.01274755	30	8	3.06
ROG	0.00110621	30	8	0.27
SOx	0.00003957	30	8	0.01
PM10	0.00064574	30	8	0.15
PM2.5	0.00050904	30	8	0.12
CO2	4.20541416	30	8	1,009.30
CH4	0.00005216	30	8	0.01

LA County* (Annual) -- Worker Trips Phase 5 (2020)				
	lbs/mi	**Miles**	**Trips**	**Total (lbs/day)**
CO	0.00444247	30	24	3.20
NOx	0.00040506	30	24	0.29
ROG	0.00052463	30	24	0.38
SOx	0.00001073	30	24	0.01
PM10	0.00009550	30	24	0.07
PM2.5	0.00006279	30	24	0.05
CO2	1.10456157	30	24	795.28
CH4	0.00004495	30	24	0.03

Total Off-site Emissions (lbs/day)	
CO	4
NOx	3
ROG	1
SOx	0
PM10	0
PM2.5	0
CO2	1,805
CH4	0

Total Emissions	ROG (ppd)	CO (ppd)	NOx (ppd)	(SOx ppd)	PM10 (ppd)	PM2.5 (ppd)	CO2 (ppd)	CH4 (ppd)
	7	**36**	**47**	**0**	**69**	**16**	**11925**	**1**

Months	6
Workdays Per Phase	120

GHG Emissions	CO2	CH4
lbs/day	11925	1
lbs/day CO2e	11925	13
Total	11938	
Total tonnes/day	5	
Total tonnes/year	650	

Total On and Off Site Emissions	**VOC**	**NOx**	**CO**	**SOx**	**PM2.5**	**PM10**
On-site	6	44	31	0	16	69
Off-site	1	3	4	0	0	0
Total	7	47	36	0	16	69

Total On and Off Site Mitigated Emissions	**VOC**	**NOx**	**CO**	**SOx**	**PM2.5**	**PM10**
On-site	6	42	30	0	15	69
Off-site	1	3	4	0	0	0
Total	7	45	34	0	16	69

Buried Concrete Cover - Fugitive Dust Emissions - Inputs for ISC-AERMOD

	Weight Conv. [a]	Time Adjustment [b]
	453.59	28,800

Project Phase	lb/day [c]	g/s
PM10		
	233.2	3.67219
PM2.5		
	48.0	0.75583

[a] Weight conversion is the amount of grams per pound.
[b] Time adjustment is the number of seconds in 8 hours (1 day of grading).
[c] Pounds per day emissions rate from construction emissions developed using Offroad 2007 and EMFAC 2007 emissions factors.

Alternative 1 - Off-Road Equipment Emissions

Daily Emissions (ppd)	CO	NO2 [1]	PM2.5	PM10
	155	28	11.6	12.6
Conversion to Grams/Second		**NO2**	**PM2.5**	**PM10**
	2.4362	0.4337	0.1824	0.1983

Alternative 1 - Mitigated Off-Road Equipment Emissions

Daily Emissions (ppd)	CO	NO2 [1]	PM2.5	PM10
	147	26	11.0	12.0
Conversion to Grams/Second		**NO2**	**PM2.5**	**PM10**
	2.3144	0.4120	0.1733	0.1883

[1] Used 10% of NOX as NO2 value for input into AERMOD

Floating Cover Phase 1 Regional Construction Emissions

Fugitive Dust Emissions		**Site Preparation Activity**			
		Excavation	1,742,400	Square Feet[e]	
Schedule -	1	days[a]			

Fugitive Dust Parameters	
Vehicle Speed (mph)[b]	**Vehicle Miles Traveled**
3	80.00

Fugitive Dust Stockpiling Parameters					
Silt Content[c]	**Precipitation Days[d]**	**Mean Wind Speed Percent[e]**	**TSP Fraction**	**Area[f] (acres)**	
6.9	10	0.53	0.5	5	

Fugitive Dust Material Handling					
Aerodynamic Particle Size Multiplier[g]	**Mean Wind Speed[h]**	**Moisture Content[i]**	**Dirt Handled**	**Dirt Handled**	
	mph		cy	lb/day	
0.35	2.8	7.9	150	375,000	

Dragline Parameters			
Drop Height (feet)	**Moisture Content[l]**	**PM_{10} Scaling Factor**	**$PM_{2.5}$ Scaling Factor**
3	7.9%	0.75	0.017

.		**Max Daily Grading (acres)**	**PM10**	**PM2.5**
Site Prep - Grading		9.50	221.4	46.0

Incremental Increase in Fugitive Dust Emissions from Construction Operations

Equations:

Storage Piles[k]: PM10 Emissions (lb/day) = 1.7 x (silt content/1.5) x ((365-precipitation days)/235) x wind speed percent/15 x TSP fraction x Area) x (1 - control efficiency)

Material Handling[k]: PM10 Emissions (lb/day) = (0.0032 x aerodynamic particle size multiplier x (wind speed (mph)/5)$^{1.3}$)(moisture content/2)$^{1.4}$ x dirt handled (lb/day)/2,000 (lb/ton)
(1 - control efficiency)

Dragline Equation for PM_{10} Emissions[o] (lbs/day) = [((0.0021) x (drop height)$^{0.7}$) / (moisture content)$^{0.3}$] x 0.75 x Dirt Handled x Control Efficiency

Dragline Equation for $PM_{2.5}$ Emissions[o] (lbs/day) = [((0.0021) x (drop height)$^{1.1}$) / (moisture content)$^{0.3}$] x 0.017 x Dirt Handled x Control Efficiency

Grading Equition for PM10 is based on UREBEMIS2007's rate for grading dust of 38.2 pounds per acre, and applied 61% reduction based on Rule 403 compliance.

Phase I	**Control Efficiency**	**PM10[n]**	**PM2.5[n]**
Description	%	lb/day	lb/day
Earthmoving	61	8.590	1.787
Storage Piles	61	0.4	0.083
Material Handling	61	0.01	0.002
Dragline	61	0.426	0.010
Grading	61	221.369	46.045
Total		***230.79***	***47.93***

Notes

a) Assumed 34 haul truck trips a day at 10 cubic yards a load, worst single-day scenerio, 4000 foot long area 12 foot wide.
b) Caterpillar Performance Handbook, Edition 33, October 2003 Operating Speeds, p 2-3.
c) USEPA, AP-42, July 1998, Table 11.9-3 Typical Values for Corection Factors Applicable to the Predictive Emission Factor Equations
d) Table A9-9-E2, SCAQMD CEQA Air Quality Handbook, 1993
e) Mean wind speed percent - percent of time mean wind speed exceeds 12 mph.
f) Assumed storage piles are 0.21 acres in size
g) USEPA, AP-42, Jan 1995, Section 13.2.4 Aggretate Handling and Storage Piles, p 13.2.4-3 Aerodynamic particle size multiplier for < 10 µm
h) Mean wind speed at the Downtown Los Angeles Wind Monitoring Station.
i) USEPA, Fugitive Dust Background Document and Technical Information Document for Best Available Control Measures, equation 2-13, p 2-28.
j) Assuming 150 cubic yards of dirt handled
k) USEPA, AP-42, July 1998, Table 11.9-1, Equation for Site Grading ≤ 10 µm
l) USEPA, AP-42, Jan 1995, Section 13.2.4 Aggretate Handling and Storage Piles, Equation 1
m) USEPA, Fugitive Dust Background Document and Technical Information Document for Best Available Control Measures, Sept 1992, EPA-450/2-92-004, Equation 2-12.
n) Includes watering at least three times a day per Rule 403 (61% control efficiency).
o) Source: USEPA, AP-42, Emission Factor Equations for Uncontrolled Dust Sources at Western Surface Coal Mines, Table 11.9-1, Dragline calculations for PM_{10} and $PM_{2.5}$.

USCR Floating Cover Estimated Equipment Operations

Equipment Type	QTY	Operating Hrs/WD/each	Operating Hours per Day	Rog (lbs/day)	Rog Rate (lbs/hr)	CO (lbs/day)	CO rate (lbs/hr)	NOX (lbs/day)	NOX rate (lbs/hr)	SOX (lbs/day)	SOX rate (lbs/hr)	PM10 (lbs/day)	PM2.5 (lbs/day)	PM (lbs/day)	PM rate (lbs/hr)	CO2 (lbs/day)	CO2 Rate (lbs/hr)	CH4 (lbs/day)	CH4 rate (lbs/hr)
1/2 Ton Pickup (Commute Vehicle)	6	4	24																
3/4 Ton Pickup	4	8	32																
1 Ton Pickup	2	8	16																
4,000 Gallon Water Truck	2	8	16	1.65	0.1029	8.14	0.5086	10.17	0.6353	0.01	0.0009	0.7160	0.6587	0.72	0.0447	1256.69	78.5	0.15	0.0093
Yard Crane, ATV	2	8	16	2.04	0.1276	7.28	0.4553	17.71	1.1066	0.02	0.0014	0.7458	0.6862	0.75	0.0466	2058.16	129	0.18	0.0115
Loader/ForksCat 966	2	8	16	1.90	0.1186	5.68	0.3553	17.55	1.0966	0.03	0.0017	0.6000	0.5520	0.60	0.0375	2383.63	149	0.17	0.0107
Job Trailers (3)	3	8	24																
Grader, Cat 16G	1	8	8	1.13	0.1407	3.34	0.4177	10.28	1.2844	0.02	0.0019	0.3559	0.3274	0.36	0.0445	1376.91	172	0.10	0.0127
Dozer, D10	2	8	16	5.29	0.3304	17.38	1.0864	45.31	2.8317	0.09	0.0058	1.5334	1.4107	1.53	0.0958	8276.48	517	0.48	0.0298
Excavator, Cat 365	2	6	12	1.99	0.1657	6.12	0.5102	15.75	1.3127	0.03	0.0023	0.5557	0.5113	0.56	0.0463	2804.82	234	0.18	0.0149
Roller/Compactor (Vibratory)	1	8	8	0.73	0.0912	3.21	0.4018	4.93	0.6164	0.01	0.0008	0.3352	0.3084	0.34	0.0419	536.42	67.1	0.07	0.0082
Hydraulic Breaker	2	8	16	1.16	0.0728	5.99	0.3747	7.96	0.4977	0.01	0.0008	0.5451	0.5015	0.55	0.0341	1068.81	66.8	0.11	0.0066
Truck Tractor	1	8	8																
Asphalt Paver	2	8	16																

Tandem Rollers	2	8	16																
Pulley Grader System	2	8	16																
Gas Engine Vibrator	1	8	8																
Concrete Pump	1	8	8																
Crane, Truck-Mounted	1	8	8																
Off-Road Forklift	1	8	8																
Generator	1	8	8																
Drill	1	8	8																
Air Compressor	1	8	8																
Misc.	10	2	20																
Total lbs/day				**15.88**		**57.16**		**129.65**		**0.22**		**5.39**	**4.96**	**5.39**		**19761.92**		**1.43**	

Total On-Site Emissions	ROG (ppd)	CO (ppd)	NOx (ppd)	(SOx ppd)	PM10 (ppd)	PM2.5 (ppd)	CO2 (ppd)	CH4 (ppd)
	16	**57**	**130**	**0**	**236**	**53**	**19762**	**1**

LA County* (Annual) -- Haul/Delivery Phase 1 (2014)				
	lbs/mi	**Miles**	**Trips**	**Total (lbs/day)**
CO	0.00846435	30	68	17.27
NOx	0.02418049	30	68	49.33
ROG	0.00201594	30	68	4.11
SOx	0.00004092	30	68	0.08
PM10	0.00118458	30	68	2.42
PM2.5	0.00100582	30	68	2.05
CO2	4.21279345	30	68	8,594.10
CH4	0.00009261	30	68	0.19

LA County* (Annual) -- Worker Trips Phase 1 (2014)				
	lbs/mi	**Miles**	**Trips**	**Total (lbs/day)**
CO	0.00660353	30	46	9.11
NOx	0.00065484	30	46	0.90
ROG	0.00070227	30	46	0.97
SOx	0.00001069	30	46	0.01
PM10	0.00009185	30	46	0.13
PM2.5	0.00005939	30	46	0.08
CO2	1.10257205	30	46	1,521.55
CH4	0.00006312	30	46	0.09

Total Off-site Emissions (lbs/day)	
CO	26
NOx	50
ROG	5
SOx	0
PM10	3
PM2.5	2
CO2	10,116
CH4	0

Total Emissions	ROG (ppd)	CO (ppd)	NOx (ppd)	(SOx ppd)	PM10 (ppd)	PM2.5 (ppd)	CO2 (ppd)	CH4 (ppd)
	21	**84**	**180**	**0**	**239**	**55**	**29878**	**2**

Months	4
Workdays Per Phase	80

GHG Emissions	CO2	CH4
lbs/day	29878	2
lbs/day CO2e	29878	36
Total	29913	
Total tonnes/day	14	
Total tonnes/year	1085	

Total On and Off Site Emissions	**VOC**	**NOx**	**CO**	**SOx**	**PM2.5**	**PM10**
On-site	16	130	57	0	53	236
Off-site	5	50	26	0	2	3
Total	21	180	84	0	55	239

Total On and Off Site Mitigated Emissions	**VOC**	**NOx**	**CO**	**SOx**	**PM2.5**	**PM10**
On-site	15	123	54	0	53	236
Off-site	5	48	25	0	2	2
Total	20	171	79	0	55	238

Floating Cover Phase 2 Regional Construction Emissions

Fugitive Dust Emissions		Site Preparation Activity			
		Excavation	1,742,400	Square Feet[a]	
Schedule -	1	days[a]			

Fugitive Dust Parameters	
Vehicle Speed (mph)[b]	Vehicle Miles Traveled
3	80.00

Fugitive Dust Stockpiling Parameters					
Silt Content[c]	Precipitation Days[d]	Mean Wind Speed Percent[e]	TSP Fraction	Area[f] (acres)	
6.9	10	0.53	0.5	5	

Fugitive Dust Material Handling					
Aerodynamic Particle Size Multiplier[g]	Mean Wind Speed[h]	Moisture Content[i]	Dirt Handled	Dirt Handled	
	mph		cy	lb/day	
0.35	2.8	7.9	155	386,607	

Dragline Parameters			
Drop Height (feet)	Moisture Content[i]	PM_{10} Scaling Factor	$PM_{2.5}$ Scaling Factor
3	7.9%	0.75	0.017

.		Max Daily Grading (acres)	PM10	PM2.5
Site Prep - Grading		9.50	221.4	46.0

Incremental Increase in Fugitive Dust Emissions from Construction Operations

Equations:

Storage Piles[k]: PM10 Emissions (lb/day) = 1.7 x (silt content/1.5) x ((365-precipitation days)/235) x wind speed percent/15 x TSP fraction x Area) x (1 - control efficiency)

Material Handling[k]: PM10 Emissions (lb/day) = (0.0032 x aerodynamic particle size multiplier x (wind speed (mph)/5)$^{1.3}$/(moisture content/2)$^{1.4}$ x dirt handled (lb/day)/2,000 (lb/ton)
(1 - control efficiency)

Dragline Equation for PM_{10} Emissions[o] (lbs/day) = [((0.0021) x (drop height)$^{0.7}$) / (moisture content)$^{0.3}$] x 0.75 x Dirt Handled x Control Efficiency

Dragline Equation for $PM_{2.5}$ Emissions[o] (lbs/day) = [((0.0021) x (drop height)$^{1.1}$) / (moisture content)$^{0.3}$] x 0.017 x Dirt Handled x Control Efficiency

Grading Equition for PM10 is based on UREBEMIS2007's rate for grading dust of 38.2 pounds per acre, and applied 61% reduction based on Rule 403 compliance.

Phase I	Control Efficiency	PM10[n]	PM2.5[n]
Description	%	lb/day	lb/day
Earthmoving	61	8.590	1.787
Storage Piles	61	0.4	0.083
Material Handling	61	0.01	0.002
Dragline	61	0.439	0.010
Grading	61	221.369	46.045
Total		***230.81***	***47.93***

Notes

a) Assumed 14 haul truck trips a day at 10 cubic yards a load, worst single-day scenerio, 4000 foot long area 12 foot wide.
b) Caterpillar Performance Handbook, Edition 33, October 2003 Operating Speeds, p 2-3.
c) USEPA, AP-42, July 1998, Table 11.9-3 Typical Values for Corection Factors Applicable to the Predictive Emission Factor Equations
d) Table A9-9-E2, SCAQMD CEQA Air Quality Handbook, 1993
e) Mean wind speed percent - percent of time mean wind speed exceeds 12 mph.
f) Assumed storage piles are 0.21 acres in size
g) USEPA, AP-42, Jan 1995, Section 13.2.4 Aggretate Handling and Storage Piles, p 13.2.4-3 Aerodynamic particle size multiplier for < 10 μm
h) Mean wind speed at the Downtown Los Angeles Wind Monitoring Station.
i) USEPA, Fugitive Dust Background Document and Technical Information Document for Best Available Control Measures, equation 2-13, p 2-28.
j) Assuming 155 cubic yards of dirt handled
k) USEPA, AP-42, July 1998, Table 11.9-1, Equation for Site Grading ≤ 10 μm
l) USEPA, AP-42, Jan 1995, Section 13.2.4 Aggretate Handling and Storage Piles, Equation 1
m) USEPA, Fugitive Dust Background Document and Technical Information Document for Best Available Control Measures, Sept 1992, EPA-450/2-92-004, Equation 2-12.
n) Includes watering at least three times a day per Rule 403 (61% control efficiency).
o) Source: USEPA, AP-42, Emission Factor Equations for Uncontrolled Dust Sources at Western Surface Coal Mines, Table 11.9-1, Dragline calculations for PM_{10} and $PM_{2.5}$.

USCR Floating Cover Estimated Equipment Operations

Equipment Type	QTY	Operating Hrs/WD/each	Operating Hours per Day	Rog (lbs/day)	Rog Rate (lbs/hr)	CO (lbs/day)	CO rate (lbs/hr)	NOX (lbs/day)	NOX rate (lbs/hr)	SOX (lbs/day)	SOX rate (lbs/hr)	PM10 (lbs/day)	PM2.5 (lbs/day)	PM (lbs/day)	PM rate (lbs/hr)	CO2 (lbs/day)	CO2 Rate (lbs/hr)	CH4 (lbs/day)	CH4 rate (lbs/hr)
1/2 Ton Pickup (Commute Vehicle)	6	4	24																
3/4 Ton Pickup	4	8	32																
1 Ton Pickup	2	8	16																
4,000 Gallon Water Truck	2	8	16	1.65	0.1029	8.14	0.5086	10.17	0.6353	0.01	0.0009	0.7160	0.6587	0.72	0.0447	1256.69	78.5	0.15	0.0093
Yard Crane, ATV	2	8	16																
Loader/ForksCat 966	2	8	16																
Job Trailers (3)	3	8	24																
Grader, Cat 16G	1	8	8	1.13	0.1407	3.34	0.4177	10.28	1.2844	0.02	0.0019	0.3559	0.3274	0.36	0.0445	1376.91	172	0.10	0.0127
Dozer, D10	2	8	16	5.29	0.3304	17.38	1.0864	45.31	2.8317	0.09	0.0058	1.5334	1.4107	1.53	0.0958	8276.48	517	0.48	0.0298
Excavator, Cat 365	2	6	12																
Roller/Compactor (Vibratory)	1	8	8	0.73	0.0912	3.21	0.4018	4.93	0.6164	0.01	0.0008	0.3352	0.3084	0.34	0.0419	536.42	67.1	0.07	0.0082
Hydraulic Breaker	2	8	16																
Truck Tractor	1	8	8	0.82	0.1029	4.07	0.5086	5.08	0.6353	0.01	0.0009	0.3580	0.3294	0.36	0.0447	628.35	78.5	0.07	0.0093
Asphalt Paver	2	8	16	2.29	0.1429	8.44	0.5277	12.98	0.8112	0.01	0.0009	0.9024	0.8302	0.90	0.0564	1246.94	77.9	0.21	0.0129

Tandem Rollers	2	8	16	1.46	0.0912	6.43	0.4018	9.86	0.6164	0.01	0.0008	0.6704	0.6167	0.67	0.0419	1072.83	67.1	0.13	0.0082
Pulley Grader System	2	8	16	2.18	0.1362	9.58	0.5987	17.27	1.0796	0.02	0.0015	0.8631	0.7941	0.86	0.0539	2123.89	133	0.20	0.0123
Gas Engine Vibrator	1	8	8	1.16	0.1448	3.99	0.4985	9.89	1.2360	0.01	0.0016	0.4218	0.3881	0.42	0.0527	1217.92	152	0.10	0.0131
Concrete Pump	1	8	8	0.07	0.0089	0.34	0.0420	0.44	0.0550	0.00	0.0001	0.0196	0.0180	0.02	0.0025	57.99	7.2	0.01	0.0008
Crane, Truck-Mounted	1	8	8	1.02	0.1276	3.64	0.4553	8.85	1.1066	0.01	0.0014	0.3729	0.3431	0.37	0.0466	1029.08	129	0.09	0.0115
Off-Road Forklift	1	8	8																
Generator	1	8	8																
Drill	1	8	8																
Air Compressor	1	8	8																
Misc.	10	2	20																
Total lbs/day				**16.96**		**64.49**		**129.98**		**0.20**		**6.19**	**5.70**	**6.19**		**18195.15**		**1.53**	

Total On-Site Emissions	ROG (ppd)	CO (ppd)	NOx (ppd)	(SOx ppd)	PM10 (ppd)	PM2.5 (ppd)	CO2 (ppd)	CH4 (ppd)
	17	**64**	**130**	**0**	**237**	**54**	**18195**	**2**

LA County* (Annual) -- Haul/Delivery Phase 2 (2014)				
	lbs/mi	Miles	Trips	Total (lbs/day)
CO	0.00846435	30	28	7.11
NOx	0.02418049	30	28	20.31
ROG	0.00201594	30	28	1.69
SOx	0.00004092	30	28	0.03
PM10	0.00118458	30	28	1.00
PM2.5	0.00100582	30	28	0.84
CO2	4.21279345	30	28	3,538.75
CH4	0.00009261	30	28	0.08

LA County* (Annual) -- Worker Trips Phase 2 (2014)				
	lbs/mi	Miles	Trips	Total (lbs/day)
CO	0.00660353	30	68	13.47
NOx	0.00065484	30	68	1.34
ROG	0.00070227	30	68	1.43
SOx	0.00001069	30	68	0.02
PM10	0.00009185	30	68	0.19
PM2.5	0.00005939	30	68	0.12
CO2	1.10257205	30	68	2,249.25
CH4	0.00006312	30	68	0.13

Total Off-site Emissions (lbs/day)	
CO	21
NOx	22
ROG	3
SOx	0
PM10	1
PM2.5	1
CO2	5,788
CH4	0

Total Emissions	ROG (ppd)	CO (ppd)	NOx (ppd)	(SOx ppd)	PM10 (ppd)	PM2.5 (ppd)	CO2 (ppd)	CH4 (ppd)
	20	**85**	**152**	**0**	**238**	**55**	**23983**	**2**

Months	7
Workdays Per Phase	140

GHG Emissions	CO2	CH4
lbs/day	23983	2
lbs/day CO2e	23983	36
Total	24020	
Total tonnes/day	11	
Total tonnes/year	1525	

Total On and Off Site Emissions	VOC	NOx	CO	SOx	PM2.5	PM10
On-site	17	130	64	0	54	237
Off-site	3	22	21	0	1	1
Total	20	152	85	0	55	238

Total On and Off Site Mitigated Emissions	VOC	NOx	CO	SOx	PM2.5	PM10
On-site	16	123	61	0	53	237
Off-site	3	21	20	0	1	1
Total	19	144	81	0	54	238

Floating Cover Phase 3 Regional Construction Emissions

Fugitive Dust Emissions		**Site Preparation Activity**			
		Excavation	1,742,400	Square Feet[a]	
Schedule -	1	days[a]			

Fugitive Dust Parameters	
Vehicle Speed (mph)[b]	**Vehicle Miles Traveled**
3	20.00

Fugitive Dust Stockpiling Parameters					
Silt Content[c]	**Precipitation Days[d]**	**Mean Wind Speed Percent[e]**	**TSP Fraction**	**Area[f] (acres)**	
6.9	10	0.53	0.5	0	

Fugitive Dust Material Handling					
Aerodynamic Particle Size Multiplier [g]	**Mean Wind Speed[h]**	**Moisture Content[i]**	**Dirt Handled**	**Dirt Handled**	
	mph		cy	lb/day	
0.35	2.8	7.9	0	0	

Dragline Parameters			
Drop Height (feet)	**Moisture Content[i]**	**PM_{10} Scaling Factor**	**$PM_{2.5}$ Scaling Factor**
3	7.9%	0.75	0.017

.		**Max Daily Grading (acres)**	**PM10**	**PM2.5**
Site Prep - Grading		0.00	0.0	0.0

Incremental Increase in Fugitive Dust Emissions from Construction Operations

Equations:

Storage Piles[k]: PM10 Emissions (lb/day) = 1.7 x (silt content/1.5) x ((365-precipitation days)/235) x wind speed percent/15 x TSP fraction x Area) x (1 - control efficiency)

Material Handling[k]: PM10 Emissions (lb/day) = (0.0032 x aerodynamic particle size multiplier x (wind speed (mph)/5)$^{1.3}$/(moisture content/2)$^{1.4}$ x dirt handled (lb/day)/2,000 (lb/ton)
(1 - control efficiency)

Dragline Equation for PM_{10} Emissions[o] (lbs/day) = [((0.0021) x (drop height)$^{0.7}$) / (moisture content)$^{0.3}$] x 0.75 x Dirt Handled x Control Efficiency

Dragline Equation for $PM_{2.5}$ Emissions[o] (lbs/day) = [((0.0021) x (drop height)$^{1.1}$) / (moisture content)$^{0.3}$] x 0.017 x Dirt Handled x Control Efficiency

Grading Equition for PM10 is based on UREBEMIS2007's rate for grading dust of 38.2 pounds per acre, and applied 61% reduction based on Rule 403 compliance.

Phase I	**Control Efficiency**	**PM10[n]**	**PM2.5[n]**
Description	%	lb/day	lb/day
Earthmoving	61	2.150	0.447
Storage Piles	61	0	0.000
Material Handling	61	0	0.000
Dragline	61	0.000	0.000
Grading	61	0.000	0.000
Total		***2.15***	***0.45***

Notes

a) Assumed 1 haul truck trips a day at 10 cubic yards a load, worst single-day scenerio, 4000 foot long area 12 foot wide.
b) Caterpillar Performance Handbook, Edition 33, October 2003 Operating Speeds, p 2-3.
c) USEPA, AP-42, July 1998, Table 11.9-3 Typical Values for Corection Factors Applicable to the Predictive Emission Factor Equations
d) Table A9-9-E2, SCAQMD CEQA Air Quality Handbook, 1993
e) Mean wind speed percent - percent of time mean wind speed exceeds 12 mph.
f) Assumed storage piles are 0.21 acres in size
g) USEPA, AP-42, Jan 1995, Section 13.2.4 Aggretate Handling and Storage Piles, p 13.2.4-3 Aerodynamic particle size multiplier for < 10 μm
h) Mean wind speed at the Downtown Los Angeles Wind Monitoring Station.
i) USEPA, Fugitive Dust Background Document and Technical Information Document for Best Available Control Measures, equation 2-13, p 2-28.
j) Assuming 000 cubic yards of dirt handled
k) USEPA, AP-42, July 1998, Table 11.9-1, Equation for Site Grading≤ 10 μm
l) USEPA, AP-42, Jan 1995, Section 13.2.4 Aggretate Handling and Storage Piles, Equation 1
m) USEPA, Fugitive Dust Background Document and Technical Information Document for Best Available Control Measures, Sept 1992, EPA-450/2-92-004, Equation 2-12.
n) Includes watering at least three times a day per Rule 403 (61% control efficiency).
o) Source: USEPA, AP-42, Emission Factor Equations for Uncontrolled Dust Sources at Western Surface Coal Mines, Table 11.9-1, Dragline calculations for PM_{10} and $PM_{2.5}$.

USCR Floating Cover Estimated Equipment Operations

Equipment Type	QTY	Operating Hrs/WD/each	Operating Hours per Day	Rog (lbs/day)	Rog Rate (lbs/hr)	CO (lbs/day)	CO rate (lbs/hr)	NOX (lbs/day)	NOX rate (lbs/hr)	SOX (lbs/day)	SOX rate (lbs/hr)	PM10 (lbs/day)	PM2.5 (lbs/day)	PM (lbs/day)	PM rate (lbs/hr)	CO2 (lbs/day)	CO2 Rate (lbs/hr)	CH4 (lbs/day)	CH4 rate (lbs/hr)
1/2 Ton Pickup (Commute Vehicle)	6	4	24																
3/4 Ton Pickup	4	8	32																
1 Ton Pickup	2	8	16																
4,000 Gallon Water Truck	2	8	16																
Yard Crane, ATV	2	8	16																
Loader/ForksCat 966	2	8	16																
Job Trailers (3)	3	8	24																
Grader, Cat 16G	1	8	8																
Dozer, D10	2	8	16																
Excavator, Cat 365	2	6	12																
Roller/Compactor (Vibratory)	1	8	8																
Hydraulic Breaker	2	8	16																
Truck Tractor	1	8	8																
Asphalt Paver	2	8	16																
Tandem Rollers	2	8	16																
Pulley Grader System	2	8	16																
Gas Engine Vibrator	1	8	8																

Concrete Pump	1	8	8																
Crane, Truck-Mounted	1	8	8																
Off-Road Forklift	1	8	8	0.37	0.0459	1.76	0.2200	2.53	0.3163	0.00	0.0006	0.1248	0.1148	0.12	0.0156	435.17	54.4	0.03	0.0041
Generator	1	8	8	0.51	0.0640	2.33	0.2913	3.77	0.4717	0.01	0.0007	0.2142	0.1971	0.21	0.0268	487.94	61.0	0.05	0.0058
Drill	1	8	8	0.54	0.0673	4.02	0.5022	4.91	0.6138	0.01	0.0017	0.1601	0.1473	0.16	0.0200	1319.37	165	0.05	0.0061
Air Compressor	1	8	8	0.60	0.0747	1.89	0.2360	1.64	0.2056	0.00	0.0003	0.1463	0.1346	0.15	0.0183	178.17	22.3	0.05	0.0067
Misc.	10	2	20	2.71	0.1355	9.69	0.4843	22.43	1.1215	0.03	0.0016	0.9504	0.8744	0.95	0.0475	3044.80	152	0.24	0.0122
Total lbs/day				**4.73**		**19.68**		**35.29**		**0.06**		**1.60**	**1.47**	**1.60**		**5465.45**		**0.43**	

Total On-Site Emissions	ROG (ppd)	CO (ppd)	NOx (ppd)	(SOx ppd)	PM10 (ppd)	PM2.5 (ppd)	CO2 (ppd)	CH4 (ppd)
	5	**20**	**35**	**0**	**4**	**2**	**5465**	**0**

LA County* (Annual) -- Haul/Delivery Phase 3 (2015)				
	lbs/mi	Miles	Trips	Total (lbs/day)
CO	0.00766891	30	2	0.46
NOx	0.02122678	30	2	1.27
ROG	0.00178608	30	2	0.11
SOx	0.00004082	30	2	0.00
PM10	0.00104715	30	2	0.06
PM2.5	0.00087977	30	2	0.05
CO2	4.20902225	30	2	252.54
CH4	0.00008369	30	2	0.01

LA County* (Annual) -- Worker Trips Phase 3 (2015)				
	lbs/mi	Miles	Trips	Total (lbs/day)
CO	0.00614108	30	40	7.37
NOx	0.00060188	30	40	0.72
ROG	0.00066355	30	40	0.80
SOx	0.00001070	30	40	0.01
PM10	0.00009259	30	40	0.11
PM2.5	0.00006015	30	40	0.07
CO2	1.10192837	30	40	1,322.31
CH4	0.00005923	30	40	0.07

Total Off-site Emissions (lbs/day)	
CO	8
NOx	2
ROG	1
SOx	0
PM10	0
PM2.5	0
CO2	1,575
CH4	0

Total Emissions	ROG (ppd)	CO (ppd)	NOx (ppd)	(SOx ppd)	PM10 (ppd)	PM2.5 (ppd)	CO2 (ppd)	CH4 (ppd)
	6	**28**	**37**	**0**	**4**	**2**	**7040**	**1**

Months	4
Workdays Per Phase	80

GHG Emissions	CO2	CH4
lbs/day	7040	1
lbs/day CO2e	7040	11
Total	7051	
Total tonnes/day	3	
Total tonnes/year	256	

Total On and Off Site Emissions	VOC	NOx	CO	SOx	PM2.5	PM10
On-site	5	35	20	0	2	4
Off-site	1	2	8	0	0	0
Total	6	37	28	0	2	4

Total On and Off Site Mitigated Emissions	VOC	NOx	CO	SOx	PM2.5	PM10
On-site	4	34	19	0	2	4
Off-site	1	2	7	0	0	0
Total	5	35	26	0	2	4

Floating Cover - Fugitive Dust Emissions - Inputs for ISC-AERMOD

		Weight Conv. [a]	Time Adjustment [b]
		453.59	28,800
Project Phase	**lb/day [c]**	**g/s**	
PM10			
	230.8	3.63518	
PM2.5			
	47.9	0.75488	

[a] Weight conversion is the amount of grams per pound.
[b] Time adjustment is the number of seconds in 8 hours (1 day of grading).
[c] Pounds per day emissions rate from construction emissions developed using Offroad 2007 and EMFAC 2007 emissions factors.

Alternative 1 - Off-Road Equipment Emissions

Daily Emissions (ppd)	CO	NO2 [1]	PM2.5	PM10
	64	13	5.7	6.2
Conversion to Grams/Second		**NO2**	**PM2.5**	**PM10**
	1.0157	0.2047	0.0897	0.0975

Alternative 1 - Mitigated Off-Road Equipment Emissions

Daily Emissions (ppd)	CO	NO2 [1]	PM2.5	PM10
	61	12	5.4	5.9
Conversion to Grams/Second		**NO2**	**PM2.5**	**PM10**
	0.9649	0.1945	0.0852	0.0926

[1] Used 10% of NOX as NO2 value for input into AERMOD

Aluminum Cover Phase 1 Regional Construction Emissions

Fugitive Dust Emissions		**Site Preparation Activity**			
		Excavation	1,742,400	Square Feet[a]	
Schedule -	1	days[a]			

Fugitive Dust Parameters	
Vehicle Speed (mph)[b]	**Vehicle Miles Traveled**
3	80.00

Fugitive Dust Stockpiling Parameters				
Silt Content[c]	**Precipitation Days[d]**	**Mean Wind Speed Percent[e]**	**TSP Fraction**	**Area[f] (acres)**
6.9	10	0.53	0.5	5

Fugitive Dust Material Handling				
Aerodynamic Particle Size Multiplier[g]	**Mean Wind Speed[h]**	**Moisture Content[i]**	**Dirt Handled**	**Dirt Handled**
	mph		cy	lb/day
0.35	2.8	7.9	973	2,433,333

Dragline Parameters			
Drop Height (feet)	**Moisture Content[i]**	**PM_{10} Scaling Factor**	**$PM_{2.5}$ Scaling Factor**
3	7.9%	0.75	0.017

.		**Max Daily Grading (acres)**	**PM10**	**PM2.5**
Site Prep - Grading		9.50	221.4	46.0

Incremental Increase in Fugitive Dust Emissions from Construction Operations

Equations:

Storage Piles[k]: PM10 Emissions (lb/day) = 1.7 x (silt content/1.5) x ((365-precipitation days)/235) x wind speed percent/15 x TSP fraction x Area) x (1 - control efficiency)

Material Handling[l]: PM10 Emissions (lb/day) = (0.0032 x aerodynamic particle size multiplier x (wind speed (mph)/5)$^{1.3}$/(moisture content/2)$^{1.4}$ x dirt handled (lb/day)/2,000 (lb/ton)
(1 - control efficiency)

Dragline Equation for PM_{10} Emissions[o] (lbs/day) = [((0.0021) x (drop height)$^{0.7}$) / (moisture content)$^{0.3}$] x 0.75 x Dirt Handled x Control Efficiency

Dragline Equation for $PM_{2.5}$ Emissions[o] (lbs/day) = [((0.0021) x (drop height)$^{1.1}$) / (moisture content)$^{0.3}$] x 0.017 x Dirt Handled x Control Efficiency

Grading Equition for PM10 is based on UREBEMIS2007's rate for grading dust of 38.2 pounds per acre, and applied 61% reduction based on Rule 403 compliance.

Phase I	**Control Efficiency**	**PM10[n]**	**PM2.5[n]**
Description	%	lb/day	lb/day
Earthmoving	61	8.590	1.787
Storage Piles	61	0.4	0.083
Material Handling	61	0.04	0.008
Dragline	61	2.763	0.063
Grading	61	221.369	46.045
Total		***233.16***	***47.99***

Notes

a) Assumed 79 haul truck trips a day at 10 cubic yards a load, worst single-day scenerio, 4000 foot long area 12 foot wide.
b) Caterpillar Performance Handbook, Edition 33, October 2003 Operating Speeds, p 2-3.
c) USEPA, AP-42, July 1998, Table 11.9-3 Typical Values for Corection Factors Applicable to the Predictive Emission Factor Equations
d) Table A9-9-E2, SCAQMD CEQA Air Quality Handbook, 1993
e) Mean wind speed percent - percent of time mean wind speed exceeds 12 mph.
f) Assumed storage piles are 0.21 acres in size
g) USEPA, AP-42, Jan 1995, Section 13.2.4 Aggretate Handling and Storage Piles, p 13.2.4-3 Aerodynamic particle size multiplier for < 10 µm
h) Mean wind speed at the Downtown Los Angeles Wind Monitoring Station.
i) USEPA, Fugitive Dust Background Document and Technical Information Document for Best Available Control Measures, equation 2-13, p 2-28.
j) Assuming 973 cubic yards of dirt handled
k) USEPA, AP-42, July 1998, Table 11.9-1, Equation for Site Grading ≤ 10 µm
l) USEPA, AP-42, Jan 1995, Section 13.2.4 Aggretate Handling and Storage Piles, Equation 1
m) USEPA, Fugitive Dust Background Document and Technical Information Document for Best Available Control Measures, Sept 1992, EPA-450/2-92-004, Equation 2-12.
n) Includes watering at least three times a day per Rule 403 (61% control efficiency).
o) Source: USEPA, AP-42, Emission Factor Equations for Uncontrolled Dust Sources at Western Surface Coal Mines, Table 11.9-1, Dragline calculations for PM_{10} and $PM_{2.5}$.

2014

USCR Aluminum Cover w/ Landslides Mitigation Estimated Equipment Operations

Equipment Type	QTY	Operating Hrs/WD/each	Operating Hours per Day	Rog (lbs/day)	Rog Rate (lbs/hr)	CO (lbs/day)	CO rate (lbs/hr)	NOX (lbs/day)	NOX rate (lbs/hr)	SOX (lbs/day)	SOX rate (lbs/hr)	PM10 (lbs/day)	PM2.5 (lbs/day)	PM (lbs/day)	PM rate (lbs/hr)	CO2 (lbs/day)	CO2 Rate (lbs/hr)	CH4 (lbs/day)	CH4 rate (lbs/hr)
1/2 Ton Pickup (Commute Vehicle)	6	4	24																
3/4 Ton Pickup	4	8	32																
1 Ton Pickup	2	8	16																
4,000 Gallon Water Truck	4	8	32	3.29	0.1029	16.28	0.5086	20.33	0.6353	0.03	0.0009	1.4320	1.3174	1.43	0.0447	2513.39	78.5	0.30	0.0093
Yard Crane, ATV	1	8	8	1.02	0.1276	3.64	0.4553	8.85	1.1066	0.01	0.0014	0.3729	0.3431	0.37	0.0466	1029.08	129	0.09	0.0115
Loader/ForksCat 966	2	8	16	1.90	0.1186	5.68	0.3553	17.55	1.0966	0.03	0.0017	0.6000	0.5520	0.60	0.0375	2383.63	149	0.17	0.0107
Job Trailers (3)	3	8	24																
Grader, Cat 16G	1	8	8	1.13	0.1407	3.34	0.4177	10.28	1.2844	0.02	0.0019	0.3559	0.3274	0.36	0.0445	1376.91	172	0.10	0.0127
Dozer, D10	2	8	16	5.29	0.3304	17.38	1.0864	45.31	2.8317	0.09	0.0058	1.5334	1.4107	1.53	0.0958	8276.48	517	0.48	0.0298
Excavator, Cat 365	4	7	28	4.64	0.1657	14.29	0.5102	36.75	1.3127	0.06	0.0023	1.2967	1.1930	1.30	0.0463	6544.59	234	0.42	0.0149
Roller/Compactor (Vibratory)	1	8	8	0.73	0.0912	3.21	0.4018	4.93	0.6164	0.01	0.0008	0.3352	0.3084	0.34	0.0419	536.42	67.1	0.07	0.0082
Hydraulic Breaker	2	8	16	1.16	0.0728	5.99	0.3747	7.96	0.4977	0.01	0.0008	0.5451	0.5015	0.55	0.0341	1068.81	66.8	0.11	0.0066
Truck Tractor	3	8	24	2.47	0.1029	12.21	0.5086	15.25	0.6353	0.02	0.0009	1.0740	0.9881	1.07	0.0447	1885.04	78.5	0.22	0.0093
Dump Truck	2	8	16																
Crawler Loader	2	8	16	2.40	0.1499	9.23	0.5767	17.36	1.0853	0.02	0.0013	1.0310	0.9485	1.03	0.0644	1824.31	114	0.22	0.0135
Front End Loader	2	8	16	1.80	0.1122	7.49	0.4683	13.79	0.8620	0.02	0.0012	0.7374	0.6784	0.74	0.0461	1737.79	109	0.16	0.0101
Sheepsfoot Roller	2	8	16	1.46	0.0912	6.43	0.4018	9.86	0.6164	0.01	0.0008	0.6704	0.6167	0.67	0.0419	1072.83	67.1	0.13	0.0082
Chipping Machine	2	8	16	2.56	0.1597	10.64	0.6651	17.39	1.0867	0.02	0.0015	1.0832	0.9965	1.08	0.0677	2116.95	132	0.23	0.0144

Chain Saw 36"	4	8	32	4.63	0.1448	15.95	0.4985	39.55	1.2360	0.05	0.0016	1.6872	1.5522	1.69	0.0527	4871.68	152	0.42	0.0131
Air Compressor, 260 cfm	1	8	8	0.66	0.0831	1.96	0.2446	1.71	0.2134	0.00	0.0003	0.1610	0.1481	0.16	0.0201	178.17	22.3	0.06	0.0075
Air Track Drill	1	8	8	0.58	0.0729	4.02	0.5030	5.71	0.7136	0.01	0.0017	0.1987	0.1828	0.20	0.0248	1319.50	165	0.05	0.0066
Grout Pump	1	8	8	0.55	0.0683	2.30	0.2873	3.54	0.4427	0.00	0.0006	0.2360	0.2171	0.24	0.0295	396.85	49.6	0.05	0.0062
Hydraulic Jack	1	8	8																
Air Pump	1	8	8	0.55	0.0683	2.30	0.2873	3.54	0.4427	0.00	0.0006	0.2360	0.2171	0.24	0.0295	396.85	49.6	0.05	0.0062
Asphalt Paver	2	8	16																
Tandem Rollers	2	8	16																
Pulley Grader System	2	8	16																
Gas Engine Vibrator	1	8	8																
Concrete Pump	1	8	8																
Hydraulic Crane (25 Ton)	2	8	16																
Drill Rig with Augers	1	8	8																
Cherry Pickers (boom lifts)	2	8	16																
Backhoe Loader	1	8	8																
Misc.	10	2	20																
Total lbs/day				**36.81**		**142.35**		**279.67**		**0.43**		**13.59**	**12.50**	**13.59**		**39529.27**		**3.32**	

Total On-Site Emissions	ROG (ppd)	CO (ppd)	NOx (ppd)	(SOx ppd)	PM10 (ppd)	PM2.5 (ppd)	CO2 (ppd)	CH4 (ppd)
	37	**142**	**280**	**0**	**247**	**60**	**39529**	**3**

LA County* (Annual) -- Haul/Delivery Phase 1 (2014)				
	lbs/mi	**Miles**	**Trips**	**Total (lbs/day)**
CO	0.00846435	30	158	40.12
NOx	0.02418049	30	158	114.62
ROG	0.00201594	30	158	9.56
SOx	0.00004092	30	158	0.19
PM10	0.00118458	30	158	5.61
PM2.5	0.00100582	30	158	4.77
CO2	4.21279345	30	158	19,968.64
CH4	0.00009261	30	158	0.44

LA County* (Annual) -- Worker Trips Phase 1 (2014)				
	lbs/mi	**Miles**	**Trips**	**Total (lbs/day)**
CO	0.00660353	30	96	19.02
NOx	0.00065484	30	96	1.89
ROG	0.00070227	30	96	2.02
SOx	0.00001069	30	96	0.03
PM10	0.00009185	30	96	0.26
PM2.5	0.00005939	30	96	0.17
CO2	1.10257205	30	96	3,175.41
CH4	0.00006312	30	96	0.18

Total Off-site Emissions (lbs/day)	
CO	59
NOx	117
ROG	12
SOx	0
PM10	6
PM2.5	5
CO2	23,144
CH4	1

Total Emissions	ROG (ppd)	CO (ppd)	NOx (ppd)	(SOx ppd)	PM10 (ppd)	PM2.5 (ppd)	CO2 (ppd)	CH4 (ppd)
	48	**201**	**396**	**1**	**253**	**65**	**62673**	**4**

Months	4
Workdays Per Phase	80

GHG Emissions	CO2	CH4
lbs/day	62673	4
lbs/day CO2e	62673	83
Total	62756	
Total tonnes/day	28	
Total tonnes/year	2277	

Total On and Off Site Emissions	**VOC**	**NOx**	**CO**	**SOx**	**PM2.5**	**PM10**
On-site	37	280	142	0	60	247
Off-site	12	117	59	0	5	6
Total	48	396	201	1	65	253

Total On and Off Site Mitigated Emissions	**VOC**	**NOx**	**CO**	**SOx**	**PM2.5**	**PM10**
On-site	35	266	135	0	60	246
Off-site	11	111	56	0	5	6
Total	46	376	191	1	65	252

Aluminum Cover Phase 2 Regional Construction Emissions

Fugitive Dust Emissions		**Site Preparation Activity**			
		Excavation	1,742,400	Square Feet[a]	
Schedule -	1	days[a]			

Fugitive Dust Parameters	
Vehicle Speed (mph)[b]	**Vehicle Miles Traveled**
3	80.00

Fugitive Dust Stockpiling Parameters					
Silt Content[c]	**Precipitation Days[d]**	**Mean Wind Speed Percent[e]**	**TSP Fraction**	**Area[f] (acres)**	
6.9	10	0.53	0.5	5	

Fugitive Dust Material Handling					
Aerodynamic Particle Size Multiplier[g]	**Mean Wind Speed[h]**	**Moisture Content[i]**	**Dirt Handled**	**Dirt Handled**	
	mph		cy	lb/day	
0.35	2.8	7.9	978	2,444,940	

Dragline Parameters			
Drop Height (feet)	**Moisture Content[i]**	**PM_{10} Scaling Factor**	**$PM_{2.5}$ Scaling Factor**
3	7.9%	0.75	0.017

.		**Max Daily Grading (acres)**	**PM10**	**PM2.5**
Site Prep - Grading		9.50	221.4	46.0

Incremental Increase in Fugitive Dust Emissions from Construction Operations

Equations:

Storage Piles[k]: PM10 Emissions (lb/day) = 1.7 x (silt content/1.5) x ((365-precipitation days)/235) x wind speed percent/15 x TSP fraction x Area) x (1 - control efficiency)

Material Handling[k]: PM10 Emissions (lb/day) = (0.0032 x aerodynamic particle size multiplier x (wind speed (mph)/5)$^{1.3}$/(moisture content/2)$^{1.4}$ x dirt handled (lb/day)/2,000 (lb/ton)
(1 - control efficiency)

Dragline Equation for PM_{10} Emissions[o] (lbs/day) = [((0.0021) x (drop height)$^{0.7}$) / (moisture content)$^{0.3}$] x 0.75 x Dirt Handled x Control Efficiency

Dragline Equation for $PM_{2.5}$ Emissions[o] (lbs/day) = [((0.0021) x (drop height)$^{1.1}$) / (moisture content)$^{0.3}$] x 0.017 x Dirt Handled x Control Efficiency

Grading Equition for PM10 is based on UREBEMIS2007's rate for grading dust of 38.2 pounds per acre, and applied 61% reduction based on Rule 403 compliance.

Phase I	Control Efficiency	PM10[n]	PM2.5[n]
Description	%	lb/day	lb/day
Earthmoving	61	8.590	1.787
Storage Piles	61	0.4	0.083
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Dragline	61	2.776	0.063
Grading	61	221.369	46.045
Total		***233.17***	***47.99***

Notes

a) Assumed 60 haul truck trips a day at 10 cubic yards a load, worst single-day scenerio, 4000 foot long area 12 foot wide.
b) Caterpillar Performance Handbook, Edition 33, October 2003 Operating Speeds, p 2-3.
c) USEPA, AP-42, July 1998, Table 11.9-3 Typical Values for Corection Factors Applicable to the Predictive Emission Factor Equations
d) Table A9-9-E2, SCAQMD CEQA Air Quality Handbook, 1993
e) Mean wind speed percent - percent of time mean wind speed exceeds 12 mph.
f) Assumed storage piles are 0.21 acres in size
g) USEPA, AP-42, Jan 1995, Section 13.2.4 Aggretate Handling and Storage Piles, p 13.2.4-3 Aerodynamic particle size multiplier for < 10 µm
h) Mean wind speed at the Downtown Los Angeles Wind Monitoring Station.
i) USEPA, Fugitive Dust Background Document and Technical Information Document for Best Available Control Measures, equation 2-13, p 2-28.
j) Assuming 978 cubic yards of dirt handled
k) USEPA, AP-42, July 1998, Table 11.9-1, Equation for Site Grading≤ 10 µm
l) USEPA, AP-42, Jan 1995, Section 13.2.4 Aggretate Handling and Storage Piles, Equation 1
m) USEPA, Fugitive Dust Background Document and Technical Information Document for Best Available Control Measures, Sept 1992, EPA-450/2-92-004, Equation 2-12.
n) Includes watering at least three times a day per Rule 403 (61% control efficiency).
o) Source: USEPA, AP-42, Emission Factor Equations for Uncontrolled Dust Sources at Western Surface Coal Mines, Table 11.9-1, Dragline calculations for PM_{10} and $PM_{2.5}$.

2015

USCR Aluminum Cover w/ Landslides Mitigation Estimated Equipment Operations

Equipment Type	QTY	Operating Hrs/WD/each	Operating Hours per Day	Rog (lbs/day)	Rog Rate (lbs/hr)	CO (lbs/day)	CO rate (lbs/hr)	NOX (lbs/day)	NOX rate (lbs/hr)	SOX (lbs/day)	SOX rate (lbs/hr)	PM10 (lbs/day)	PM2.5 (lbs/day)	PM (lbs/day)	PM rate (lbs/hr)	CO2 (lbs/day)	CO2 Rate (lbs/hr)	CH4 (lbs/day)	CH4 rate (lbs/hr)
1/2 Ton Pickup (Commute Vehicle)	6	4	24																
3/4 Ton Pickup	4	8	32																
1 Ton Pickup	2	8	16																
4,000 Gallon Water Truck	4	8	32	2.92	0.0913	16.11	0.5034	18.39	0.5746	0.03	0.0009	1.2394	1.1403	1.24	0.0387	2513.38	78.5	0.26	0.0082
Yard Crane, ATV	1	8	8																
Loader/ForksCat 966	2	8	16																
Job Trailers (3)	3	8	24																
Grader, Cat 16G	1	8	8	1.06	0.1326	3.24	0.4046	9.28	1.1596	0.02	0.0019	0.3198	0.2942	0.32	0.0400	1376.91	172	0.10	0.0120
Dozer, D10	2	8	16	5.04	0.3148	17.01	1.0631	39.88	2.4922	0.09	0.0058	1.3668	1.2574	1.37	0.0854	8276.48	517	0.45	0.0284
Excavator, Cat 365	4	7	28	4.42	0.1577	13.90	0.4964	32.53	1.1619	0.06	0.0023	1.1572	1.0647	1.16	0.0413	6544.59	234	0.40	0.0142
Roller/Compactor (Vibratory)	1	8	8	0.68	0.0851	3.18	0.3979	4.56	0.5706	0.01	0.0008	0.3086	0.2839	0.31	0.0386	536.40	67.1	0.06	0.0077
Hydraulic Breaker	2	8	16																
Truck Tractor	3	8	24	2.19	0.0913	12.08	0.5034	13.79	0.5746	0.02	0.0009	0.9296	0.8552	0.93	0.0387	1885.04	78.5	0.20	0.0082
Dump Truck	2	8	16																
Crawler Loader	2	8	16	2.26	0.1415	9.04	0.5650	16.10	1.0059	0.02	0.0013	0.9502	0.8742	0.95	0.0594	1824.31	114	0.20	0.0128
Front End Loader	2	8	16	1.68	0.1050	7.38	0.4615	12.54	0.7838	0.02	0.0012	0.6664	0.6131	0.67	0.0416	1737.79	109	0.15	0.0095
Sheepsfoot Roller	2	8	16	1.36	0.0851	6.37	0.3979	9.13	0.5706	0.01	0.0008	0.6172	0.5678	0.62	0.0386	1072.81	67.1	0.12	0.0077
Chipping Machine	2	8	16	2.34	0.1465	10.48	0.6549	15.83	0.9893	0.02	0.0015	0.9706	0.8929	0.97	0.0607	2116.95	132	0.21	0.0132

Chain Saw 36"	4	8	32	4.34	0.1355	15.50	0.4843	35.89	1.1215	0.05	0.0016	1.5207	1.3990	1.52	0.0475	4871.68	152	0.39	0.0122
Air Compressor, 260 cfm	1	8	8	0.60	0.0747	1.89	0.2360	1.64	0.2056	0.00	0.0003	0.1463	0.1346	0.15	0.0183	178.17	22.3	0.05	0.0067
Air Track Drill	1	8	8	0.54	0.0673	4.02	0.5022	4.91	0.6138	0.01	0.0017	0.1601	0.1473	0.16	0.0200	1319.37	165	0.05	0.0061
Grout Pump	1	8	8	0.50	0.0621	2.26	0.2825	3.30	0.4121	0.00	0.0006	0.2134	0.1963	0.21	0.0267	396.85	49.6	0.04	0.0056
Hydraulic Jack	1	8	8																
Air Pump	1	8	8	0.50	0.0621	2.26	0.2825	3.30	0.4121	0.00	0.0006	0.2134	0.1963	0.21	0.0267	396.85	49.6	0.04	0.0056
Asphalt Paver	2	8	16	2.16	0.1347	8.32	0.5203	12.17	0.7607	0.01	0.0009	0.8415	0.7741	0.84	0.0526	1246.94	77.9	0.19	0.0122
Tandem Rollers	2	8	16	1.36	0.0851	6.37	0.3979	9.13	0.5706	0.01	0.0008	0.6172	0.5678	0.62	0.0386	1072.81	67.1	0.12	0.0077
Pulley Grader System	2	8	16	2.04	0.1277	9.49	0.5931	15.67	0.9795	0.02	0.0015	0.7820	0.7195	0.78	0.0489	2123.89	133	0.18	0.0115
Gas Engine Vibrator	1	8	8																
Concrete Pump	1	8	8																
Hydraulic Crane (25 Ton)	2	8	16																
Drill Rig with Augers	1	8	8																
Cherry Pickers (boom lifts)	2	8	16																
Backhoe Loader	1	8	8																
Misc.	10	2	20																
Total lbs/day				**35.98**		**148.89**		**258.03**		**0.43**		**13.02**	**11.98**	**13.02**		**39491.20**		**3.25**	

Total On-Site Emissions	ROG (ppd)	CO (ppd)	NOx (ppd)	(SOx ppd)	PM10 (ppd)	PM2.5 (ppd)	CO2 (ppd)	CH4 (ppd)
	36	**149**	**258**	**0**	**246**	**60**	**39491**	**3**

LA County* (Annual) -- Haul/Delivery Phase 2 (2015)				
	lbs/mi	Miles**	Trips	Total (lbs/day)
CO	0.00766891	30	120	27.61
NOx	0.02122678	30	120	76.42
ROG	0.00178608	30	120	6.43
SOx	0.00004082	30	120	0.15
PM10	0.00104715	30	120	3.77
PM2.5	0.00087977	30	120	3.17
CO2	4.20902225	30	120	15,152.48
CH4	0.00008369	30	120	0.30

LA County* (Annual) -- Worker Trips Phase 2 (2015)				
	lbs/mi	Miles**	Trips	Total (lbs/day)
CO	0.00614108	30	98	18.05
NOx	0.00060188	30	98	1.77
ROG	0.00066355	30	98	1.95
SOx	0.00001070	30	98	0.03
PM10	0.00009259	30	98	0.27
PM2.5	0.00006015	30	98	0.18
CO2	1.10192837	30	98	3,239.67
CH4	0.00005923	30	98	0.17

Total Off-site Emissions (lbs/day)	
CO	46
NOx	78
ROG	8
SOx	0
PM10	4
PM2.5	3
CO2	18,392
CH4	0

Total Emissions	ROG (ppd)	CO (ppd)	NOx (ppd)	(SOx ppd)	PM10 (ppd)	PM2.5 (ppd)	CO2 (ppd)	CH4 (ppd)
	44	**195**	**336**	**1**	**250**	**63**	**57883**	**4**

Months	7
Workdays Per Phase	140

GHG Emissions	CO2	CH4
lbs/day	57883	4
lbs/day CO2e	57883	78
Total	57962	
Total tonnes/day	26	
Total tonnes/year	3681	

Total On and Off Site Emissions	VOC	NOx	CO	SOx	PM2.5	PM10
On-site	36	258	149	0	60	246
Off-site	8	78	46	0	3	4
Total	44	336	195	1	63	250

Total On and Off Site Mitigated Emissions	VOC	NOx	CO	SOx	PM2.5	PM10
On-site	34	245	141	0	59	246
Off-site	8	74	43	0	3	4
Total	42	319	185	1	63	249

Aluminum Phase 3 Regional Construction Emissions

Fugitive Dust Emissions		Site Preparation Activity			
		Excavation	1,742,400	Square Feet[a]	
Schedule -	1	days[a]			

Fugitive Dust Parameters	
Vehicle Speed (mph)[b]	Vehicle Miles Traveled
3	20.00

Fugitive Dust Stockpiling Parameters					
Silt Content[c]	Precipitation Days[d]	Mean Wind Speed Percent[e]	TSP Fraction	Area[f] (acres)	
6.9	10	0.53	0.5	0	

Fugitive Dust Material Handling					
Aerodynamic Particle Size Multiplier[g]	Mean Wind Speed[h]	Moisture Content[i]	Dirt Handled	Dirt Handled	
	mph		cy	lb/day	
0.35	2.8	7.9	0	0	

Dragline Parameters			
Drop Height (feet)	Moisture Content[i]	PM_{10} Scaling Factor	$PM_{2.5}$ Scaling Factor
3	7.9%	0.75	0.017

.		Max Daily Grading (acres)	PM10	PM2.5
Site Prep - Grading		0.00	0.0	0.0

Incremental Increase in Fugitive Dust Emissions from Construction Operations

Equations:

Storage Piles[k]: PM10 Emissions (lb/day) = 1.7 x (silt content/1.5) x ((365-precipitation days)/235) x wind speed percent/15 x TSP fraction x Area) x (1 - control efficiency)

Material Handling[k]: PM10 Emissions (lb/day) = (0.0032 x aerodynamic particle size multiplier x (wind speed (mph)/5)$^{1.3}$/(moisture content/2)$^{1.4}$ x dirt handled (lb/day)/2,000 (lb/ton)
(1 - control efficiency)

Dragline Equation for PM_{10} Emissions[o] (lbs/day) = [((0.0021) x (drop height)$^{0.7}$) / (moisture content)$^{0.3}$] x 0.75 x Dirt Handled x Control Efficiency

Dragline Equation for $PM_{2.5}$ Emissions[o] (lbs/day) = [((0.0021) x (drop height)$^{1.1}$) / (moisture content)$^{0.3}$] x 0.017 x Dirt Handled x Control Efficiency

Grading Equition for PM10 is based on UREBEMIS2007's rate for grading dust of 38.2 pounds per acre, and applied 61% reduction based on Rule 403 compliance.

Phase I	Control Efficiency	PM10[n]	PM2.5[n]
Description	%	lb/day	lb/day
Earthmoving	61	2.150	0.447
Storage Piles	61	0	0.000
Material Handling	61	0	0.000
Dragline	61	0.000	0.000
Grading	61	0.000	0.000
Total		***2.15***	***0.45***

Notes

a) Assumed 4 haul truck trips a day at 10 cubic yards a load, worst single-day scenerio, 4000 foot long area 12 foot wide.
b) Caterpillar Performance Handbook, Edition 33, October 2003 Operating Speeds, p 2-3.
c) USEPA, AP-42, July 1998, Table 11.9-3 Typical Values for Corection Factors Applicable to the Predictive Emission Factor Equations
d) Table A9-9-E2, SCAQMD CEQA Air Quality Handbook, 1993
e) Mean wind speed percent - percent of time mean wind speed exceeds 12 mph.
f) Assumed storage piles are 0.21 acres in size
g) USEPA, AP-42, Jan 1995, Section 13.2.4 Aggretate Handling and Storage Piles, p 13.2.4-3 Aerodynamic particle size multiplier for < 10 µm
h) Mean wind speed at the Downtown Los Angeles Wind Monitoring Station.
i) USEPA, Fugitive Dust Background Document and Technical Information Document for Best Available Control Measures, equation 2-13, p 2-28.
j) Assuming 000 cubic yards of dirt handled
k) USEPA, AP-42, July 1998, Table 11.9-1, Equation for Site Grading ≤ 10 µm
l) USEPA, AP-42, Jan 1995, Section 13.2.4 Aggretate Handling and Storage Piles, Equation 1
m) USEPA, Fugitive Dust Background Document and Technical Information Document for Best Available Control Measures, Sept 1992, EPA-450/2-92-004, Equation 2-12.
n) Includes watering at least three times a day per Rule 403 (61% control efficiency).
o) Source: USEPA, AP-42, Emission Factor Equations for Uncontrolled Dust Sources at Western Surface Coal Mines, Table 11.9-1, Dragline calculations for PM_{10} and $PM_{2.5}$.

2015

USCR Aluminum Cover w/ Landslides Mitigation Estimated Equipment Operations

Equipment Type	QTY	Operating Hrs/WD/each	Operating Hours per Day	Rog (lbs/day)	Rog Rate (lbs/hr)	CO (lbs/day)	CO rate (lbs/hr)	NOX (lbs/day)	NOX rate (lbs/hr)	SOX (lbs/day)	SOX rate (lbs/hr)	PM10 (lbs/day)	PM2.5 (lbs/day)	PM (lbs/day)	PM rate (lbs/hr)	CO2 (lbs/day)	CO2 Rate (lbs/hr)	CH4 (lbs/day)	CH4 rate (lbs/hr)
1/2 Ton Pickup (Commute Vehicle)	6	4	24																
3/4 Ton Pickup	4	8	32																
1 Ton Pickup	2	8	16																
4,000 Gallon Water Truck	4	8	32																
Yard Crane, ATV	1	8	8																
Loader/ForksCat 966	2	8	16	1.79	0.1118	5.51	0.3444	15.82	0.9890	0.03	0.0017	0.5390	0.4959	0.54	0.0337	2383.63	149	0.16	0.0101
Job Trailers (3)	3	8	24																
Grader, Cat 16G	1	8	8																
Dozer, D10	2	8	16																
Excavator, Cat 365	4	7	28	4.42	0.1577	13.90	0.4964	32.53	1.1619	0.06	0.0023	1.1572	1.0647	1.16	0.0413	6544.59	234	0.40	0.0142
Roller/Compactor (Vibratory)	1	8	8																
Hydraulic Breaker	2	8	16																
Truck Tractor	3	8	24																
Dump Truck	2	8	16																
Crawler Loader	2	8	16																
Front End Loader	2	8	16																
Sheepsfoot Roller	2	8	16																
Chipping Machine	2	8	16																

Chain Saw 36"	4	8	32																
Air Compressor, 260 cfm	1	8	8																
Air Track Drill	1	8	8																
Grout Pump	1	8	8																
Hydraulic Jack	1	8	8																
Air Pump	1	8	8																
Asphalt Paver	2	8	16																
Tandem Rollers	2	8	16																
Pulley Grader System	2	8	16																
Gas Engine Vibrator	1	8	8	1.08	0.1355	3.87	0.4843	8.97	1.1215	0.01	0.0016	0.3802	0.3498	0.38	0.0475	1217.92	152	0.10	0.0122
Concrete Pump	1	8	8	0.07	0.0088	0.33	0.0419	0.44	0.0545	0.00	0.0001	0.0189	0.0174	0.02	0.0024	57.99	7.2	0.01	0.0008
Hydraulic Crane (25 Ton)	2	8	16	1.93	0.1204	7.03	0.4395	16.32	1.0200	0.02	0.0014	0.6811	0.6266	0.68	0.0426	2058.09	129	0.17	0.0109
Drill Rig with Augers	1	8	8	0.54	0.0673	4.02	0.5022	4.91	0.6138	0.01	0.0017	0.1601	0.1473	0.16	0.0200	1319.37	165	0.05	0.0061
Cherry Pickers (boom lifts)	2	8	16	0.70	0.0439	2.94	0.1837	4.27	0.2670	0.01	0.0004	0.2672	0.2458	0.27	0.0167	555.55	34.7	0.06	0.0040
Backhoe Loader	1	8	8	0.53	0.0666	2.97	0.3716	3.60	0.4501	0.01	0.0008	0.2383	0.2192	0.24	0.0298	534.39	66.8	0.05	0.0060
Misc.	10	2	20	2.71	0.1355	9.69	0.4843	22.43	1.1215	0.03	0.0016	0.9504	0.8744	0.95	0.0475	3044.80	152	0.24	0.0122
Total lbs/day				**13.77**		**50.27**		**109.30**		**0.19**		**4.39**	**4.04**	**4.39**		**17716.32**		**1.24**	

Total On-Site Emissions	ROG (ppd)	CO (ppd)	NOx (ppd)	(SOx ppd)	PM10 (ppd)	PM2.5 (ppd)	CO2 (ppd)	CH4 (ppd)
	14	**50**	**109**	**0**	**7**	**4**	**17716**	**1**

LA County* (Annual) -- Haul/Delivery Phase 3 (2015)				
	lbs/mi	**Miles****	**Trips**	**Total (lbs/day)**
CO	0.00766891	30	8	1.84
NOx	0.02122678	30	8	5.09
ROG	0.00178608	30	8	0.43
SOx	0.00004082	30	8	0.01
PM10	0.00104715	30	8	0.25
PM2.5	0.00087977	30	8	0.21
CO2	4.20902225	30	8	1,010.17
CH4	0.00008369	30	8	0.02

LA County* (Annual) -- Worker Trips Phase 3 2015				
	lbs/mi	**Miles****	**Trips**	**Total (lbs/day)**
CO	0.00614108	30	54	9.95
NOx	0.00060188	30	54	0.98
ROG	0.00066355	30	54	1.07
SOx	0.00001070	30	54	0.02
PM10	0.00009259	30	54	0.15
PM2.5	0.00006015	30	54	0.10
CO2	1.10192837	30	54	1,785.12
CH4	0.00005923	30	54	0.10

Total Off-site Emissions (lbs/day)	
CO	12
NOx	6
ROG	2
SOx	0
PM10	0
PM2.5	0
CO2	2,795
CH4	0

Total Emissions	ROG (ppd)	CO (ppd)	NOx (ppd)	(SOx ppd)	PM10 (ppd)	PM2.5 (ppd)	CO2 (ppd)	CH4 (ppd)
	15	**62**	**115**	**0**	**7**	**5**	**20512**	**1**

Months	26
Workdays Per Phase	520

GHG Emissions	CO2	CH4
lbs/day	20512	1
lbs/day CO2e	20512	29
Total	20540	
Total tonnes/day	9	
Total tonnes/year	4845	

Total On and Off Site Emissions	**VOC**	**NOx**	**CO**	**SOx**	**PM2.5**	**PM10**
On-site	14	109	50	0	4	7
Off-site	2	6	12	0	0	0
Total	15	115	62	0	5	7

Total On and Off Site Mitigated Emissions	**VOC**	**NOx**	**CO**	**SOx**	**PM2.5**	**PM10**
On-site	13	104	48	0	4	6
Off-site	1	6	11	0	0	0
Total	15	110	59	0	5	7

Aluminum Cover Phase 4 Regional Construction Emissions

Fugitive Dust Emissions		**Site Preparation Activity**			
		Excavation	1,742,400	Square Feet[a]	
Schedule -	1	**days[a]**			

Fugitive Dust Parameters	
Vehicle Speed (mph)[b]	**Vehicle Miles Traveled**
3	20.00

Fugitive Dust Stockpiling Parameters					
Silt Content[c]	**Precipitation Days[d]**	**Mean Wind Speed Percent[e]**	**TSP Fraction**	**Area[f] (acres)**	
6.9	10	0.53	0.5	0	

Fugitive Dust Material Handling					
Aerodynamic Particle Size Multiplier[g]	**Mean Wind Speed[h]**	**Moisture Content[i]**	**Dirt Handled**	**Dirt Handled**	
	mph		cy	lb/day	
0.35	2.8	7.9	0	0	

Dragline Parameters			
Drop Height (feet)	**Moisture Content[i]**	**PM_{10} Scaling Factor**	**$PM_{2.5}$ Scaling Factor**
3	7.9%	0.75	0.017

.		**Max Daily Grading (acres)**	**PM10**	**PM2.5**
Site Prep - Grading		0.00	0.0	0.0

Incremental Increase in Fugitive Dust Emissions from Construction Operations

Equations:

Storage Piles[k]: PM10 Emissions (lb/day) = 1.7 x (silt content/1.5) x ((365-precipitation days)/235) x wind speed percent/15 x TSP fraction x Area) x (1 - control efficiency)

Material Handling[k]: PM10 Emissions (lb/day) = (0.0032 x aerodynamic particle size multiplier x (wind speed (mph)/5)$^{1.3}$/(moisture content/2)$^{1.4}$ x dirt handled (lb/day)/2,000 (lb/ton)
(1 - control efficiency)

Dragline Equation for PM_{10} Emissions[o] (lbs/day) = [((0.0021) x (drop height)$^{0.7}$) / (moisture content)$^{0.3}$] x 0.75 x Dirt Handled x Control Efficiency

Dragline Equation for $PM_{2.5}$ Emissions[o] (lbs/day) = [((0.0021) x (drop height)$^{1.1}$) / (moisture content)$^{0.3}$] x 0.017 x Dirt Handled x Control Efficiency

Grading Equition for PM10 is based on UREBEMIS2007's rate for grading dust of 38.2 pounds per acre, and applied 61% reduction based on Rule 403 compliance.

Phase I	**Control Efficiency**	**PM10[n]**	**PM2.5[n]**
Description	%	lb/day	lb/day
Earthmoving	61	2.150	0.447
Storage Piles	61	0	0.000
Material Handling	61	0	0.000
Dragline	61	0.000	0.000
Grading	61	0.000	0.000
Total		***2.15***	***0.45***

Notes

a) Assumed 2 haul truck trips a day at 10 cubic yards a load, worst single-day scenerio, 4000 foot long area 12 foot wide.
b) Caterpillar Performance Handbook, Edition 33, October 2003 Operating Speeds, p 2-3.
c) USEPA, AP-42, July 1998, Table 11.9-3 Typical Values for Corection Factors Applicable to the Predictive Emission Factor Equations
d) Table A9-9-E2, SCAQMD CEQA Air Quality Handbook, 1993
e) Mean wind speed percent - percent of time mean wind speed exceeds 12 mph.
f) Assumed storage piles are 0.21 acres in size
g) USEPA, AP-42, Jan 1995, Section 13.2.4 Aggretate Handling and Storage Piles, p 13.2.4-3 Aerodynamic particle size multiplier for < 10 µm
h) Mean wind speed at the Downtown Los Angeles Wind Monitoring Station.
i) USEPA, Fugitive Dust Background Document and Technical Information Document for Best Available Control Measures, equation 2-13, p 2-28.
j) Assuming 000 cubic yards of dirt handled
k) USEPA, AP-42, July 1998, Table 11.9-1, Equation for Site Grading≤ 10 µm
l) USEPA, AP-42, Jan 1995, Section 13.2.4 Aggretate Handling and Storage Piles, Equation 1
m) USEPA, Fugitive Dust Background Document and Technical Information Document for Best Available Control Measures, Sept 1992, EPA-450/2-92-004, Equation 2-12.
n) Includes watering at least three times a day per Rule 403 (61% control efficiency).
o) Source: USEPA, AP-42, Emission Factor Equations for Uncontrolled Dust Sources at Western Surface Coal Mines, Table 11.9-1, Dragline calculations for PM_{10} and $PM_{2.5}$.

2017

USCR Aluminum Cover w/ Landslides Mitigation Estimated Equipment Operations

Equipment Type	QTY	Operating Hrs/WD/each	Operating Hours per Day	Rog (lbs/day)	Rog Rate (lbs/hr)	CO (lbs/day)	CO rate (lbs/hr)	NOX (lbs/day)	NOX rate (lbs/hr)	SOX (lbs/day)	SOX rate (lbs/hr)	PM10 (lbs/day)	PM2.5 (lbs/day)	PM (lbs/day)	PM rate (lbs/hr)	CO2 (lbs/day)	CO2 Rate (lbs/hr)	CH4 (lbs/day)	CH4 rate (lbs/hr)
1/2 Ton Pickup (Commute Vehicle)	6	4	24																
3/4 Ton Pickup	4	8	32																
1 Ton Pickup	2	8	16																
4,000 Gallon Water Truck	4	8	32																
Yard Crane, ATV	1	8	8																
Loader/ForksCat 966	2	8	16	1.60	0.1000	5.26	0.3290	12.77	0.7984	0.03	0.0017	0.4347	0.3999	0.43	0.0272	2383.63	149	0.14	0.0090
Job Trailers (3)	3	8	24																
Grader, Cat 16G	1	8	8																
Dozer, D10	2	8	16																
Excavator, Cat 365	4	7	28																
Roller/Compactor (Vibratory)	1	8	8																
Hydraulic Breaker	2	8	16																
Truck Tractor	3	8	24																
Dump Truck	2	8	16																
Crawler Loader	2	8	16																
Front End Loader	2	8	16																
Sheepsfoot Roller	2	8	16																
Chipping Machine	2	8	16																

Chain Saw 36"	4	8	32																
Air Compressor, 260 cfm	1	8	8																
Air Track Drill	1	8	8																
Grout Pump	1	8	8																
Hydraulic Jack	1	8	8																
Air Pump	1	8	8																
Asphalt Paver	2	8	16																
Tandem Rollers	2	8	16																
Pulley Grader System	2	8	16																
Gas Engine Vibrator	1	8	8																
Concrete Pump	1	8	8																
Hydraulic Crane (25 Ton)	2	8	16																
Drill Rig with Augers	1	8	8																
Cherry Pickers (boom lifts)	2	8	16																
Backhoe Loader	1	8	8																
Misc.	10	2	20	2.37	0.1187	9.30	0.4650	18.28	0.9138	0.03	0.0016	0.7583	0.6977	0.76	0.0379	3044.80	152	0.21	0.0107
Total lbs/day				**3.97**		**14.56**		**31.05**		**0.06**		**1.19**	**1.10**	**1.19**		**5428.42**		**0.36**	

Total On-Site Emissions	ROG (ppd)	CO (ppd)	NOx (ppd)	(SOx ppd)	PM10 (ppd)	PM2.5 (ppd)	CO2 (ppd)	CH4 (ppd)
	4	**15**	**31**	**0**	**3**	**2**	**5428**	**0**

LA County* (Annual) -- Haul/Delivery Phase 4 (2017)				
	lbs/mi	**Miles****	**Trips**	**Total (lbs/day)**
CO	0.00650533	30	4	0.78
NOx	0.01690387	30	4	2.03
ROG	0.00145203	30	4	0.17
SOx	0.00004033	30	4	0.00
PM10	0.00084894	30	4	0.10
PM2.5	0.00069721	30	4	0.08
CO2	4.20820129	30	4	504.98
CH4	0.00006722	30	4	0.01

LA County* (Annual) -- Worker Trips Phase 4 2017				
	lbs/mi	**Miles****	**Trips**	**Total (lbs/day)**
CO	0.00537891	30	22	3.55
NOx	0.00051297	30	22	0.34
ROG	0.00060109	30	22	0.40
SOx	0.00001079	30	22	0.01
PM10	0.00009446	30	22	0.06
PM2.5	0.00006192	30	22	0.04
CO2	1.10627489	30	22	730.14
CH4	0.00005300	30	22	0.03

Total Off-site Emissions (lbs/day)	
CO	4
NOx	2
ROG	1
SOx	0
PM10	0
PM2.5	0
CO2	1,235
CH4	0

Total Emissions	ROG (ppd)	CO (ppd)	NOx (ppd)	(SOx ppd)	PM10 (ppd)	PM2.5 (ppd)	CO2 (ppd)	CH4 (ppd)
	5	**19**	**33**	**0**	**4**	**2**	**6664**	**0**

Months	2
Workdays Per Phase	40

GHG Emissions	CO2	CH4
lbs/day	6664	0
lbs/day CO2e	6664	8
Total	6672	
Total tonnes/day	3	
Total tonnes/year	121	

Total On and Off Site Emissions	**VOC**	**NOx**	**CO**	**SOx**	**PM2.5**	**PM10**
On-site	4	31	15	0	2	3
Off-site	1	2	4	0	0	0
Total	5	33	19	0	2	4

Total On and Off Site Mitigated Emissions	**VOC**	**NOx**	**CO**	**SOx**	**PM2.5**	**PM10**
On-site	4	29	14	0	1	3
Off-site	1	2	4	0	0	0
Total	4	32	18	0	2	3

Aluminum Cover Phase 5 Regional Construction Emissions

Fugitive Dust Emissions		**Site Preparation Activity**			
		Excavation	1,742,400	Square Feet[a]	
Schedule -	1	days[a]			

Fugitive Dust Parameters	
Vehicle Speed (mph)[b]	**Vehicle Miles Traveled**
3	20.00

Fugitive Dust Stockpiling Parameters					
Silt Content[c]	**Precipitation Days[d]**	**Mean Wind Speed Percent[e]**	**TSP Fraction**	**Area[f] (acres)**	
6.9	10	0.53	0.5	0	

Fugitive Dust Material Handling					
Aerodynamic Particle Size Multiplier[g]	**Mean Wind Speed[h]**	**Moisture Content[i]**	**Dirt Handled**	**Dirt Handled**	
	mph		cy	lb/day	
0.35	2.8	7.9	0	0	

Dragline Parameters			
Drop Height (feet)	**Moisture Content[i]**	**PM_{10} Scaling Factor**	**$PM_{2.5}$ Scaling Factor**
3	7.9%	0.75	0.017

.		**Max Daily Grading (acres)**	**PM10**	**PM2.5**
Site Prep - Grading		0.00	0.0	0.0

Incremental Increase in Fugitive Dust Emissions from Construction Operations

Equations:

Storage Piles[k]: PM10 Emissions (lb/day) = 1.7 x (silt content/1.5) x ((365-precipitation days)/235) x wind speed percent/15 x TSP fraction x Area) x (1 - control efficiency)

Material Handling[k]: PM10 Emissions (lb/day) = (0.0032 x aerodynamic particle size multiplier x (wind speed (mph)/5)$^{1.3}$/(moisture content/2)$^{1.4}$ x dirt handled (lb/day)/2,000 (lb/ton)
(1 - control efficiency)

Dragline Equation for PM_{10} Emissions[o] (lbs/day) = [((0.0021) x (drop height)$^{0.7}$) / (moisture content)$^{0.3}$] x 0.75 x Dirt Handled x Control Efficiency

Dragline Equation for $PM_{2.5}$ Emissions[o] (lbs/day) = [((0.0021) x (drop height)$^{1.1}$) / (moisture content)$^{0.3}$] x 0.017 x Dirt Handled x Control Efficiency

Grading Equition for PM10 is based on UREBEMIS2007's rate for grading dust of 38.2 pounds per acre, and applied 61% reduction based on Rule 403 compliance.

Phase I	**Control Efficiency**	**PM10[n]**	**PM2.5[n]**
Description	%	lb/day	lb/day
Earthmoving	61	2.150	0.447
Storage Piles	61	0	0.000
Material Handling	61	0	0.000
Dragline	61	0.000	0.000
Grading	61	0.000	0.000
Total		***2.15***	***0.45***

Notes

a) Assumed 3 haul truck trips a day at 10 cubic yards a load, worst single-day scenerio, 4000 foot long area 12 foot wide.
b) Caterpillar Performance Handbook, Edition 33, October 2003 Operating Speeds, p 2-3.
c) USEPA, AP-42, July 1998, Table 11.9-3 Typical Values for Corection Factors Applicable to the Predictive Emission Factor Equations
d) Table A9-9-E2, SCAQMD CEQA Air Quality Handbook, 1993
e) Mean wind speed percent - percent of time mean wind speed exceeds 12 mph.
f) Assumed storage piles are 0.21 acres in size
g) USEPA, AP-42, Jan 1995, Section 13.2.4 Aggretate Handling and Storage Piles, p 13.2.4-3 Aerodynamic particle size multiplier for < 10 μm
h) Mean wind speed at the Downtown Los Angeles Wind Monitoring Station.
i) USEPA, Fugitive Dust Background Document and Technical Information Document for Best Available Control Measures, equation 2-13, p 2-28.
j) Assuming 000 cubic yards of dirt handled
k) USEPA, AP-42, July 1998, Table 11.9-1, Equation for Site Grading ≤ 10 μm
l) USEPA, AP-42, Jan 1995, Section 13.2.4 Aggretate Handling and Storage Piles, Equation 1
m) USEPA, Fugitive Dust Background Document and Technical Information Document for Best Available Control Measures, Sept 1992, EPA-450/2-92-004, Equation 2-12.
n) Includes watering at least three times a day per Rule 403 (61% control efficiency).
o) Source: USEPA, AP-42, Emission Factor Equations for Uncontrolled Dust Sources at Western Surface Coal Mines, Table 11.9-1, Dragline calculations for PM_{10} and $PM_{2.5}$.

2018

USCR Aluminum Cover w/ Landslides Mitigation Estimated Equipment Operations

Equipment Type	QTY	Operating Hrs/WD/each	Operating Hours per Day	Rog (lbs/day)	Rog Rate (lbs/hr)	CO (lbs/day)	CO rate (lbs/hr)	NOX (lbs/day)	NOX rate (lbs/hr)	SOX (lbs/day)	SOX rate (lbs/hr)	PM10 (lbs/day)	PM2.5 (lbs/day)	PM (lbs/day)	PM rate (lbs/hr)	CO2 (lbs/day)	CO2 Rate (lbs/hr)	CH4 (lbs/day)	CH4 rate (lbs/hr)
1/2 Ton Pickup (Commute Vehicle)		4	0																
3/4 Ton Pickup		8	0																
1 Ton Pickup		8	0																
4,000 Gallon Water Truck		8	0																
Yard Crane, ATV	1	8	8	0.81	0.1012	3.25	0.4060	6.33	0.7908	0.01	0.0014	0.2546	0.2343	0.25	0.0318	1029.02	129	0.07	0.0091
Loader/ForksCat 966		8	0																
Job Trailers (3)		8	0																
Grader, Cat 16G		8	0																
Dozer, D10		8	0																
Excavator, Cat 365		7	0																
Roller/Compactor (Vibratory)		8	0																
Hydraulic Breaker		8	0																
Truck Tractor		8	0																
Dump Truck		8	0																
Crawler Loader		8	0																
Front End Loader		8	0																
Sheepsfoot Roller		8	0																
Chipping Machine		8	0																

Chain Saw 36"		8	0																
Air Compressor, 260 cfm	1	8	8	0.41	0.0518	1.71	0.2142	1.48	0.1848	0.00	0.0003	0.1044	0.0961	0.10	0.0131	178.17	22.3	0.04	0.0047
Air Track Drill		8	0																
Grout Pump		8	0																
Hydraulic Jack		8	0																
Air Pump		8	0																
Asphalt Paver		8	0																
Tandem Rollers		8	0																
Pulley Grader System		8	0																
Gas Engine Vibrator		8	0																
Concrete Pump		8	0																
Hydraulic Crane (25 Ton)		8	0																
Drill Rig with Augers		8	0																
Cherry Pickers (boom lifts)		8	0																
Backhoe Loader		8	0																
Misc.	1	2	2	0.22	0.1113	0.92	0.4591	1.65	0.8242	0.00	0.0016	0.0673	0.0619	0.07	0.0336	304.48	152	0.02	0.0100
Total lbs/day				**0.64**		**2.63**		**3.13**		**0.01**		**0.17**	**0.16**	**0.17**		**482.65**		**0.06**	

Total On-Site Emissions	ROG (ppd)	CO (ppd)	NOx (ppd)	(SOx ppd)	PM10 (ppd)	PM2.5 (ppd)	CO2 (ppd)	CH4 (ppd)
	1	**3**	**3**	**0**	**2**	**0**	**483**	**0**

LA County* (Annual) -- Haul/Delivery Phase 5 (2018)				
	lbs/mi	**Miles**	**Trips**	**Total (lbs/day)**
CO	0.00604721	30	6	1.09
NOx	0.01526414	30	6	2.75
ROG	0.00131697	30	6	0.24
SOx	0.00003934	30	6	0.01
PM10	0.00076808	30	6	0.14
PM2.5	0.00062383	30	6	0.11
CO2	4.20756838	30	6	757.36
CH4	0.00006182	30	6	0.01

LA County* (Annual) -- Worker Trips Phase 5 2018				
	lbs/mi	**Miles**	**Trips**	**Total (lbs/day)**
CO	0.00502881	30	70	10.56
NOx	0.00047300	30	70	0.99
ROG	0.00057178	30	70	1.20
SOx	0.00001071	30	70	0.02
PM10	0.00009494	30	70	0.20
PM2.5	0.00006234	30	70	0.13
CO2	1.10562643	30	70	2,321.82
CH4	0.00005003	30	70	0.11

Total Off-site Emissions (lbs/day)	
CO	12
NOx	4
ROG	1
SOx	0
PM10	0
PM2.5	0
CO2	3,079
CH4	0

Total Emissions	ROG (ppd)	CO (ppd)	NOx (ppd)	(SOx ppd)	PM10 (ppd)	PM2.5 (ppd)	CO2 (ppd)	CH4 (ppd)
	2	**14**	**7**	**0**	**2**	**1**	**3562**	**0**

Months	7
Workdays Per Phase	140

GHG Emissions	CO2	CH4
lbs/day	3562	0
lbs/day CO2e	3562	4
Total	3565	
Total tonnes/day	2	
Total tonnes/year	226	

Total On and Off Site Emissions	VOC	NOx	CO	SOx	PM2.5	PM10
On-site	1	3	3	0	1	2
Off-site	1	4	12	0	0	0
Total	2	7	14	0	1	3

Total On and Off Site Mitigated Emissions	VOC	NOx	CO	SOx	PM2.5	PM10
On-site	1	3	3	0	1	2
Off-site	1	4	11	0	0	0
Total	2	7	14	0	1	3

Aluminum Cover - Fugitive Dust Emissions - Inputs for ISC-AERMOD

			Weight Conv. [a]	Time Adjustment [b]
			453.59	28,800
Project Phase	**lb/day [c]**	**g/s**		
PM10				
	233.2	3.67219		
PM2.5				
	48.0	0.75583		

[a] Weight conversion is the amount of grams per pound.
[b] Time adjustment is the number of seconds in 8 hours (1 day of grading).
[c] Pounds per day emissions rate from construction emissions developed using Offroad 2007 and EMFAC 2007 emissions factors.

Alternative 1 - Off-Road Equipment Emissions

Daily Emissions (ppd)	**CO**	**NO2 [1]**	**PM2.5**	**PM10**
	149	28	12.5	13.6
Conversion to Grams/Second		**NO2**	**PM2.5**	**PM10**
	2.3450	0.4405	0.1969	0.2140

Alternative 1 - Mitigated Off-Road Equipment Emissions

Daily Emissions (ppd)	**CO**	**NO2 [1]**	**PM2.5**	**PM10**
	141	27	11.9	12.9
Conversion to Grams/Second		**NO2**	**PM2.5**	**PM10**
	2.2277	0.4184	0.1870	0.2033

[1] Used 10% of NOX as NO2 value for input into AERMOD

Appendix D

Localized Construction Modeling

Alternative 1 CO Localized Emissions

```
**
****************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 6.6.0
** Lakes Environmental Software Inc.
** Date: 7/27/2010
** File: J:\Projects\LADWP Stone Canyon Reservoir Project 2008-057\Air Quality\Construction Emissions\Localized\Project\CO\CO.ADI
**
****************************************
**
**
****************************************
** AERMOD Control Pathway
****************************************
**
**
CO STARTING
   TITLEONE Stone Canyon Reservoir
   TITLETWO CO
   MODELOPT DFAULT CONC NODRYDPLT NOWETDPLT
   AVERTIME 1 8
   URBANOPT 9862049
   POLLUTID CO
   RUNORNOT RUN
CO FINISHED
**
****************************************
** AERMOD Source Pathway
****************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
   LOCATION VOL1 VOLUME 365893.498 3776581.066 303.930
** DESCRSRC Exhaust
** Source Parameters **
   SRCPARAM VOL1 2.685 5.000 45.578 1.163
   URBANSRC VOL1
   CONCUNIT 873.2 GRAMS/SEC PPM
   SRCGROUP ALL
SO FINISHED
**
****************************************
** AERMOD Receptor Pathway
****************************************
**
**
RE STARTING
** DESCRREC "" ""
   DISCCART    365205.23   3776966.38  375.93  426.00
   DISCCART    365273.46   3776942.30  371.48  426.00
   DISCCART    365297.54   3776837.96  364.53  426.00
   DISCCART    365261.42   3776781.78  365.63  426.00
   DISCCART    365241.35   3776673.42  365.70  365.68
   DISCCART    365205.23   3776528.94  365.00  364.88
   DISCCART    365153.06   3776456.70  365.00  365.00
   DISCCART    365116.94   3776332.29  365.00  365.00
   DISCCART    365120.95   3776231.96  364.96  364.86
   DISCCART    365137.01   3776115.58  364.26  364.20
   DISCCART    365116.94   3775999.19  364.00  364.00
   DISCCART    365104.90   3775898.86  364.00  364.00
   DISCCART    365132.99   3775754.39  364.00  364.00
   DISCCART    365317.60   3777247.31  388.83  426.00
   DISCCART    365273.46   3777203.17  389.43  426.00
   DISCCART    365100.89   3777094.81  392.86  426.00
   DISCCART    366493.48   3776063.40  333.67  365.00
   DISCCART    366465.39   3776183.80  356.13  365.00
   DISCCART    366453.35   3776308.21  364.45  363.66
   DISCCART    366449.34   3776416.57  364.78  364.59
   DISCCART    366397.17   3776561.05  365.00  365.00
   DISCCART    366369.07   3776685.46  365.00  365.00
   DISCCART    366369.07   3776837.96  365.00  365.00
   DISCCART    366409.21   3776962.37  365.00  365.00
   DISCCART    366457.36   3777078.76  365.00  365.00
   DISCCART    366441.31   3777195.14  365.00  365.00
   DISCCART    365594.52   3777500.15  365.00  426.00
   DISCCART    365534.32   3777544.29  364.93  426.00
   DISCCART    365646.69   3777439.95  365.00  426.00
   DISCCART    365702.87   3777419.88  364.34  426.00
   DISCCART    365385.83   3777435.93  380.85  426.00
   DISCCART    365329.64   3777520.21  382.17  426.00
   DISCCART    366272.76   3775373.13  284.66  365.00
   DISCCART    366373.09   3775401.22  277.95  365.00
   DISCCART    366573.75   3775473.46  276.50  365.00
   DISCCART    366124.27   3777528.24  365.00  365.00
RE FINISHED
**
****************************************
** AERMOD Meteorology Pathway
****************************************
**
**
ME STARTING
   SURFFILE "L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.SFC"
   PROFFILE "L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.PFL"
   SURFDATA 0 2005
   UAIRDATA 3190 2005
   PROFBASE 10 METERS
ME FINISHED
**
****************************************
** AERMOD Output Pathway
****************************************
**
**
OU STARTING
   RECTABLE ALLAVE 1ST
   RECTABLE 1 1ST
   RECTABLE 8 1ST
```

```
** Auto-Generated Plotfiles
   PLOTFILE 1 ALL 1ST CO.AD\01H1GALL.PLT
   PLOTFILE 8 ALL 1ST CO.AD\08H1GALL.PLT
OU FINISHED

 ***********************************
 *** SETUP Finishes Successfully ***
 ***********************************

 *** AERMOD - VERSION 09292 ***   *** Stone Canyon Reservoir                                                ***        07/27/10
                                  *** CO                                                                    ***        14:07:35
                                                                                                                       PAGE   1
 **MODELOPTs:  RegDFAULT CONC                                          ELEV
                                                             NODRYDPLT NOWETDPLT

                                            ***     MODEL SETUP OPTIONS SUMMARY       ***
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

 **Model Is Setup For Calculation of Average CONCentration Values.

   --  DEPOSITION LOGIC  --
 **NO GAS DEPOSITION Data Provided.
 **NO PARTICLE DEPOSITION Data Provided.
 **Model Uses NO DRY DEPLETION.  DRYDPLT  =  F
 **Model Uses NO WET DEPLETION.  WETDPLT  =  F

 **Model Uses URBAN Dispersion Algorithm for the SBL for     1 Source(s),
   for Total of    1 Urban Area(s):
   Urban Population =   9862049.0 ;  Urban Roughness Length =  1.000 m

 **Model Uses Regulatory DEFAULT Options:
         1. Stack-tip Downwash.
         2. Model Accounts for ELEVated Terrain Effects.
         3. Use Calms Processing Routine.
         4. Use Missing Data Processing Routine.
         5. No Exponential Decay for URBAN/Non-SO2.
         6. Urban Roughness Length of 1.0 Meter Assumed.

 **Model Assumes No FLAGPOLE Receptor Heights.

 **Model Calculates  2 Short Term Average(s) of:   1-HR   8-HR

 **This Run Includes:      1 Source(s);       1 Source Group(s); and      36 Receptor(s)

 **The Model Assumes A Pollutant Type of:  CO

 **Model Set To Continue RUNning After the Setup Testing.

 **Output Options Selected:
          Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE Keyword)
          Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)

 **NOTE:  The Following Flags May Appear Following CONC Values:  c for Calm Hours
                                                                 m for Missing Hours
                                                                 b for Both Calm and Missing Hours

 **Misc. Inputs:  Base Elev. for Pot. Temp. Profile (m MSL) =     10.00 ;  Decay Coef. =    0.000     ; Rot. Angle =     0.0
                  Emission Units = GRAMS/SEC                                ;  Emission Rate Unit Factor =    873.20
                  Output Units   = PPM

 **Approximate Storage Requirements of Model =      3.5 MB of RAM.

 *** AERMOD - VERSION 09292 ***   *** Stone Canyon Reservoir                                                ***        07/27/10
                                  *** CO                                                                    ***        14:07:35
                                                                                                                       PAGE   2
 **MODELOPTs:  RegDFAULT CONC                                          ELEV
                                                             NODRYDPLT NOWETDPLT


                                                  *** VOLUME SOURCE DATA ***

             NUMBER EMISSION RATE                      BASE    RELEASE    INIT.    INIT.   URBAN  EMISSION RATE
     SOURCE   PART. (USER UNITS)     X        Y       ELEV.   HEIGHT     SY       SZ     SOURCE  SCALAR VARY
       ID     CATS.              (METERS) (METERS) (METERS) (METERS) (METERS) (METERS)             BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

   VOL1         0  0.26850E+01  365893.5 3776581.1   303.9     5.00    45.58     1.16     YES
 *** AERMOD - VERSION 09292 ***   *** Stone Canyon Reservoir                                                ***        07/27/10
                                  *** CO                                                                    ***        14:07:35
                                                                                                                       PAGE   3
 **MODELOPTs:  RegDFAULT CONC                                          ELEV
                                                             NODRYDPLT NOWETDPLT


                                           *** SOURCE IDs DEFINING SOURCE GROUPS ***

 GROUP ID                                          SOURCE IDs



  ALL      VOL1     ,
 *** AERMOD - VERSION 09292 ***   *** Stone Canyon Reservoir                                                ***        07/27/10
                                  *** CO                                                                    ***        14:07:35
                                                                                                                       PAGE   4
 **MODELOPTs:  RegDFAULT CONC                                          ELEV
                                                             NODRYDPLT NOWETDPLT

                                             *** DISCRETE CARTESIAN RECEPTORS ***
                                           (X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
                                                           (METERS)

     ( 365205.2, 3776966.4,      375.9,      426.0,        0.0);         ( 365273.5, 3776942.3,      371.5,      426.0,        0.0);
     ( 365297.5, 3776838.0,      364.5,      426.0,        0.0);         ( 365261.4, 3776781.8,      365.6,      426.0,        0.0);
     ( 365241.3, 3776673.4,      365.7,      365.7,        0.0);         ( 365205.2, 3776528.9,      365.0,      364.9,        0.0);
     ( 365153.1, 3776456.7,      365.0,      365.0,        0.0);         ( 365116.9, 3776332.3,      365.0,      365.0,        0.0);
     ( 365121.0, 3776232.0,      365.0,      364.9,        0.0);         ( 365137.0, 3776115.6,      364.3,      364.2,        0.0);
     ( 365116.9, 3775999.2,      364.0,      364.0,        0.0);         ( 365104.9, 3775898.9,      364.0,      364.0,        0.0);
     ( 365133.0, 3775754.4,      364.0,      364.0,        0.0);         ( 365317.6, 3777247.3,      388.8,      426.0,        0.0);
     ( 365273.5, 3777203.2,      389.4,      426.0,        0.0);         ( 365100.9, 3777094.8,      392.9,      426.0,        0.0);
     ( 366493.5, 3776063.4,      333.7,      365.0,        0.0);         ( 366465.4, 3776183.8,      356.1,      365.0,        0.0);
     ( 366453.3, 3776308.2,      364.4,      363.7,        0.0);         ( 366449.3, 3776416.6,      364.8,      364.6,        0.0);
     ( 366397.2, 3776561.0,      365.0,      365.0,        0.0);         ( 366369.1, 3776685.5,      365.0,      365.0,        0.0);
     ( 366369.1, 3776838.0,      365.0,      365.0,        0.0);         ( 366409.2, 3776962.4,      365.0,      365.0,        0.0);
     ( 366457.4, 3777078.8,      365.0,      365.0,        0.0);         ( 366441.3, 3777195.1,      365.0,      365.0,        0.0);
```

```
   ( 365594.5, 3777500.1,     365.0,     426.0,       0.0);       ( 365534.3, 3777544.3,     364.9,     426.0,       0.0);
   ( 365646.7, 3777439.9,     365.0,     426.0,       0.0);       ( 365702.9, 3777419.9,     364.3,     426.0,       0.0);
   ( 365385.8, 3777435.9,     380.9,     426.0,       0.0);       ( 365329.6, 3777520.2,     382.2,     426.0,       0.0);
   ( 366272.8, 3775373.1,     284.7,     365.0,       0.0);       ( 366373.1, 3775401.2,     277.9,     365.0,       0.0);
   ( 366573.8, 3775473.5,     276.5,     365.0,       0.0);       ( 366124.3, 3777528.2,     365.0,     365.0,       0.0);
*** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                              ***        07/27/10
                                  *** CO                                                                  ***        14:07:35
                                                                                                                     PAGE   5
**MODELOPTs:  RegDFAULT CONC                                            ELEV
                                                                 NODRYDPLT NOWETDPLT

                                        *** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***
                                                           (1=YES; 0=NO)

          1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
          1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
          1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
          1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
          1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
          1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
          1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
          1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1

             NOTE:  METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.


                                  *** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
                                                          (METERS/SEC)

                                              1.54,   3.09,   5.14,   8.23,  10.80,
*** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                              ***        07/27/10
                                  *** CO                                                                  ***        14:07:35
                                                                                                                     PAGE   6
**MODELOPTs:  RegDFAULT CONC                                            ELEV
                                                                 NODRYDPLT NOWETDPLT

                                   *** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

  Surface file:   L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.SFC    Met Version:  06341
  Profile file:   L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.PFL
  Surface format: FREE
  Profile format: FREE
  Surface station no.:       0                  Upper air station no.:     3190
                Name: UNKNOWN                                  Name: UNKNOWN
                Year:   2005                                   Year:   2005

First 24 hours of scalar data
YR MO DY JDY HR     H0     U*     W*  DT/DZ ZICNV ZIMCH  M-O LEN    Z0  BOWEN ALBEDO  REF WS   WD     HT  REF TA     HT
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
05 01 01   1 01   -0.9  0.033 -9.000 -9.000 -999.   14.      3.7  0.45   1.00   1.00    0.50  321.    9.1  281.1    5.5
05 01 01   1 02   -0.9  0.033 -9.000 -9.000 -999.   14.      3.8  0.45   1.00   1.00    0.50  320.    9.1  280.8    5.5
05 01 01   1 03   -0.9  0.033 -9.000 -9.000 -999.   14.      3.7  0.45   1.00   1.00    0.50  323.    9.1  280.9    5.5
05 01 01   1 04   -1.3  0.040 -9.000 -9.000 -999.   18.      4.4  0.45   1.00   1.00    0.60  316.    9.1  280.8    5.5
05 01 01   1 05   -1.3  0.040 -9.000 -9.000 -999.   18.      4.4  0.45   1.00   1.00    0.60  322.    9.1  280.4    5.5
05 01 01   1 06   -0.3  0.020 -9.000 -9.000 -999.    6.      2.3  0.45   1.00   1.00    0.30  352.    9.1  279.9    5.5
05 01 01   1 07   -2.3  0.053 -9.000 -9.000 -999.   28.      5.8  0.45   1.00   1.00    0.80  324.    9.1  279.6    5.5
05 01 01   1 08   -1.2  0.040 -9.000 -9.000 -999.   18.      4.8  0.45   1.00   0.55    0.60  336.    9.1  280.5    5.5
05 01 01   1 09   43.0  0.243  0.490  0.005   99.  276.    -30.3  0.45   1.00   0.32    1.50   44.    9.1  283.4    5.5
05 01 01   1 10  110.6  0.339  1.374  0.005  849.  453.    -31.7  0.45   1.00   0.24    2.10   74.    9.1  285.1    5.5
05 01 01   1 11  135.3  0.321  1.653  0.010 1209.  419.    -22.2  0.45   1.00   0.21    1.90   84.    9.1  286.4    5.5
05 01 01   1 12   14.3  0.223  0.783  0.010 1212.  246.    -70.3  0.45   1.00   0.20    1.50  137.    9.1  286.8    5.5
05 01 01   1 13   27.1  0.187  0.971  0.010 1218.  186.    -21.7  0.45   1.00   0.20    1.10  111.    9.1  286.9    5.5
05 01 01   1 14   17.1  0.179  0.834  0.009 1222.  174.    -30.0  0.45   1.00   0.21    1.10  186.    9.1  286.9    5.5
05 01 01   1 15    3.7  0.172  0.499  0.009 1223.  164.   -124.8  0.45   1.00   0.24    1.20  195.    9.1  286.1    5.5
05 01 01   1 16    0.1  0.147  0.150  0.009 1223.  130.  -2871.4  0.45   1.00   0.33    1.10  182.    9.1  285.9    5.5
05 01 01   1 17   -1.7  0.047 -9.000 -9.000 -999.   31.      5.5  0.45   1.00   0.59    0.70  159.    9.1  285.5    5.5
05 01 01   1 18   -0.2  0.019 -9.000 -9.000 -999.    6.      2.9  0.45   1.00   1.00    0.28  170.    9.1  285.1    5.5
05 01 01   1 19   -0.2  0.019 -9.000 -9.000 -999.    6.      2.9  0.45   1.00   1.00    0.28  186.    9.1  284.4    5.5
05 01 01   1 20 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.45   1.00   1.00    0.00    0.    9.1  284.0    5.5
05 01 01   1 21 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.45   1.00   1.00    0.00    0.    9.1  283.9    5.5
05 01 01   1 22 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.45   1.00   1.00    0.00    0.    9.1  283.4    5.5
05 01 01   1 23   -0.2  0.019 -9.000 -9.000 -999.    6.      2.9  0.45   1.00   1.00    0.28  313.    9.1  283.4    5.5
05 01 01   1 24 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.45   1.00   1.00    0.00    0.    9.1  283.4    5.5


First hour of profile data
YR MO DY HR HEIGHT F  WDIR    WSPD AMB_TMP sigmaA  sigmaW  sigmaV
05 01 01 01    5.5 0 -999.  -99.00   281.2   99.0  -99.00  -99.00
05 01 01 01    9.1 1  321.    0.50  -999.0   99.0  -99.00  -99.00

F indicates top of profile (=1) or below (=0)
*** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                              ***        07/27/10
                                  *** CO                                                                  ***        14:07:35
                                                                                                                     PAGE   7
**MODELOPTs:  RegDFAULT CONC                                            ELEV
                                                                 NODRYDPLT NOWETDPLT

                              *** THE   1ST HIGHEST  1-HR AVERAGE CONCENTRATION   VALUES FOR SOURCE GROUP:  ALL       ***
                                 INCLUDING SOURCE(S):      VOL1    ,

                                                *** DISCRETE CARTESIAN RECEPTOR POINTS ***

                                     ** CONC OF CO       IN PPM                                          **

     X-COORD (M)  Y-COORD (M)        CONC     (YYMMDDHH)               X-COORD (M)  Y-COORD (M)        CONC     (YYMMDDHH)
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
       365205.23   3776966.38       0.31549  (07043007)                365273.46   3776942.30       0.32861  (07043007)
       365297.54   3776837.96       0.27033  (07043007)                365261.42   3776781.78       0.23954  (06082807)
       365241.35   3776673.42       0.34668  (06082207)                365205.23   3776528.94       0.20250  (06121509)
       365153.06   3776456.70       0.22426  (07032008)                365116.94   3776332.29       0.16529  (05052707)
       365120.95   3776231.96       0.19754  (05121209)                365137.01   3776115.58       0.23788  (05090207)
       365116.94   3775999.19       0.27668  (05090207)                365104.90   3775898.86       0.26685  (05103108)
       365132.99   3775754.39       0.17681  (05121809)                365317.60   3777247.31       0.17199  (05083108)
       365273.46   3777203.17       0.26688  (06042607)                365100.89   3777094.81       0.23651  (07043007)
       366493.48   3776063.40       0.38859  (07060207)                366465.39   3776183.80       0.34329  (05040607)
       366453.35   3776308.21       0.34660  (05040607)                366449.34   3776416.57       0.31898  (05101708)
       366397.17   3776561.05       0.43434  (05101708)                366369.07   3776685.46       0.22271  (06080207)
       366369.07   3776837.96       0.25674  (05041307)                366409.21   3776962.37       0.20065  (05071607)
       366457.36   3777078.76       0.18310  (05050607)                366441.31   3777195.14       0.20133  (06042107)
       365594.52   3777500.15       0.15926  (05120109)                365534.32   3777544.29       0.18714  (05120109)
       365646.69   3777439.95       0.14532  (05090608)                365702.87   3777419.88       0.13978  (05102308)
       365385.83   3777435.93       0.21569  (07050107)                365329.64   3777520.21       0.20236  (07050107)
       366272.76   3775373.13       0.20919  (06041807)                366373.09   3775401.22       0.24906  (06041807)
```

366573.75	3775473.46	0.24249	(06030408)	366124.27	3777528.24	0.25508	(06082007)

**MODELOPTs: RegDFAULT CONC   ELEV
NODRYDPLT NOWETDPLT

*** THE 1ST HIGHEST 8-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): VOL1 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF CO IN PPM **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
365205.23	3776966.38	0.05563	(05070908)	365273.46	3776942.30	0.05887	(05070908)
365297.54	3776837.96	0.06906	(05070908)	365261.42	3776781.78	0.05227	(06100908)
365241.35	3776673.42	0.06736c	(06082208)	365205.23	3776528.94	0.05644	(06041108)
365153.06	3776456.70	0.05568	(06041108)	365116.94	3776332.29	0.05029	(05110808)
365120.95	3776231.96	0.04261c	(05071508)	365137.01	3776115.58	0.03946c	(05090208)
365116.94	3775999.19	0.04439c	(05090208)	365104.90	3775898.86	0.04145c	(07031208)
365132.99	3775754.39	0.03395	(05121816)	365317.60	3777247.31	0.03310	(06081824)
365273.46	3777203.17	0.04281c	(06042608)	365100.89	3777094.81	0.03589	(07043008)
366493.48	3776063.40	0.09938	(07123008)	366465.39	3776183.80	0.07057	(07123008)
366453.35	3776308.21	0.08450	(07121008)	366449.34	3776416.57	0.06329	(05012908)
366397.17	3776561.05	0.07425	(05072708)	366369.07	3776685.46	0.06934	(06062308)
366369.07	3776837.96	0.09017	(07110324)	366409.21	3776962.37	0.07065c	(05012524)
366457.36	3777078.76	0.06312	(06073024)	366441.31	3777195.14	0.05606	(05102224)
365594.52	3777500.15	0.03753	(07071424)	365534.32	3777544.29	0.03768	(07071424)
365646.69	3777439.95	0.03919c	(06082924)	365702.87	3777419.88	0.04734c	(06072108)
365385.83	3777435.93	0.03323	(05061508)	365329.64	3777520.21	0.02987	(05061508)
366272.76	3775373.13	0.03576	(06041808)	366373.09	3775401.22	0.04030	(06041808)
366573.75	3775473.46	0.04698	(06030408)	366124.27	3777528.24	0.03388	(07080208)

**MODELOPTs: RegDFAULT CONC   ELEV
NODRYDPLT NOWETDPLT

*** THE SUMMARY OF HIGHEST 1-HR RESULTS ***

** CONC OF CO IN PPM **

GROUP ID	AVERAGE CONC	DATE (YYMMDDHH)	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	NETWORK GRID-ID
ALL HIGH 1ST HIGH VALUE IS	0.43434	ON 05101708:	AT (366397.17, 3776561.05, 365.00, 365.00, 0.00)	DC	

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

**MODELOPTs: RegDFAULT CONC   ELEV
NODRYDPLT NOWETDPLT

*** THE SUMMARY OF HIGHEST 8-HR RESULTS ***

** CONC OF CO IN PPM **

GROUP ID	AVERAGE CONC	DATE (YYMMDDHH)	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	NETWORK GRID-ID
ALL HIGH 1ST HIGH VALUE IS	0.09938	ON 07123008:	AT (366493.48, 3776063.40, 333.67, 365.00, 0.00)	DC	

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

**MODELOPTs: RegDFAULT CONC   ELEV
NODRYDPLT NOWETDPLT

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 0 Warning Message(s)
A Total of 1753 Informational Message(s)

A Total of 26280 Hours Were Processed

A Total of 1181 Calm Hours Identified

A Total of 572 Missing Hours Identified (2.18 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********
*** NONE ***

****
*** AERMOD Finishes Successfully ***
****

Alternative 1 Mitigated CO Localized Emissions

```
**
****************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 6.6.0
** Lakes Environmental Software Inc.
** Date: 7/27/2010
** File: J:\Projects\LADWP Stone Canyon Reservoir Project 2008-057\Air Quality\Construction Emissions\Localized\Project\CO\COMT.ADI
**
****************************************
**
**
****************************************
** AERMOD Control Pathway
****************************************
**
**
CO STARTING
   TITLEONE Stone Canyon Reservoir
   TITLETWO COMT
   MODELOPT DFAULT CONC NODRYDPLT NOWETDPLT
   AVERTIME 1 8
   URBANOPT 9862049
   POLLUTID CO
   RUNORNOT RUN
CO FINISHED
**
****************************************
** AERMOD Source Pathway
****************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
   LOCATION VOL1 VOLUME 365893.498 3776581.066 303.930
** DESCRSRC Exhaust
** Source Parameters **
   SRCPARAM VOL1 2.551 5.000 45.578 1.163
   URBANSRC VOL1
   CONCUNIT 873.2 GRAMS/SEC PPM
   SRCGROUP ALL
SO FINISHED
**
****************************************
** AERMOD Receptor Pathway
****************************************
**
**
RE STARTING
** DESCRREC "" ""
   DISCCART    365205.23   3776966.38  375.93  426.00
   DISCCART    365273.46   3776942.30  371.48  426.00
   DISCCART    365297.54   3776837.96  364.53  426.00
   DISCCART    365261.42   3776781.78  365.63  426.00
   DISCCART    365241.35   3776673.42  365.70  365.68
   DISCCART    365205.23   3776528.94  365.00  364.88
   DISCCART    365153.06   3776456.70  365.00  365.00
   DISCCART    365116.94   3776332.29  365.00  365.00
   DISCCART    365120.95   3776231.96  364.96  364.86
   DISCCART    365137.01   3776115.58  364.26  364.20
   DISCCART    365116.94   3775999.19  364.00  364.00
   DISCCART    365104.90   3775898.86  364.00  364.00
   DISCCART    365132.99   3775754.39  364.00  364.00
   DISCCART    365317.60   3777247.31  388.83  426.00
   DISCCART    365273.46   3777203.17  389.43  426.00
   DISCCART    365100.89   3777094.81  392.86  426.00
   DISCCART    366493.48   3776063.40  333.67  365.00
   DISCCART    366465.39   3776183.80  356.13  365.00
   DISCCART    366453.35   3776308.21  364.45  363.66
   DISCCART    366449.34   3776416.57  364.78  364.59
   DISCCART    366397.17   3776561.05  365.00  365.00
   DISCCART    366369.07   3776685.46  365.00  365.00
   DISCCART    366369.07   3776837.96  365.00  365.00
   DISCCART    366409.21   3776962.37  365.00  365.00
   DISCCART    366457.36   3777078.76  365.00  365.00
   DISCCART    366441.31   3777195.14  365.00  365.00
   DISCCART    365594.52   3777500.15  365.00  426.00
   DISCCART    365534.32   3777544.29  364.93  426.00
   DISCCART    365646.69   3777439.95  365.00  426.00
   DISCCART    365702.87   3777419.88  364.34  426.00
   DISCCART    365385.83   3777435.93  380.85  426.00
   DISCCART    365329.64   3777520.21  382.17  426.00
   DISCCART    366272.76   3775373.13  284.66  365.00
   DISCCART    366373.09   3775401.22  277.95  365.00
   DISCCART    366573.75   3775473.46  276.50  365.00
   DISCCART    366124.27   3777528.24  365.00  365.00
RE FINISHED
**
****************************************
** AERMOD Meteorology Pathway
****************************************
**
**
ME STARTING
   SURFFILE "L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.SFC"
   PROFFILE "L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.PFL"
   SURFDATA 0 2005
   UAIRDATA 3190 2005
   PROFBASE 10 METERS
ME FINISHED
**
****************************************
** AERMOD Output Pathway
****************************************
**
**
OU STARTING
   RECTABLE ALLAVE 1ST
   RECTABLE 1 1ST
   RECTABLE 8 1ST
```

```
** Auto-Generated Plotfiles
   PLOTFILE 1 ALL 1ST COMT.AD\01H1GALL.PLT
   PLOTFILE 8 ALL 1ST COMT.AD\08H1GALL.PLT
OU FINISHED

 ***********************************
 *** SETUP Finishes Successfully ***
 ***********************************

 *** AERMOD - VERSION 09292 ***   *** Stone Canyon Reservoir                                                  ***        07/27/10
                                  *** COMT                                                                    ***        14:17:30
                                                                                                                         PAGE   1
 **MODELOPTs:  RegDFAULT CONC                                                   ELEV
                                                                      NODRYDPLT NOWETDPLT

                                        ***     MODEL SETUP OPTIONS SUMMARY       ***
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

 **Model Is Setup For Calculation of Average CONCentration Values.

   --  DEPOSITION LOGIC  --
 **NO GAS DEPOSITION Data Provided.
 **NO PARTICLE DEPOSITION Data Provided.
 **Model Uses NO DRY DEPLETION.  DRYDPLT  =  F
 **Model Uses NO WET DEPLETION.  WETDPLT  =  F

 **Model Uses URBAN Dispersion Algorithm for the SBL for     1 Source(s),
   for Total of    1 Urban Area(s):
   Urban Population =   9862049.0 ;  Urban Roughness Length =  1.000 m

 **Model Uses Regulatory DEFAULT Options:
         1. Stack-tip Downwash.
         2. Model Accounts for ELEVated Terrain Effects.
         3. Use Calms Processing Routine.
         4. Use Missing Data Processing Routine.
         5. No Exponential Decay for URBAN/Non-SO2.
         6. Urban Roughness Length of 1.0 Meter Assumed.

 **Model Assumes No FLAGPOLE Receptor Heights.

 **Model Calculates  2 Short Term Average(s) of:   1-HR   8-HR

 **This Run Includes:      1 Source(s);       1 Source Group(s); and      36 Receptor(s)

 **The Model Assumes A Pollutant Type of:  CO

 **Model Set To Continue RUNning After the Setup Testing.

 **Output Options Selected:
          Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE Keyword)
          Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)

 **NOTE:  The Following Flags May Appear Following CONC Values:  c for Calm Hours
                                                                 m for Missing Hours
                                                                 b for Both Calm and Missing Hours

 **Misc. Inputs:  Base Elev. for Pot. Temp. Profile (m MSL) =    10.00 ;  Decay Coef. =    0.000     ;  Rot. Angle =     0.0
                  Emission Units = GRAMS/SEC                                ;  Emission Rate Unit Factor =    873.20
                  Output Units   = PPM

 **Approximate Storage Requirements of Model =      3.5 MB of RAM.

 *** AERMOD - VERSION 09292 ***   *** Stone Canyon Reservoir                                                  ***        07/27/10
                                  *** COMT                                                                    ***        14:17:30
                                                                                                                         PAGE   2
 **MODELOPTs:  RegDFAULT CONC                                                   ELEV
                                                                      NODRYDPLT NOWETDPLT


                                              *** VOLUME SOURCE DATA ***

            NUMBER EMISSION RATE                     BASE    RELEASE    INIT.    INIT.   URBAN  EMISSION RATE
    SOURCE   PART. (USER UNITS)     X        Y       ELEV.   HEIGHT      SY       SZ     SOURCE  SCALAR VARY
     ID      CATS.               (METERS) (METERS) (METERS) (METERS) (METERS) (METERS)              BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

   VOL1         0  0.25510E+01  365893.5 3776581.1   303.9     5.00    45.58     1.16     YES
 *** AERMOD - VERSION 09292 ***   *** Stone Canyon Reservoir                                                  ***        07/27/10
                                  *** COMT                                                                    ***        14:17:30
                                                                                                                         PAGE   3
 **MODELOPTs:  RegDFAULT CONC                                                   ELEV
                                                                      NODRYDPLT NOWETDPLT


                                       *** SOURCE IDs DEFINING SOURCE GROUPS ***

 GROUP ID                                                 SOURCE IDs



  ALL       VOL1     ,
 *** AERMOD - VERSION 09292 ***   *** Stone Canyon Reservoir                                                  ***        07/27/10
                                  *** COMT                                                                    ***        14:17:30
                                                                                                                         PAGE   4
 **MODELOPTs:  RegDFAULT CONC                                                   ELEV
                                                                      NODRYDPLT NOWETDPLT

                                         *** DISCRETE CARTESIAN RECEPTORS ***
                                       (X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
                                                       (METERS)

     ( 365205.2, 3776966.4,     375.9,     426.0,       0.0);         ( 365273.5, 3776942.3,     371.5,     426.0,       0.0);
     ( 365297.5, 3776838.0,     364.5,     426.0,       0.0);         ( 365261.4, 3776781.8,     365.6,     426.0,       0.0);
     ( 365241.3, 3776673.4,     365.7,     365.7,       0.0);         ( 365205.2, 3776528.9,     365.0,     364.9,       0.0);
     ( 365153.1, 3776456.7,     365.0,     365.0,       0.0);         ( 365116.9, 3776332.3,     365.0,     365.0,       0.0);
     ( 365121.0, 3776232.0,     365.0,     364.9,       0.0);         ( 365137.0, 3776115.6,     364.3,     364.2,       0.0);
     ( 365116.9, 3775999.2,     364.0,     364.0,       0.0);         ( 365104.9, 3775898.9,     364.0,     364.0,       0.0);
     ( 365133.0, 3775754.4,     364.0,     364.0,       0.0);         ( 365317.6, 3777247.3,     388.8,     426.0,       0.0);
     ( 365273.5, 3777203.2,     389.4,     426.0,       0.0);         ( 365100.9, 3777094.8,     392.9,     426.0,       0.0);
     ( 366493.5, 3776063.4,     333.7,     365.0,       0.0);         ( 366465.4, 3776183.8,     356.1,     365.0,       0.0);
     ( 366453.3, 3776308.2,     364.4,     363.7,       0.0);         ( 366449.3, 3776416.6,     364.8,     364.6,       0.0);
     ( 366397.2, 3776561.0,     365.0,     365.0,       0.0);         ( 366369.1, 3776685.5,     365.0,     365.0,       0.0);
     ( 366369.1, 3776838.0,     365.0,     365.0,       0.0);         ( 366409.2, 3776962.4,     365.0,     365.0,       0.0);
     ( 366457.4, 3777078.8,     365.0,     365.0,       0.0);         ( 366441.3, 3777195.1,     365.0,     365.0,       0.0);
```

(365594.5,	3777500.1,	365.0,	426.0,	0.0);	(365534.3,	3777544.3,	364.9,	426.0,	0.0);
(365646.7,	3777439.9,	365.0,	426.0,	0.0);	(365702.9,	3777419.9,	364.3,	426.0,	0.0);
(365385.8,	3777435.9,	380.9,	426.0,	0.0);	(365329.6,	3777520.2,	382.2,	426.0,	0.0);
(366272.8,	3775373.1,	284.7,	365.0,	0.0);	(366373.1,	3775401.2,	277.9,	365.0,	0.0);
(366573.8,	3775473.5,	276.5,	365.0,	0.0);	(366124.3,	3777528.2,	365.0,	365.0,	0.0);

**MODELOPTs: RegDFAULT CONC ELEV
NODRYDPLT NOWETDPLT

*** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***
(1=YES; 0=NO)

1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1

NOTE: METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.

*** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
(METERS/SEC)

1.54, 3.09, 5.14, 8.23, 10.80,

**MODELOPTs: RegDFAULT CONC ELEV
NODRYDPLT NOWETDPLT

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.SFC Met Version: 06341
Profile file: L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 0 Upper air station no.: 3190
Name: UNKNOWN Name: UNKNOWN
Year: 2005 Year: 2005

First 24 hours of scalar data

YR	MO	DY	JDY	HR	H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O LEN	Z0	BOWEN	ALBEDO	REF WS	WD	HT	REF TA	HT
05	01	01	1	01	-0.9	0.033	-9.000	-9.000	-999.	14.	3.7	0.45	1.00	1.00	0.50	321.	9.1	281.1	5.5
05	01	01	1	02	-0.9	0.033	-9.000	-9.000	-999.	14.	3.8	0.45	1.00	1.00	0.50	320.	9.1	280.8	5.5
05	01	01	1	03	-0.9	0.033	-9.000	-9.000	-999.	14.	3.7	0.45	1.00	1.00	0.50	323.	9.1	280.9	5.5
05	01	01	1	04	-1.3	0.040	-9.000	-9.000	-999.	18.	4.4	0.45	1.00	1.00	0.60	316.	9.1	280.8	5.5
05	01	01	1	05	-1.3	0.040	-9.000	-9.000	-999.	18.	4.4	0.45	1.00	1.00	0.60	322.	9.1	280.4	5.5
05	01	01	1	06	-0.3	0.020	-9.000	-9.000	-999.	6.	2.3	0.45	1.00	1.00	0.30	352.	9.1	279.9	5.5
05	01	01	1	07	-2.3	0.053	-9.000	-9.000	-999.	28.	5.8	0.45	1.00	1.00	0.80	324.	9.1	279.6	5.5
05	01	01	1	08	-1.2	0.040	-9.000	-9.000	-999.	18.	4.8	0.45	1.00	0.55	0.60	336.	9.1	280.5	5.5
05	01	01	1	09	43.0	0.243	0.490	0.005	99.	276.	-30.3	0.45	1.00	0.32	1.50	44.	9.1	283.4	5.5
05	01	01	1	10	110.6	0.339	1.374	0.005	849.	453.	-31.7	0.45	1.00	0.24	2.10	74.	9.1	285.1	5.5
05	01	01	1	11	135.3	0.321	1.653	0.010	1209.	419.	-22.2	0.45	1.00	0.21	1.90	84.	9.1	286.4	5.5
05	01	01	1	12	14.3	0.223	0.783	0.010	1212.	246.	-70.3	0.45	1.00	0.20	1.50	137.	9.1	286.8	5.5
05	01	01	1	13	27.1	0.187	0.971	0.010	1218.	186.	-21.7	0.45	1.00	0.20	1.10	111.	9.1	286.9	5.5
05	01	01	1	14	17.1	0.179	0.834	0.009	1222.	174.	-30.0	0.45	1.00	0.21	1.10	186.	9.1	286.9	5.5
05	01	01	1	15	3.7	0.172	0.499	0.009	1223.	164.	-124.8	0.45	1.00	0.24	1.20	195.	9.1	286.1	5.5
05	01	01	1	16	0.1	0.147	0.150	0.009	1223.	130.	-2871.4	0.45	1.00	0.33	1.10	182.	9.1	285.9	5.5
05	01	01	1	17	-1.7	0.047	-9.000	-9.000	-999.	31.	5.5	0.45	1.00	0.59	0.70	159.	9.1	285.5	5.5
05	01	01	1	18	-0.2	0.019	-9.000	-9.000	-999.	6.	2.9	0.45	1.00	1.00	0.28	170.	9.1	285.1	5.5
05	01	01	1	19	-0.2	0.019	-9.000	-9.000	-999.	6.	2.9	0.45	1.00	1.00	0.28	186.	9.1	284.4	5.5
05	01	01	1	20	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.45	1.00	1.00	0.00	0.	9.1	284.0	5.5
05	01	01	1	21	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.45	1.00	1.00	0.00	0.	9.1	283.9	5.5
05	01	01	1	22	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.45	1.00	1.00	0.00	0.	9.1	283.4	5.5
05	01	01	1	23	-0.2	0.019	-9.000	-9.000	-999.	6.	2.9	0.45	1.00	1.00	0.28	313.	9.1	283.4	5.5
05	01	01	1	24	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.45	1.00	1.00	0.00	0.	9.1	283.4	5.5

First hour of profile data

YR	MO	DY	HR	HEIGHT	F	WDIR	WSPD	AMB_TMP	sigmaA	sigmaW	sigmaV
05	01	01	01	5.5	0	-999.	-99.00	281.2	99.0	-99.00	-99.00
05	01	01	01	9.1	1	321.	0.50	-999.0	99.0	-99.00	-99.00

F indicates top of profile (=1) or below (=0)

**MODELOPTs: RegDFAULT CONC ELEV
NODRYDPLT NOWETDPLT

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): VOL1 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF CO IN PPM **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
365205.23	3776966.38	0.29974	(07043007)	365273.46	3776942.30	0.31221	(07043007)
365297.54	3776837.96	0.25684	(07043007)	365261.42	3776781.78	0.22758	(06082807)
365241.35	3776673.42	0.32938	(06082207)	365205.23	3776528.94	0.19239	(06121509)
365153.06	3776456.70	0.21307	(07032008)	365116.94	3776332.29	0.15704	(05052707)
365120.95	3776231.96	0.18768	(05121209)	365137.01	3776115.58	0.22601	(05090207)
365116.94	3775999.19	0.26287	(05090207)	365104.90	3775898.86	0.25353	(05103108)
365132.99	3775754.39	0.16799	(05121809)	365317.60	3777247.31	0.16341	(05083108)
365273.46	3777203.17	0.25356	(06042607)	365100.89	3777094.81	0.22470	(07043007)
366493.48	3776063.40	0.36919	(07060207)	366465.39	3776183.80	0.32616	(05040607)
366453.35	3776308.21	0.32930	(05040607)	366449.34	3776416.57	0.30307	(05101708)
366397.17	3776561.05	0.41266	(05101708)	366369.07	3776685.46	0.21159	(06080207)
366369.07	3776837.96	0.24392	(05041307)	366409.21	3776962.37	0.19064	(05071607)
366457.36	3777078.76	0.17396	(05050607)	366441.31	3777195.14	0.19129	(06042107)
365594.52	3777500.15	0.15131	(05120109)	365534.32	3777544.29	0.17780	(05120109)
365646.69	3777439.95	0.13807	(05090608)	365702.87	3777419.88	0.13280	(05102308)
365385.83	3777435.93	0.20493	(07050107)	365329.64	3777520.21	0.19226	(07050107)
366272.76	3775373.13	0.19875	(06041807)	366373.09	3775401.22	0.23663	(06041807)

366573.75 3775473.46 0.23038 (06030408) 366124.27 3777528.24 0.24235 (06082007)

**MODELOPTs: RegDFAULT CONC ELEV
NODRYDPLT NOWETDPLT

*** THE 1ST HIGHEST 8-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): VOL1 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF CO IN PPM **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
365205.23	3776966.38	0.05286	(05070908)	365273.46	3776942.30	0.05593	(05070908)
365297.54	3776837.96	0.06562	(05070908)	365261.42	3776781.78	0.04966	(06100908)
365241.35	3776673.42	0.06400c	(06082208)	365205.23	3776528.94	0.05362	(06041108)
365153.06	3776456.70	0.05290	(06041108)	365116.94	3776332.29	0.04778	(05110808)
365120.95	3776231.96	0.04048c	(05071508)	365137.01	3776115.58	0.03749c	(05090208)
365116.94	3775999.19	0.04218c	(05090208)	365104.90	3775898.86	0.03938c	(07031208)
365132.99	3775754.39	0.03226	(05121816)	365317.60	3777247.31	0.03144	(06081824)
365273.46	3777203.17	0.04067c	(06042608)	365100.89	3777094.81	0.03410	(07043008)
366493.48	3776063.40	0.09442	(07123008)	366465.39	3776183.80	0.06705	(07123008)
366453.35	3776308.21	0.08028	(07121008)	366449.34	3776416.57	0.06013	(05012908)
366397.17	3776561.05	0.07054	(05072708)	366369.07	3776685.46	0.06588	(06062308)
366369.07	3776837.96	0.08567	(07110324)	366409.21	3776962.37	0.06713c	(05012524)
366457.36	3777078.76	0.05997	(06073024)	366441.31	3777195.14	0.05326	(05102224)
365594.52	3777500.15	0.03566	(07071424)	365534.32	3777544.29	0.03580	(07071424)
365646.69	3777439.95	0.03723c	(06082924)	365702.87	3777419.88	0.04498c	(06072108)
365385.83	3777435.93	0.03157	(05061508)	365329.64	3777520.21	0.02838	(05061508)
366272.76	3775373.13	0.03397	(06041808)	366373.09	3775401.22	0.03829	(06041808)
366573.75	3775473.46	0.04464	(06030408)	366124.27	3777528.24	0.03219	(07080208)

**MODELOPTs: RegDFAULT CONC ELEV
NODRYDPLT NOWETDPLT

*** THE SUMMARY OF HIGHEST 1-HR RESULTS ***

** CONC OF CO IN PPM **

GROUP ID	AVERAGE CONC	DATE (YYMMDDHH)	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	NETWORK GRID-ID
ALL HIGH 1ST HIGH VALUE IS	0.41266	ON 05101708:	AT (366397.17, 3776561.05, 365.00, 365.00, 0.00)	DC	

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

**MODELOPTs: RegDFAULT CONC ELEV
NODRYDPLT NOWETDPLT

*** THE SUMMARY OF HIGHEST 8-HR RESULTS ***

** CONC OF CO IN PPM **

GROUP ID	AVERAGE CONC	DATE (YYMMDDHH)	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	NETWORK GRID-ID
ALL HIGH 1ST HIGH VALUE IS	0.09442	ON 07123008:	AT (366493.48, 3776063.40, 333.67, 365.00, 0.00)	DC	

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

**MODELOPTs: RegDFAULT CONC ELEV
NODRYDPLT NOWETDPLT

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 0 Warning Message(s)
A Total of 1753 Informational Message(s)

A Total of 26280 Hours Were Processed

A Total of 1181 Calm Hours Identified

A Total of 572 Missing Hours Identified (2.18 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********
*** NONE ***

****
*** AERMOD Finishes Successfully ***
****

Alternative 1 NO_2 Localized Emissions

```
**
****************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 6.6.0
** Lakes Environmental Software Inc.
** Date: 7/27/2010
** File: J:\Projects\LADWP Stone Canyon Reservoir Project 2008-057\Air Quality\Construction Emissions\Localized\Project\NO2\NO2.ADI
**
****************************************
**
**
****************************************
** AERMOD Control Pathway
****************************************
**
**
CO STARTING
   TITLEONE Stone Canyon Reservoir
   TITLETWO NO2
   MODELOPT DFAULT CONC NODRYDPLT NOWETDPLT
   AVERTIME 1
   URBANOPT 9862049
   POLLUTID NOX
   RUNORNOT RUN
CO FINISHED
**
****************************************
** AERMOD Source Pathway
****************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
   LOCATION VOL1 VOLUME 365893.498 3776581.066 303.930
** DESCRSRC Exhaust
** Source Parameters **
   SRCPARAM VOL1 0.5104 5.000 45.578 1.163
   URBANSRC VOL1
   CONCUNIT 531.5 GRAMS/SEC PPM
   SRCGROUP ALL
SO FINISHED
**
****************************************
** AERMOD Receptor Pathway
****************************************
**
**
RE STARTING
** DESCRREC "" ""
   DISCCART    365205.23   3776966.38  375.93  426.00
   DISCCART    365273.46   3776942.30  371.48  426.00
   DISCCART    365297.54   3776837.96  364.53  426.00
   DISCCART    365261.42   3776781.78  365.63  426.00
   DISCCART    365241.35   3776673.42  365.70  365.68
   DISCCART    365205.23   3776528.94  365.00  364.88
   DISCCART    365153.06   3776456.70  365.00  365.00
   DISCCART    365116.94   3776332.29  365.00  365.00
   DISCCART    365120.95   3776231.96  364.96  364.86
   DISCCART    365137.01   3776115.58  364.26  364.20
   DISCCART    365116.94   3775999.19  364.00  364.00
   DISCCART    365104.90   3775898.86  364.00  364.00
   DISCCART    365132.99   3775754.39  364.00  364.00
   DISCCART    365317.60   3777247.31  388.83  426.00
   DISCCART    365273.46   3777203.17  389.43  426.00
   DISCCART    365100.89   3777094.81  392.86  426.00
   DISCCART    366493.48   3776063.40  333.67  365.00
   DISCCART    366465.39   3776183.80  356.13  365.00
   DISCCART    366453.35   3776308.21  364.45  363.66
   DISCCART    366449.34   3776416.57  364.78  364.59
   DISCCART    366397.17   3776561.05  365.00  365.00
   DISCCART    366369.07   3776685.46  365.00  365.00
   DISCCART    366369.07   3776837.96  365.00  365.00
   DISCCART    366409.21   3776962.37  365.00  365.00
   DISCCART    366457.36   3777078.76  365.00  365.00
   DISCCART    366441.31   3777195.14  365.00  365.00
   DISCCART    365594.52   3777500.15  365.00  426.00
   DISCCART    365534.32   3777544.29  364.93  426.00
   DISCCART    365646.69   3777439.95  365.00  426.00
   DISCCART    365702.87   3777419.88  364.34  426.00
   DISCCART    365385.83   3777435.93  380.85  426.00
   DISCCART    365329.64   3777520.21  382.17  426.00
   DISCCART    366272.76   3775373.13  284.66  365.00
   DISCCART    366373.09   3775401.22  277.95  365.00
   DISCCART    366573.75   3775473.46  276.50  365.00
   DISCCART    366124.27   3777528.24  365.00  365.00
RE FINISHED
**
****************************************
** AERMOD Meteorology Pathway
****************************************
**
**
ME STARTING
   SURFFILE "L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.SFC"
   PROFFILE "L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.PFL"
   SURFDATA 0 2005
   UAIRDATA 3190 2005
   PROFBASE 10 METERS
ME FINISHED
**
****************************************
** AERMOD Output Pathway
****************************************
**
**
OU STARTING
   RECTABLE ALLAVE 1ST
   RECTABLE 1 1ST
** Auto-Generated Plotfiles
```

```
  PLOTFILE 1 ALL 1ST NO2.AD\01H1GALL.PLT
OU FINISHED

 ***********************************
 *** SETUP Finishes Successfully ***
 ***********************************

 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                                  ***        07/27/10
                                   *** NO2                                                                     ***        18:02:38
                                                                                                                          PAGE   1
 **MODELOPTs:  RegDFAULT CONC                                                ELEV
                                                                   NODRYDPLT NOWETDPLT

                                        ***     MODEL SETUP OPTIONS SUMMARY       ***
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

 **Model Is Setup For Calculation of Average CONCentration Values.

  -- DEPOSITION LOGIC --
 **NO GAS DEPOSITION Data Provided.
 **NO PARTICLE DEPOSITION Data Provided.
 **Model Uses NO DRY DEPLETION.  DRYDPLT  =  F
 **Model Uses NO WET DEPLETION.  WETDPLT  =  F

 **Model Uses URBAN Dispersion Algorithm for the SBL for     1 Source(s),
   for Total of    1 Urban Area(s):
   Urban Population =   9862049.0 ;  Urban Roughness Length =  1.000 m

 **Model Uses Regulatory DEFAULT Options:
         1. Stack-tip Downwash.
         2. Model Accounts for ELEVated Terrain Effects.
         3. Use Calms Processing Routine.
         4. Use Missing Data Processing Routine.
         5. No Exponential Decay for URBAN/Non-SO2.
         6. Urban Roughness Length of 1.0 Meter Assumed.

 **Model Assumes No FLAGPOLE Receptor Heights.

 **Model Calculates  1 Short Term Average(s) of:   1-HR

 **This Run Includes:      1 Source(s);       1 Source Group(s); and      36 Receptor(s)

 **The Model Assumes A Pollutant Type of:  NOX

 **Model Set To Continue RUNning After the Setup Testing.

 **Output Options Selected:
          Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE Keyword)
          Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)

 **NOTE:  The Following Flags May Appear Following CONC Values:  c for Calm Hours
                                                                 m for Missing Hours
                                                                 b for Both Calm and Missing Hours

 **Misc. Inputs:  Base Elev. for Pot. Temp. Profile (m MSL) =    10.00 ;  Decay Coef. =    0.000     ;  Rot. Angle =     0.0
                  Emission Units = GRAMS/SEC                                ;  Emission Rate Unit Factor =    531.50
                  Output Units   = PPM

 **Approximate Storage Requirements of Model =      3.5 MB of RAM.

 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                                  ***        07/27/10
                                   *** NO2                                                                     ***        18:02:38
                                                                                                                          PAGE   2
 **MODELOPTs:  RegDFAULT CONC                                                ELEV
                                                                   NODRYDPLT NOWETDPLT


                                              *** VOLUME SOURCE DATA ***

             NUMBER EMISSION RATE                        BASE    RELEASE    INIT.    INIT.   URBAN  EMISSION RATE
   SOURCE     PART. (USER UNITS)     X         Y        ELEV.   HEIGHT      SY       SZ     SOURCE  SCALAR VARY
     ID       CATS.                (METERS) (METERS) (METERS) (METERS) (METERS) (METERS)             BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

   VOL1         0   0.51040E+00  365893.5 3776581.1   303.9     5.00    45.58     1.16     YES
 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                                  ***        07/27/10
                                   *** NO2                                                                     ***        18:02:38
                                                                                                                          PAGE   3
 **MODELOPTs:  RegDFAULT CONC                                                ELEV
                                                                   NODRYDPLT NOWETDPLT


                                       *** SOURCE IDs DEFINING SOURCE GROUPS ***

 GROUP ID                                              SOURCE IDs



  ALL        VOL1     ,
 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                                  ***        07/27/10
                                   *** NO2                                                                     ***        18:02:38
                                                                                                                          PAGE   4
 **MODELOPTs:  RegDFAULT CONC                                                ELEV
                                                                   NODRYDPLT NOWETDPLT

                                           *** DISCRETE CARTESIAN RECEPTORS ***
                                         (X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
                                                        (METERS)

     ( 365205.2, 3776966.4,     375.9,     426.0,       0.0);        ( 365273.5, 3776942.3,     371.5,     426.0,       0.0);
     ( 365297.5, 3776838.0,     364.5,     426.0,       0.0);        ( 365261.4, 3776781.8,     365.6,     426.0,       0.0);
     ( 365241.3, 3776673.4,     365.7,     365.7,       0.0);        ( 365205.2, 3776528.9,     365.0,     364.9,       0.0);
     ( 365153.1, 3776456.7,     365.0,     365.0,       0.0);        ( 365116.9, 3776332.3,     365.0,     365.0,       0.0);
     ( 365121.0, 3776232.0,     365.0,     364.9,       0.0);        ( 365137.0, 3776115.6,     364.3,     364.2,       0.0);
     ( 365116.9, 3775999.2,     364.0,     364.0,       0.0);        ( 365104.9, 3775898.9,     364.0,     364.0,       0.0);
     ( 365133.0, 3775754.4,     364.0,     364.0,       0.0);        ( 365317.6, 3777247.3,     388.8,     426.0,       0.0);
     ( 365273.5, 3777203.2,     389.4,     426.0,       0.0);        ( 365100.9, 3777094.8,     392.9,     426.0,       0.0);
     ( 366493.5, 3776063.4,     333.7,     365.0,       0.0);        ( 366465.4, 3776183.8,     356.1,     365.0,       0.0);
     ( 366453.3, 3776308.2,     364.4,     363.7,       0.0);        ( 366449.3, 3776416.6,     364.8,     364.6,       0.0);
     ( 366397.2, 3776561.0,     365.0,     365.0,       0.0);        ( 366369.1, 3776685.5,     365.0,     365.0,       0.0);
     ( 366369.1, 3776838.0,     365.0,     365.0,       0.0);        ( 366409.2, 3776962.4,     365.0,     365.0,       0.0);
     ( 366457.4, 3777078.8,     365.0,     365.0,       0.0);        ( 366441.3, 3777195.1,     365.0,     365.0,       0.0);
     ( 365594.5, 3777500.1,     365.0,     426.0,       0.0);        ( 365534.3, 3777544.3,     364.9,     426.0,       0.0);
     ( 365646.7, 3777439.9,     365.0,     426.0,       0.0);        ( 365702.9, 3777419.9,     364.3,     426.0,       0.0);
```

(365385.8, 3777435.9,	380.9,	426.0,	0.0);		(365329.6, 3777520.2,	382.2,	426.0,	0.0);
(366272.8, 3775373.1,	284.7,	365.0,	0.0);		(366373.1, 3775401.2,	277.9,	365.0,	0.0);
(366573.8, 3775473.5,	276.5,	365.0,	0.0);		(366124.3, 3777528.2,	365.0,	365.0,	0.0);

**MODELOPTs: RegDFAULT CONC   ELEV
NODRYDPLT NOWETDPLT

*** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***
(1=YES; 0=NO)

```
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1
```

NOTE: METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.

*** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
(METERS/SEC)

1.54,   3.09,   5.14,   8.23, 10.80,

**MODELOPTs: RegDFAULT CONC   ELEV
NODRYDPLT NOWETDPLT

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.SFC   Met Version: 06341
Profile file: L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.PFL
Surface format: FREE
Profile format: FREE
Surface station no.:   0   Upper air station no.:   3190
Name: UNKNOWN   Name: UNKNOWN
Year: 2005   Year: 2005

First 24 hours of scalar data

YR MO DY	JDY HR	H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O LEN	Z0	BOWEN	ALBEDO	REF WS	WD	HT	REF TA	HT
05 01 01	1 01	-0.9	0.033	-9.000	-9.000	-999.	14.	3.7	0.45	1.00	1.00	0.50	321.	9.1	281.1	5.5
05 01 01	1 02	-0.9	0.033	-9.000	-9.000	-999.	14.	3.8	0.45	1.00	1.00	0.50	320.	9.1	280.8	5.5
05 01 01	1 03	-0.9	0.033	-9.000	-9.000	-999.	14.	3.7	0.45	1.00	1.00	0.50	323.	9.1	280.9	5.5
05 01 01	1 04	-1.3	0.040	-9.000	-9.000	-999.	18.	4.4	0.45	1.00	1.00	0.60	316.	9.1	280.8	5.5
05 01 01	1 05	-1.3	0.040	-9.000	-9.000	-999.	18.	4.4	0.45	1.00	1.00	0.60	322.	9.1	280.4	5.5
05 01 01	1 06	-0.3	0.020	-9.000	-9.000	-999.	6.	2.3	0.45	1.00	1.00	0.30	352.	9.1	279.9	5.5
05 01 01	1 07	-2.3	0.053	-9.000	-9.000	-999.	28.	5.8	0.45	1.00	1.00	0.80	324.	9.1	279.6	5.5
05 01 01	1 08	-1.2	0.040	-9.000	-9.000	-999.	18.	4.8	0.45	1.00	0.55	0.60	336.	9.1	280.5	5.5
05 01 01	1 09	43.0	0.243	0.490	0.005	99.	276.	-30.3	0.45	1.00	0.32	1.50	44.	9.1	283.4	5.5
05 01 01	1 10	110.6	0.339	1.374	0.005	849.	453.	-31.7	0.45	1.00	0.24	2.10	74.	9.1	285.1	5.5
05 01 01	1 11	135.3	0.321	1.653	0.010	1209.	419.	-22.2	0.45	1.00	0.21	1.90	84.	9.1	286.4	5.5
05 01 01	1 12	14.3	0.223	0.783	0.010	1212.	246.	-70.3	0.45	1.00	0.20	1.50	137.	9.1	286.8	5.5
05 01 01	1 13	27.1	0.187	0.971	0.010	1218.	186.	-21.7	0.45	1.00	0.20	1.10	111.	9.1	286.9	5.5
05 01 01	1 14	17.1	0.179	0.834	0.009	1222.	174.	-30.0	0.45	1.00	0.21	1.10	186.	9.1	286.9	5.5
05 01 01	1 15	3.7	0.172	0.499	0.009	1223.	164.	-124.8	0.45	1.00	0.24	1.20	195.	9.1	286.1	5.5
05 01 01	1 16	0.1	0.147	0.150	0.009	1223.	130.	-2871.4	0.45	1.00	0.33	1.10	182.	9.1	285.9	5.5
05 01 01	1 17	-1.7	0.047	-9.000	-9.000	-999.	31.	5.5	0.45	1.00	0.59	0.70	159.	9.1	285.5	5.5
05 01 01	1 18	-0.2	0.019	-9.000	-9.000	-999.	6.	2.9	0.45	1.00	1.00	0.28	170.	9.1	285.1	5.5
05 01 01	1 19	-0.2	0.019	-9.000	-9.000	-999.	6.	2.9	0.45	1.00	1.00	0.28	186.	9.1	284.4	5.5
05 01 01	1 20	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.45	1.00	1.00	0.00	0.	9.1	284.0	5.5
05 01 01	1 21	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.45	1.00	1.00	0.00	0.	9.1	283.9	5.5
05 01 01	1 22	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.45	1.00	1.00	0.00	0.	9.1	283.4	5.5
05 01 01	1 23	-0.2	0.019	-9.000	-9.000	-999.	6.	2.9	0.45	1.00	1.00	0.28	313.	9.1	283.4	5.5
05 01 01	1 24	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.45	1.00	1.00	0.00	0.	9.1	283.4	5.5

First hour of profile data

YR MO DY HR	HEIGHT	F	WDIR	WSPD	AMB_TMP	sigmaA	sigmaW	sigmaV
05 01 01 01	5.5	0	-999.	-99.00	281.2	99.0	-99.00	-99.00
05 01 01 01	9.1	1	321.	0.50	-999.0	99.0	-99.00	-99.00

F indicates top of profile (=1) or below (=0)

**MODELOPTs: RegDFAULT CONC   ELEV
NODRYDPLT NOWETDPLT

*** THE   1ST HIGHEST 1-HR AVERAGE CONCENTRATION   VALUES FOR SOURCE GROUP: ALL   ***
INCLUDING SOURCE(S):   VOL1   ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF NOX   IN PPM   **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
365205.23	3776966.38	0.03650	(07043007)	365273.46	3776942.30	0.03802	(07043007)
365297.54	3776837.96	0.03128	(07043007)	365261.42	3776781.78	0.02772	(06082807)
365241.35	3776673.42	0.04011	(06082207)	365205.23	3776528.94	0.02343	(06121509)
365153.06	3776456.70	0.02595	(07032008)	365116.94	3776332.29	0.01913	(05052707)
365120.95	3776231.96	0.02286	(05121209)	365137.01	3776115.58	0.02752	(05090207)
365116.94	3775999.19	0.03201	(05090207)	365104.90	3775898.86	0.03088	(05103108)
365132.99	3775754.39	0.02046	(05121809)	365317.60	3777247.31	0.01990	(05083108)
365273.46	3777203.17	0.03088	(06042607)	365100.89	3777094.81	0.02737	(07043007)
366493.48	3776063.40	0.04496	(07060207)	366465.39	3776183.80	0.03972	(05040607)
366453.35	3776308.21	0.04010	(05040607)	366449.34	3776416.57	0.03691	(05101708)
366397.17	3776561.05	0.05026	(05101708)	366369.07	3776685.46	0.02577	(06080207)
366369.07	3776837.96	0.02971	(05041307)	366409.21	3776962.37	0.02322	(05071607)
366457.36	3777078.76	0.02119	(05050607)	366441.31	3777195.14	0.02330	(06042107)
365594.52	3777500.15	0.01843	(05120109)	365534.32	3777544.29	0.02165	(05120109)
365646.69	3777439.95	0.01681	(05090608)	365702.87	3777419.88	0.01617	(05102308)
365385.83	3777435.93	0.02496	(07050107)	365329.64	3777520.21	0.02341	(07050107)
366272.76	3775373.13	0.02420	(06041807)	366373.09	3775401.22	0.02882	(06041807)
366573.75	3775473.46	0.02806	(06030408)	366124.27	3777528.24	0.02951	(06082007)

```
**MODELOPTs:  RegDFAULT CONC                                  ELEV
                                                    NODRYDPLT NOWETDPLT

                                      *** THE SUMMARY OF HIGHEST  1-HR RESULTS ***

                                ** CONC OF NOX      IN PPM                                **

                                                DATE                                                                NETWORK
GROUP ID                        AVERAGE CONC     (YYMMDDHH)            RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG)    OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

ALL      HIGH  1ST HIGH VALUE IS       0.05026  ON 05101708: AT (  366397.17,  3776561.05,   365.00,   365.00,    0.00)  DC

 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
```



```
**MODELOPTs:  RegDFAULT CONC                                  ELEV
                                                    NODRYDPLT NOWETDPLT

 *** Message Summary : AERMOD Model Execution ***

  --------- Summary of Total Messages --------

 A Total of           0 Fatal Error Message(s)
 A Total of           0 Warning Message(s)
 A Total of        1753 Informational Message(s)

 A Total of       26280 Hours Were Processed

 A Total of        1181 Calm Hours Identified

 A Total of         572 Missing Hours Identified (  2.18 Percent)


    ******** FATAL ERROR MESSAGES ********
               ***  NONE  ***


    ********   WARNING MESSAGES   ********
               ***  NONE  ***

    ************************************
    *** AERMOD Finishes Successfully ***
    ************************************
```

Alternative 1 Mitigated NO_2 Localized Emissions

```
**
****************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 6.6.0
** Lakes Environmental Software Inc.
** Date: 7/27/2010
** File: J:\Projects\LADWP Stone Canyon Reservoir Project 2008-057\Air Quality\Construction Emissions\Localized\Project\NO2\NO2MT.ADI
**
****************************************
**
**
****************************************
** AERMOD Control Pathway
****************************************
**
**
CO STARTING
   TITLEONE Stone Canyon Reservoir
   TITLETWO NO2MT
   MODELOPT DFAULT CONC NODRYDPLT NOWETDPLT
   AVERTIME 1
   URBANOPT 9862049
   POLLUTID NOX
   RUNORNOT RUN
CO FINISHED
**
****************************************
** AERMOD Source Pathway
****************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
   LOCATION VOL1 VOLUME 365893.498 3776581.066 303.930
** DESCRSRC Exhaust
** Source Parameters **
   SRCPARAM VOL1 0.4849 5.000 45.578 1.163
   URBANSRC VOL1
   CONCUNIT 531.5 GRAMS/SEC PPM
   SRCGROUP ALL
SO FINISHED
**
****************************************
** AERMOD Receptor Pathway
****************************************
**
**
RE STARTING
** DESCRREC "" ""
   DISCCART    365205.23   3776966.38  375.93  426.00
   DISCCART    365273.46   3776942.30  371.48  426.00
   DISCCART    365297.54   3776837.96  364.53  426.00
   DISCCART    365261.42   3776781.78  365.63  426.00
   DISCCART    365241.35   3776673.42  365.70  365.68
   DISCCART    365205.23   3776528.94  365.00  364.88
   DISCCART    365153.06   3776456.70  365.00  365.00
   DISCCART    365116.94   3776332.29  365.00  365.00
   DISCCART    365120.95   3776231.96  364.96  364.86
   DISCCART    365137.01   3776115.58  364.26  364.20
   DISCCART    365116.94   3775999.19  364.00  364.00
   DISCCART    365104.90   3775898.86  364.00  364.00
   DISCCART    365132.99   3775754.39  364.00  364.00
   DISCCART    365317.60   3777247.31  388.83  426.00
   DISCCART    365273.46   3777203.17  389.43  426.00
   DISCCART    365100.89   3777094.81  392.86  426.00
   DISCCART    366493.48   3776063.40  333.67  365.00
   DISCCART    366465.39   3776183.80  356.13  365.00
   DISCCART    366453.35   3776308.21  364.45  363.66
   DISCCART    366449.34   3776416.57  364.78  364.59
   DISCCART    366397.17   3776561.05  365.00  365.00
   DISCCART    366369.07   3776685.46  365.00  365.00
   DISCCART    366369.07   3776837.96  365.00  365.00
   DISCCART    366409.21   3776962.37  365.00  365.00
   DISCCART    366457.36   3777078.76  365.00  365.00
   DISCCART    366441.31   3777195.14  365.00  365.00
   DISCCART    365594.52   3777500.15  365.00  426.00
   DISCCART    365534.32   3777544.29  364.93  426.00
   DISCCART    365646.69   3777439.95  365.00  426.00
   DISCCART    365702.87   3777419.88  364.34  426.00
   DISCCART    365385.83   3777435.93  380.85  426.00
   DISCCART    365329.64   3777520.21  382.17  426.00
   DISCCART    366272.76   3775373.13  284.66  365.00
   DISCCART    366373.09   3775401.22  277.95  365.00
   DISCCART    366573.75   3775473.46  276.50  365.00
   DISCCART    366124.27   3777528.24  365.00  365.00
RE FINISHED
**
****************************************
** AERMOD Meteorology Pathway
****************************************
**
**
ME STARTING
   SURFFILE "L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.SFC"
   PROFFILE "L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.PFL"
   SURFDATA 0 2005
   UAIRDATA 3190 2005
   PROFBASE 10 METERS
ME FINISHED
**
****************************************
** AERMOD Output Pathway
****************************************
**
**
OU STARTING
   RECTABLE ALLAVE 1ST
   RECTABLE 1 1ST
** Auto-Generated Plotfiles
```

```
  PLOTFILE 1 ALL 1ST NO2MT.AD\01H1GALL.PLT
OU FINISHED

 **********************************
 *** SETUP Finishes Successfully ***
 **********************************

 *** AERMOD - VERSION 09292 ***   *** Stone Canyon Reservoir                                            ***        07/27/10
                                  *** NO2MT                                                             ***        18:04:52
                                                                                                                   PAGE   1
 **MODELOPTs:  RegDFAULT CONC                                            ELEV
                                                               NODRYDPLT NOWETDPLT

                                     ***     MODEL SETUP OPTIONS SUMMARY       ***
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

 **Model Is Setup For Calculation of Average CONCentration Values.

   --  DEPOSITION LOGIC  --
 **NO GAS DEPOSITION Data Provided.
 **NO PARTICLE DEPOSITION Data Provided.
 **Model Uses NO DRY DEPLETION.  DRYDPLT  =  F
 **Model Uses NO WET DEPLETION.  WETDPLT  =  F

 **Model Uses URBAN Dispersion Algorithm for the SBL for     1 Source(s),
   for Total of    1 Urban Area(s):
   Urban Population =   9862049.0 ;  Urban Roughness Length =  1.000 m

 **Model Uses Regulatory DEFAULT Options:
         1. Stack-tip Downwash.
         2. Model Accounts for ELEVated Terrain Effects.
         3. Use Calms Processing Routine.
         4. Use Missing Data Processing Routine.
         5. No Exponential Decay for URBAN/Non-SO2.
         6. Urban Roughness Length of 1.0 Meter Assumed.

 **Model Assumes No FLAGPOLE Receptor Heights.

 **Model Calculates  1 Short Term Average(s) of:   1-HR

 **This Run Includes:      1 Source(s);       1 Source Group(s); and      36 Receptor(s)

 **The Model Assumes A Pollutant Type of:  NOX

 **Model Set To Continue RUNning After the Setup Testing.

 **Output Options Selected:
          Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE Keyword)
          Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)

 **NOTE:  The Following Flags May Appear Following CONC Values:  c for Calm Hours
                                                                 m for Missing Hours
                                                                 b for Both Calm and Missing Hours

 **Misc. Inputs:  Base Elev. for Pot. Temp. Profile (m MSL) =    10.00 ;  Decay Coef. =    0.000     ;  Rot. Angle =     0.0
                  Emission Units = GRAMS/SEC                                ;  Emission Rate Unit Factor =    531.50
                  Output Units   = PPM

 **Approximate Storage Requirements of Model =      3.5 MB of RAM.

 *** AERMOD - VERSION 09292 ***   *** Stone Canyon Reservoir                                            ***        07/27/10
                                  *** NO2MT                                                             ***        18:04:52
                                                                                                                   PAGE   2
 **MODELOPTs:  RegDFAULT CONC                                            ELEV
                                                               NODRYDPLT NOWETDPLT


                                           *** VOLUME SOURCE DATA ***

            NUMBER EMISSION RATE                        BASE    RELEASE    INIT.    INIT.   URBAN  EMISSION RATE
    SOURCE    PART. (USER UNITS)     X         Y       ELEV.   HEIGHT      SY       SZ     SOURCE  SCALAR VARY
     ID       CATS.              (METERS) (METERS) (METERS) (METERS) (METERS) (METERS)               BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

   VOL1         0   0.48490E+00  365893.5 3776581.1   303.9     5.00    45.58     1.16     YES
 *** AERMOD - VERSION 09292 ***   *** Stone Canyon Reservoir                                            ***        07/27/10
                                  *** NO2MT                                                             ***        18:04:52
                                                                                                                   PAGE   3
 **MODELOPTs:  RegDFAULT CONC                                            ELEV
                                                               NODRYDPLT NOWETDPLT


                                    *** SOURCE IDs DEFINING SOURCE GROUPS ***

 GROUP ID                                           SOURCE IDs



  ALL       VOL1     ,
 *** AERMOD - VERSION 09292 ***   *** Stone Canyon Reservoir                                            ***        07/27/10
                                  *** NO2MT                                                             ***        18:04:52
                                                                                                                   PAGE   4
 **MODELOPTs:  RegDFAULT CONC                                            ELEV
                                                               NODRYDPLT NOWETDPLT

                                      *** DISCRETE CARTESIAN RECEPTORS ***
                                    (X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
                                                    (METERS)

     ( 365205.2, 3776966.4,     375.9,     426.0,       0.0);        ( 365273.5, 3776942.3,     371.5,     426.0,       0.0);
     ( 365297.5, 3776838.0,     364.5,     426.0,       0.0);        ( 365261.4, 3776781.8,     365.6,     426.0,       0.0);
     ( 365241.3, 3776673.4,     365.7,     365.7,       0.0);        ( 365205.2, 3776528.9,     365.0,     364.9,       0.0);
     ( 365153.1, 3776456.7,     365.0,     365.0,       0.0);        ( 365116.9, 3776332.3,     365.0,     365.0,       0.0);
     ( 365121.0, 3776232.0,     365.0,     364.9,       0.0);        ( 365137.0, 3776115.6,     364.3,     364.2,       0.0);
     ( 365116.9, 3775999.2,     364.0,     364.0,       0.0);        ( 365104.9, 3775898.9,     364.0,     364.0,       0.0);
     ( 365133.0, 3775754.4,     364.0,     364.0,       0.0);        ( 365317.6, 3777247.3,     388.8,     426.0,       0.0);
     ( 365273.5, 3777203.2,     389.4,     426.0,       0.0);        ( 365100.9, 3777094.8,     392.9,     426.0,       0.0);
     ( 366493.5, 3776063.4,     333.7,     365.0,       0.0);        ( 366465.4, 3776183.8,     356.1,     365.0,       0.0);
     ( 366453.3, 3776308.2,     364.4,     363.7,       0.0);        ( 366449.3, 3776416.6,     364.8,     364.6,       0.0);
     ( 366397.2, 3776561.0,     365.0,     365.0,       0.0);        ( 366369.1, 3776685.5,     365.0,     365.0,       0.0);
     ( 366369.1, 3776838.0,     365.0,     365.0,       0.0);        ( 366409.2, 3776962.4,     365.0,     365.0,       0.0);
     ( 366457.4, 3777078.8,     365.0,     365.0,       0.0);        ( 366441.3, 3777195.1,     365.0,     365.0,       0.0);
     ( 365594.5, 3777500.1,     365.0,     426.0,       0.0);        ( 365534.3, 3777544.3,     364.9,     426.0,       0.0);
     ( 365646.7, 3777439.9,     365.0,     426.0,       0.0);        ( 365702.9, 3777419.9,     364.3,     426.0,       0.0);
```

```
( 365385.8, 3777435.9,     380.9,     426.0,       0.0);        ( 365329.6, 3777520.2,     382.2,     426.0,       0.0);
( 366272.8, 3775373.1,     284.7,     365.0,       0.0);        ( 366373.1, 3775401.2,     277.9,     365.0,       0.0);
( 366573.8, 3775473.5,     276.5,     365.0,       0.0);        ( 366124.3, 3777528.2,     365.0,     365.0,       0.0);
```


*** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***
(1=YES; 0=NO)

```
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1
```

NOTE: METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.

*** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
(METERS/SEC)

1.54, 3.09, 5.14, 8.23, 10.80,

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.SFC   Met Version: 06341
Profile file: L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 0   Upper air station no.: 3190
Name: UNKNOWN   Name: UNKNOWN
Year: 2005   Year: 2005

First 24 hours of scalar data

YR MO DY	JDY HR	H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O LEN	Z0	BOWEN	ALBEDO	REF WS	WD	HT	REF TA	HT
05 01 01	1 01	-0.9	0.033	-9.000	-9.000	-999.	14.	3.7	0.45	1.00	1.00	0.50	321.	9.1	281.1	5.5
05 01 01	1 02	-0.9	0.033	-9.000	-9.000	-999.	14.	3.8	0.45	1.00	1.00	0.50	320.	9.1	280.8	5.5
05 01 01	1 03	-0.9	0.033	-9.000	-9.000	-999.	14.	3.7	0.45	1.00	1.00	0.50	323.	9.1	280.9	5.5
05 01 01	1 04	-1.3	0.040	-9.000	-9.000	-999.	18.	4.4	0.45	1.00	1.00	0.60	316.	9.1	280.8	5.5
05 01 01	1 05	-1.3	0.040	-9.000	-9.000	-999.	18.	4.4	0.45	1.00	1.00	0.60	322.	9.1	280.4	5.5
05 01 01	1 06	-0.3	0.020	-9.000	-9.000	-999.	6.	2.3	0.45	1.00	1.00	0.30	352.	9.1	279.9	5.5
05 01 01	1 07	-2.3	0.053	-9.000	-9.000	-999.	28.	5.8	0.45	1.00	1.00	0.80	324.	9.1	279.6	5.5
05 01 01	1 08	-1.2	0.040	-9.000	-9.000	-999.	18.	4.8	0.45	1.00	0.55	0.60	336.	9.1	280.5	5.5
05 01 01	1 09	43.0	0.243	0.490	0.005	99.	276.	-30.3	0.45	1.00	0.32	1.50	44.	9.1	283.4	5.5
05 01 01	1 10	110.6	0.339	1.374	0.005	849.	453.	-31.7	0.45	1.00	0.24	2.10	74.	9.1	285.1	5.5
05 01 01	1 11	135.3	0.321	1.653	0.010	1209.	419.	-22.2	0.45	1.00	0.21	1.90	84.	9.1	286.4	5.5
05 01 01	1 12	14.3	0.223	0.783	0.010	1212.	246.	-70.3	0.45	1.00	0.20	1.50	137.	9.1	286.8	5.5
05 01 01	1 13	27.1	0.187	0.971	0.010	1218.	186.	-21.7	0.45	1.00	0.20	1.10	111.	9.1	286.9	5.5
05 01 01	1 14	17.1	0.179	0.834	0.009	1222.	174.	-30.0	0.45	1.00	0.21	1.10	186.	9.1	286.9	5.5
05 01 01	1 15	3.7	0.172	0.499	0.009	1223.	164.	-124.8	0.45	1.00	0.24	1.20	195.	9.1	286.1	5.5
05 01 01	1 16	0.1	0.147	0.150	0.009	1223.	130.	-2871.4	0.45	1.00	0.33	1.10	182.	9.1	285.9	5.5
05 01 01	1 17	-1.7	0.047	-9.000	-9.000	-999.	31.	5.5	0.45	1.00	0.59	0.70	159.	9.1	285.5	5.5
05 01 01	1 18	-0.2	0.019	-9.000	-9.000	-999.	6.	2.9	0.45	1.00	1.00	0.28	170.	9.1	285.1	5.5
05 01 01	1 19	-0.2	0.019	-9.000	-9.000	-999.	6.	2.9	0.45	1.00	1.00	0.28	186.	9.1	284.4	5.5
05 01 01	1 20	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.45	1.00	1.00	0.00	0.	9.1	284.0	5.5
05 01 01	1 21	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.45	1.00	1.00	0.00	0.	9.1	283.9	5.5
05 01 01	1 22	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.45	1.00	1.00	0.00	0.	9.1	283.4	5.5
05 01 01	1 23	-0.2	0.019	-9.000	-9.000	-999.	6.	2.9	0.45	1.00	1.00	0.28	313.	9.1	283.4	5.5
05 01 01	1 24	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.45	1.00	1.00	0.00	0.	9.1	283.4	5.5

First hour of profile data

YR MO DY HR	HEIGHT	F	WDIR	WSPD	AMB_TMP	sigmaA	sigmaW	sigmaV
05 01 01 01	5.5	0	-999.	-99.00	281.2	99.0	-99.00	-99.00
05 01 01 01	9.1	1	321.	0.50	-999.0	99.0	-99.00	-99.00

F indicates top of profile (=1) or below (=0)

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): VOL1 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF NOX IN PPM **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
365205.23	3776966.38	0.03468	(07043007)	365273.46	3776942.30	0.03612	(07043007)
365297.54	3776837.96	0.02972	(07043007)	365261.42	3776781.78	0.02633	(06082807)
365241.35	3776673.42	0.03811	(06082207)	365205.23	3776528.94	0.02226	(06121509)
365153.06	3776456.70	0.02465	(07032008)	365116.94	3776332.29	0.01817	(05052707)
365120.95	3776231.96	0.02171	(05121209)	365137.01	3776115.58	0.02615	(05090207)
365116.94	3775999.19	0.03041	(05090207)	365104.90	3775898.86	0.02933	(05103108)
365132.99	3775754.39	0.01944	(05121809)	365317.60	3777247.31	0.01891	(05083108)
365273.46	3777203.17	0.02934	(06042607)	365100.89	3777094.81	0.02600	(07043007)
366493.48	3776063.40	0.04272	(07060207)	366465.39	3776183.80	0.03774	(05040607)
366453.35	3776308.21	0.03810	(05040607)	366449.34	3776416.57	0.03506	(05101708)
366397.17	3776561.05	0.04775	(05101708)	366369.07	3776685.46	0.02448	(06080207)
366369.07	3776837.96	0.02822	(05041307)	366409.21	3776962.37	0.02206	(05071607)
366457.36	3777078.76	0.02013	(05050607)	366441.31	3777195.14	0.02213	(06042107)
365594.52	3777500.15	0.01751	(05120109)	365534.32	3777544.29	0.02057	(05120109)
365646.69	3777439.95	0.01597	(05090608)	365702.87	3777419.88	0.01537	(05102308)
365385.83	3777435.93	0.02371	(07050107)	365329.64	3777520.21	0.02224	(07050107)
366272.76	3775373.13	0.02300	(06041807)	366373.09	3775401.22	0.02738	(06041807)
366573.75	3775473.46	0.02666	(06030408)	366124.27	3777528.24	0.02804	(06082007)

```
**MODELOPTs:  RegDFAULT CONC                                    ELEV
                                                      NODRYDPLT NOWETDPLT

                          *** THE SUMMARY OF HIGHEST  1-HR RESULTS ***

                  ** CONC OF NOX      IN PPM                                **

                                           DATE                                                            NETWORK
GROUP ID                     AVERAGE CONC     (YYMMDDHH)          RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG)   OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

ALL      HIGH  1ST HIGH VALUE IS      0.04775  ON 05101708: AT (  366397.17,  3776561.05,   365.00,   365.00,    0.00)  DC

 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
```



```
**MODELOPTs:  RegDFAULT CONC                                    ELEV
                                                      NODRYDPLT NOWETDPLT

 *** Message Summary : AERMOD Model Execution ***

  --------- Summary of Total Messages --------

 A Total of            0 Fatal Error Message(s)
 A Total of            0 Warning Message(s)
 A Total of         1753 Informational Message(s)

 A Total of        26280 Hours Were Processed

 A Total of         1181 Calm Hours Identified

 A Total of          572 Missing Hours Identified (  2.18 Percent)


    ******** FATAL ERROR MESSAGES ********
               ***  NONE  ***


    ********   WARNING MESSAGES   ********
               ***  NONE  ***


    ************************************
    *** AERMOD Finishes Successfully ***
    ************************************
```

Alternative 1 PM_{10} Localized Emissions

```
**
****************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 6.6.0
** Lakes Environmental Software Inc.
** Date: 7/27/2010
** File: J:\Projects\LADWP Stone Canyon Reservoir Project 2008-057\Air Quality\Construction Emissions\Localized\Project\PM10\PM10.ADI
**
****************************************
**
**
****************************************
** AERMOD Control Pathway
****************************************
**
**
CO STARTING
   TITLEONE Stone Canyon Reservoir
   TITLETWO PM10
   MODELOPT DFAULT CONC NODRYDPLT NOWETDPLT
   AVERTIME 24
   URBANOPT 9862049
   POLLUTID PM.10
   RUNORNOT RUN
CO FINISHED
**
****************************************
** AERMOD Source Pathway
****************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
   LOCATION AREA1 AREA 365796.443 3776482.259 303.190
** DESCRSRC Dust
   LOCATION VOL1 VOLUME 365893.498 3776581.066 303.930
** DESCRSRC Exhaust
** Source Parameters **
   SRCPARAM AREA1 0.0001099 0.000 195.986 195.986 0.000
   SRCPARAM VOL1 0.0381 5.000 45.578 1.163
   URBANSRC AREA1
   URBANSRC VOL1
   SRCGROUP ALL
SO FINISHED
**
****************************************
** AERMOD Receptor Pathway
****************************************
**
**
RE STARTING
** DESCRREC "" ""
   DISCCART    365205.23   3776966.38  375.93  426.00
   DISCCART    365273.46   3776942.30  371.48  426.00
   DISCCART    365297.54   3776837.96  364.53  426.00
   DISCCART    365261.42   3776781.78  365.63  426.00
   DISCCART    365241.35   3776673.42  365.70  365.68
   DISCCART    365205.23   3776528.94  365.00  364.88
   DISCCART    365153.06   3776456.70  365.00  365.00
   DISCCART    365116.94   3776332.29  365.00  365.00
   DISCCART    365120.95   3776231.96  364.96  364.86
   DISCCART    365137.01   3776115.58  364.26  364.20
   DISCCART    365116.94   3775999.19  364.00  364.00
   DISCCART    365104.90   3775898.86  364.00  364.00
   DISCCART    365132.99   3775754.39  364.00  364.00
   DISCCART    365317.60   3777247.31  388.83  426.00
   DISCCART    365273.46   3777203.17  389.43  426.00
   DISCCART    365100.89   3777094.81  392.86  426.00
   DISCCART    366493.48   3776063.40  333.67  365.00
   DISCCART    366465.39   3776183.80  356.13  365.00
   DISCCART    366453.35   3776308.21  364.45  363.66
   DISCCART    366449.34   3776416.57  364.78  364.59
   DISCCART    366397.17   3776561.05  365.00  365.00
   DISCCART    366369.07   3776685.46  365.00  365.00
   DISCCART    366369.07   3776837.96  365.00  365.00
   DISCCART    366409.21   3776962.37  365.00  365.00
   DISCCART    366457.36   3777078.76  365.00  365.00
   DISCCART    366441.31   3777195.14  365.00  365.00
   DISCCART    365594.52   3777500.15  365.00  426.00
   DISCCART    365534.32   3777544.29  364.93  426.00
   DISCCART    365646.69   3777439.95  365.00  426.00
   DISCCART    365702.87   3777419.88  364.34  426.00
   DISCCART    365385.83   3777435.93  380.85  426.00
   DISCCART    365329.64   3777520.21  382.17  426.00
   DISCCART    366272.76   3775373.13  284.66  365.00
   DISCCART    366373.09   3775401.22  277.95  365.00
   DISCCART    366573.75   3775473.46  276.50  365.00
   DISCCART    366124.27   3777528.24  365.00  365.00
RE FINISHED
**
****************************************
** AERMOD Meteorology Pathway
****************************************
**
**
ME STARTING
   SURFFILE "L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.SFC"
   PROFFILE "L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.PFL"
   SURFDATA 0 2005
   UAIRDATA 3190 2005
   PROFBASE 10 METERS
ME FINISHED
**
****************************************
** AERMOD Output Pathway
****************************************
**
**
OU STARTING
```

```
   RECTABLE ALLAVE 1ST
   RECTABLE 24 1ST
** Auto-Generated Plotfiles
   PLOTFILE 24 ALL 1ST PM10.AD\24H1GALL.PLT
OU FINISHED

 **********************************
 *** SETUP Finishes Successfully ***
 **********************************

 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                             ***        07/27/10
                                   *** PM10                                                               ***        13:10:24
                                                                                                                     PAGE   1
 **MODELOPTs:  RegDFAULT CONC                                              ELEV
                                                                  NODRYDPLT NOWETDPLT

                                            ***     MODEL SETUP OPTIONS SUMMARY       ***
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

 **Model Is Setup For Calculation of Average CONCentration Values.

   --  DEPOSITION LOGIC  --
 **NO GAS DEPOSITION Data Provided.
 **NO PARTICLE DEPOSITION Data Provided.
 **Model Uses NO DRY DEPLETION.  DRYDPLT  =  F
 **Model Uses NO WET DEPLETION.  WETDPLT  =  F

 **Model Uses URBAN Dispersion Algorithm for the SBL for     2 Source(s),
   for Total of    1 Urban Area(s):
   Urban Population =   9862049.0 ;  Urban Roughness Length =  1.000 m

 **Model Uses Regulatory DEFAULT Options:
         1. Stack-tip Downwash.
         2. Model Accounts for ELEVated Terrain Effects.
         3. Use Calms Processing Routine.
         4. Use Missing Data Processing Routine.
         5. No Exponential Decay for URBAN/Non-SO2.
         6. Urban Roughness Length of 1.0 Meter Assumed.

 **Model Assumes No FLAGPOLE Receptor Heights.

 **Model Calculates  1 Short Term Average(s) of:  24-HR

 **This Run Includes:      2 Source(s);       1 Source Group(s); and      36 Receptor(s)

 **The Model Assumes A Pollutant Type of:  PM.10

 **Model Set To Continue RUNning After the Setup Testing.

 **Output Options Selected:
          Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE Keyword)
          Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)

 **NOTE:  The Following Flags May Appear Following CONC Values:  c for Calm Hours
                                                                 m for Missing Hours
                                                                 b for Both Calm and Missing Hours

 **Misc. Inputs:  Base Elev. for Pot. Temp. Profile (m MSL) =    10.00 ;  Decay Coef. =    0.000     ; Rot. Angle =     0.0
                  Emission Units = GRAMS/SEC                                ;  Emission Rate Unit Factor =   0.10000E+07
                  Output Units   = MICROGRAMS/M**3

 **Approximate Storage Requirements of Model =      3.5 MB of RAM.

 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                             ***        07/27/10
                                   *** PM10                                                               ***        13:10:24
                                                                                                                     PAGE   2
 **MODELOPTs:  RegDFAULT CONC                                              ELEV
                                                                  NODRYDPLT NOWETDPLT


                                                  *** VOLUME SOURCE DATA ***

               NUMBER EMISSION RATE                    BASE    RELEASE    INIT.    INIT.   URBAN  EMISSION RATE
    SOURCE     PART.  (GRAMS/SEC)     X        Y       ELEV.   HEIGHT      SY       SZ     SOURCE  SCALAR VARY
     ID        CATS.               (METERS) (METERS) (METERS) (METERS) (METERS) (METERS)             BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

   VOL1         0   0.38100E-01  365893.5 3776581.1   303.9     5.00    45.58     1.16     YES
 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                             ***        07/27/10
                                   *** PM10                                                               ***        13:10:24
                                                                                                                     PAGE   3
 **MODELOPTs:  RegDFAULT CONC                                              ELEV
                                                                  NODRYDPLT NOWETDPLT


                                                  *** AREA SOURCE DATA ***

               NUMBER EMISSION RATE  COORD (SW CORNER)  BASE     RELEASE  X-DIM     Y-DIM    ORIENT.    INIT.   URBAN  EMISSION RATE
   SOURCE      PART.  (GRAMS/SEC       X         Y       ELEV.    HEIGHT  OF AREA   OF AREA   OF AREA     SZ     SOURCE  SCALAR VARY
     ID        CATS.   /METER**2)   (METERS) (METERS) (METERS) (METERS) (METERS)  (METERS)   (DEG.)  (METERS)            BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

   AREA1        0   0.10990E-03  365796.4 3776482.3   303.2     0.00    195.99    195.99      0.00     0.00    YES
 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                             ***        07/27/10
                                   *** PM10                                                               ***        13:10:24
                                                                                                                     PAGE   4
 **MODELOPTs:  RegDFAULT CONC                                              ELEV
                                                                  NODRYDPLT NOWETDPLT


                                           *** SOURCE IDs DEFINING SOURCE GROUPS ***

 GROUP ID                                            SOURCE IDs



  ALL      AREA1   , VOL1    ,
 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                             ***        07/27/10
                                   *** PM10                                                               ***        13:10:24
                                                                                                                     PAGE   5
 **MODELOPTs:  RegDFAULT CONC                                              ELEV
                                                                  NODRYDPLT NOWETDPLT

                                              *** DISCRETE CARTESIAN RECEPTORS ***
```

```
                              (X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
                                                (METERS)

    ( 365205.2, 3776966.4,     375.9,     426.0,       0.0);        ( 365273.5, 3776942.3,     371.5,     426.0,       0.0);
    ( 365297.5, 3776838.0,     364.5,     426.0,       0.0);        ( 365261.4, 3776781.8,     365.6,     426.0,       0.0);
    ( 365241.3, 3776673.4,     365.7,     365.7,       0.0);        ( 365205.2, 3776528.9,     365.0,     364.9,       0.0);
    ( 365153.1, 3776456.7,     365.0,     365.0,       0.0);        ( 365116.9, 3776332.3,     365.0,     365.0,       0.0);
    ( 365121.0, 3776232.0,     365.0,     364.9,       0.0);        ( 365137.0, 3776115.6,     364.3,     364.2,       0.0);
    ( 365116.9, 3775999.2,     364.0,     364.0,       0.0);        ( 365104.9, 3775898.9,     364.0,     364.0,       0.0);
    ( 365133.0, 3775754.4,     364.0,     364.0,       0.0);        ( 365317.6, 3777247.3,     388.8,     426.0,       0.0);
    ( 365273.5, 3777203.2,     389.4,     426.0,       0.0);        ( 365100.9, 3777094.8,     392.9,     426.0,       0.0);
    ( 366493.5, 3776063.4,     333.7,     365.0,       0.0);        ( 366465.4, 3776183.8,     356.1,     365.0,       0.0);
    ( 366453.3, 3776308.2,     364.4,     363.7,       0.0);        ( 366449.3, 3776416.6,     364.8,     364.6,       0.0);
    ( 366397.2, 3776561.0,     365.0,     365.0,       0.0);        ( 366369.1, 3776685.5,     365.0,     365.0,       0.0);
    ( 366369.1, 3776838.0,     365.0,     365.0,       0.0);        ( 366409.2, 3776962.4,     365.0,     365.0,       0.0);
    ( 366457.4, 3777078.8,     365.0,     365.0,       0.0);        ( 366441.3, 3777195.1,     365.0,     365.0,       0.0);
    ( 365594.5, 3777500.1,     365.0,     426.0,       0.0);        ( 365534.3, 3777544.3,     364.9,     426.0,       0.0);
    ( 365646.7, 3777439.9,     365.0,     426.0,       0.0);        ( 365702.9, 3777419.9,     364.3,     426.0,       0.0);
    ( 365385.8, 3777435.9,     380.9,     426.0,       0.0);        ( 365329.6, 3777520.2,     382.2,     426.0,       0.0);
    ( 366272.8, 3775373.1,     284.7,     365.0,       0.0);        ( 366373.1, 3775401.2,     277.9,     365.0,       0.0);
    ( 366573.8, 3775473.5,     276.5,     365.0,       0.0);        ( 366124.3, 3777528.2,     365.0,     365.0,       0.0);
*** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                               ***        07/27/10
                                  *** PM10                                                                 ***        13:10:24
                                                                                                                      PAGE   6
**MODELOPTs:  RegDFAULT CONC                                                 ELEV
                                                                   NODRYDPLT NOWETDPLT

                                       *** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***
                                                          (1=YES; 0=NO)

           1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1

               NOTE:  METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.


                                  *** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
                                                        (METERS/SEC)

                                                1.54,   3.09,   5.14,   8.23,  10.80,
*** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                               ***        07/27/10
                                  *** PM10                                                                 ***        13:10:24
                                                                                                                      PAGE   7
**MODELOPTs:  RegDFAULT CONC                                                 ELEV
                                                                   NODRYDPLT NOWETDPLT

                                   *** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

  Surface file:   L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.SFC    Met Version:  06341
  Profile file:   L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.PFL
  Surface format: FREE
  Profile format: FREE
  Surface station no.:        0                  Upper air station no.:     3190
                Name: UNKNOWN                                   Name: UNKNOWN
                Year:   2005                                    Year:   2005

First 24 hours of scalar data
YR MO DY JDY HR     H0     U*     W*  DT/DZ ZICNV ZIMCH  M-O LEN    Z0  BOWEN ALBEDO  REF WS   WD     HT  REF TA     HT
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
05 01 01   1 01   -0.9  0.033 -9.000 -9.000 -999.   14.       3.7  0.45   1.00   1.00    0.50  321.    9.1  281.1    5.5
05 01 01   1 02   -0.9  0.033 -9.000 -9.000 -999.   14.       3.8  0.45   1.00   1.00    0.50  320.    9.1  280.8    5.5
05 01 01   1 03   -0.9  0.033 -9.000 -9.000 -999.   14.       3.7  0.45   1.00   1.00    0.50  323.    9.1  280.9    5.5
05 01 01   1 04   -1.3  0.040 -9.000 -9.000 -999.   18.       4.4  0.45   1.00   1.00    0.60  316.    9.1  280.8    5.5
05 01 01   1 05   -1.3  0.040 -9.000 -9.000 -999.   18.       4.4  0.45   1.00   1.00    0.60  322.    9.1  280.4    5.5
05 01 01   1 06   -0.3  0.020 -9.000 -9.000 -999.    6.       2.3  0.45   1.00   1.00    0.30  352.    9.1  279.9    5.5
05 01 01   1 07   -2.3  0.053 -9.000 -9.000 -999.   28.       5.8  0.45   1.00   1.00    0.80  324.    9.1  279.6    5.5
05 01 01   1 08   -1.2  0.040 -9.000 -9.000 -999.   18.       4.8  0.45   1.00   0.55    0.60  336.    9.1  280.5    5.5
05 01 01   1 09   43.0  0.243  0.490  0.005   99.  276.     -30.3  0.45   1.00   0.32    1.50   44.    9.1  283.4    5.5
05 01 01   1 10  110.6  0.339  1.374  0.005  849.  453.     -31.7  0.45   1.00   0.24    2.10   74.    9.1  285.1    5.5
05 01 01   1 11  135.3  0.321  1.653  0.010 1209.  419.     -22.2  0.45   1.00   0.21    1.90   84.    9.1  286.4    5.5
05 01 01   1 12   14.3  0.223  0.783  0.010 1212.  246.     -70.3  0.45   1.00   0.20    1.50  137.    9.1  286.8    5.5
05 01 01   1 13   27.1  0.187  0.971  0.010 1218.  186.     -21.7  0.45   1.00   0.20    1.10  111.    9.1  286.9    5.5
05 01 01   1 14   17.1  0.179  0.834  0.009 1222.  174.     -30.0  0.45   1.00   0.21    1.10  186.    9.1  286.9    5.5
05 01 01   1 15    3.7  0.172  0.499  0.009 1223.  164.    -124.8  0.45   1.00   0.24    1.20  195.    9.1  286.1    5.5
05 01 01   1 16    0.1  0.147  0.150  0.009 1223.  130.   -2871.4  0.45   1.00   0.33    1.10  182.    9.1  285.9    5.5
05 01 01   1 17   -1.7  0.047 -9.000 -9.000 -999.   31.       5.5  0.45   1.00   0.59    0.70  159.    9.1  285.5    5.5
05 01 01   1 18   -0.2  0.019 -9.000 -9.000 -999.    6.       2.9  0.45   1.00   1.00    0.28  170.    9.1  285.1    5.5
05 01 01   1 19   -0.2  0.019 -9.000 -9.000 -999.    6.       2.9  0.45   1.00   1.00    0.28  186.    9.1  284.4    5.5
05 01 01   1 20 -999.0 -9.000 -9.000 -9.000 -999. -999.  -99999.0  0.45   1.00   1.00    0.00    0.    9.1  284.0    5.5
05 01 01   1 21 -999.0 -9.000 -9.000 -9.000 -999. -999.  -99999.0  0.45   1.00   1.00    0.00    0.    9.1  283.9    5.5
05 01 01   1 22 -999.0 -9.000 -9.000 -9.000 -999. -999.  -99999.0  0.45   1.00   1.00    0.00    0.    9.1  283.4    5.5
05 01 01   1 23   -0.2  0.019 -9.000 -9.000 -999.    6.       2.9  0.45   1.00   1.00    0.28  313.    9.1  283.4    5.5
05 01 01   1 24 -999.0 -9.000 -9.000 -9.000 -999. -999.  -99999.0  0.45   1.00   1.00    0.00    0.    9.1  283.4    5.5


First hour of profile data
YR MO DY HR HEIGHT F  WDIR    WSPD AMB_TMP sigmaA  sigmaW  sigmaV
05 01 01 01    5.5 0 -999.  -99.00   281.2   99.0  -99.00  -99.00
05 01 01 01    9.1 1  321.    0.50  -999.0   99.0  -99.00  -99.00

F indicates top of profile (=1) or below (=0)
*** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                               ***        07/27/10
                                  *** PM10                                                                 ***        13:10:24
                                                                                                                      PAGE   8
**MODELOPTs:  RegDFAULT CONC                                                 ELEV
                                                                   NODRYDPLT NOWETDPLT

                              *** THE   1ST HIGHEST 24-HR AVERAGE CONCENTRATION   VALUES FOR SOURCE GROUP:  ALL       ***
                                  INCLUDING SOURCE(S):      AREA1   , VOL1    ,

                                             *** DISCRETE CARTESIAN RECEPTOR POINTS ***

                                        ** CONC OF PM.10    IN MICROGRAMS/M**3                         **

     X-COORD (M)  Y-COORD (M)        CONC      (YYMMDDHH)               X-COORD (M)  Y-COORD (M)        CONC      (YYMMDDHH)
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
       365205.23   3776966.38      58.16123  (07043024)               365273.46   3776942.30      58.90862  (07043024)
```

365297.54	3776837.96	62.78878c (05101024)	365261.42	3776781.78	65.55535 (07090324)
365241.35	3776673.42	63.43178 (05122624)	365205.23	3776528.94	65.09492c (06063024)
365153.06	3776456.70	76.16212 (05020624)	365116.94	3776332.29	57.36388 (05020624)
365120.95	3776231.96	57.22882c (06082624)	365137.01	3776115.58	53.84400c (05092124)
365116.94	3775999.19	51.00803c (05090224)	365104.90	3775898.86	60.98223c (06102024)
365132.99	3775754.39	59.93239c (06102024)	365317.60	3777247.31	58.56094c (05111424)
365273.46	3777203.17	50.32928c (05111424)	365100.89	3777094.81	51.35089 (06061424)
366493.48	3776063.40	240.85232 (06102724)	366465.39	3776183.80	232.51338c (05091724)
366453.35	3776308.21	136.41070c (05021424)	366449.34	3776416.57	117.09628c (05090224)
366397.17	3776561.05	105.15511 (05072724)	366369.07	3776685.46	148.91077c (05081024)
366369.07	3776837.96	104.70350c (05082724)	366409.21	3776962.37	78.29856 (06073124)
366457.36	3777078.76	60.98564 (06073124)	366441.31	3777195.14	56.85171 (06051524)
365594.52	3777500.15	68.33494c (05082924)	365534.32	3777544.29	63.91643c (05090624)
365646.69	3777439.95	82.30903c (05082924)	365702.87	3777419.88	83.29585c (05082924)
365385.83	3777435.93	94.71495 (07050124)	365329.64	3777520.21	90.72197 (07050124)
366272.76	3775373.13	123.39285 (06110624)	366373.09	3775401.22	96.08978 (06021324)
366573.75	3775473.46	141.83617 (06030424)	366124.27	3777528.24	43.60907 (07070624)

```
 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                                ***        07/27/10
                                   *** PM10                                                                  ***        13:10:24
                                                                                                                        PAGE   9
 **MODELOPTs:  RegDFAULT CONC                                                 ELEV
                                                                     NODRYDPLT NOWETDPLT

                                                *** THE SUMMARY OF HIGHEST 24-HR RESULTS ***

                                   ** CONC OF PM.10    IN MICROGRAMS/M**3                          **

                                                        DATE                                                              NETWORK
GROUP ID                         AVERAGE CONC      (YYMMDDHH)            RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG)    OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

ALL      HIGH  1ST HIGH VALUE IS     240.85232  ON 06102724: AT (  366493.48,  3776063.40,   333.67,   365.00,    0.00)  DC


 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                                ***        07/27/10
                                   *** PM10                                                                  ***        13:10:24
                                                                                                                        PAGE  10
 **MODELOPTs:  RegDFAULT CONC                                                 ELEV
                                                                     NODRYDPLT NOWETDPLT

 *** Message Summary : AERMOD Model Execution ***

  --------- Summary of Total Messages --------

 A Total of           0 Fatal Error Message(s)
 A Total of           0 Warning Message(s)
 A Total of        1753 Informational Message(s)

 A Total of       26280 Hours Were Processed

 A Total of        1181 Calm Hours Identified

 A Total of         572 Missing Hours Identified (  2.18 Percent)


    ******** FATAL ERROR MESSAGES ********
               ***  NONE  ***


    ********   WARNING MESSAGES   ********
               ***  NONE  ***

    ***********************************
    *** AERMOD Finishes Successfully ***
    ***********************************
```

Alternative 1 Mitigated PM_{10} Localized Emissions

```
**
****************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 6.6.0
** Lakes Environmental Software Inc.
** Date: 7/27/2010
** File: J:\Projects\LADWP Stone Canyon Reservoir Project 2008-057\Air Quality\Construction Emissions\Localized\Project\PM10\PM10MT.ADI
**
****************************************
**
**
****************************************
** AERMOD Control Pathway
****************************************
**
**
CO STARTING
   TITLEONE Stone Canyon Reservoir
   TITLETWO PM10MIT
   MODELOPT DFAULT CONC NODRYDPLT NOWETDPLT
   AVERTIME 24
   URBANOPT 9862049
   POLLUTID PM.10
   RUNORNOT RUN
CO FINISHED
**
****************************************
** AERMOD Source Pathway
****************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
   LOCATION AREA1 AREA 365796.443 3776482.259 303.190
** DESCRSRC Dust
   LOCATION VOL1 VOLUME 365893.498 3776581.066 303.930
** DESCRSRC Exhaust
** Source Parameters **
   SRCPARAM AREA1 0.0001099 0.000 195.986 195.986 0.000
   SRCPARAM VOL1 0.0362 5.000 45.578 1.163
   URBANSRC AREA1
   URBANSRC VOL1
   SRCGROUP ALL
SO FINISHED
**
****************************************
** AERMOD Receptor Pathway
****************************************
**
**
RE STARTING
** DESCRREC "" ""
   DISCCART    365205.23   3776966.38  375.93  426.00
   DISCCART    365273.46   3776942.30  371.48  426.00
   DISCCART    365297.54   3776837.96  364.53  426.00
   DISCCART    365261.42   3776781.78  365.63  426.00
   DISCCART    365241.35   3776673.42  365.70  365.68
   DISCCART    365205.23   3776528.94  365.00  364.88
   DISCCART    365153.06   3776456.70  365.00  365.00
   DISCCART    365116.94   3776332.29  365.00  365.00
   DISCCART    365120.95   3776231.96  364.96  364.86
   DISCCART    365137.01   3776115.58  364.26  364.20
   DISCCART    365116.94   3775999.19  364.00  364.00
   DISCCART    365104.90   3775898.86  364.00  364.00
   DISCCART    365132.99   3775754.39  364.00  364.00
   DISCCART    365317.60   3777247.31  388.83  426.00
   DISCCART    365273.46   3777203.17  389.43  426.00
   DISCCART    365100.89   3777094.81  392.86  426.00
   DISCCART    366493.48   3776063.40  333.67  365.00
   DISCCART    366465.39   3776183.80  356.13  365.00
   DISCCART    366453.35   3776308.21  364.45  363.66
   DISCCART    366449.34   3776416.57  364.78  364.59
   DISCCART    366397.17   3776561.05  365.00  365.00
   DISCCART    366369.07   3776685.46  365.00  365.00
   DISCCART    366369.07   3776837.96  365.00  365.00
   DISCCART    366409.21   3776962.37  365.00  365.00
   DISCCART    366457.36   3777078.76  365.00  365.00
   DISCCART    366441.31   3777195.14  365.00  365.00
   DISCCART    365594.52   3777500.15  365.00  426.00
   DISCCART    365534.32   3777544.29  364.93  426.00
   DISCCART    365646.69   3777439.95  365.00  426.00
   DISCCART    365702.87   3777419.88  364.34  426.00
   DISCCART    365385.83   3777435.93  380.85  426.00
   DISCCART    365329.64   3777520.21  382.17  426.00
   DISCCART    366272.76   3775373.13  284.66  365.00
   DISCCART    366373.09   3775401.22  277.95  365.00
   DISCCART    366573.75   3775473.46  276.50  365.00
   DISCCART    366124.27   3777528.24  365.00  365.00
RE FINISHED
**
****************************************
** AERMOD Meteorology Pathway
****************************************
**
**
ME STARTING
   SURFFILE "L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.SFC"
   PROFFILE "L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.PFL"
   SURFDATA 0 2005
   UAIRDATA 3190 2005
   PROFBASE 10 METERS
ME FINISHED
**
****************************************
** AERMOD Output Pathway
****************************************
**
**
OU STARTING
```

```
   RECTABLE ALLAVE 1ST
   RECTABLE 24 1ST
** Auto-Generated Plotfiles
   PLOTFILE 24 ALL 1ST PM10MT.AD\24H1GALL.PLT
OU FINISHED

 **********************************
 *** SETUP Finishes Successfully ***
 **********************************

 *** AERMOD - VERSION 09292 ***   *** Stone Canyon Reservoir                                               ***        07/27/10
                                  *** PM10MIT                                                              ***        13:37:29
                                                                                                                      PAGE   1
 **MODELOPTs:  RegDFAULT CONC                                          ELEV
                                                             NODRYDPLT NOWETDPLT

                                          ***     MODEL SETUP OPTIONS SUMMARY       ***
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

 **Model Is Setup For Calculation of Average CONCentration Values.

   --  DEPOSITION LOGIC  --
 **NO GAS DEPOSITION Data Provided.
 **NO PARTICLE DEPOSITION Data Provided.
 **Model Uses NO DRY DEPLETION.  DRYDPLT  =  F
 **Model Uses NO WET DEPLETION.  WETDPLT  =  F

 **Model Uses URBAN Dispersion Algorithm for the SBL for     2 Source(s),
   for Total of    1 Urban Area(s):
   Urban Population =   9862049.0 ;  Urban Roughness Length =  1.000 m

 **Model Uses Regulatory DEFAULT Options:
         1. Stack-tip Downwash.
         2. Model Accounts for ELEVated Terrain Effects.
         3. Use Calms Processing Routine.
         4. Use Missing Data Processing Routine.
         5. No Exponential Decay for URBAN/Non-SO2.
         6. Urban Roughness Length of 1.0 Meter Assumed.

 **Model Assumes No FLAGPOLE Receptor Heights.

 **Model Calculates  1 Short Term Average(s) of:  24-HR

 **This Run Includes:      2 Source(s);       1 Source Group(s); and      36 Receptor(s)

 **The Model Assumes A Pollutant Type of:  PM.10

 **Model Set To Continue RUNning After the Setup Testing.

 **Output Options Selected:
          Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE Keyword)
          Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)

 **NOTE:  The Following Flags May Appear Following CONC Values:  c for Calm Hours
                                                                m for Missing Hours
                                                                b for Both Calm and Missing Hours

 **Misc. Inputs:  Base Elev. for Pot. Temp. Profile (m MSL) =    10.00 ;  Decay Coef. =    0.000     ;  Rot. Angle =     0.0
                  Emission Units = GRAMS/SEC                                ;  Emission Rate Unit Factor =   0.10000E+07
                  Output Units   = MICROGRAMS/M**3

 **Approximate Storage Requirements of Model =      3.5 MB of RAM.

 *** AERMOD - VERSION 09292 ***   *** Stone Canyon Reservoir                                               ***        07/27/10
                                  *** PM10MIT                                                              ***        13:37:29
                                                                                                                      PAGE   2
 **MODELOPTs:  RegDFAULT CONC                                          ELEV
                                                             NODRYDPLT NOWETDPLT


                                                *** VOLUME SOURCE DATA ***

              NUMBER EMISSION RATE                    BASE    RELEASE    INIT.    INIT.   URBAN  EMISSION RATE
    SOURCE    PART.  (GRAMS/SEC)     X        Y       ELEV.   HEIGHT      SY       SZ     SOURCE  SCALAR VARY
     ID       CATS.                (METERS) (METERS) (METERS) (METERS) (METERS) (METERS)             BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

   VOL1         0   0.36200E-01  365893.5 3776581.1   303.9     5.00    45.58     1.16     YES
 *** AERMOD - VERSION 09292 ***   *** Stone Canyon Reservoir                                               ***        07/27/10
                                  *** PM10MIT                                                              ***        13:37:29
                                                                                                                      PAGE   3
 **MODELOPTs:  RegDFAULT CONC                                          ELEV
                                                             NODRYDPLT NOWETDPLT


                                                *** AREA SOURCE DATA ***

              NUMBER EMISSION RATE  COORD (SW CORNER)  BASE     RELEASE  X-DIM     Y-DIM    ORIENT.    INIT.   URBAN  EMISSION RATE
   SOURCE     PART.  (GRAMS/SEC       X        Y       ELEV.    HEIGHT  OF AREA   OF AREA   OF AREA     SZ     SOURCE  SCALAR VARY
     ID       CATS.   /METER**2)   (METERS) (METERS) (METERS) (METERS) (METERS)  (METERS)   (DEG.)  (METERS)             BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

   AREA1        0   0.10990E-03  365796.4 3776482.3   303.2     0.00    195.99    195.99      0.00     0.00    YES
 *** AERMOD - VERSION 09292 ***   *** Stone Canyon Reservoir                                               ***        07/27/10
                                  *** PM10MIT                                                              ***        13:37:29
                                                                                                                      PAGE   4
 **MODELOPTs:  RegDFAULT CONC                                          ELEV
                                                             NODRYDPLT NOWETDPLT


                                         *** SOURCE IDs DEFINING SOURCE GROUPS ***

 GROUP ID                                             SOURCE IDs


  ALL       AREA1   , VOL1    ,
 *** AERMOD - VERSION 09292 ***   *** Stone Canyon Reservoir                                               ***        07/27/10
                                  *** PM10MIT                                                              ***        13:37:29
                                                                                                                      PAGE   5
 **MODELOPTs:  RegDFAULT CONC                                          ELEV
                                                             NODRYDPLT NOWETDPLT

                                           *** DISCRETE CARTESIAN RECEPTORS ***
```

```
                                    (X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
                                                    (METERS)

    ( 365205.2, 3776966.4,     375.9,     426.0,       0.0);         ( 365273.5, 3776942.3,     371.5,     426.0,       0.0);
    ( 365297.5, 3776838.0,     364.5,     426.0,       0.0);         ( 365261.4, 3776781.8,     365.6,     426.0,       0.0);
    ( 365241.3, 3776673.4,     365.7,     365.7,       0.0);         ( 365205.2, 3776528.9,     365.0,     364.9,       0.0);
    ( 365153.1, 3776456.7,     365.0,     365.0,       0.0);         ( 365116.9, 3776332.3,     365.0,     365.0,       0.0);
    ( 365121.0, 3776232.0,     365.0,     364.9,       0.0);         ( 365137.0, 3776115.6,     364.3,     364.2,       0.0);
    ( 365116.9, 3775999.2,     364.0,     364.0,       0.0);         ( 365104.9, 3775898.9,     364.0,     364.0,       0.0);
    ( 365133.0, 3775754.4,     364.0,     364.0,       0.0);         ( 365317.6, 3777247.3,     388.8,     426.0,       0.0);
    ( 365273.5, 3777203.2,     389.4,     426.0,       0.0);         ( 365100.9, 3777094.8,     392.9,     426.0,       0.0);
    ( 366493.5, 3776063.4,     333.7,     365.0,       0.0);         ( 366465.4, 3776183.8,     356.1,     365.0,       0.0);
    ( 366453.3, 3776308.2,     364.4,     363.7,       0.0);         ( 366449.3, 3776416.6,     364.8,     364.6,       0.0);
    ( 366397.2, 3776561.0,     365.0,     365.0,       0.0);         ( 366369.1, 3776685.5,     365.0,     365.0,       0.0);
    ( 366369.1, 3776838.0,     365.0,     365.0,       0.0);         ( 366409.2, 3776962.4,     365.0,     365.0,       0.0);
    ( 366457.4, 3777078.8,     365.0,     365.0,       0.0);         ( 366441.3, 3777195.1,     365.0,     365.0,       0.0);
    ( 365594.5, 3777500.1,     365.0,     426.0,       0.0);         ( 365534.3, 3777544.3,     364.9,     426.0,       0.0);
    ( 365646.7, 3777439.9,     365.0,     426.0,       0.0);         ( 365702.9, 3777419.9,     364.3,     426.0,       0.0);
    ( 365385.8, 3777435.9,     380.9,     426.0,       0.0);         ( 365329.6, 3777520.2,     382.2,     426.0,       0.0);
    ( 366272.8, 3775373.1,     284.7,     365.0,       0.0);         ( 366373.1, 3775401.2,     277.9,     365.0,       0.0);
    ( 366573.8, 3775473.5,     276.5,     365.0,       0.0);         ( 366124.3, 3777528.2,     365.0,     365.0,       0.0);
*** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                                    ***        07/27/10
                                  *** PM10MIT                                                                   ***        13:37:29
                                                                                                                           PAGE   6
**MODELOPTs:  RegDFAULT CONC                                                  ELEV
                                                                    NODRYDPLT NOWETDPLT

                                        *** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***
                                                          (1=YES; 0=NO)

           1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1

               NOTE:  METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.


                                  *** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
                                                         (METERS/SEC)

                                               1.54,   3.09,   5.14,   8.23,  10.80,
*** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                                    ***        07/27/10
                                  *** PM10MIT                                                                   ***        13:37:29
                                                                                                                           PAGE   7
**MODELOPTs:  RegDFAULT CONC                                                  ELEV
                                                                    NODRYDPLT NOWETDPLT

                                   *** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

  Surface file:   L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.SFC    Met Version:  06341
  Profile file:   L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.PFL
  Surface format: FREE
  Profile format: FREE
  Surface station no.:        0                 Upper air station no.:     3190
                Name: UNKNOWN                                    Name: UNKNOWN
                Year:   2005                                     Year:   2005

 First 24 hours of scalar data
 YR MO DY JDY HR     H0     U*     W*  DT/DZ ZICNV ZIMCH  M-O LEN    Z0  BOWEN ALBEDO  REF WS   WD     HT  REF TA     HT
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 05 01 01   1 01   -0.9  0.033 -9.000 -9.000 -999.   14.      3.7  0.45   1.00   1.00    0.50  321.     9.1  281.1     5.5
 05 01 01   1 02   -0.9  0.033 -9.000 -9.000 -999.   14.      3.8  0.45   1.00   1.00    0.50  320.     9.1  280.8     5.5
 05 01 01   1 03   -0.9  0.033 -9.000 -9.000 -999.   14.      3.7  0.45   1.00   1.00    0.50  323.     9.1  280.9     5.5
 05 01 01   1 04   -1.3  0.040 -9.000 -9.000 -999.   18.      4.4  0.45   1.00   1.00    0.60  316.     9.1  280.8     5.5
 05 01 01   1 05   -1.3  0.040 -9.000 -9.000 -999.   18.      4.4  0.45   1.00   1.00    0.60  322.     9.1  280.4     5.5
 05 01 01   1 06   -0.3  0.020 -9.000 -9.000 -999.    6.      2.3  0.45   1.00   1.00    0.30  352.     9.1  279.9     5.5
 05 01 01   1 07   -2.3  0.053 -9.000 -9.000 -999.   28.      5.8  0.45   1.00   1.00    0.80  324.     9.1  279.6     5.5
 05 01 01   1 08   -1.2  0.040 -9.000 -9.000 -999.   18.      4.8  0.45   1.00   0.55    0.60  336.     9.1  280.5     5.5
 05 01 01   1 09   43.0  0.243  0.490  0.005   99.  276.    -30.3  0.45   1.00   0.32    1.50   44.     9.1  283.4     5.5
 05 01 01   1 10  110.6  0.339  1.374  0.005  849.  453.    -31.7  0.45   1.00   0.24    2.10   74.     9.1  285.1     5.5
 05 01 01   1 11  135.3  0.321  1.653  0.010 1209.  419.    -22.2  0.45   1.00   0.21    1.90   84.     9.1  286.4     5.5
 05 01 01   1 12   14.3  0.223  0.783  0.010 1212.  246.    -70.3  0.45   1.00   0.20    1.50  137.     9.1  286.8     5.5
 05 01 01   1 13   27.1  0.187  0.971  0.010 1218.  186.    -21.7  0.45   1.00   0.20    1.10  111.     9.1  286.9     5.5
 05 01 01   1 14   17.1  0.179  0.834  0.009 1222.  174.    -30.0  0.45   1.00   0.21    1.10  186.     9.1  286.9     5.5
 05 01 01   1 15    3.7  0.172  0.499  0.009 1223.  164.   -124.8  0.45   1.00   0.24    1.20  195.     9.1  286.1     5.5
 05 01 01   1 16    0.1  0.147  0.150  0.009 1223.  130.  -2871.4  0.45   1.00   0.33    1.10  182.     9.1  285.9     5.5
 05 01 01   1 17   -1.7  0.047 -9.000 -9.000 -999.   31.      5.5  0.45   1.00   0.59    0.70  159.     9.1  285.5     5.5
 05 01 01   1 18   -0.2  0.019 -9.000 -9.000 -999.    6.      2.9  0.45   1.00   1.00    0.28  170.     9.1  285.1     5.5
 05 01 01   1 19   -0.2  0.019 -9.000 -9.000 -999.    6.      2.9  0.45   1.00   1.00    0.28  186.     9.1  284.4     5.5
 05 01 01   1 20 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.45   1.00   1.00    0.00    0.     9.1  284.0     5.5
 05 01 01   1 21 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.45   1.00   1.00    0.00    0.     9.1  283.9     5.5
 05 01 01   1 22 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.45   1.00   1.00    0.00    0.     9.1  283.4     5.5
 05 01 01   1 23   -0.2  0.019 -9.000 -9.000 -999.    6.      2.9  0.45   1.00   1.00    0.28  313.     9.1  283.4     5.5
 05 01 01   1 24 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.45   1.00   1.00    0.00    0.     9.1  283.4     5.5


 First hour of profile data
 YR MO DY HR HEIGHT F  WDIR    WSPD AMB_TMP sigmaA  sigmaW  sigmaV
 05 01 01 01    5.5 0 -999.  -99.00   281.2   99.0  -99.00  -99.00
 05 01 01 01    9.1 1  321.    0.50  -999.0   99.0  -99.00  -99.00

 F indicates top of profile (=1) or below (=0)
*** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                                    ***        07/27/10
                                  *** PM10MIT                                                                   ***        13:37:29
                                                                                                                           PAGE   8
**MODELOPTs:  RegDFAULT CONC                                                  ELEV
                                                                    NODRYDPLT NOWETDPLT

                              *** THE   1ST HIGHEST 24-HR AVERAGE CONCENTRATION   VALUES FOR SOURCE GROUP:  ALL       ***
                                  INCLUDING SOURCE(S):      AREA1   , VOL1    ,

                                              *** DISCRETE CARTESIAN RECEPTOR POINTS ***

                                        ** CONC OF PM.10    IN MICROGRAMS/M**3                         **

     X-COORD (M)  Y-COORD (M)        CONC      (YYMMDDHH)               X-COORD (M)  Y-COORD (M)        CONC      (YYMMDDHH)
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
       365205.23   3776966.38       58.14738  (07043024)                365273.46   3776942.30       58.89401  (07043024)
```

365297.54	3776837.96	62.77979c	(05101024)	365261.42	3776781.78	65.53995	(07090324)
365241.35	3776673.42	63.41128	(05122624)	365205.23	3776528.94	65.08017c	(06063024)
365153.06	3776456.70	76.13814	(05020624)	365116.94	3776332.29	57.34532	(05020624)
365120.95	3776231.96	57.22036c	(06082624)	365137.01	3776115.58	53.83590c	(05092124)
365116.94	3775999.19	50.99610c	(05090224)	365104.90	3775898.86	60.97671c	(06102024)
365132.99	3775754.39	59.92693c	(06102024)	365317.60	3777247.31	58.55158c	(05111424)
365273.46	3777203.17	50.31863c	(05111424)	365100.89	3777094.81	51.33893	(06061424)
366493.48	3776063.40	240.82569	(06102724)	366465.39	3776183.80	232.50145c	(05091724)
366453.35	3776308.21	136.39473c	(05021424)	366449.34	3776416.57	117.08002c	(05090224)
366397.17	3776561.05	105.13477	(05072724)	366369.07	3776685.46	148.88417c	(05081024)
366369.07	3776837.96	104.69416c	(05082724)	366409.21	3776962.37	78.27667	(06073124)
366457.36	3777078.76	60.96530	(06073124)	366441.31	3777195.14	56.83723	(06051524)
365594.52	3777500.15	68.32843c	(05082924)	365534.32	3777544.29	63.90181c	(05090624)
365646.69	3777439.95	82.30174c	(05082924)	365702.87	3777419.88	83.28797c	(05082924)
365385.83	3777435.93	94.69935	(07050124)	365329.64	3777520.21	90.70778	(07050124)
366272.76	3775373.13	123.38541	(06110624)	366373.09	3775401.22	96.07994	(06021324)
366573.75	3775473.46	141.82189	(06030424)	366124.27	3777528.24	43.59776	(07070624)

**MODELOPTs: RegDFAULT CONC ELEV
NODRYDPLT NOWETDPLT

*** THE SUMMARY OF HIGHEST 24-HR RESULTS ***

** CONC OF PM.10 IN MICROGRAMS/M**3 **

GROUP ID		AVERAGE CONC	DATE (YYMMDDHH)	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	NETWORK GRID-ID
ALL	HIGH 1ST HIGH VALUE IS	240.82569	ON 06102724: AT	(366493.48, 3776063.40, 333.67, 365.00, 0.00)	DC	

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

**MODELOPTs: RegDFAULT CONC ELEV
NODRYDPLT NOWETDPLT

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 0 Warning Message(s)
A Total of 1753 Informational Message(s)

A Total of 26280 Hours Were Processed

A Total of 1181 Calm Hours Identified

A Total of 572 Missing Hours Identified (2.18 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********
*** NONE ***

****
*** AERMOD Finishes Successfully ***
****

Alternative 1 $PM_{2.5}$ Localized Emissions

```
**
****************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 6.6.0
** Lakes Environmental Software Inc.
** Date: 7/27/2010
** File: J:\Projects\LADWP Stone Canyon Reservoir Project 2008-057\Air Quality\Construction Emissions\Localized\Project\PM25\PM25.ADI
**
****************************************
**
**
****************************************
** AERMOD Control Pathway
****************************************
**
**
CO STARTING
   TITLEONE Stone Canyon Reservoir
   TITLETWO PM25
   MODELOPT DFAULT CONC NODRYDPLT NOWETDPLT
   AVERTIME 24
   URBANOPT 9862049
   POLLUTID PM.25
   RUNORNOT RUN
CO FINISHED
**
****************************************
** AERMOD Source Pathway
****************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
   LOCATION AREA1 AREA 365796.443 3776482.259 303.190
** DESCRSRC Dust
   LOCATION VOL1 VOLUME 365893.498 3776581.066 303.930
** DESCRSRC Exhaust
** Source Parameters **
   SRCPARAM AREA1 0.00002138 0.000 195.986 195.986 0.000
   SRCPARAM VOL1 0.0351 5.000 45.578 1.163
   URBANSRC AREA1
   URBANSRC VOL1
   SRCGROUP ALL
SO FINISHED
**
****************************************
** AERMOD Receptor Pathway
****************************************
**
**
RE STARTING
** DESCRREC "" ""
   DISCCART    365205.23   3776966.38  375.93  426.00
   DISCCART    365273.46   3776942.30  371.48  426.00
   DISCCART    365297.54   3776837.96  364.53  426.00
   DISCCART    365261.42   3776781.78  365.63  426.00
   DISCCART    365241.35   3776673.42  365.70  365.68
   DISCCART    365205.23   3776528.94  365.00  364.88
   DISCCART    365153.06   3776456.70  365.00  365.00
   DISCCART    365116.94   3776332.29  365.00  365.00
   DISCCART    365120.95   3776231.96  364.96  364.86
   DISCCART    365137.01   3776115.58  364.26  364.20
   DISCCART    365116.94   3775999.19  364.00  364.00
   DISCCART    365104.90   3775898.86  364.00  364.00
   DISCCART    365132.99   3775754.39  364.00  364.00
   DISCCART    365317.60   3777247.31  388.83  426.00
   DISCCART    365273.46   3777203.17  389.43  426.00
   DISCCART    365100.89   3777094.81  392.86  426.00
   DISCCART    366493.48   3776063.40  333.67  365.00
   DISCCART    366465.39   3776183.80  356.13  365.00
   DISCCART    366453.35   3776308.21  364.45  363.66
   DISCCART    366449.34   3776416.57  364.78  364.59
   DISCCART    366397.17   3776561.05  365.00  365.00
   DISCCART    366369.07   3776685.46  365.00  365.00
   DISCCART    366369.07   3776837.96  365.00  365.00
   DISCCART    366409.21   3776962.37  365.00  365.00
   DISCCART    366457.36   3777078.76  365.00  365.00
   DISCCART    366441.31   3777195.14  365.00  365.00
   DISCCART    365594.52   3777500.15  365.00  426.00
   DISCCART    365534.32   3777544.29  364.93  426.00
   DISCCART    365646.69   3777439.95  365.00  426.00
   DISCCART    365702.87   3777419.88  364.34  426.00
   DISCCART    365385.83   3777435.93  380.85  426.00
   DISCCART    365329.64   3777520.21  382.17  426.00
   DISCCART    366272.76   3775373.13  284.66  365.00
   DISCCART    366373.09   3775401.22  277.95  365.00
   DISCCART    366573.75   3775473.46  276.50  365.00
   DISCCART    366124.27   3777528.24  365.00  365.00
RE FINISHED
**
****************************************
** AERMOD Meteorology Pathway
****************************************
**
**
ME STARTING
   SURFFILE "L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.SFC"
   PROFFILE "L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.PFL"
   SURFDATA 0 2005
   UAIRDATA 3190 2005
   PROFBASE 10 METERS
ME FINISHED
**
****************************************
** AERMOD Output Pathway
****************************************
**
**
OU STARTING
```

```
   RECTABLE ALLAVE 1ST
   RECTABLE 24 1ST
** Auto-Generated Plotfiles
   PLOTFILE 24 ALL 1ST PM25.AD\24H1GALL.PLT
OU FINISHED

 **********************************
 *** SETUP Finishes Successfully ***
 **********************************

 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                               ***        07/27/10
                                   *** PM25                                                                 ***        13:48:13
                                                                                                                       PAGE   1
 **MODELOPTs:  RegDFAULT CONC                                         ELEV
                                                                NODRYDPLT NOWETDPLT

                                          ***     MODEL SETUP OPTIONS SUMMARY       ***
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

 **Model Is Setup For Calculation of Average CONCentration Values.

   --  DEPOSITION LOGIC  --
 **NO GAS DEPOSITION Data Provided.
 **NO PARTICLE DEPOSITION Data Provided.
 **Model Uses NO DRY DEPLETION.  DRYDPLT  =  F
 **Model Uses NO WET DEPLETION.  WETDPLT  =  F

 **Model Uses URBAN Dispersion Algorithm for the SBL for     2 Source(s),
   for Total of    1 Urban Area(s):
   Urban Population =   9862049.0 ;  Urban Roughness Length =  1.000 m

 **Model Uses Regulatory DEFAULT Options:
         1. Stack-tip Downwash.
         2. Model Accounts for ELEVated Terrain Effects.
         3. Use Calms Processing Routine.
         4. Use Missing Data Processing Routine.
         5. No Exponential Decay for URBAN/Non-SO2.
         6. Urban Roughness Length of 1.0 Meter Assumed.

 **Model Assumes No FLAGPOLE Receptor Heights.

 **Model Calculates  1 Short Term Average(s) of:  24-HR

 **This Run Includes:      2 Source(s);       1 Source Group(s); and      36 Receptor(s)

 **The Model Assumes A Pollutant Type of:  PM.25

 **Model Set To Continue RUNning After the Setup Testing.

 **Output Options Selected:
          Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE Keyword)
          Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)

 **NOTE:  The Following Flags May Appear Following CONC Values:  c for Calm Hours
                                                                 m for Missing Hours
                                                                 b for Both Calm and Missing Hours

 **Misc. Inputs:  Base Elev. for Pot. Temp. Profile (m MSL) =    10.00 ;  Decay Coef. =    0.000     ;  Rot. Angle =     0.0
                  Emission Units = GRAMS/SEC                                ;  Emission Rate Unit Factor =   0.10000E+07
                  Output Units   = MICROGRAMS/M**3

 **Approximate Storage Requirements of Model =      3.5 MB of RAM.

 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                               ***        07/27/10
                                   *** PM25                                                                 ***        13:48:13
                                                                                                                       PAGE   2
 **MODELOPTs:  RegDFAULT CONC                                         ELEV
                                                                NODRYDPLT NOWETDPLT

                                          *** VOLUME SOURCE DATA ***
```

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
VOL1	0	0.35100E-01	365893.5	3776581.1	303.9	5.00	45.58	1.16	YES	

```
 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                               ***        07/27/10
                                   *** PM25                                                                 ***        13:48:13
                                                                                                                       PAGE   3
 **MODELOPTs:  RegDFAULT CONC                                         ELEV
                                                                NODRYDPLT NOWETDPLT

                                          *** AREA SOURCE DATA ***
```

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC /METER**2)	COORD (SW CORNER) X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	X-DIM OF AREA (METERS)	Y-DIM OF AREA (METERS)	ORIENT. OF AREA (DEG.)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
AREA1	0	0.21380E-04	365796.4	3776482.3	303.2	0.00	195.99	195.99	0.00	0.00	YES	

```
 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                               ***        07/27/10
                                   *** PM25                                                                 ***        13:48:13
                                                                                                                       PAGE   4
 **MODELOPTs:  RegDFAULT CONC                                         ELEV
                                                                NODRYDPLT NOWETDPLT

                                       *** SOURCE IDs DEFINING SOURCE GROUPS ***

 GROUP ID                                              SOURCE IDs


  ALL      AREA1   , VOL1    ,
 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                               ***        07/27/10
                                   *** PM25                                                                 ***        13:48:13
                                                                                                                       PAGE   5
 **MODELOPTs:  RegDFAULT CONC                                         ELEV
                                                                NODRYDPLT NOWETDPLT

                                         *** DISCRETE CARTESIAN RECEPTORS ***
```

(X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
(METERS)

(365205.2,	3776966.4,	375.9,	426.0,	0.0);	(365273.5,	3776942.3,	371.5,	426.0,	0.0);
(365297.5,	3776838.0,	364.5,	426.0,	0.0);	(365261.4,	3776781.8,	365.6,	426.0,	0.0);
(365241.3,	3776673.4,	365.7,	365.7,	0.0);	(365205.2,	3776528.9,	365.0,	364.9,	0.0);
(365153.1,	3776456.7,	365.0,	365.0,	0.0);	(365116.9,	3776332.3,	365.0,	365.0,	0.0);
(365121.0,	3776232.0,	365.0,	364.9,	0.0);	(365137.0,	3776115.6,	364.3,	364.2,	0.0);
(365116.9,	3775999.2,	364.0,	364.0,	0.0);	(365104.9,	3775898.9,	364.0,	364.0,	0.0);
(365133.0,	3775754.4,	364.0,	364.0,	0.0);	(365317.6,	3777247.3,	388.8,	426.0,	0.0);
(365273.5,	3777203.2,	389.4,	426.0,	0.0);	(365100.9,	3777094.8,	392.9,	426.0,	0.0);
(366493.5,	3776063.4,	333.7,	365.0,	0.0);	(366465.4,	3776183.8,	356.1,	365.0,	0.0);
(366453.3,	3776308.2,	364.4,	363.7,	0.0);	(366449.3,	3776416.6,	364.8,	364.6,	0.0);
(366397.2,	3776561.0,	365.0,	365.0,	0.0);	(366369.1,	3776685.5,	365.0,	365.0,	0.0);
(366369.1,	3776838.0,	365.0,	365.0,	0.0);	(366409.2,	3776962.4,	365.0,	365.0,	0.0);
(366457.4,	3777078.8,	365.0,	365.0,	0.0);	(366441.3,	3777195.1,	365.0,	365.0,	0.0);
(365594.5,	3777500.1,	365.0,	426.0,	0.0);	(365534.3,	3777544.3,	364.9,	426.0,	0.0);
(365646.7,	3777439.9,	365.0,	426.0,	0.0);	(365702.9,	3777419.9,	364.3,	426.0,	0.0);
(365385.8,	3777435.9,	380.9,	426.0,	0.0);	(365329.6,	3777520.2,	382.2,	426.0,	0.0);
(366272.8,	3775373.1,	284.7,	365.0,	0.0);	(366373.1,	3775401.2,	277.9,	365.0,	0.0);
(366573.8,	3775473.5,	276.5,	365.0,	0.0);	(366124.3,	3777528.2,	365.0,	365.0,	0.0);

*** AERMOD - VERSION 09292 *** *** Stone Canyon Reservoir *** 07/27/10
*** PM25 *** 13:48:13
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**MODELOPTs: RegDFAULT CONC ELEV
NODRYDPLT NOWETDPLT

*** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***
(1=YES; 0=NO)

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

NOTE: METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.

*** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
(METERS/SEC)

1.54, 3.09, 5.14, 8.23, 10.80,

*** AERMOD - VERSION 09292 *** *** Stone Canyon Reservoir *** 07/27/10
*** PM25 *** 13:48:13
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**MODELOPTs: RegDFAULT CONC ELEV
NODRYDPLT NOWETDPLT

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.SFC Met Version: 06341
Profile file: L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 0 Upper air station no.: 3190
Name: UNKNOWN Name: UNKNOWN
Year: 2005 Year: 2005

First 24 hours of scalar data

YR	MO	DY	JDY	HR	H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O LEN	Z0	BOWEN	ALBEDO	REF WS	WD	HT	REF TA	HT
05	01	01	1	01	-0.9	0.033	-9.000	-9.000	-999.	14.	3.7	0.45	1.00	1.00	0.50	321.	9.1	281.1	5.5
05	01	01	1	02	-0.9	0.033	-9.000	-9.000	-999.	14.	3.8	0.45	1.00	1.00	0.50	320.	9.1	280.8	5.5
05	01	01	1	03	-0.9	0.033	-9.000	-9.000	-999.	14.	3.7	0.45	1.00	1.00	0.50	323.	9.1	280.9	5.5
05	01	01	1	04	-1.3	0.040	-9.000	-9.000	-999.	18.	4.4	0.45	1.00	1.00	0.60	316.	9.1	280.8	5.5
05	01	01	1	05	-1.3	0.040	-9.000	-9.000	-999.	18.	4.4	0.45	1.00	1.00	0.60	322.	9.1	280.4	5.5
05	01	01	1	06	-0.3	0.020	-9.000	-9.000	-999.	6.	2.3	0.45	1.00	1.00	0.30	352.	9.1	279.9	5.5
05	01	01	1	07	-2.3	0.053	-9.000	-9.000	-999.	28.	5.8	0.45	1.00	1.00	0.80	324.	9.1	279.6	5.5
05	01	01	1	08	-1.2	0.040	-9.000	-9.000	-999.	18.	4.8	0.45	1.00	0.55	0.60	336.	9.1	280.5	5.5
05	01	01	1	09	43.0	0.243	0.490	0.005	99.	276.	-30.3	0.45	1.00	0.32	1.50	44.	9.1	283.4	5.5
05	01	01	1	10	110.6	0.339	1.374	0.005	849.	453.	-31.7	0.45	1.00	0.24	2.10	74.	9.1	285.1	5.5
05	01	01	1	11	135.3	0.321	1.653	0.010	1209.	419.	-22.2	0.45	1.00	0.21	1.90	84.	9.1	286.4	5.5
05	01	01	1	12	14.3	0.223	0.783	0.010	1212.	246.	-70.3	0.45	1.00	0.20	1.50	137.	9.1	286.8	5.5
05	01	01	1	13	27.1	0.187	0.971	0.010	1218.	186.	-21.7	0.45	1.00	0.20	1.10	111.	9.1	286.9	5.5
05	01	01	1	14	17.1	0.179	0.834	0.009	1222.	174.	-30.0	0.45	1.00	0.21	1.10	186.	9.1	286.9	5.5
05	01	01	1	15	3.7	0.172	0.499	0.009	1223.	164.	-124.8	0.45	1.00	0.24	1.20	195.	9.1	286.1	5.5
05	01	01	1	16	0.1	0.147	0.150	0.009	1223.	130.	-2871.4	0.45	1.00	0.33	1.10	182.	9.1	285.9	5.5
05	01	01	1	17	-1.7	0.047	-9.000	-9.000	-999.	31.	5.5	0.45	1.00	0.59	0.70	159.	9.1	285.5	5.5
05	01	01	1	18	-0.2	0.019	-9.000	-9.000	-999.	6.	2.9	0.45	1.00	1.00	0.28	170.	9.1	285.1	5.5
05	01	01	1	19	-0.2	0.019	-9.000	-9.000	-999.	6.	2.9	0.45	1.00	1.00	0.28	186.	9.1	284.4	5.5
05	01	01	1	20	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.45	1.00	1.00	0.00	0.	9.1	284.0	5.5
05	01	01	1	21	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.45	1.00	1.00	0.00	0.	9.1	283.9	5.5
05	01	01	1	22	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.45	1.00	1.00	0.00	0.	9.1	283.4	5.5
05	01	01	1	23	-0.2	0.019	-9.000	-9.000	-999.	6.	2.9	0.45	1.00	1.00	0.28	313.	9.1	283.4	5.5
05	01	01	1	24	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.45	1.00	1.00	0.00	0.	9.1	283.4	5.5

First hour of profile data

YR	MO	DY	HR	HEIGHT	F	WDIR	WSPD	AMB_TMP	sigmaA	sigmaW	sigmaV
05	01	01	01	5.5	0	-999.	-99.00	281.2	99.0	-99.00	-99.00
05	01	01	01	9.1	1	321.	0.50	-999.0	99.0	-99.00	-99.00

F indicates top of profile (=1) or below (=0)

*** AERMOD - VERSION 09292 *** *** Stone Canyon Reservoir *** 07/27/10
*** PM25 *** 13:48:13
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**MODELOPTs: RegDFAULT CONC ELEV
NODRYDPLT NOWETDPLT

*** THE 1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): AREA1 , VOL1 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM.25 IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
365205.23	3776966.38	11.51652	(07043024)	365273.46	3776942.30	11.67304	(07043024)

```
        365297.54   3776837.96       12.34600c (05101024)              365261.42   3776781.78       12.97751  (07090324)
        365241.35   3776673.42       12.63874  (05122624)              365205.23   3776528.94       12.87848c (06063024)
        365153.06   3776456.70       15.16607  (05020624)              365116.94   3776332.29       11.43006  (05020624)
        365120.95   3776231.96       11.25657c (06082624)              365137.01   3776115.58       10.59291c (05092124)
        365116.94   3775999.19       10.09692c (05090224)              365104.90   3775898.86       11.94393c (06102024)
        365132.99   3775754.39       11.73881c (06102024)              365317.60   3777247.31       11.52885c (05111424)
        365273.46   3777203.17        9.94625c (05111424)              365100.89   3777094.81       10.16414  (06061424)
        366493.48   3776063.40       47.24362  (06102724)              366465.39   3776183.80       45.40713c (05091724)
        366453.35   3776308.21       26.77004c (05021424)              366449.34   3776416.57       23.01697c (05090224)
        366397.17   3776561.05       20.75337  (05072724)              366369.07   3776685.46       29.35683c (05081024)
        366369.07   3776837.96       20.50523c (05082724)              366409.21   3776962.37       15.55120  (06073124)
        366457.36   3777078.76       12.16056  (06073124)              366441.31   3777195.14       11.27414c (06060724)
        365594.52   3777500.15       13.38886c (05082924)              365534.32   3777544.29       12.64741c (05090624)
        365646.69   3777439.95       16.11859c (05082924)              365702.87   3777419.88       16.31921c (05082924)
        365385.83   3777435.93       18.65329  (07050124)              365329.64   3777520.21       17.85585  (07050124)
        366272.76   3775373.13       24.11342  (06110624)              366373.09   3775401.22       18.83680  (06021324)
        366573.75   3775473.46       27.80111  (06030424)              366124.27   3777528.24        8.64865  (07070624)
 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                             ***        07/27/10
                                   *** PM25                                                               ***        13:48:13
                                                                                                                     PAGE   9
 **MODELOPTs:  RegDFAULT CONC                                               ELEV
                                                                     NODRYDPLT NOWETDPLT

                                                 *** THE SUMMARY OF HIGHEST 24-HR RESULTS ***

                                     ** CONC OF PM.25    IN MICROGRAMS/M**3                            **

                                                      DATE                                                                  NETWORK
GROUP ID                           AVERAGE CONC     (YYMMDDHH)            RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG)    OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

ALL      HIGH  1ST HIGH VALUE IS      47.24362  ON 06102724: AT (  366493.48,  3776063.40,   333.67,   365.00,    0.00)  DC


 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                             ***        07/27/10
                                   *** PM25                                                               ***        13:48:13
                                                                                                                     PAGE  10
 **MODELOPTs:  RegDFAULT CONC                                               ELEV
                                                                     NODRYDPLT NOWETDPLT

 *** Message Summary : AERMOD Model Execution ***

  --------- Summary of Total Messages --------

 A Total of           0 Fatal Error Message(s)
 A Total of           0 Warning Message(s)
 A Total of        1753 Informational Message(s)

 A Total of       26280 Hours Were Processed

 A Total of        1181 Calm Hours Identified

 A Total of         572 Missing Hours Identified (  2.18 Percent)


    ******** FATAL ERROR MESSAGES ********
               ***  NONE  ***


    ********   WARNING MESSAGES   ********
               ***  NONE  ***


    ************************************
    *** AERMOD Finishes Successfully ***
    ************************************
```

Alternative 1 Mitigated $PM_{2.5}$ Localized Emissions

```
**
****************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 6.6.0
** Lakes Environmental Software Inc.
** Date: 7/27/2010
** File: J:\Projects\LADWP Stone Canyon Reservoir Project 2008-057\Air Quality\Construction Emissions\Localized\Project\PM25\PM25MT.ADI
**
****************************************
**
**
****************************************
** AERMOD Control Pathway
****************************************
**
**
CO STARTING
   TITLEONE Stone Canyon Reservoir
   TITLETWO PM25MT
   MODELOPT DFAULT CONC NODRYDPLT NOWETDPLT
   AVERTIME 24
   URBANOPT 9862049
   POLLUTID PM.25
   RUNORNOT RUN
CO FINISHED
**
****************************************
** AERMOD Source Pathway
****************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
   LOCATION AREA1 AREA 365796.443 3776482.259 303.190
** DESCRSRC Dust
   LOCATION VOL1 VOLUME 365893.498 3776581.066 303.930
** DESCRSRC Exhaust
** Source Parameters **
   SRCPARAM AREA1 0.00002138 0.000 195.986 195.986 0.000
   SRCPARAM VOL1 0.0333 5.000 45.578 1.163
   URBANSRC AREA1
   URBANSRC VOL1
   SRCGROUP ALL
SO FINISHED
**
****************************************
** AERMOD Receptor Pathway
****************************************
**
**
RE STARTING
** DESCRREC "" ""
   DISCCART    365205.23   3776966.38  375.93  426.00
   DISCCART    365273.46   3776942.30  371.48  426.00
   DISCCART    365297.54   3776837.96  364.53  426.00
   DISCCART    365261.42   3776781.78  365.63  426.00
   DISCCART    365241.35   3776673.42  365.70  365.68
   DISCCART    365205.23   3776528.94  365.00  364.88
   DISCCART    365153.06   3776456.70  365.00  365.00
   DISCCART    365116.94   3776332.29  365.00  365.00
   DISCCART    365120.95   3776231.96  364.96  364.86
   DISCCART    365137.01   3776115.58  364.26  364.20
   DISCCART    365116.94   3775999.19  364.00  364.00
   DISCCART    365104.90   3775898.86  364.00  364.00
   DISCCART    365132.99   3775754.39  364.00  364.00
   DISCCART    365317.60   3777247.31  388.83  426.00
   DISCCART    365273.46   3777203.17  389.43  426.00
   DISCCART    365100.89   3777094.81  392.86  426.00
   DISCCART    366493.48   3776063.40  333.67  365.00
   DISCCART    366465.39   3776183.80  356.13  365.00
   DISCCART    366453.35   3776308.21  364.45  363.66
   DISCCART    366449.34   3776416.57  364.78  364.59
   DISCCART    366397.17   3776561.05  365.00  365.00
   DISCCART    366369.07   3776685.46  365.00  365.00
   DISCCART    366369.07   3776837.96  365.00  365.00
   DISCCART    366409.21   3776962.37  365.00  365.00
   DISCCART    366457.36   3777078.76  365.00  365.00
   DISCCART    366441.31   3777195.14  365.00  365.00
   DISCCART    365594.52   3777500.15  365.00  426.00
   DISCCART    365534.32   3777544.29  364.93  426.00
   DISCCART    365646.69   3777439.95  365.00  426.00
   DISCCART    365702.87   3777419.88  364.34  426.00
   DISCCART    365385.83   3777435.93  380.85  426.00
   DISCCART    365329.64   3777520.21  382.17  426.00
   DISCCART    366272.76   3775373.13  284.66  365.00
   DISCCART    366373.09   3775401.22  277.95  365.00
   DISCCART    366573.75   3775473.46  276.50  365.00
   DISCCART    366124.27   3777528.24  365.00  365.00
RE FINISHED
**
****************************************
** AERMOD Meteorology Pathway
****************************************
**
**
ME STARTING
   SURFFILE "L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.SFC"
   PROFFILE "L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.PFL"
   SURFDATA 0 2005
   UAIRDATA 3190 2005
   PROFBASE 10 METERS
ME FINISHED
**
****************************************
** AERMOD Output Pathway
****************************************
**
**
OU STARTING
```

```
   RECTABLE ALLAVE 1ST
   RECTABLE 24 1ST
** Auto-Generated Plotfiles
   PLOTFILE 24 ALL 1ST PM25MT.AD\24H1GALL.PLT
OU FINISHED

 **********************************
 *** SETUP Finishes Successfully ***
 **********************************

 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                                    ***        07/27/10
                                   *** PM25MT                                                                    ***        13:51:27
                                                                                                                            PAGE   1
 **MODELOPTs:  RegDFAULT CONC                                            ELEV
                                                               NODRYDPLT NOWETDPLT

                                         ***     MODEL SETUP OPTIONS SUMMARY       ***
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

 **Model Is Setup For Calculation of Average CONCentration Values.

   --  DEPOSITION LOGIC  --
 **NO GAS DEPOSITION Data Provided.
 **NO PARTICLE DEPOSITION Data Provided.
 **Model Uses NO DRY DEPLETION.  DRYDPLT  =  F
 **Model Uses NO WET DEPLETION.  WETDPLT  =  F

 **Model Uses URBAN Dispersion Algorithm for the SBL for     2 Source(s),
   for Total of    1 Urban Area(s):
   Urban Population =   9862049.0 ;  Urban Roughness Length =  1.000 m

 **Model Uses Regulatory DEFAULT Options:
         1. Stack-tip Downwash.
         2. Model Accounts for ELEVated Terrain Effects.
         3. Use Calms Processing Routine.
         4. Use Missing Data Processing Routine.
         5. No Exponential Decay for URBAN/Non-SO2.
         6. Urban Roughness Length of 1.0 Meter Assumed.

 **Model Assumes No FLAGPOLE Receptor Heights.

 **Model Calculates  1 Short Term Average(s) of:  24-HR

 **This Run Includes:      2 Source(s);       1 Source Group(s); and      36 Receptor(s)

 **The Model Assumes A Pollutant Type of:  PM.25

 **Model Set To Continue RUNning After the Setup Testing.

 **Output Options Selected:
          Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE Keyword)
          Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)

 **NOTE:  The Following Flags May Appear Following CONC Values:  c for Calm Hours
                                                                 m for Missing Hours
                                                                 b for Both Calm and Missing Hours

 **Misc. Inputs:  Base Elev. for Pot. Temp. Profile (m MSL) =    10.00 ;  Decay Coef. =    0.000     ; Rot. Angle =     0.0
                  Emission Units = GRAMS/SEC                                ;  Emission Rate Unit Factor =   0.10000E+07
                  Output Units   = MICROGRAMS/M**3

 **Approximate Storage Requirements of Model =      3.5 MB of RAM.

 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                                    ***        07/27/10
                                   *** PM25MT                                                                    ***        13:51:27
                                                                                                                            PAGE   2
 **MODELOPTs:  RegDFAULT CONC                                            ELEV
                                                               NODRYDPLT NOWETDPLT


                                               *** VOLUME SOURCE DATA ***

              NUMBER EMISSION RATE                      BASE    RELEASE    INIT.    INIT.   URBAN  EMISSION RATE
     SOURCE    PART.  (GRAMS/SEC)     X         Y      ELEV.   HEIGHT      SY       SZ     SOURCE  SCALAR VARY
       ID      CATS.              (METERS) (METERS) (METERS) (METERS) (METERS) (METERS)              BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

   VOL1          0   0.33300E-01  365893.5 3776581.1   303.9     5.00    45.58     1.16     YES
 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                                    ***        07/27/10
                                   *** PM25MT                                                                    ***        13:51:27
                                                                                                                            PAGE   3
 **MODELOPTs:  RegDFAULT CONC                                            ELEV
                                                               NODRYDPLT NOWETDPLT


                                               *** AREA SOURCE DATA ***

              NUMBER EMISSION RATE  COORD (SW CORNER)  BASE     RELEASE  X-DIM     Y-DIM    ORIENT.    INIT.   URBAN  EMISSION RATE
    SOURCE     PART.  (GRAMS/SEC       X         Y      ELEV.    HEIGHT  OF AREA   OF AREA   OF AREA     SZ     SOURCE  SCALAR VARY
      ID       CATS.   /METER**2)   (METERS) (METERS) (METERS) (METERS) (METERS)  (METERS)   (DEG.)  (METERS)              BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

   AREA1         0   0.21380E-04  365796.4 3776482.3   303.2     0.00    195.99    195.99      0.00     0.00    YES
 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                                    ***        07/27/10
                                   *** PM25MT                                                                    ***        13:51:27
                                                                                                                            PAGE   4
 **MODELOPTs:  RegDFAULT CONC                                            ELEV
                                                               NODRYDPLT NOWETDPLT


                                        *** SOURCE IDs DEFINING SOURCE GROUPS ***

 GROUP ID                                              SOURCE IDs



  ALL       AREA1    , VOL1    ,
 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                                    ***        07/27/10
                                   *** PM25MT                                                                    ***        13:51:27
                                                                                                                            PAGE   5
 **MODELOPTs:  RegDFAULT CONC                                            ELEV
                                                               NODRYDPLT NOWETDPLT

                                          *** DISCRETE CARTESIAN RECEPTORS ***
```

```
                                           (X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
                                                          (METERS)

     ( 365205.2, 3776966.4,     375.9,     426.0,       0.0);        ( 365273.5, 3776942.3,     371.5,     426.0,       0.0);
     ( 365297.5, 3776838.0,     364.5,     426.0,       0.0);        ( 365261.4, 3776781.8,     365.6,     426.0,       0.0);
     ( 365241.3, 3776673.4,     365.7,     365.7,       0.0);        ( 365205.2, 3776528.9,     365.0,     364.9,       0.0);
     ( 365153.1, 3776456.7,     365.0,     365.0,       0.0);        ( 365116.9, 3776332.3,     365.0,     365.0,       0.0);
     ( 365121.0, 3776232.0,     365.0,     364.9,       0.0);        ( 365137.0, 3776115.6,     364.3,     364.2,       0.0);
     ( 365116.9, 3775999.2,     364.0,     364.0,       0.0);        ( 365104.9, 3775898.9,     364.0,     364.0,       0.0);
     ( 365133.0, 3775754.4,     364.0,     364.0,       0.0);        ( 365317.6, 3777247.3,     388.8,     426.0,       0.0);
     ( 365273.5, 3777203.2,     389.4,     426.0,       0.0);        ( 365100.9, 3777094.8,     392.9,     426.0,       0.0);
     ( 366493.5, 3776063.4,     333.7,     365.0,       0.0);        ( 366465.4, 3776183.8,     356.1,     365.0,       0.0);
     ( 366453.3, 3776308.2,     364.4,     363.7,       0.0);        ( 366449.3, 3776416.6,     364.8,     364.6,       0.0);
     ( 366397.2, 3776561.0,     365.0,     365.0,       0.0);        ( 366369.1, 3776685.5,     365.0,     365.0,       0.0);
     ( 366369.1, 3776838.0,     365.0,     365.0,       0.0);        ( 366409.2, 3776962.4,     365.0,     365.0,       0.0);
     ( 366457.4, 3777078.8,     365.0,     365.0,       0.0);        ( 366441.3, 3777195.1,     365.0,     365.0,       0.0);
     ( 365594.5, 3777500.1,     365.0,     426.0,       0.0);        ( 365534.3, 3777544.3,     364.9,     426.0,       0.0);
     ( 365646.7, 3777439.9,     365.0,     426.0,       0.0);        ( 365702.9, 3777419.9,     364.3,     426.0,       0.0);
     ( 365385.8, 3777435.9,     380.9,     426.0,       0.0);        ( 365329.6, 3777520.2,     382.2,     426.0,       0.0);
     ( 366272.8, 3775373.1,     284.7,     365.0,       0.0);        ( 366373.1, 3775401.2,     277.9,     365.0,       0.0);
     ( 366573.8, 3775473.5,     276.5,     365.0,       0.0);        ( 366124.3, 3777528.2,     365.0,     365.0,       0.0);
*** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                                ***        07/27/10
                                  *** PM25MT                                                                ***        13:51:27
                                                                                                                       PAGE   6
**MODELOPTs:  RegDFAULT CONC                                                   ELEV
                                                                        NODRYDPLT NOWETDPLT

                                            *** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***
                                                               (1=YES; 0=NO)

           1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1

               NOTE:  METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.


                                  *** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
                                                          (METERS/SEC)

                                                 1.54,   3.09,   5.14,   8.23,  10.80,
*** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                                ***        07/27/10
                                  *** PM25MT                                                                ***        13:51:27
                                                                                                                       PAGE   7
**MODELOPTs:  RegDFAULT CONC                                                   ELEV
                                                                        NODRYDPLT NOWETDPLT

                                       *** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

  Surface file:   L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.SFC    Met Version:  06341
  Profile file:   L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.PFL
  Surface format: FREE
  Profile format: FREE
  Surface station no.:       0                 Upper air station no.:     3190
                Name: UNKNOWN                                   Name: UNKNOWN
                Year:   2005                                    Year:   2005

First 24 hours of scalar data
YR MO DY JDY HR     H0     U*     W*  DT/DZ ZICNV ZIMCH  M-O LEN    Z0  BOWEN ALBEDO  REF WS   WD     HT  REF TA     HT
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
05 01 01   1 01   -0.9  0.033 -9.000 -9.000 -999.   14.      3.7  0.45   1.00   1.00    0.50  321.    9.1  281.1    5.5
05 01 01   1 02   -0.9  0.033 -9.000 -9.000 -999.   14.      3.8  0.45   1.00   1.00    0.50  320.    9.1  280.8    5.5
05 01 01   1 03   -0.9  0.033 -9.000 -9.000 -999.   14.      3.7  0.45   1.00   1.00    0.50  323.    9.1  280.9    5.5
05 01 01   1 04   -1.3  0.040 -9.000 -9.000 -999.   18.      4.4  0.45   1.00   1.00    0.60  316.    9.1  280.8    5.5
05 01 01   1 05   -1.3  0.040 -9.000 -9.000 -999.   18.      4.4  0.45   1.00   1.00    0.60  322.    9.1  280.4    5.5
05 01 01   1 06   -0.3  0.020 -9.000 -9.000 -999.    6.      2.3  0.45   1.00   1.00    0.30  352.    9.1  279.9    5.5
05 01 01   1 07   -2.3  0.053 -9.000 -9.000 -999.   28.      5.8  0.45   1.00   1.00    0.80  324.    9.1  279.6    5.5
05 01 01   1 08   -1.2  0.040 -9.000 -9.000 -999.   18.      4.8  0.45   1.00   0.55    0.60  336.    9.1  280.5    5.5
05 01 01   1 09   43.0  0.243  0.490  0.005   99.  276.    -30.3  0.45   1.00   0.32    1.50   44.    9.1  283.4    5.5
05 01 01   1 10  110.6  0.339  1.374  0.005  849.  453.    -31.7  0.45   1.00   0.24    2.10   74.    9.1  285.1    5.5
05 01 01   1 11  135.3  0.321  1.653  0.010 1209.  419.    -22.2  0.45   1.00   0.21    1.90   84.    9.1  286.4    5.5
05 01 01   1 12   14.3  0.223  0.783  0.010 1212.  246.    -70.3  0.45   1.00   0.20    1.50  137.    9.1  286.8    5.5
05 01 01   1 13   27.1  0.187  0.971  0.010 1218.  186.    -21.7  0.45   1.00   0.20    1.10  111.    9.1  286.9    5.5
05 01 01   1 14   17.1  0.179  0.834  0.009 1222.  174.    -30.0  0.45   1.00   0.21    1.10  186.    9.1  286.9    5.5
05 01 01   1 15    3.7  0.172  0.499  0.009 1223.  164.   -124.8  0.45   1.00   0.24    1.20  195.    9.1  286.1    5.5
05 01 01   1 16    0.1  0.147  0.150  0.009 1223.  130.  -2871.4  0.45   1.00   0.33    1.10  182.    9.1  285.9    5.5
05 01 01   1 17   -1.7  0.047 -9.000 -9.000 -999.   31.      5.5  0.45   1.00   0.59    0.70  159.    9.1  285.5    5.5
05 01 01   1 18   -0.2  0.019 -9.000 -9.000 -999.    6.      2.9  0.45   1.00   1.00    0.28  170.    9.1  285.1    5.5
05 01 01   1 19   -0.2  0.019 -9.000 -9.000 -999.    6.      2.9  0.45   1.00   1.00    0.28  186.    9.1  284.4    5.5
05 01 01   1 20 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.45   1.00   1.00    0.00    0.    9.1  284.0    5.5
05 01 01   1 21 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.45   1.00   1.00    0.00    0.    9.1  283.9    5.5
05 01 01   1 22 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.45   1.00   1.00    0.00    0.    9.1  283.4    5.5
05 01 01   1 23   -0.2  0.019 -9.000 -9.000 -999.    6.      2.9  0.45   1.00   1.00    0.28  313.    9.1  283.4    5.5
05 01 01   1 24 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.45   1.00   1.00    0.00    0.    9.1  283.4    5.5


First hour of profile data
YR MO DY HR HEIGHT F  WDIR    WSPD AMB_TMP sigmaA  sigmaW  sigmaV
05 01 01 01    5.5 0 -999.  -99.00   281.2   99.0  -99.00  -99.00
05 01 01 01    9.1 1  321.    0.50  -999.0   99.0  -99.00  -99.00

F indicates top of profile (=1) or below (=0)
*** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                                ***        07/27/10
                                  *** PM25MT                                                                ***        13:51:27
                                                                                                                       PAGE   8
**MODELOPTs:  RegDFAULT CONC                                                   ELEV
                                                                        NODRYDPLT NOWETDPLT

                              *** THE   1ST HIGHEST 24-HR AVERAGE CONCENTRATION   VALUES FOR SOURCE GROUP:  ALL      ***
                                  INCLUDING SOURCE(S):      AREA1   , VOL1    ,

                                                *** DISCRETE CARTESIAN RECEPTOR POINTS ***

                                        ** CONC OF PM.25    IN MICROGRAMS/M**3                                **

     X-COORD (M)  Y-COORD (M)        CONC     (YYMMDDHH)               X-COORD (M)  Y-COORD (M)        CONC     (YYMMDDHH)
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
       365205.23   3776966.38       11.50340  (07043024)               365273.46   3776942.30       11.65919  (07043024)
```

```
       365297.54   3776837.96       12.33748c (05101024)             365261.42   3776781.78       12.96293  (07090324)
       365241.35   3776673.42       12.61932  (05122624)             365205.23   3776528.94       12.86451c (06063024)
       365153.06   3776456.70       15.14336  (05020624)             365116.94   3776332.29       11.41248  (05020624)
       365120.95   3776231.96       11.24856c (06082624)             365137.01   3776115.58       10.58524c (05092124)
       365116.94   3775999.19       10.08562c (05090224)             365104.90   3775898.86       11.93870c (06102024)
       365132.99   3775754.39       11.73364c (06102024)             365317.60   3777247.31       11.51999c (05111424)
       365273.46   3777203.17        9.93616c (05111424)             365100.89   3777094.81       10.15281  (06061424)
       366493.48   3776063.40       47.21839  (06102724)             366465.39   3776183.80       45.39583c (05091724)
       366453.35   3776308.21       26.75492c (05021424)             366449.34   3776416.57       23.00156c (05090224)
       366397.17   3776561.05       20.73410  (05072724)             366369.07   3776685.46       29.33163c (05081024)
       366369.07   3776837.96       20.49638c (05082724)             366409.21   3776962.37       15.53047  (06073124)
       366457.36   3777078.76       12.14129  (06073124)             366441.31   3777195.14       11.25906c (06060724)
       365594.52   3777500.15       13.38269c (05082924)             365534.32   3777544.29       12.63356c (05090624)
       365646.69   3777439.95       16.11169c (05082924)             365702.87   3777419.88       16.31175c (05082924)
       365385.83   3777435.93       18.63850  (07050124)             365329.64   3777520.21       17.84241  (07050124)
       366272.76   3775373.13       24.10636  (06110624)             366373.09   3775401.22       18.82748  (06021324)
       366573.75   3775473.46       27.78757  (06030424)             366124.27   3777528.24        8.63793  (07070624)
```



```
                                          *** THE SUMMARY OF HIGHEST 24-HR RESULTS ***


                                 ** CONC OF PM.25    IN MICROGRAMS/M**3                          **

                                                    DATE                                                              NETWORK
GROUP ID                          AVERAGE CONC     (YYMMDDHH)            RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG)    OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

ALL      HIGH  1ST HIGH VALUE IS      47.21839  ON 06102724: AT (  366493.48,  3776063.40,   333.67,   365.00,    0.00)  DC


 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
```



```
 *** Message Summary : AERMOD Model Execution ***

  --------- Summary of Total Messages --------

 A Total of           0 Fatal Error Message(s)
 A Total of           0 Warning Message(s)
 A Total of        1753 Informational Message(s)

 A Total of       26280 Hours Were Processed

 A Total of        1181 Calm Hours Identified

 A Total of         572 Missing Hours Identified (  2.18 Percent)


    ******** FATAL ERROR MESSAGES ********
               ***  NONE  ***


    ********   WARNING MESSAGES   ********
               ***  NONE  ***


    ************************************
    *** AERMOD Finishes Successfully ***
    ************************************
```

Alternative 2 CO Localized Emissions

```
**
****************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 6.6.0
** Lakes Environmental Software Inc.
** Date: 7/28/2010
** File: J:\Projects\LADWP Stone Canyon Reservoir Project 2008-057\Air Quality\Construction Emissions\Localized\Alt2\CO\CO.ADI
**
****************************************
**
**
****************************************
** AERMOD Control Pathway
****************************************
**
**
CO STARTING
   TITLEONE Stone Canyon Reservoir
   TITLETWO CO
   MODELOPT DFAULT CONC NODRYDPLT NOWETDPLT
   AVERTIME 1 8
   URBANOPT 9862049
   POLLUTID CO
   RUNORNOT RUN
CO FINISHED
**
****************************************
** AERMOD Source Pathway
****************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
   LOCATION VOL1 VOLUME 365893.498 3776581.066 303.930
** DESCRSRC Exhaust
** Source Parameters **
   SRCPARAM VOL1 1.055 5.000 45.578 1.163
   URBANSRC VOL1
   CONCUNIT 873.2 GRAMS/SEC PPM
   SRCGROUP ALL
SO FINISHED
**
****************************************
** AERMOD Receptor Pathway
****************************************
**
**
RE STARTING
** DESCRREC "" ""
   DISCCART    365205.23   3776966.38  375.93  426.00
   DISCCART    365273.46   3776942.30  371.48  426.00
   DISCCART    365297.54   3776837.96  364.53  426.00
   DISCCART    365261.42   3776781.78  365.63  426.00
   DISCCART    365241.35   3776673.42  365.70  365.68
   DISCCART    365205.23   3776528.94  365.00  364.88
   DISCCART    365153.06   3776456.70  365.00  365.00
   DISCCART    365116.94   3776332.29  365.00  365.00
   DISCCART    365120.95   3776231.96  364.96  364.86
   DISCCART    365137.01   3776115.58  364.26  364.20
   DISCCART    365116.94   3775999.19  364.00  364.00
   DISCCART    365104.90   3775898.86  364.00  364.00
   DISCCART    365132.99   3775754.39  364.00  364.00
   DISCCART    365317.60   3777247.31  388.83  426.00
   DISCCART    365273.46   3777203.17  389.43  426.00
   DISCCART    365100.89   3777094.81  392.86  426.00
   DISCCART    366493.48   3776063.40  333.67  365.00
   DISCCART    366465.39   3776183.80  356.13  365.00
   DISCCART    366453.35   3776308.21  364.45  363.66
   DISCCART    366449.34   3776416.57  364.78  364.59
   DISCCART    366397.17   3776561.05  365.00  365.00
   DISCCART    366369.07   3776685.46  365.00  365.00
   DISCCART    366369.07   3776837.96  365.00  365.00
   DISCCART    366409.21   3776962.37  365.00  365.00
   DISCCART    366457.36   3777078.76  365.00  365.00
   DISCCART    366441.31   3777195.14  365.00  365.00
   DISCCART    365594.52   3777500.15  365.00  426.00
   DISCCART    365534.32   3777544.29  364.93  426.00
   DISCCART    365646.69   3777439.95  365.00  426.00
   DISCCART    365702.87   3777419.88  364.34  426.00
   DISCCART    365385.83   3777435.93  380.85  426.00
   DISCCART    365329.64   3777520.21  382.17  426.00
   DISCCART    366272.76   3775373.13  284.66  365.00
   DISCCART    366373.09   3775401.22  277.95  365.00
   DISCCART    366573.75   3775473.46  276.50  365.00
   DISCCART    366124.27   3777528.24  365.00  365.00
RE FINISHED
**
****************************************
** AERMOD Meteorology Pathway
****************************************
**
**
ME STARTING
   SURFFILE "L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.SFC"
   PROFFILE "L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.PFL"
   SURFDATA 0 2005
   UAIRDATA 3190 2005
   PROFBASE 10 METERS
ME FINISHED
**
****************************************
** AERMOD Output Pathway
****************************************
**
**
OU STARTING
   RECTABLE ALLAVE 1ST
   RECTABLE 1 1ST
   RECTABLE 8 1ST
```

```
** Auto-Generated Plotfiles
   PLOTFILE 1 ALL 1ST CO.AD\01H1GALL.PLT
   PLOTFILE 8 ALL 1ST CO.AD\08H1GALL.PLT
OU FINISHED

 ***********************************
 *** SETUP Finishes Successfully ***
 ***********************************

 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                                ***        07/28/10
                                   *** CO                                                                    ***        09:27:10
                                                                                                                        PAGE   1
 **MODELOPTs:  RegDFAULT CONC                                                   ELEV
                                                                      NODRYDPLT NOWETDPLT

                                            ***     MODEL SETUP OPTIONS SUMMARY       ***
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

 **Model Is Setup For Calculation of Average CONCentration Values.

   --  DEPOSITION LOGIC  --
 **NO GAS DEPOSITION Data Provided.
 **NO PARTICLE DEPOSITION Data Provided.
 **Model Uses NO DRY DEPLETION.  DRYDPLT  =  F
 **Model Uses NO WET DEPLETION.  WETDPLT  =  F

 **Model Uses URBAN Dispersion Algorithm for the SBL for     1 Source(s),
   for Total of    1 Urban Area(s):
   Urban Population =   9862049.0 ;  Urban Roughness Length =  1.000 m

 **Model Uses Regulatory DEFAULT Options:
         1. Stack-tip Downwash.
         2. Model Accounts for ELEVated Terrain Effects.
         3. Use Calms Processing Routine.
         4. Use Missing Data Processing Routine.
         5. No Exponential Decay for URBAN/Non-SO2.
         6. Urban Roughness Length of 1.0 Meter Assumed.

 **Model Assumes No FLAGPOLE Receptor Heights.

 **Model Calculates  2 Short Term Average(s) of:   1-HR   8-HR

 **This Run Includes:      1 Source(s);       1 Source Group(s); and      36 Receptor(s)

 **The Model Assumes A Pollutant Type of:  CO

 **Model Set To Continue RUNning After the Setup Testing.

 **Output Options Selected:
          Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE Keyword)
          Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)

 **NOTE:  The Following Flags May Appear Following CONC Values:  c for Calm Hours
                                                                 m for Missing Hours
                                                                 b for Both Calm and Missing Hours

 **Misc. Inputs:  Base Elev. for Pot. Temp. Profile (m MSL) =    10.00 ;  Decay Coef. =    0.000     ; Rot. Angle =     0.0
                  Emission Units = GRAMS/SEC                                ;  Emission Rate Unit Factor =    873.20
                  Output Units   = PPM

 **Approximate Storage Requirements of Model =      3.5 MB of RAM.

 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                                ***        07/28/10
                                   *** CO                                                                    ***        09:27:10
                                                                                                                        PAGE   2
 **MODELOPTs:  RegDFAULT CONC                                                   ELEV
                                                                      NODRYDPLT NOWETDPLT


                                                  *** VOLUME SOURCE DATA ***

            NUMBER EMISSION RATE                      BASE    RELEASE    INIT.    INIT.   URBAN  EMISSION RATE
    SOURCE   PART. (USER UNITS)     X        Y       ELEV.   HEIGHT     SY       SZ     SOURCE  SCALAR VARY
     ID      CATS.              (METERS) (METERS) (METERS) (METERS) (METERS) (METERS)              BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

   VOL1         0  0.10550E+01  365893.5 3776581.1   303.9     5.00    45.58     1.16     YES
 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                                ***        07/28/10
                                   *** CO                                                                    ***        09:27:10
                                                                                                                        PAGE   3
 **MODELOPTs:  RegDFAULT CONC                                                   ELEV
                                                                      NODRYDPLT NOWETDPLT


                                           *** SOURCE IDs DEFINING SOURCE GROUPS ***

 GROUP ID                                              SOURCE IDs



  ALL       VOL1     ,
 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                                ***        07/28/10
                                   *** CO                                                                    ***        09:27:10
                                                                                                                        PAGE   4
 **MODELOPTs:  RegDFAULT CONC                                                   ELEV
                                                                      NODRYDPLT NOWETDPLT

                                             *** DISCRETE CARTESIAN RECEPTORS ***
                                           (X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
                                                            (METERS)

     ( 365205.2, 3776966.4,      375.9,      426.0,       0.0);         ( 365273.5, 3776942.3,      371.5,      426.0,       0.0);
     ( 365297.5, 3776838.0,      364.5,      426.0,       0.0);         ( 365261.4, 3776781.8,      365.6,      426.0,       0.0);
     ( 365241.3, 3776673.4,      365.7,      365.7,       0.0);         ( 365205.2, 3776528.9,      365.0,      364.9,       0.0);
     ( 365153.1, 3776456.7,      365.0,      365.0,       0.0);         ( 365116.9, 3776332.3,      365.0,      365.0,       0.0);
     ( 365121.0, 3776232.0,      365.0,      364.9,       0.0);         ( 365137.0, 3776115.6,      364.3,      364.2,       0.0);
     ( 365116.9, 3775999.2,      364.0,      364.0,       0.0);         ( 365104.9, 3775898.9,      364.0,      364.0,       0.0);
     ( 365133.0, 3775754.4,      364.0,      364.0,       0.0);         ( 365317.6, 3777247.3,      388.8,      426.0,       0.0);
     ( 365273.5, 3777203.2,      389.4,      426.0,       0.0);         ( 365100.9, 3777094.8,      392.9,      426.0,       0.0);
     ( 366493.5, 3776063.4,      333.7,      365.0,       0.0);         ( 366465.4, 3776183.8,      356.1,      365.0,       0.0);
     ( 366453.3, 3776308.2,      364.4,      363.7,       0.0);         ( 366449.3, 3776416.6,      364.8,      364.6,       0.0);
     ( 366397.2, 3776561.0,      365.0,      365.0,       0.0);         ( 366369.1, 3776685.5,      365.0,      365.0,       0.0);
     ( 366369.1, 3776838.0,      365.0,      365.0,       0.0);         ( 366409.2, 3776962.4,      365.0,      365.0,       0.0);
     ( 366457.4, 3777078.8,      365.0,      365.0,       0.0);         ( 366441.3, 3777195.1,      365.0,      365.0,       0.0);
```

(365594.5, 3777500.1,	365.0,	426.0,	0.0);	
(365646.7, 3777439.9,	365.0,	426.0,	0.0);	
(365385.8, 3777435.9,	380.9,	426.0,	0.0);	
(366272.8, 3775373.1,	284.7,	365.0,	0.0);	
(366573.8, 3775473.5,	276.5,	365.0,	0.0);	
(365534.3, 3777544.3,	364.9,	426.0,	0.0);	
(365702.9, 3777419.9,	364.3,	426.0,	0.0);	
(365329.6, 3777520.2,	382.2,	426.0,	0.0);	
(366373.1, 3775401.2,	277.9,	365.0,	0.0);	
(366124.3, 3777528.2,	365.0,	365.0,	0.0);	

*** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***
(1=YES; 0=NO)

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

NOTE: METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.

*** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
(METERS/SEC)

1.54, 3.09, 5.14, 8.23, 10.80,

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.SFC Met Version: 06341
Profile file: L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 0 Upper air station no.: 3190
Name: UNKNOWN Name: UNKNOWN
Year: 2005 Year: 2005

First 24 hours of scalar data

YR	MO	DY	JDY	HR	H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O LEN	Z0	BOWEN	ALBEDO	REF WS	WD	HT	REF TA	HT
05	01	01	1	01	-0.9	0.033	-9.000	-9.000	-999.	14.	3.7	0.45	1.00	1.00	0.50	321.	9.1	281.1	5.5
05	01	01	1	02	-0.9	0.033	-9.000	-9.000	-999.	14.	3.8	0.45	1.00	1.00	0.50	320.	9.1	280.8	5.5
05	01	01	1	03	-0.9	0.033	-9.000	-9.000	-999.	14.	3.7	0.45	1.00	1.00	0.50	323.	9.1	280.9	5.5
05	01	01	1	04	-1.3	0.040	-9.000	-9.000	-999.	18.	4.4	0.45	1.00	1.00	0.60	316.	9.1	280.8	5.5
05	01	01	1	05	-1.3	0.040	-9.000	-9.000	-999.	18.	4.4	0.45	1.00	1.00	0.60	322.	9.1	280.4	5.5
05	01	01	1	06	-0.3	0.020	-9.000	-9.000	-999.	6.	2.3	0.45	1.00	1.00	0.30	352.	9.1	279.9	5.5
05	01	01	1	07	-2.3	0.053	-9.000	-9.000	-999.	28.	5.8	0.45	1.00	1.00	0.80	324.	9.1	279.6	5.5
05	01	01	1	08	-1.2	0.040	-9.000	-9.000	-999.	18.	4.8	0.45	1.00	0.55	0.60	336.	9.1	280.5	5.5
05	01	01	1	09	43.0	0.243	0.490	0.005	99.	276.	-30.3	0.45	1.00	0.32	1.50	44.	9.1	283.4	5.5
05	01	01	1	10	110.6	0.339	1.374	0.005	849.	453.	-31.7	0.45	1.00	0.24	2.10	74.	9.1	285.1	5.5
05	01	01	1	11	135.3	0.321	1.653	0.010	1209.	419.	-22.2	0.45	1.00	0.21	1.90	84.	9.1	286.4	5.5
05	01	01	1	12	14.3	0.223	0.783	0.010	1212.	246.	-70.3	0.45	1.00	0.20	1.50	137.	9.1	286.8	5.5
05	01	01	1	13	27.1	0.187	0.971	0.010	1218.	186.	-21.7	0.45	1.00	0.20	1.10	111.	9.1	286.9	5.5
05	01	01	1	14	17.1	0.179	0.834	0.009	1222.	174.	-30.0	0.45	1.00	0.21	1.10	186.	9.1	286.9	5.5
05	01	01	1	15	3.7	0.172	0.499	0.009	1223.	164.	-124.8	0.45	1.00	0.24	1.20	195.	9.1	286.1	5.5
05	01	01	1	16	0.1	0.147	0.150	0.009	1223.	130.	-2871.4	0.45	1.00	0.33	1.10	182.	9.1	285.9	5.5
05	01	01	1	17	-1.7	0.047	-9.000	-9.000	-999.	31.	5.5	0.45	1.00	0.59	0.70	159.	9.1	285.5	5.5
05	01	01	1	18	-0.2	0.019	-9.000	-9.000	-999.	6.	2.9	0.45	1.00	1.00	0.28	170.	9.1	285.1	5.5
05	01	01	1	19	-0.2	0.019	-9.000	-9.000	-999.	6.	2.9	0.45	1.00	1.00	0.28	186.	9.1	284.4	5.5
05	01	01	1	20	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.45	1.00	1.00	0.00	0.	9.1	284.0	5.5
05	01	01	1	21	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.45	1.00	1.00	0.00	0.	9.1	283.9	5.5
05	01	01	1	22	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.45	1.00	1.00	0.00	0.	9.1	283.4	5.5
05	01	01	1	23	-0.2	0.019	-9.000	-9.000	-999.	6.	2.9	0.45	1.00	1.00	0.28	313.	9.1	283.4	5.5
05	01	01	1	24	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.45	1.00	1.00	0.00	0.	9.1	283.4	5.5

First hour of profile data

YR	MO	DY	HR	HEIGHT	F	WDIR	WSPD	AMB_TMP	sigmaA	sigmaW	sigmaV
05	01	01	01	5.5	0	-999.	-99.00	281.2	99.0	-99.00	-99.00
05	01	01	01	9.1	1	321.	0.50	-999.0	99.0	-99.00	-99.00

F indicates top of profile (=1) or below (=0)

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): VOL1 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF CO IN PPM **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
365205.23	3776966.38	0.12396	(07043007)	365273.46	3776942.30	0.12912	(07043007)
365297.54	3776837.96	0.10622	(07043007)	365261.42	3776781.78	0.09412	(06082807)
365241.35	3776673.42	0.13622	(06082207)	365205.23	3776528.94	0.07957	(06121509)
365153.06	3776456.70	0.08812	(07032008)	365116.94	3776332.29	0.06495	(05052707)
365120.95	3776231.96	0.07762	(05121209)	365137.01	3776115.58	0.09347	(05090207)
365116.94	3775999.19	0.10871	(05090207)	365104.90	3775898.86	0.10485	(05103108)
365132.99	3775754.39	0.06947	(05121809)	365317.60	3777247.31	0.06758	(05083108)
365273.46	3777203.17	0.10486	(06042607)	365100.89	3777094.81	0.09293	(07043007)
366493.48	3776063.40	0.15268	(07060207)	366465.39	3776183.80	0.13489	(05040607)
366453.35	3776308.21	0.13619	(05040607)	366449.34	3776416.57	0.12534	(05101708)
366397.17	3776561.05	0.17066	(05101708)	366369.07	3776685.46	0.08751	(06080207)
366369.07	3776837.96	0.10088	(05041307)	366409.21	3776962.37	0.07884	(05071607)
366457.36	3777078.76	0.07195	(05050607)	366441.31	3777195.14	0.07911	(06042107)
365594.52	3777500.15	0.06258	(05120109)	365534.32	3777544.29	0.07353	(05120109)
365646.69	3777439.95	0.05710	(05090608)	365702.87	3777419.88	0.05492	(05102308)
365385.83	3777435.93	0.08475	(07050107)	365329.64	3777520.21	0.07951	(07050107)
366272.76	3775373.13	0.08220	(06041807)	366373.09	3775401.22	0.09786	(06041807)

366573.75	3775473.46	0.09528	(06030408)	366124.27	3777528.24	0.10023	(06082007)

*** AERMOD - VERSION 09292 *** *** Stone Canyon Reservoir *** 07/28/10
*** CO *** 09:27:10
PAGE 8

**MODELOPTs: RegDFAULT CONC ELEV
NODRYDPLT NOWETDPLT

*** THE 1ST HIGHEST 8-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): VOL1 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF CO IN PPM **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
365205.23	3776966.38	0.02186	(05070908)	365273.46	3776942.30	0.02313	(05070908)
365297.54	3776837.96	0.02714	(05070908)	365261.42	3776781.78	0.02054	(06100908)
365241.35	3776673.42	0.02647c	(06082208)	365205.23	3776528.94	0.02218	(06041108)
365153.06	3776456.70	0.02188	(06041108)	365116.94	3776332.29	0.01976	(05110808)
365120.95	3776231.96	0.01674c	(05071508)	365137.01	3776115.58	0.01550c	(05090208)
365116.94	3775999.19	0.01744c	(05090208)	365104.90	3775898.86	0.01629c	(07031208)
365132.99	3775754.39	0.01334	(05121816)	365317.60	3777247.31	0.01300	(06081824)
365273.46	3777203.17	0.01682c	(06042608)	365100.89	3777094.81	0.01410	(07043008)
366493.48	3776063.40	0.03905	(07123008)	366465.39	3776183.80	0.02773	(07123008)
366453.35	3776308.21	0.03320	(07121008)	366449.34	3776416.57	0.02487	(05012908)
366397.17	3776561.05	0.02917	(05072708)	366369.07	3776685.46	0.02725	(06062308)
366369.07	3776837.96	0.03543	(07110324)	366409.21	3776962.37	0.02776c	(05012524)
366457.36	3777078.76	0.02480	(06073024)	366441.31	3777195.14	0.02203	(05102224)
365594.52	3777500.15	0.01475	(07071424)	365534.32	3777544.29	0.01481	(07071424)
365646.69	3777439.95	0.01540c	(06082924)	365702.87	3777419.88	0.01860c	(06072108)
365385.83	3777435.93	0.01306	(05061508)	365329.64	3777520.21	0.01174	(05061508)
366272.76	3775373.13	0.01405	(06041808)	366373.09	3775401.22	0.01583	(06041808)
366573.75	3775473.46	0.01846	(06030408)	366124.27	3777528.24	0.01331	(07080208)

*** AERMOD - VERSION 09292 *** *** Stone Canyon Reservoir *** 07/28/10
*** CO *** 09:27:10
PAGE 9

**MODELOPTs: RegDFAULT CONC ELEV
NODRYDPLT NOWETDPLT

*** THE SUMMARY OF HIGHEST 1-HR RESULTS ***

** CONC OF CO IN PPM **

GROUP ID		AVERAGE CONC	DATE (YYMMDDHH)	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	NETWORK GRID-ID
ALL	HIGH 1ST HIGH VALUE IS	0.17066	ON 05101708:	AT (366397.17, 3776561.05, 365.00, 365.00, 0.00)	DC	

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

*** AERMOD - VERSION 09292 *** *** Stone Canyon Reservoir *** 07/28/10
*** CO *** 09:27:10
PAGE 10

**MODELOPTs: RegDFAULT CONC ELEV
NODRYDPLT NOWETDPLT

*** THE SUMMARY OF HIGHEST 8-HR RESULTS ***

** CONC OF CO IN PPM **

GROUP ID		AVERAGE CONC	DATE (YYMMDDHH)	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	NETWORK GRID-ID
ALL	HIGH 1ST HIGH VALUE IS	0.03905	ON 07123008:	AT (366493.48, 3776063.40, 333.67, 365.00, 0.00)	DC	

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

*** AERMOD - VERSION 09292 *** *** Stone Canyon Reservoir *** 07/28/10
*** CO *** 09:27:10
PAGE 11

**MODELOPTs: RegDFAULT CONC ELEV
NODRYDPLT NOWETDPLT

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 0 Warning Message(s)
A Total of 1753 Informational Message(s)

A Total of 26280 Hours Were Processed

A Total of 1181 Calm Hours Identified

A Total of 572 Missing Hours Identified (2.18 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********
*** NONE ***

****
*** AERMOD Finishes Successfully ***
****

Alternative 2 Mitigated CO Localized Emissions

```
**
****************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 6.6.0
** Lakes Environmental Software Inc.
** Date: 7/28/2010
** File: J:\Projects\LADWP Stone Canyon Reservoir Project 2008-057\Air Quality\Construction Emissions\Localized\Alt2\CO\COMT.ADI
**
****************************************
**
**
****************************************
** AERMOD Control Pathway
****************************************
**
**
CO STARTING
   TITLEONE Stone Canyon Reservoir
   TITLETWO COMT
   MODELOPT DFAULT CONC NODRYDPLT NOWETDPLT
   AVERTIME 1 8
   URBANOPT 9862049
   POLLUTID CO
   RUNORNOT RUN
CO FINISHED
**
****************************************
** AERMOD Source Pathway
****************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
   LOCATION VOL1 VOLUME 365893.498 3776581.066 303.930
** DESCRSRC Exhaust
** Source Parameters **
   SRCPARAM VOL1 1.008 5.000 45.578 1.163
   URBANSRC VOL1
   CONCUNIT 873.2 GRAMS/SEC PPM
   SRCGROUP ALL
SO FINISHED
**
****************************************
** AERMOD Receptor Pathway
****************************************
**
**
RE STARTING
** DESCRREC "" ""
   DISCCART    365205.23   3776966.38  375.93  426.00
   DISCCART    365273.46   3776942.30  371.48  426.00
   DISCCART    365297.54   3776837.96  364.53  426.00
   DISCCART    365261.42   3776781.78  365.63  426.00
   DISCCART    365241.35   3776673.42  365.70  365.68
   DISCCART    365205.23   3776528.94  365.00  364.88
   DISCCART    365153.06   3776456.70  365.00  365.00
   DISCCART    365116.94   3776332.29  365.00  365.00
   DISCCART    365120.95   3776231.96  364.96  364.86
   DISCCART    365137.01   3776115.58  364.26  364.20
   DISCCART    365116.94   3775999.19  364.00  364.00
   DISCCART    365104.90   3775898.86  364.00  364.00
   DISCCART    365132.99   3775754.39  364.00  364.00
   DISCCART    365317.60   3777247.31  388.83  426.00
   DISCCART    365273.46   3777203.17  389.43  426.00
   DISCCART    365100.89   3777094.81  392.86  426.00
   DISCCART    366493.48   3776063.40  333.67  365.00
   DISCCART    366465.39   3776183.80  356.13  365.00
   DISCCART    366453.35   3776308.21  364.45  363.66
   DISCCART    366449.34   3776416.57  364.78  364.59
   DISCCART    366397.17   3776561.05  365.00  365.00
   DISCCART    366369.07   3776685.46  365.00  365.00
   DISCCART    366369.07   3776837.96  365.00  365.00
   DISCCART    366409.21   3776962.37  365.00  365.00
   DISCCART    366457.36   3777078.76  365.00  365.00
   DISCCART    366441.31   3777195.14  365.00  365.00
   DISCCART    365594.52   3777500.15  365.00  426.00
   DISCCART    365534.32   3777544.29  364.93  426.00
   DISCCART    365646.69   3777439.95  365.00  426.00
   DISCCART    365702.87   3777419.88  364.34  426.00
   DISCCART    365385.83   3777435.93  380.85  426.00
   DISCCART    365329.64   3777520.21  382.17  426.00
   DISCCART    366272.76   3775373.13  284.66  365.00
   DISCCART    366373.09   3775401.22  277.95  365.00
   DISCCART    366573.75   3775473.46  276.50  365.00
   DISCCART    366124.27   3777528.24  365.00  365.00
RE FINISHED
**
****************************************
** AERMOD Meteorology Pathway
****************************************
**
**
ME STARTING
   SURFFILE "L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.SFC"
   PROFFILE "L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.PFL"
   SURFDATA 0 2005
   UAIRDATA 3190 2005
   PROFBASE 10 METERS
ME FINISHED
**
****************************************
** AERMOD Output Pathway
****************************************
**
**
OU STARTING
   RECTABLE ALLAVE 1ST
   RECTABLE 1 1ST
   RECTABLE 8 1ST
```

```
** Auto-Generated Plotfiles
   PLOTFILE 1 ALL 1ST COMT.AD\01H1GALL.PLT
   PLOTFILE 8 ALL 1ST COMT.AD\08H1GALL.PLT
OU FINISHED

 ***********************************
 *** SETUP Finishes Successfully ***
 ***********************************

 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                                        ***        07/28/10
                                   *** COMT                                                                          ***        09:28:30
                                                                                                                                PAGE   1
 **MODELOPTs:  RegDFAULT CONC                                              ELEV
                                                                 NODRYDPLT NOWETDPLT

                                            ***     MODEL SETUP OPTIONS SUMMARY       ***
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

 **Model Is Setup For Calculation of Average CONCentration Values.

   --  DEPOSITION LOGIC  --
 **NO GAS DEPOSITION Data Provided.
 **NO PARTICLE DEPOSITION Data Provided.
 **Model Uses NO DRY DEPLETION.  DRYDPLT  =  F
 **Model Uses NO WET DEPLETION.  WETDPLT  =  F

 **Model Uses URBAN Dispersion Algorithm for the SBL for     1 Source(s),
   for Total of    1 Urban Area(s):
   Urban Population =   9862049.0 ;  Urban Roughness Length =  1.000 m

 **Model Uses Regulatory DEFAULT Options:
         1. Stack-tip Downwash.
         2. Model Accounts for ELEVated Terrain Effects.
         3. Use Calms Processing Routine.
         4. Use Missing Data Processing Routine.
         5. No Exponential Decay for URBAN/Non-SO2.
         6. Urban Roughness Length of 1.0 Meter Assumed.

 **Model Assumes No FLAGPOLE Receptor Heights.

 **Model Calculates  2 Short Term Average(s) of:   1-HR   8-HR

 **This Run Includes:      1 Source(s);       1 Source Group(s); and      36 Receptor(s)

 **The Model Assumes A Pollutant Type of:  CO

 **Model Set To Continue RUNning After the Setup Testing.

 **Output Options Selected:
          Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE Keyword)
          Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)

 **NOTE:  The Following Flags May Appear Following CONC Values:  c for Calm Hours
                                                                 m for Missing Hours
                                                                 b for Both Calm and Missing Hours

 **Misc. Inputs:  Base Elev. for Pot. Temp. Profile (m MSL) =    10.00 ;  Decay Coef. =    0.000     ;  Rot. Angle =     0.0
                  Emission Units = GRAMS/SEC                                ;  Emission Rate Unit Factor =    873.20
                  Output Units   = PPM

 **Approximate Storage Requirements of Model =      3.5 MB of RAM.

 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                                        ***        07/28/10
                                   *** COMT                                                                          ***        09:28:30
                                                                                                                                PAGE   2
 **MODELOPTs:  RegDFAULT CONC                                              ELEV
                                                                 NODRYDPLT NOWETDPLT


                                                   *** VOLUME SOURCE DATA ***

            NUMBER EMISSION RATE                       BASE    RELEASE    INIT.    INIT.   URBAN  EMISSION RATE
    SOURCE   PART. (USER UNITS)     X        Y       ELEV.   HEIGHT     SY       SZ     SOURCE  SCALAR VARY
      ID     CATS.              (METERS) (METERS) (METERS) (METERS) (METERS) (METERS)            BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

   VOL1        0   0.10080E+01  365893.5 3776581.1   303.9     5.00    45.58     1.16     YES
 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                                        ***        07/28/10
                                   *** COMT                                                                          ***        09:28:30
                                                                                                                                PAGE   3
 **MODELOPTs:  RegDFAULT CONC                                              ELEV
                                                                 NODRYDPLT NOWETDPLT


                                           *** SOURCE IDs DEFINING SOURCE GROUPS ***

 GROUP ID                                           SOURCE IDs



  ALL      VOL1    ,
 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                                        ***        07/28/10
                                   *** COMT                                                                          ***        09:28:30
                                                                                                                                PAGE   4
 **MODELOPTs:  RegDFAULT CONC                                              ELEV
                                                                 NODRYDPLT NOWETDPLT

                                               *** DISCRETE CARTESIAN RECEPTORS ***
                                             (X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
                                                             (METERS)

     ( 365205.2, 3776966.4,     375.9,     426.0,       0.0);        ( 365273.5, 3776942.3,     371.5,     426.0,       0.0);
     ( 365297.5, 3776838.0,     364.5,     426.0,       0.0);        ( 365261.4, 3776781.8,     365.6,     426.0,       0.0);
     ( 365241.3, 3776673.4,     365.7,     365.7,       0.0);        ( 365205.2, 3776528.9,     365.0,     364.9,       0.0);
     ( 365153.1, 3776456.7,     365.0,     365.0,       0.0);        ( 365116.9, 3776332.3,     365.0,     365.0,       0.0);
     ( 365121.0, 3776232.0,     365.0,     364.9,       0.0);        ( 365137.0, 3776115.6,     364.3,     364.2,       0.0);
     ( 365116.9, 3775999.2,     364.0,     364.0,       0.0);        ( 365104.9, 3775898.9,     364.0,     364.0,       0.0);
     ( 365133.0, 3775754.4,     364.0,     364.0,       0.0);        ( 365317.6, 3777247.3,     388.8,     426.0,       0.0);
     ( 365273.5, 3777203.2,     389.4,     426.0,       0.0);        ( 365100.9, 3777094.8,     392.9,     426.0,       0.0);
     ( 366493.5, 3776063.4,     333.7,     365.0,       0.0);        ( 366465.4, 3776183.8,     356.1,     365.0,       0.0);
     ( 366453.3, 3776308.2,     364.4,     363.7,       0.0);        ( 366449.3, 3776416.6,     364.8,     364.6,       0.0);
     ( 366397.2, 3776561.0,     365.0,     365.0,       0.0);        ( 366369.1, 3776685.5,     365.0,     365.0,       0.0);
     ( 366369.1, 3776838.0,     365.0,     365.0,       0.0);        ( 366409.2, 3776962.4,     365.0,     365.0,       0.0);
     ( 366457.4, 3777078.8,     365.0,     365.0,       0.0);        ( 366441.3, 3777195.1,     365.0,     365.0,       0.0);
```

(365594.5,	3777500.1,	365.0,	426.0,	0.0);	(365534.3,	3777544.3,	364.9,	426.0,	0.0);
(365646.7,	3777439.9,	365.0,	426.0,	0.0);	(365702.9,	3777419.9,	364.3,	426.0,	0.0);
(365385.8,	3777435.9,	380.9,	426.0,	0.0);	(365329.6,	3777520.2,	382.2,	426.0,	0.0);
(366272.8,	3775373.1,	284.7,	365.0,	0.0);	(366373.1,	3775401.2,	277.9,	365.0,	0.0);
(366573.8,	3775473.5,	276.5,	365.0,	0.0);	(366124.3,	3777528.2,	365.0,	365.0,	0.0);

**MODELOPTs: RegDFAULT CONC ELEV
NODRYDPLT NOWETDPLT

*** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***
(1=YES; 0=NO)

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

NOTE: METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.

*** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
(METERS/SEC)

1.54, 3.09, 5.14, 8.23, 10.80,

**MODELOPTs: RegDFAULT CONC ELEV
NODRYDPLT NOWETDPLT

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.SFC Met Version: 06341
Profile file: L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 0 Upper air station no.: 3190
Name: UNKNOWN Name: UNKNOWN
Year: 2005 Year: 2005

First 24 hours of scalar data

YR	MO	DY	JDY	HR	H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O LEN	Z0	BOWEN	ALBEDO	REF WS	WD	HT	REF TA	HT
05	01	01	1	01	-0.9	0.033	-9.000	-9.000	-999.	14.	3.7	0.45	1.00	1.00	0.50	321.	9.1	281.1	5.5
05	01	01	1	02	-0.9	0.033	-9.000	-9.000	-999.	14.	3.8	0.45	1.00	1.00	0.50	320.	9.1	280.8	5.5
05	01	01	1	03	-0.9	0.033	-9.000	-9.000	-999.	14.	3.7	0.45	1.00	1.00	0.50	323.	9.1	280.9	5.5
05	01	01	1	04	-1.3	0.040	-9.000	-9.000	-999.	18.	4.4	0.45	1.00	1.00	0.60	316.	9.1	280.8	5.5
05	01	01	1	05	-1.3	0.040	-9.000	-9.000	-999.	18.	4.4	0.45	1.00	1.00	0.60	322.	9.1	280.4	5.5
05	01	01	1	06	-0.3	0.020	-9.000	-9.000	-999.	6.	2.3	0.45	1.00	1.00	0.30	352.	9.1	279.9	5.5
05	01	01	1	07	-2.3	0.053	-9.000	-9.000	-999.	28.	5.8	0.45	1.00	1.00	0.80	324.	9.1	279.6	5.5
05	01	01	1	08	-1.2	0.040	-9.000	-9.000	-999.	18.	4.8	0.45	1.00	0.55	0.60	336.	9.1	280.5	5.5
05	01	01	1	09	43.0	0.243	0.490	0.005	99.	276.	-30.3	0.45	1.00	0.32	1.50	44.	9.1	283.4	5.5
05	01	01	1	10	110.6	0.339	1.374	0.005	849.	453.	-31.7	0.45	1.00	0.24	2.10	74.	9.1	285.1	5.5
05	01	01	1	11	135.3	0.321	1.653	0.010	1209.	419.	-22.2	0.45	1.00	0.21	1.90	84.	9.1	286.4	5.5
05	01	01	1	12	14.3	0.223	0.783	0.010	1212.	246.	-70.3	0.45	1.00	0.20	1.50	137.	9.1	286.8	5.5
05	01	01	1	13	27.1	0.187	0.971	0.010	1218.	186.	-21.7	0.45	1.00	0.20	1.10	111.	9.1	286.9	5.5
05	01	01	1	14	17.1	0.179	0.834	0.009	1222.	174.	-30.0	0.45	1.00	0.21	1.10	186.	9.1	286.9	5.5
05	01	01	1	15	3.7	0.172	0.499	0.009	1223.	164.	-124.8	0.45	1.00	0.24	1.20	195.	9.1	286.1	5.5
05	01	01	1	16	0.1	0.147	0.150	0.009	1223.	130.	-2871.4	0.45	1.00	0.33	1.10	182.	9.1	285.9	5.5
05	01	01	1	17	-1.7	0.047	-9.000	-9.000	-999.	31.	5.5	0.45	1.00	0.59	0.70	159.	9.1	285.5	5.5
05	01	01	1	18	-0.2	0.019	-9.000	-9.000	-999.	6.	2.9	0.45	1.00	1.00	0.28	170.	9.1	285.1	5.5
05	01	01	1	19	-0.2	0.019	-9.000	-9.000	-999.	6.	2.9	0.45	1.00	1.00	0.28	186.	9.1	284.4	5.5
05	01	01	1	20	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.45	1.00	1.00	0.00	0.	9.1	284.0	5.5
05	01	01	1	21	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.45	1.00	1.00	0.00	0.	9.1	283.9	5.5
05	01	01	1	22	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.45	1.00	1.00	0.00	0.	9.1	283.4	5.5
05	01	01	1	23	-0.2	0.019	-9.000	-9.000	-999.	6.	2.9	0.45	1.00	1.00	0.28	313.	9.1	283.4	5.5
05	01	01	1	24	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.45	1.00	1.00	0.00	0.	9.1	283.4	5.5

First hour of profile data

YR	MO	DY	HR	HEIGHT	F	WDIR	WSPD	AMB_TMP	sigmaA	sigmaW	sigmaV
05	01	01	01	5.5	0	-999.	-99.00	281.2	99.0	-99.00	-99.00
05	01	01	01	9.1	1	321.	0.50	-999.0	99.0	-99.00	-99.00

F indicates top of profile (=1) or below (=0)

**MODELOPTs: RegDFAULT CONC ELEV
NODRYDPLT NOWETDPLT

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): VOL1 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF CO IN PPM **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
365205.23	3776966.38	0.11844	(07043007)	365273.46	3776942.30	0.12337	(07043007)
365297.54	3776837.96	0.10149	(07043007)	365261.42	3776781.78	0.08993	(06082807)
365241.35	3776673.42	0.13015	(06082207)	365205.23	3776528.94	0.07602	(06121509)
365153.06	3776456.70	0.08419	(07032008)	365116.94	3776332.29	0.06205	(05052707)
365120.95	3776231.96	0.07416	(05121209)	365137.01	3776115.58	0.08930	(05090207)
365116.94	3775999.19	0.10387	(05090207)	365104.90	3775898.86	0.10018	(05103108)
365132.99	3775754.39	0.06638	(05121809)	365317.60	3777247.31	0.06457	(05083108)
365273.46	3777203.17	0.10019	(06042607)	365100.89	3777094.81	0.08879	(07043007)
366493.48	3776063.40	0.14588	(07060207)	366465.39	3776183.80	0.12888	(05040607)
366453.35	3776308.21	0.13012	(05040607)	366449.34	3776416.57	0.11975	(05101708)
366397.17	3776561.05	0.16306	(05101708)	366369.07	3776685.46	0.08361	(06080207)
366369.07	3776837.96	0.09638	(05041307)	366409.21	3776962.37	0.07533	(05071607)
366457.36	3777078.76	0.06874	(05050607)	366441.31	3777195.14	0.07558	(06042107)
365594.52	3777500.15	0.05979	(05120109)	365534.32	3777544.29	0.07026	(05120109)
365646.69	3777439.95	0.05456	(05090608)	365702.87	3777419.88	0.05248	(05102308)
365385.83	3777435.93	0.08097	(07050107)	365329.64	3777520.21	0.07597	(07050107)
366272.76	3775373.13	0.07853	(06041807)	366373.09	3775401.22	0.09350	(06041807)

366573.75	3775473.46	0.09103	(06030408)	366124.27	3777528.24	0.09576	(06082007)

*** AERMOD - VERSION 09292 *** *** Stone Canyon Reservoir *** 07/28/10
*** COMT *** 09:28:30
PAGE 8

**MODELOPTs: RegDFAULT CONC ELEV
NODRYDPLT NOWETDPLT

*** THE 1ST HIGHEST 8-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): VOL1 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF CO IN PPM **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
365205.23	3776966.38	0.02089	(05070908)	365273.46	3776942.30	0.02210	(05070908)
365297.54	3776837.96	0.02593	(05070908)	365261.42	3776781.78	0.01962	(06100908)
365241.35	3776673.42	0.02529c	(06082208)	365205.23	3776528.94	0.02119	(06041108)
365153.06	3776456.70	0.02090	(06041108)	365116.94	3776332.29	0.01888	(05110808)
365120.95	3776231.96	0.01599c	(05071508)	365137.01	3776115.58	0.01481c	(05090208)
365116.94	3775999.19	0.01667c	(05090208)	365104.90	3775898.86	0.01556c	(07031208)
365132.99	3775754.39	0.01275	(05121816)	365317.60	3777247.31	0.01242	(06081824)
365273.46	3777203.17	0.01607c	(06042608)	365100.89	3777094.81	0.01347	(07043008)
366493.48	3776063.40	0.03731	(07123008)	366465.39	3776183.80	0.02649	(07123008)
366453.35	3776308.21	0.03172	(07121008)	366449.34	3776416.57	0.02376	(05012908)
366397.17	3776561.05	0.02787	(05072708)	366369.07	3776685.46	0.02603	(06062308)
366369.07	3776837.96	0.03385	(07110324)	366409.21	3776962.37	0.02652c	(05012524)
366457.36	3777078.76	0.02370	(06073024)	366441.31	3777195.14	0.02105	(05102224)
365594.52	3777500.15	0.01409	(07071424)	365534.32	3777544.29	0.01415	(07071424)
365646.69	3777439.95	0.01471c	(06082924)	365702.87	3777419.88	0.01777c	(06072108)
365385.83	3777435.93	0.01248	(05061508)	365329.64	3777520.21	0.01122	(05061508)
366272.76	3775373.13	0.01342	(06041808)	366373.09	3775401.22	0.01513	(06041808)
366573.75	3775473.46	0.01764	(06030408)	366124.27	3777528.24	0.01272	(07080208)

*** AERMOD - VERSION 09292 *** *** Stone Canyon Reservoir *** 07/28/10
*** COMT *** 09:28:30
PAGE 9

**MODELOPTs: RegDFAULT CONC ELEV
NODRYDPLT NOWETDPLT

*** THE SUMMARY OF HIGHEST 1-HR RESULTS ***

** CONC OF CO IN PPM **

GROUP ID		AVERAGE CONC	DATE (YYMMDDHH)	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	NETWORK GRID-ID
ALL	HIGH 1ST HIGH VALUE IS	0.16306	ON 05101708: AT	(366397.17, 3776561.05, 365.00, 365.00, 0.00)	DC	

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

*** AERMOD - VERSION 09292 *** *** Stone Canyon Reservoir *** 07/28/10
*** COMT *** 09:28:30
PAGE 10

**MODELOPTs: RegDFAULT CONC ELEV
NODRYDPLT NOWETDPLT

*** THE SUMMARY OF HIGHEST 8-HR RESULTS ***

** CONC OF CO IN PPM **

GROUP ID		AVERAGE CONC	DATE (YYMMDDHH)	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	NETWORK GRID-ID
ALL	HIGH 1ST HIGH VALUE IS	0.03731	ON 07123008: AT	(366493.48, 3776063.40, 333.67, 365.00, 0.00)	DC	

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

*** AERMOD - VERSION 09292 *** *** Stone Canyon Reservoir *** 07/28/10
*** COMT *** 09:28:30
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**MODELOPTs: RegDFAULT CONC ELEV
NODRYDPLT NOWETDPLT

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 0 Warning Message(s)
A Total of 1753 Informational Message(s)

A Total of 26280 Hours Were Processed

A Total of 1181 Calm Hours Identified

A Total of 572 Missing Hours Identified (2.18 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********
*** NONE ***

****
*** AERMOD Finishes Successfully ***
****

Alternative 2 NO_2 Localized Emissions

```
**
****************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 6.6.0
** Lakes Environmental Software Inc.
** Date: 7/27/2010
** File: J:\Projects\LADWP Stone Canyon Reservoir Project 2008-057\Air Quality\Construction Emissions\Localized\Alt2\NO2\NO2.ADI
**
****************************************
**
**
****************************************
** AERMOD Control Pathway
****************************************
**
**
CO STARTING
   TITLEONE Stone Canyon Reservoir
   TITLETWO NO2
   MODELOPT DFAULT CONC NODRYDPLT NOWETDPLT
   AVERTIME 1
   URBANOPT 9862049
   POLLUTID NOX
   RUNORNOT RUN
CO FINISHED
**
****************************************
** AERMOD Source Pathway
****************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
   LOCATION VOL1 VOLUME 365893.498 3776581.066 303.930
** DESCRSRC Exhaust
** Source Parameters **
   SRCPARAM VOL1 0.2533 5.000 45.578 1.163
   URBANSRC VOL1
   CONCUNIT 531.5 GRAMS/SEC PPM
   SRCGROUP ALL
SO FINISHED
**
****************************************
** AERMOD Receptor Pathway
****************************************
**
**
RE STARTING
** DESCRREC "" ""
   DISCCART    365205.23   3776966.38  375.93  426.00
   DISCCART    365273.46   3776942.30  371.48  426.00
   DISCCART    365297.54   3776837.96  364.53  426.00
   DISCCART    365261.42   3776781.78  365.63  426.00
   DISCCART    365241.35   3776673.42  365.70  365.68
   DISCCART    365205.23   3776528.94  365.00  364.88
   DISCCART    365153.06   3776456.70  365.00  365.00
   DISCCART    365116.94   3776332.29  365.00  365.00
   DISCCART    365120.95   3776231.96  364.96  364.86
   DISCCART    365137.01   3776115.58  364.26  364.20
   DISCCART    365116.94   3775999.19  364.00  364.00
   DISCCART    365104.90   3775898.86  364.00  364.00
   DISCCART    365132.99   3775754.39  364.00  364.00
   DISCCART    365317.60   3777247.31  388.83  426.00
   DISCCART    365273.46   3777203.17  389.43  426.00
   DISCCART    365100.89   3777094.81  392.86  426.00
   DISCCART    366493.48   3776063.40  333.67  365.00
   DISCCART    366465.39   3776183.80  356.13  365.00
   DISCCART    366453.35   3776308.21  364.45  363.66
   DISCCART    366449.34   3776416.57  364.78  364.59
   DISCCART    366397.17   3776561.05  365.00  365.00
   DISCCART    366369.07   3776685.46  365.00  365.00
   DISCCART    366369.07   3776837.96  365.00  365.00
   DISCCART    366409.21   3776962.37  365.00  365.00
   DISCCART    366457.36   3777078.76  365.00  365.00
   DISCCART    366441.31   3777195.14  365.00  365.00
   DISCCART    365594.52   3777500.15  365.00  426.00
   DISCCART    365534.32   3777544.29  364.93  426.00
   DISCCART    365646.69   3777439.95  365.00  426.00
   DISCCART    365702.87   3777419.88  364.34  426.00
   DISCCART    365385.83   3777435.93  380.85  426.00
   DISCCART    365329.64   3777520.21  382.17  426.00
   DISCCART    366272.76   3775373.13  284.66  365.00
   DISCCART    366373.09   3775401.22  277.95  365.00
   DISCCART    366573.75   3775473.46  276.50  365.00
   DISCCART    366124.27   3777528.24  365.00  365.00
RE FINISHED
**
****************************************
** AERMOD Meteorology Pathway
****************************************
**
**
ME STARTING
   SURFFILE "L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.SFC"
   PROFFILE "L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.PFL"
   SURFDATA 0 2005
   UAIRDATA 3190 2005
   PROFBASE 10 METERS
ME FINISHED
**
****************************************
** AERMOD Output Pathway
****************************************
**
**
OU STARTING
   RECTABLE ALLAVE 1ST
   RECTABLE 1 1ST
** Auto-Generated Plotfiles
```

```
  PLOTFILE 1 ALL 1ST NO2.AD\01H1GALL.PLT
OU FINISHED

 **********************************
 *** SETUP Finishes Successfully ***
 **********************************

 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                                  ***        07/27/10
                                   *** NO2                                                                     ***        16:23:38
                                                                                                                          PAGE   1
 **MODELOPTs:  RegDFAULT CONC                                                   ELEV
                                                                     NODRYDPLT NOWETDPLT

                                            ***     MODEL SETUP OPTIONS SUMMARY       ***
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

 **Model Is Setup For Calculation of Average CONCentration Values.

   -- DEPOSITION LOGIC --
 **NO GAS DEPOSITION Data Provided.
 **NO PARTICLE DEPOSITION Data Provided.
 **Model Uses NO DRY DEPLETION.  DRYDPLT  =  F
 **Model Uses NO WET DEPLETION.  WETDPLT  =  F

 **Model Uses URBAN Dispersion Algorithm for the SBL for     1 Source(s),
   for Total of    1 Urban Area(s):
   Urban Population =   9862049.0 ;  Urban Roughness Length =  1.000 m

 **Model Uses Regulatory DEFAULT Options:
         1. Stack-tip Downwash.
         2. Model Accounts for ELEVated Terrain Effects.
         3. Use Calms Processing Routine.
         4. Use Missing Data Processing Routine.
         5. No Exponential Decay for URBAN/Non-SO2.
         6. Urban Roughness Length of 1.0 Meter Assumed.

 **Model Assumes No FLAGPOLE Receptor Heights.

 **Model Calculates  1 Short Term Average(s) of:   1-HR

 **This Run Includes:      1 Source(s);       1 Source Group(s); and      36 Receptor(s)

 **The Model Assumes A Pollutant Type of:  NOX

 **Model Set To Continue RUNning After the Setup Testing.

 **Output Options Selected:
          Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE Keyword)
          Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)

 **NOTE:  The Following Flags May Appear Following CONC Values:  c for Calm Hours
                                                                 m for Missing Hours
                                                                 b for Both Calm and Missing Hours

 **Misc. Inputs:  Base Elev. for Pot. Temp. Profile (m MSL) =    10.00 ; Decay Coef. =    0.000     ;  Rot. Angle =     0.0
                  Emission Units = GRAMS/SEC                                ;  Emission Rate Unit Factor =    531.50
                  Output Units   = PPM

 **Approximate Storage Requirements of Model =      3.5 MB of RAM.

 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                                  ***        07/27/10
                                   *** NO2                                                                     ***        16:23:38
                                                                                                                          PAGE   2
 **MODELOPTs:  RegDFAULT CONC                                                   ELEV
                                                                     NODRYDPLT NOWETDPLT


                                                *** VOLUME SOURCE DATA ***

              NUMBER EMISSION RATE                        BASE    RELEASE    INIT.    INIT.   URBAN  EMISSION RATE
     SOURCE    PART. (USER UNITS)      X         Y        ELEV.   HEIGHT      SY       SZ     SOURCE  SCALAR VARY
      ID       CATS.                (METERS) (METERS) (METERS) (METERS) (METERS) (METERS)               BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

   VOL1          0  0.25330E+00  365893.5 3776581.1   303.9     5.00    45.58     1.16     YES
 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                                  ***        07/27/10
                                   *** NO2                                                                     ***        16:23:38
                                                                                                                          PAGE   3
 **MODELOPTs:  RegDFAULT CONC                                                   ELEV
                                                                     NODRYDPLT NOWETDPLT


                                           *** SOURCE IDs DEFINING SOURCE GROUPS ***

 GROUP ID                                                   SOURCE IDs



  ALL       VOL1     ,
 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                                  ***        07/27/10
                                   *** NO2                                                                     ***        16:23:38
                                                                                                                          PAGE   4
 **MODELOPTs:  RegDFAULT CONC                                                   ELEV
                                                                     NODRYDPLT NOWETDPLT

                                             *** DISCRETE CARTESIAN RECEPTORS ***
                                           (X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
                                                            (METERS)

     ( 365205.2, 3776966.4,      375.9,      426.0,       0.0);         ( 365273.5, 3776942.3,      371.5,      426.0,       0.0);
     ( 365297.5, 3776838.0,      364.5,      426.0,       0.0);         ( 365261.4, 3776781.8,      365.6,      426.0,       0.0);
     ( 365241.3, 3776673.4,      365.7,      365.7,       0.0);         ( 365205.2, 3776528.9,      365.0,      364.9,       0.0);
     ( 365153.1, 3776456.7,      365.0,      365.0,       0.0);         ( 365116.9, 3776332.3,      365.0,      365.0,       0.0);
     ( 365121.0, 3776232.0,      365.0,      364.9,       0.0);         ( 365137.0, 3776115.6,      364.3,      364.2,       0.0);
     ( 365116.9, 3775999.2,      364.0,      364.0,       0.0);         ( 365104.9, 3775898.9,      364.0,      364.0,       0.0);
     ( 365133.0, 3775754.4,      364.0,      364.0,       0.0);         ( 365317.6, 3777247.3,      388.8,      426.0,       0.0);
     ( 365273.5, 3777203.2,      389.4,      426.0,       0.0);         ( 365100.9, 3777094.8,      392.9,      426.0,       0.0);
     ( 366493.5, 3776063.4,      333.7,      365.0,       0.0);         ( 366465.4, 3776183.8,      356.1,      365.0,       0.0);
     ( 366453.3, 3776308.2,      364.4,      363.7,       0.0);         ( 366449.3, 3776416.6,      364.8,      364.6,       0.0);
     ( 366397.2, 3776561.0,      365.0,      365.0,       0.0);         ( 366369.1, 3776685.5,      365.0,      365.0,       0.0);
     ( 366369.1, 3776838.0,      365.0,      365.0,       0.0);         ( 366409.2, 3776962.4,      365.0,      365.0,       0.0);
     ( 366457.4, 3777078.8,      365.0,      365.0,       0.0);         ( 366441.3, 3777195.1,      365.0,      365.0,       0.0);
     ( 365594.5, 3777500.1,      365.0,      426.0,       0.0);         ( 365534.3, 3777544.3,      364.9,      426.0,       0.0);
     ( 365646.7, 3777439.9,      365.0,      426.0,       0.0);         ( 365702.9, 3777419.9,      364.3,      426.0,       0.0);
```

```
( 365385.8, 3777435.9,     380.9,     426.0,        0.0);        ( 365329.6, 3777520.2,     382.2,     426.0,        0.0);
( 366272.8, 3775373.1,     284.7,     365.0,        0.0);        ( 366373.1, 3775401.2,     277.9,     365.0,        0.0);
( 366573.8, 3775473.5,     276.5,     365.0,        0.0);        ( 366124.3, 3777528.2,     365.0,     365.0,        0.0);
```


**MODELOPTs: RegDFAULT CONC ELEV
NODRYDPLT NOWETDPLT

*** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***
(1=YES; 0=NO)

```
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1
```

NOTE: METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.

*** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
(METERS/SEC)

1.54, 3.09, 5.14, 8.23, 10.80,

**MODELOPTs: RegDFAULT CONC ELEV
NODRYDPLT NOWETDPLT

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.SFC Met Version: 06341
Profile file: L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 0 Upper air station no.: 3190
Name: UNKNOWN Name: UNKNOWN
Year: 2005 Year: 2005

First 24 hours of scalar data

YR MO DY	JDY HR	H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O LEN	Z0	BOWEN	ALBEDO	REF WS	WD	HT	REF TA	HT
05 01 01	1 01	-0.9	0.033	-9.000	-9.000	-999.	14.	3.7	0.45	1.00	1.00	0.50	321.	9.1	281.1	5.5
05 01 01	1 02	-0.9	0.033	-9.000	-9.000	-999.	14.	3.8	0.45	1.00	1.00	0.50	320.	9.1	280.8	5.5
05 01 01	1 03	-0.9	0.033	-9.000	-9.000	-999.	14.	3.7	0.45	1.00	1.00	0.50	323.	9.1	280.9	5.5
05 01 01	1 04	-1.3	0.040	-9.000	-9.000	-999.	18.	4.4	0.45	1.00	1.00	0.60	316.	9.1	280.8	5.5
05 01 01	1 05	-1.3	0.040	-9.000	-9.000	-999.	18.	4.4	0.45	1.00	1.00	0.60	322.	9.1	280.4	5.5
05 01 01	1 06	-0.3	0.020	-9.000	-9.000	-999.	6.	2.3	0.45	1.00	1.00	0.30	352.	9.1	279.9	5.5
05 01 01	1 07	-2.3	0.053	-9.000	-9.000	-999.	28.	5.8	0.45	1.00	1.00	0.80	324.	9.1	279.6	5.5
05 01 01	1 08	-1.2	0.040	-9.000	-9.000	-999.	18.	4.8	0.45	1.00	0.55	0.60	336.	9.1	280.5	5.5
05 01 01	1 09	43.0	0.243	0.490	0.005	99.	276.	-30.3	0.45	1.00	0.32	1.50	44.	9.1	283.4	5.5
05 01 01	1 10	110.6	0.339	1.374	0.005	849.	453.	-31.7	0.45	1.00	0.24	2.10	74.	9.1	285.1	5.5
05 01 01	1 11	135.3	0.321	1.653	0.010	1209.	419.	-22.2	0.45	1.00	0.21	1.90	84.	9.1	286.4	5.5
05 01 01	1 12	14.3	0.223	0.783	0.010	1212.	246.	-70.3	0.45	1.00	0.20	1.50	137.	9.1	286.8	5.5
05 01 01	1 13	27.1	0.187	0.971	0.010	1218.	186.	-21.7	0.45	1.00	0.20	1.10	111.	9.1	286.9	5.5
05 01 01	1 14	17.1	0.179	0.834	0.009	1222.	174.	-30.0	0.45	1.00	0.21	1.10	186.	9.1	286.9	5.5
05 01 01	1 15	3.7	0.172	0.499	0.009	1223.	164.	-124.8	0.45	1.00	0.24	1.20	195.	9.1	286.1	5.5
05 01 01	1 16	0.1	0.147	0.150	0.009	1223.	130.	-2871.4	0.45	1.00	0.33	1.10	182.	9.1	285.9	5.5
05 01 01	1 17	-1.7	0.047	-9.000	-9.000	-999.	31.	5.5	0.45	1.00	0.59	0.70	159.	9.1	285.5	5.5
05 01 01	1 18	-0.2	0.019	-9.000	-9.000	-999.	6.	2.9	0.45	1.00	1.00	0.28	170.	9.1	285.1	5.5
05 01 01	1 19	-0.2	0.019	-9.000	-9.000	-999.	6.	2.9	0.45	1.00	1.00	0.28	186.	9.1	284.4	5.5
05 01 01	1 20	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.45	1.00	1.00	0.00	0.	9.1	284.0	5.5
05 01 01	1 21	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.45	1.00	1.00	0.00	0.	9.1	283.9	5.5
05 01 01	1 22	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.45	1.00	1.00	0.00	0.	9.1	283.4	5.5
05 01 01	1 23	-0.2	0.019	-9.000	-9.000	-999.	6.	2.9	0.45	1.00	1.00	0.28	313.	9.1	283.4	5.5
05 01 01	1 24	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.45	1.00	1.00	0.00	0.	9.1	283.4	5.5

First hour of profile data

YR MO DY HR	HEIGHT	F	WDIR	WSPD	AMB_TMP	sigmaA	sigmaW	sigmaV
05 01 01 01	5.5	0	-999.	-99.00	281.2	99.0	-99.00	-99.00
05 01 01 01	9.1	1	321.	0.50	-999.0	99.0	-99.00	-99.00

F indicates top of profile (=1) or below (=0)

**MODELOPTs: RegDFAULT CONC ELEV
NODRYDPLT NOWETDPLT

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): VOL1 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF NOX IN PPM **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
365205.23	3776966.38	0.01812	(07043007)	365273.46	3776942.30	0.01887	(07043007)
365297.54	3776837.96	0.01552	(07043007)	365261.42	3776781.78	0.01375	(06082807)
365241.35	3776673.42	0.01991	(06082207)	365205.23	3776528.94	0.01163	(06121509)
365153.06	3776456.70	0.01288	(07032008)	365116.94	3776332.29	0.00949	(05052707)
365120.95	3776231.96	0.01134	(05121209)	365137.01	3776115.58	0.01366	(05090207)
365116.94	3775999.19	0.01589	(05090207)	365104.90	3775898.86	0.01532	(05103108)
365132.99	3775754.39	0.01015	(05121809)	365317.60	3777247.31	0.00988	(05083108)
365273.46	3777203.17	0.01532	(06042607)	365100.89	3777094.81	0.01358	(07043007)
366493.48	3776063.40	0.02231	(07060207)	366465.39	3776183.80	0.01971	(05040607)
366453.35	3776308.21	0.01990	(05040607)	366449.34	3776416.57	0.01832	(05101708)
366397.17	3776561.05	0.02494	(05101708)	366369.07	3776685.46	0.01279	(06080207)
366369.07	3776837.96	0.01474	(05041307)	366409.21	3776962.37	0.01152	(05071607)
366457.36	3777078.76	0.01051	(05050607)	366441.31	3777195.14	0.01156	(06042107)
365594.52	3777500.15	0.00915	(05120109)	365534.32	3777544.29	0.01075	(05120109)
365646.69	3777439.95	0.00834	(05090608)	365702.87	3777419.88	0.00803	(05102308)
365385.83	3777435.93	0.01239	(07050107)	365329.64	3777520.21	0.01162	(07050107)
366272.76	3775373.13	0.01201	(06041807)	366373.09	3775401.22	0.01430	(06041807)
366573.75	3775473.46	0.01392	(06030408)	366124.27	3777528.24	0.01465	(06082007)

```
                                *** NO2                                                              ***        16:23:38
                                                                                                                PAGE   8
 **MODELOPTs:  RegDFAULT CONC                                          ELEV
                                                             NODRYDPLT NOWETDPLT

                                             *** THE SUMMARY OF HIGHEST  1-HR RESULTS ***

                                 ** CONC OF NOX      IN PPM                                       **

                                             DATE                                                                NETWORK
GROUP ID                         AVERAGE CONC     (YYMMDDHH)           RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG)    OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

ALL      HIGH  1ST HIGH VALUE IS      0.02494  ON 05101708: AT (  366397.17,  3776561.05,   365.00,   365.00,    0.00)  DC


 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                        ***        07/27/10
                                   *** NO2                                                           ***        16:23:38
                                                                                                                PAGE   9
 **MODELOPTs:  RegDFAULT CONC                                          ELEV
                                                             NODRYDPLT NOWETDPLT

 *** Message Summary : AERMOD Model Execution ***

  --------- Summary of Total Messages --------

 A Total of           0 Fatal Error Message(s)
 A Total of           0 Warning Message(s)
 A Total of        1753 Informational Message(s)

 A Total of       26280 Hours Were Processed

 A Total of        1181 Calm Hours Identified

 A Total of         572 Missing Hours Identified (  2.18 Percent)


    ******** FATAL ERROR MESSAGES ********
               ***  NONE  ***


    ********   WARNING MESSAGES   ********
               ***  NONE  ***


    ************************************
    *** AERMOD Finishes Successfully ***
    ************************************
```

Alternative 2 Mitigated NO_2 Localized Emissions

```
**
****************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 6.6.0
** Lakes Environmental Software Inc.
** Date: 7/27/2010
** File: J:\Projects\LADWP Stone Canyon Reservoir Project 2008-057\Air Quality\Construction Emissions\Localized\Alt2\NO2\NO2MT.ADI
**
****************************************
**
**
****************************************
** AERMOD Control Pathway
****************************************
**
**
CO STARTING
   TITLEONE Stone Canyon Reservoir
   TITLETWO NO2MT
   MODELOPT DFAULT CONC NODRYDPLT NOWETDPLT
   AVERTIME 1
   URBANOPT 9862049
   POLLUTID NOX
   RUNORNOT RUN
CO FINISHED
**
****************************************
** AERMOD Source Pathway
****************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
   LOCATION VOL1 VOLUME 365893.498 3776581.066 303.930
** DESCRSRC Exhaust
** Source Parameters **
   SRCPARAM VOL1 0.2407 5.000 45.578 1.163
   URBANSRC VOL1
   CONCUNIT 531.5 GRAMS/SEC PPM
   SRCGROUP ALL
SO FINISHED
**
****************************************
** AERMOD Receptor Pathway
****************************************
**
**
RE STARTING
** DESCRREC "" ""
   DISCCART    365205.23   3776966.38  375.93  426.00
   DISCCART    365273.46   3776942.30  371.48  426.00
   DISCCART    365297.54   3776837.96  364.53  426.00
   DISCCART    365261.42   3776781.78  365.63  426.00
   DISCCART    365241.35   3776673.42  365.70  365.68
   DISCCART    365205.23   3776528.94  365.00  364.88
   DISCCART    365153.06   3776456.70  365.00  365.00
   DISCCART    365116.94   3776332.29  365.00  365.00
   DISCCART    365120.95   3776231.96  364.96  364.86
   DISCCART    365137.01   3776115.58  364.26  364.20
   DISCCART    365116.94   3775999.19  364.00  364.00
   DISCCART    365104.90   3775898.86  364.00  364.00
   DISCCART    365132.99   3775754.39  364.00  364.00
   DISCCART    365317.60   3777247.31  388.83  426.00
   DISCCART    365273.46   3777203.17  389.43  426.00
   DISCCART    365100.89   3777094.81  392.86  426.00
   DISCCART    366493.48   3776063.40  333.67  365.00
   DISCCART    366465.39   3776183.80  356.13  365.00
   DISCCART    366453.35   3776308.21  364.45  363.66
   DISCCART    366449.34   3776416.57  364.78  364.59
   DISCCART    366397.17   3776561.05  365.00  365.00
   DISCCART    366369.07   3776685.46  365.00  365.00
   DISCCART    366369.07   3776837.96  365.00  365.00
   DISCCART    366409.21   3776962.37  365.00  365.00
   DISCCART    366457.36   3777078.76  365.00  365.00
   DISCCART    366441.31   3777195.14  365.00  365.00
   DISCCART    365594.52   3777500.15  365.00  426.00
   DISCCART    365534.32   3777544.29  364.93  426.00
   DISCCART    365646.69   3777439.95  365.00  426.00
   DISCCART    365702.87   3777419.88  364.34  426.00
   DISCCART    365385.83   3777435.93  380.85  426.00
   DISCCART    365329.64   3777520.21  382.17  426.00
   DISCCART    366272.76   3775373.13  284.66  365.00
   DISCCART    366373.09   3775401.22  277.95  365.00
   DISCCART    366573.75   3775473.46  276.50  365.00
   DISCCART    366124.27   3777528.24  365.00  365.00
RE FINISHED
**
****************************************
** AERMOD Meteorology Pathway
****************************************
**
**
ME STARTING
   SURFFILE "L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.SFC"
   PROFFILE "L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.PFL"
   SURFDATA 0 2005
   UAIRDATA 3190 2005
   PROFBASE 10 METERS
ME FINISHED
**
****************************************
** AERMOD Output Pathway
****************************************
**
**
OU STARTING
   RECTABLE ALLAVE 1ST
   RECTABLE 1 1ST
** Auto-Generated Plotfiles
```

```
  PLOTFILE 1 ALL 1ST NO2MT.AD\01H1GALL.PLT
OU FINISHED

 **********************************
 *** SETUP Finishes Successfully ***
 **********************************

 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                                 ***        07/27/10
                                   *** NO2MT                                                                  ***        16:22:27
                                                                                                                         PAGE   1
 **MODELOPTs:  RegDFAULT CONC                                                 ELEV
                                                                    NODRYDPLT NOWETDPLT

                                       ***     MODEL SETUP OPTIONS SUMMARY       ***
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

 **Model Is Setup For Calculation of Average CONCentration Values.

   -- DEPOSITION LOGIC  --
 **NO GAS DEPOSITION Data Provided.
 **NO PARTICLE DEPOSITION Data Provided.
 **Model Uses NO DRY DEPLETION.  DRYDPLT  =  F
 **Model Uses NO WET DEPLETION.  WETDPLT  =  F

 **Model Uses URBAN Dispersion Algorithm for the SBL for     1 Source(s),
   for Total of    1 Urban Area(s):
   Urban Population =   9862049.0 ;  Urban Roughness Length =  1.000 m

 **Model Uses Regulatory DEFAULT Options:
         1. Stack-tip Downwash.
         2. Model Accounts for ELEVated Terrain Effects.
         3. Use Calms Processing Routine.
         4. Use Missing Data Processing Routine.
         5. No Exponential Decay for URBAN/Non-SO2.
         6. Urban Roughness Length of 1.0 Meter Assumed.

 **Model Assumes No FLAGPOLE Receptor Heights.

 **Model Calculates  1 Short Term Average(s) of:   1-HR

 **This Run Includes:      1 Source(s);       1 Source Group(s); and      36 Receptor(s)

 **The Model Assumes A Pollutant Type of:  NOX

 **Model Set To Continue RUNning After the Setup Testing.

 **Output Options Selected:
          Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE Keyword)
          Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)

 **NOTE:  The Following Flags May Appear Following CONC Values:  c for Calm Hours
                                                                  m for Missing Hours
                                                                  b for Both Calm and Missing Hours

 **Misc. Inputs:  Base Elev. for Pot. Temp. Profile (m MSL) =    10.00 ;  Decay Coef. =    0.000     ;  Rot. Angle =     0.0
                  Emission Units = GRAMS/SEC                                ;  Emission Rate Unit Factor =    531.50
                  Output Units   = PPM

 **Approximate Storage Requirements of Model =      3.5 MB of RAM.

 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                                 ***        07/27/10
                                   *** NO2MT                                                                  ***        16:22:27
                                                                                                                         PAGE   2
 **MODELOPTs:  RegDFAULT CONC                                                 ELEV
                                                                    NODRYDPLT NOWETDPLT


                                             *** VOLUME SOURCE DATA ***

             NUMBER EMISSION RATE                        BASE    RELEASE    INIT.    INIT.   URBAN  EMISSION RATE
    SOURCE    PART. (USER UNITS)     X         Y        ELEV.   HEIGHT      SY       SZ     SOURCE  SCALAR VARY
      ID      CATS.               (METERS) (METERS) (METERS) (METERS) (METERS) (METERS)                BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

   VOL1          0   0.24070E+00  365893.5 3776581.1   303.9     5.00    45.58     1.16     YES
 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                                 ***        07/27/10
                                   *** NO2MT                                                                  ***        16:22:27
                                                                                                                         PAGE   3
 **MODELOPTs:  RegDFAULT CONC                                                 ELEV
                                                                    NODRYDPLT NOWETDPLT


                                      *** SOURCE IDs DEFINING SOURCE GROUPS ***

 GROUP ID                                              SOURCE IDs



  ALL       VOL1     ,
 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                                 ***        07/27/10
                                   *** NO2MT                                                                  ***        16:22:27
                                                                                                                         PAGE   4
 **MODELOPTs:  RegDFAULT CONC                                                 ELEV
                                                                    NODRYDPLT NOWETDPLT

                                          *** DISCRETE CARTESIAN RECEPTORS ***
                                        (X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
                                                       (METERS)

     ( 365205.2, 3776966.4,      375.9,      426.0,        0.0);         ( 365273.5, 3776942.3,      371.5,      426.0,        0.0);
     ( 365297.5, 3776838.0,      364.5,      426.0,        0.0);         ( 365261.4, 3776781.8,      365.6,      426.0,        0.0);
     ( 365241.3, 3776673.4,      365.7,      365.7,        0.0);         ( 365205.2, 3776528.9,      365.0,      364.9,        0.0);
     ( 365153.1, 3776456.7,      365.0,      365.0,        0.0);         ( 365116.9, 3776332.3,      365.0,      365.0,        0.0);
     ( 365121.0, 3776232.0,      365.0,      364.9,        0.0);         ( 365137.0, 3776115.6,      364.3,      364.2,        0.0);
     ( 365116.9, 3775999.2,      364.0,      364.0,        0.0);         ( 365104.9, 3775898.9,      364.0,      364.0,        0.0);
     ( 365133.0, 3775754.4,      364.0,      364.0,        0.0);         ( 365317.6, 3777247.3,      388.8,      426.0,        0.0);
     ( 365273.5, 3777203.2,      389.4,      426.0,        0.0);         ( 365100.9, 3777094.8,      392.9,      426.0,        0.0);
     ( 366493.5, 3776063.4,      333.7,      365.0,        0.0);         ( 366465.4, 3776183.8,      356.1,      365.0,        0.0);
     ( 366453.3, 3776308.2,      364.4,      363.7,        0.0);         ( 366449.3, 3776416.6,      364.8,      364.6,        0.0);
     ( 366397.2, 3776561.0,      365.0,      365.0,        0.0);         ( 366369.1, 3776685.5,      365.0,      365.0,        0.0);
     ( 366369.1, 3776838.0,      365.0,      365.0,        0.0);         ( 366409.2, 3776962.4,      365.0,      365.0,        0.0);
     ( 366457.4, 3777078.8,      365.0,      365.0,        0.0);         ( 366441.3, 3777195.1,      365.0,      365.0,        0.0);
     ( 365594.5, 3777500.1,      365.0,      426.0,        0.0);         ( 365534.3, 3777544.3,      364.9,      426.0,        0.0);
     ( 365646.7, 3777439.9,      365.0,      426.0,        0.0);         ( 365702.9, 3777419.9,      364.3,      426.0,        0.0);
```

```
( 365385.8, 3777435.9,     380.9,     426.0,        0.0);        ( 365329.6, 3777520.2,     382.2,     426.0,        0.0);
( 366272.8, 3775373.1,     284.7,     365.0,        0.0);        ( 366373.1, 3775401.2,     277.9,     365.0,        0.0);
( 366573.8, 3775473.5,     276.5,     365.0,        0.0);        ( 366124.3, 3777528.2,     365.0,     365.0,        0.0);
```

*** AERMOD - VERSION 09292 ***   *** Stone Canyon Reservoir   ***   07/27/10
*** NO2MT   ***   16:22:27
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**MODELOPTs: RegDFAULT CONC   ELEV
NODRYDPLT NOWETDPLT

*** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***
(1=YES; 0=NO)

```
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1
```

NOTE: METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.

*** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
(METERS/SEC)

1.54, 3.09, 5.14, 8.23, 10.80,

*** AERMOD - VERSION 09292 ***   *** Stone Canyon Reservoir   ***   07/27/10
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**MODELOPTs: RegDFAULT CONC   ELEV
NODRYDPLT NOWETDPLT

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.SFC   Met Version: 06341
Profile file: L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 0   Upper air station no.: 3190
Name: UNKNOWN   Name: UNKNOWN
Year: 2005   Year: 2005

First 24 hours of scalar data

YR	MO	DY	JDY	HR	H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O LEN	Z0	BOWEN	ALBEDO	REF WS	WD	HT	REF TA	HT
05	01	01	1	01	-0.9	0.033	-9.000	-9.000	-999.	14.	3.7	0.45	1.00	1.00	0.50	321.	9.1	281.1	5.5
05	01	01	1	02	-0.9	0.033	-9.000	-9.000	-999.	14.	3.8	0.45	1.00	1.00	0.50	320.	9.1	280.8	5.5
05	01	01	1	03	-0.9	0.033	-9.000	-9.000	-999.	14.	3.7	0.45	1.00	1.00	0.50	323.	9.1	280.9	5.5
05	01	01	1	04	-1.3	0.040	-9.000	-9.000	-999.	18.	4.4	0.45	1.00	1.00	0.60	316.	9.1	280.8	5.5
05	01	01	1	05	-1.3	0.040	-9.000	-9.000	-999.	18.	4.4	0.45	1.00	1.00	0.60	322.	9.1	280.4	5.5
05	01	01	1	06	-0.3	0.020	-9.000	-9.000	-999.	6.	2.3	0.45	1.00	1.00	0.30	352.	9.1	279.9	5.5
05	01	01	1	07	-2.3	0.053	-9.000	-9.000	-999.	28.	5.8	0.45	1.00	1.00	0.80	324.	9.1	279.6	5.5
05	01	01	1	08	-1.2	0.040	-9.000	-9.000	-999.	18.	4.8	0.45	1.00	0.55	0.60	336.	9.1	280.5	5.5
05	01	01	1	09	43.0	0.243	0.490	0.005	99.	276.	-30.3	0.45	1.00	0.32	1.50	44.	9.1	283.4	5.5
05	01	01	1	10	110.6	0.339	1.374	0.005	849.	453.	-31.7	0.45	1.00	0.24	2.10	74.	9.1	285.1	5.5
05	01	01	1	11	135.3	0.321	1.653	0.010	1209.	419.	-22.2	0.45	1.00	0.21	1.90	84.	9.1	286.4	5.5
05	01	01	1	12	14.3	0.223	0.783	0.010	1212.	246.	-70.3	0.45	1.00	0.20	1.50	137.	9.1	286.8	5.5
05	01	01	1	13	27.1	0.187	0.971	0.010	1218.	186.	-21.7	0.45	1.00	0.20	1.10	111.	9.1	286.9	5.5
05	01	01	1	14	17.1	0.179	0.834	0.009	1222.	174.	-30.0	0.45	1.00	0.21	1.10	186.	9.1	286.9	5.5
05	01	01	1	15	3.7	0.172	0.499	0.009	1223.	164.	-124.8	0.45	1.00	0.24	1.20	195.	9.1	286.1	5.5
05	01	01	1	16	0.1	0.147	0.150	0.009	1223.	130.	-2871.4	0.45	1.00	0.33	1.10	182.	9.1	285.9	5.5
05	01	01	1	17	-1.7	0.047	-9.000	-9.000	-999.	31.	5.5	0.45	1.00	0.59	0.70	159.	9.1	285.5	5.5
05	01	01	1	18	-0.2	0.019	-9.000	-9.000	-999.	6.	2.9	0.45	1.00	1.00	0.28	170.	9.1	285.1	5.5
05	01	01	1	19	-0.2	0.019	-9.000	-9.000	-999.	6.	2.9	0.45	1.00	1.00	0.28	186.	9.1	284.4	5.5
05	01	01	1	20	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.45	1.00	1.00	0.00	0.	9.1	284.0	5.5
05	01	01	1	21	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.45	1.00	1.00	0.00	0.	9.1	283.9	5.5
05	01	01	1	22	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.45	1.00	1.00	0.00	0.	9.1	283.4	5.5
05	01	01	1	23	-0.2	0.019	-9.000	-9.000	-999.	6.	2.9	0.45	1.00	1.00	0.28	313.	9.1	283.4	5.5
05	01	01	1	24	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.45	1.00	1.00	0.00	0.	9.1	283.4	5.5

First hour of profile data

YR	MO	DY	HR	HEIGHT	F	WDIR	WSPD	AMB_TMP	sigmaA	sigmaW	sigmaV
05	01	01	01	5.5	0	-999.	-99.00	281.2	99.0	-99.00	-99.00
05	01	01	01	9.1	1	321.	0.50	-999.0	99.0	-99.00	-99.00

F indicates top of profile (=1) or below (=0)

*** AERMOD - VERSION 09292 ***   *** Stone Canyon Reservoir   ***   07/27/10
*** NO2MT   ***   16:22:27
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**MODELOPTs: RegDFAULT CONC   ELEV
NODRYDPLT NOWETDPLT

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): VOL1 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF NOX IN PPM **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
365205.23	3776966.38	0.01721	(07043007)	365273.46	3776942.30	0.01793	(07043007)
365297.54	3776837.96	0.01475	(07043007)	365261.42	3776781.78	0.01307	(06082807)
365241.35	3776673.42	0.01892	(06082207)	365205.23	3776528.94	0.01105	(06121509)
365153.06	3776456.70	0.01224	(07032008)	365116.94	3776332.29	0.00902	(05052707)
365120.95	3776231.96	0.01078	(05121209)	365137.01	3776115.58	0.01298	(05090207)
365116.94	3775999.19	0.01510	(05090207)	365104.90	3775898.86	0.01456	(05103108)
365132.99	3775754.39	0.00965	(05121809)	365317.60	3777247.31	0.00938	(05083108)
365273.46	3777203.17	0.01456	(06042607)	365100.89	3777094.81	0.01291	(07043007)
366493.48	3776063.40	0.02120	(07060207)	366465.39	3776183.80	0.01873	(05040607)
366453.35	3776308.21	0.01891	(05040607)	366449.34	3776416.57	0.01741	(05101708)
366397.17	3776561.05	0.02370	(05101708)	366369.07	3776685.46	0.01215	(06080207)
366369.07	3776837.96	0.01401	(05041307)	366409.21	3776962.37	0.01095	(05071607)
366457.36	3777078.76	0.00999	(05050607)	366441.31	3777195.14	0.01099	(06042107)
365594.52	3777500.15	0.00869	(05120109)	365534.32	3777544.29	0.01021	(05120109)
365646.69	3777439.95	0.00793	(05090608)	365702.87	3777419.88	0.00763	(05102308)
365385.83	3777435.93	0.01177	(07050107)	365329.64	3777520.21	0.01104	(07050107)
366272.76	3775373.13	0.01141	(06041807)	366373.09	3775401.22	0.01359	(06041807)
366573.75	3775473.46	0.01323	(06030408)	366124.27	3777528.24	0.01392	(06082007)

*** AERMOD - VERSION 09292 ***   *** Stone Canyon Reservoir   ***   07/27/10

**MODELOPTs: RegDFAULT CONC ELEV
NODRYDPLT NOWETDPLT

*** THE SUMMARY OF HIGHEST 1-HR RESULTS ***

** CONC OF NOX IN PPM **

```
                                          DATE                                                           NETWORK
GROUP ID                  AVERAGE CONC    (YYMMDDHH)          RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG)   OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

ALL      HIGH  1ST HIGH VALUE IS      0.02370  ON 05101708: AT (  366397.17,  3776561.05,   365.00,   365.00,    0.00)  DC
```

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

**MODELOPTs: RegDFAULT CONC ELEV
NODRYDPLT NOWETDPLT

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

```
A Total of           0 Fatal Error Message(s)
A Total of           0 Warning Message(s)
A Total of        1753 Informational Message(s)

A Total of       26280 Hours Were Processed

A Total of        1181 Calm Hours Identified

A Total of         572 Missing Hours Identified (  2.18 Percent)
```

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********
*** NONE ***

****
*** AERMOD Finishes Successfully ***
****

Alternative 2 PM_{10} Localized Emissions

```
**
****************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 6.6.0
** Lakes Environmental Software Inc.
** Date: 7/27/2010
** File: J:\Projects\LADWP Stone Canyon Reservoir Project 2008-057\Air Quality\Construction Emissions\Localized\Alt2\PM10\PM10.ADI
**
****************************************
**
**
****************************************
** AERMOD Control Pathway
****************************************
**
**
CO STARTING
   TITLEONE Stone Canyon Reservoir
   TITLETWO PM10
   MODELOPT DFAULT CONC NODRYDPLT NOWETDPLT
   AVERTIME 24
   URBANOPT 9862049
   POLLUTID PM.10
   RUNORNOT RUN
CO FINISHED
**
****************************************
** AERMOD Source Pathway
****************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
   LOCATION AREA1 AREA 365796.443 3776482.259 303.190
** DESCRSRC Dust
   LOCATION VOL1 VOLUME 365893.498 3776581.066 303.930
** DESCRSRC Exhaust
** Source Parameters **
   SRCPARAM AREA1 0.00009338 0.000 195.986 195.986 0.000
   SRCPARAM VOL1 0.1098 5.000 45.578 1.163
   URBANSRC AREA1
   URBANSRC VOL1
   SRCGROUP ALL
SO FINISHED
**
****************************************
** AERMOD Receptor Pathway
****************************************
**
**
RE STARTING
** DESCRREC "" ""
   DISCCART    365205.23   3776966.38  375.93  426.00
   DISCCART    365273.46   3776942.30  371.48  426.00
   DISCCART    365297.54   3776837.96  364.53  426.00
   DISCCART    365261.42   3776781.78  365.63  426.00
   DISCCART    365241.35   3776673.42  365.70  365.68
   DISCCART    365205.23   3776528.94  365.00  364.88
   DISCCART    365153.06   3776456.70  365.00  365.00
   DISCCART    365116.94   3776332.29  365.00  365.00
   DISCCART    365120.95   3776231.96  364.96  364.86
   DISCCART    365137.01   3776115.58  364.26  364.20
   DISCCART    365116.94   3775999.19  364.00  364.00
   DISCCART    365104.90   3775898.86  364.00  364.00
   DISCCART    365132.99   3775754.39  364.00  364.00
   DISCCART    365317.60   3777247.31  388.83  426.00
   DISCCART    365273.46   3777203.17  389.43  426.00
   DISCCART    365100.89   3777094.81  392.86  426.00
   DISCCART    366493.48   3776063.40  333.67  365.00
   DISCCART    366465.39   3776183.80  356.13  365.00
   DISCCART    366453.35   3776308.21  364.45  363.66
   DISCCART    366449.34   3776416.57  364.78  364.59
   DISCCART    366397.17   3776561.05  365.00  365.00
   DISCCART    366369.07   3776685.46  365.00  365.00
   DISCCART    366369.07   3776837.96  365.00  365.00
   DISCCART    366409.21   3776962.37  365.00  365.00
   DISCCART    366457.36   3777078.76  365.00  365.00
   DISCCART    366441.31   3777195.14  365.00  365.00
   DISCCART    365594.52   3777500.15  365.00  426.00
   DISCCART    365534.32   3777544.29  364.93  426.00
   DISCCART    365646.69   3777439.95  365.00  426.00
   DISCCART    365702.87   3777419.88  364.34  426.00
   DISCCART    365385.83   3777435.93  380.85  426.00
   DISCCART    365329.64   3777520.21  382.17  426.00
   DISCCART    366272.76   3775373.13  284.66  365.00
   DISCCART    366373.09   3775401.22  277.95  365.00
   DISCCART    366573.75   3775473.46  276.50  365.00
   DISCCART    366124.27   3777528.24  365.00  365.00
RE FINISHED
**
****************************************
** AERMOD Meteorology Pathway
****************************************
**
**
ME STARTING
   SURFFILE "L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.SFC"
   PROFFILE "L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.PFL"
   SURFDATA 0 2005
   UAIRDATA 3190 2005
   PROFBASE 10 METERS
ME FINISHED
**
****************************************
** AERMOD Output Pathway
****************************************
**
**
OU STARTING
```

```
   RECTABLE ALLAVE 1ST
   RECTABLE 24 1ST
** Auto-Generated Plotfiles
   PLOTFILE 24 ALL 1ST PM10.AD\24H1GALL.PLT
OU FINISHED

 **********************************
 *** SETUP Finishes Successfully ***
 **********************************

 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                              ***        07/27/10
                                   *** PM10                                                                ***        15:45:18
                                                                                                                      PAGE   1
 **MODELOPTs:  RegDFAULT CONC                                          ELEV
                                                             NODRYDPLT NOWETDPLT

                                    ***     MODEL SETUP OPTIONS SUMMARY       ***
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

 **Model Is Setup For Calculation of Average CONCentration Values.

   --  DEPOSITION LOGIC  --
 **NO GAS DEPOSITION Data Provided.
 **NO PARTICLE DEPOSITION Data Provided.
 **Model Uses NO DRY DEPLETION.  DRYDPLT  =  F
 **Model Uses NO WET DEPLETION.  WETDPLT  =  F

 **Model Uses URBAN Dispersion Algorithm for the SBL for     2 Source(s),
   for Total of    1 Urban Area(s):
   Urban Population =   9862049.0 ;  Urban Roughness Length =  1.000 m

 **Model Uses Regulatory DEFAULT Options:
         1. Stack-tip Downwash.
         2. Model Accounts for ELEVated Terrain Effects.
         3. Use Calms Processing Routine.
         4. Use Missing Data Processing Routine.
         5. No Exponential Decay for URBAN/Non-SO2.
         6. Urban Roughness Length of 1.0 Meter Assumed.

 **Model Assumes No FLAGPOLE Receptor Heights.

 **Model Calculates  1 Short Term Average(s) of:  24-HR

 **This Run Includes:      2 Source(s);       1 Source Group(s); and      36 Receptor(s)

 **The Model Assumes A Pollutant Type of:  PM.10

 **Model Set To Continue RUNning After the Setup Testing.

 **Output Options Selected:
          Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE Keyword)
          Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)

 **NOTE:  The Following Flags May Appear Following CONC Values:  c for Calm Hours
                                                                 m for Missing Hours
                                                                 b for Both Calm and Missing Hours

 **Misc. Inputs:  Base Elev. for Pot. Temp. Profile (m MSL) =    10.00 ;  Decay Coef. =    0.000     ;  Rot. Angle =     0.0
                  Emission Units = GRAMS/SEC                                ;  Emission Rate Unit Factor =   0.10000E+07
                  Output Units   = MICROGRAMS/M**3

 **Approximate Storage Requirements of Model =      3.5 MB of RAM.

 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                              ***        07/27/10
                                   *** PM10                                                                ***        15:45:18
                                                                                                                      PAGE   2
 **MODELOPTs:  RegDFAULT CONC                                          ELEV
                                                             NODRYDPLT NOWETDPLT


                                          *** VOLUME SOURCE DATA ***

              NUMBER EMISSION RATE                     BASE    RELEASE    INIT.    INIT.   URBAN  EMISSION RATE
     SOURCE    PART.  (GRAMS/SEC)     X        Y       ELEV.   HEIGHT      SY       SZ     SOURCE  SCALAR VARY
       ID      CATS.               (METERS) (METERS) (METERS) (METERS) (METERS) (METERS)              BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

   VOL1         0   0.10980E+00  365893.5 3776581.1   303.9     5.00    45.58     1.16     YES
 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                              ***        07/27/10
                                   *** PM10                                                                ***        15:45:18
                                                                                                                      PAGE   3
 **MODELOPTs:  RegDFAULT CONC                                          ELEV
                                                             NODRYDPLT NOWETDPLT


                                          *** AREA SOURCE DATA ***

              NUMBER EMISSION RATE  COORD (SW CORNER)  BASE     RELEASE  X-DIM     Y-DIM    ORIENT.    INIT.   URBAN  EMISSION RATE
    SOURCE     PART.  (GRAMS/SEC       X        Y      ELEV.    HEIGHT  OF AREA   OF AREA   OF AREA     SZ     SOURCE  SCALAR VARY
      ID       CATS.   /METER**2)   (METERS) (METERS) (METERS) (METERS) (METERS)  (METERS)   (DEG.)  (METERS)              BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

   AREA1        0   0.93380E-04  365796.4 3776482.3   303.2     0.00    195.99    195.99      0.00     0.00    YES
 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                              ***        07/27/10
                                   *** PM10                                                                ***        15:45:18
                                                                                                                      PAGE   4
 **MODELOPTs:  RegDFAULT CONC                                          ELEV
                                                             NODRYDPLT NOWETDPLT


                                   *** SOURCE IDs DEFINING SOURCE GROUPS ***

 GROUP ID                                          SOURCE IDs



  ALL       AREA1   , VOL1    ,
 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                              ***        07/27/10
                                   *** PM10                                                                ***        15:45:18
                                                                                                                      PAGE   5
 **MODELOPTs:  RegDFAULT CONC                                          ELEV
                                                             NODRYDPLT NOWETDPLT

                                     *** DISCRETE CARTESIAN RECEPTORS ***
```

(X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
(METERS)

(365205.2,	3776966.4,	375.9,	426.0,	0.0);	(365273.5,	3776942.3,	371.5,	426.0,	0.0);
(365297.5,	3776838.0,	364.5,	426.0,	0.0);	(365261.4,	3776781.8,	365.6,	426.0,	0.0);
(365241.3,	3776673.4,	365.7,	365.7,	0.0);	(365205.2,	3776528.9,	365.0,	364.9,	0.0);
(365153.1,	3776456.7,	365.0,	365.0,	0.0);	(365116.9,	3776332.3,	365.0,	365.0,	0.0);
(365121.0,	3776232.0,	365.0,	364.9,	0.0);	(365137.0,	3776115.6,	364.3,	364.2,	0.0);
(365116.9,	3775999.2,	364.0,	364.0,	0.0);	(365104.9,	3775898.9,	364.0,	364.0,	0.0);
(365133.0,	3775754.4,	364.0,	364.0,	0.0);	(365317.6,	3777247.3,	388.8,	426.0,	0.0);
(365273.5,	3777203.2,	389.4,	426.0,	0.0);	(365100.9,	3777094.8,	392.9,	426.0,	0.0);
(366493.5,	3776063.4,	333.7,	365.0,	0.0);	(366465.4,	3776183.8,	356.1,	365.0,	0.0);
(366453.3,	3776308.2,	364.4,	363.7,	0.0);	(366449.3,	3776416.6,	364.8,	364.6,	0.0);
(366397.2,	3776561.0,	365.0,	365.0,	0.0);	(366369.1,	3776685.5,	365.0,	365.0,	0.0);
(366369.1,	3776838.0,	365.0,	365.0,	0.0);	(366409.2,	3776962.4,	365.0,	365.0,	0.0);
(366457.4,	3777078.8,	365.0,	365.0,	0.0);	(366441.3,	3777195.1,	365.0,	365.0,	0.0);
(365594.5,	3777500.1,	365.0,	426.0,	0.0);	(365534.3,	3777544.3,	364.9,	426.0,	0.0);
(365646.7,	3777439.9,	365.0,	426.0,	0.0);	(365702.9,	3777419.9,	364.3,	426.0,	0.0);
(365385.8,	3777435.9,	380.9,	426.0,	0.0);	(365329.6,	3777520.2,	382.2,	426.0,	0.0);
(366272.8,	3775373.1,	284.7,	365.0,	0.0);	(366373.1,	3775401.2,	277.9,	365.0,	0.0);
(366573.8,	3775473.5,	276.5,	365.0,	0.0);	(366124.3,	3777528.2,	365.0,	365.0,	0.0);

**MODELOPTs: RegDFAULT CONC ELEV
NODRYDPLT NOWETDPLT

*** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***
(1=YES; 0=NO)

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

NOTE: METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.

*** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
(METERS/SEC)

1.54, 3.09, 5.14, 8.23, 10.80,

**MODELOPTs: RegDFAULT CONC ELEV
NODRYDPLT NOWETDPLT

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.SFC Met Version: 06341
Profile file: L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 0 Upper air station no.: 3190
Name: UNKNOWN Name: UNKNOWN
Year: 2005 Year: 2005

First 24 hours of scalar data

YR MO DY	JDY HR	H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O LEN	Z0	BOWEN	ALBEDO	REF WS	WD	HT	REF TA	HT
05 01 01	1 01	-0.9	0.033	-9.000	-9.000	-999.	14.	3.7	0.45	1.00	1.00	0.50	321.	9.1	281.1	5.5
05 01 01	1 02	-0.9	0.033	-9.000	-9.000	-999.	14.	3.8	0.45	1.00	1.00	0.50	320.	9.1	280.8	5.5
05 01 01	1 03	-0.9	0.033	-9.000	-9.000	-999.	14.	3.7	0.45	1.00	1.00	0.50	323.	9.1	280.9	5.5
05 01 01	1 04	-1.3	0.040	-9.000	-9.000	-999.	18.	4.4	0.45	1.00	1.00	0.60	316.	9.1	280.8	5.5
05 01 01	1 05	-1.3	0.040	-9.000	-9.000	-999.	18.	4.4	0.45	1.00	1.00	0.60	322.	9.1	280.4	5.5
05 01 01	1 06	-0.3	0.020	-9.000	-9.000	-999.	6.	2.3	0.45	1.00	1.00	0.30	352.	9.1	279.9	5.5
05 01 01	1 07	-2.3	0.053	-9.000	-9.000	-999.	28.	5.8	0.45	1.00	1.00	0.80	324.	9.1	279.6	5.5
05 01 01	1 08	-1.2	0.040	-9.000	-9.000	-999.	18.	4.8	0.45	1.00	0.55	0.60	336.	9.1	280.5	5.5
05 01 01	1 09	43.0	0.243	0.490	0.005	99.	276.	-30.3	0.45	1.00	0.32	1.50	44.	9.1	283.4	5.5
05 01 01	1 10	110.6	0.339	1.374	0.005	849.	453.	-31.7	0.45	1.00	0.24	2.10	74.	9.1	285.1	5.5
05 01 01	1 11	135.3	0.321	1.653	0.010	1209.	419.	-22.2	0.45	1.00	0.21	1.90	84.	9.1	286.4	5.5
05 01 01	1 12	14.3	0.223	0.783	0.010	1212.	246.	-70.3	0.45	1.00	0.20	1.50	137.	9.1	286.8	5.5
05 01 01	1 13	27.1	0.187	0.971	0.010	1218.	186.	-21.7	0.45	1.00	0.20	1.10	111.	9.1	286.9	5.5
05 01 01	1 14	17.1	0.179	0.834	0.009	1222.	174.	-30.0	0.45	1.00	0.21	1.10	186.	9.1	286.9	5.5
05 01 01	1 15	3.7	0.172	0.499	0.009	1223.	164.	-124.8	0.45	1.00	0.24	1.20	195.	9.1	286.1	5.5
05 01 01	1 16	0.1	0.147	0.150	0.009	1223.	130.	-2871.4	0.45	1.00	0.33	1.10	182.	9.1	285.9	5.5
05 01 01	1 17	-1.7	0.047	-9.000	-9.000	-999.	31.	5.5	0.45	1.00	0.59	0.70	159.	9.1	285.5	5.5
05 01 01	1 18	-0.2	0.019	-9.000	-9.000	-999.	6.	2.9	0.45	1.00	1.00	0.28	170.	9.1	285.1	5.5
05 01 01	1 19	-0.2	0.019	-9.000	-9.000	-999.	6.	2.9	0.45	1.00	1.00	0.28	186.	9.1	284.4	5.5
05 01 01	1 20	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.45	1.00	1.00	0.00	0.	9.1	284.0	5.5
05 01 01	1 21	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.45	1.00	1.00	0.00	0.	9.1	283.9	5.5
05 01 01	1 22	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.45	1.00	1.00	0.00	0.	9.1	283.4	5.5
05 01 01	1 23	-0.2	0.019	-9.000	-9.000	-999.	6.	2.9	0.45	1.00	1.00	0.28	313.	9.1	283.4	5.5
05 01 01	1 24	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.45	1.00	1.00	0.00	0.	9.1	283.4	5.5

First hour of profile data

YR MO DY HR	HEIGHT	F	WDIR	WSPD	AMB_TMP	sigmaA	sigmaW	sigmaV
05 01 01 01	5.5	0	-999.	-99.00	281.2	99.0	-99.00	-99.00
05 01 01 01	9.1	1	321.	0.50	-999.0	99.0	-99.00	-99.00

F indicates top of profile (=1) or below (=0)

**MODELOPTs: RegDFAULT CONC ELEV
NODRYDPLT NOWETDPLT

*** THE 1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): AREA1 , VOL1 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM.10 IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
365205.23	3776966.38	49.98284	(07043024)	365273.46	3776942.30	50.64899	(07043024)

365297.54	3776837.96	53.71692c (05101024)	365261.42	3776781.78	56.32852 (07090324)
365241.35	3776673.42	54.73208 (05122624)	365205.23	3776528.94	55.91085c (06063024)
365153.06	3776456.70	65.69078 (05020624)	365116.94	3776332.29	49.49736 (05020624)
365120.95	3776231.96	48.97093c (06082624)	365137.01	3776115.58	46.08044c (05092124)
365116.94	3775999.19	43.82659c (05090224)	365104.90	3775898.86	52.04034c (06102024)
365132.99	3775754.39	51.14586c (06102024)	365317.60	3777247.31	50.13952c (05111424)
365273.46	3777203.17	43.19776c (05111424)	365100.89	3777094.81	44.11936 (06061424)
366493.48	3776063.40	205.73302 (06102724)	366465.39	3776183.80	198.04852c (05091724)
366453.35	3776308.21	116.55620c (05021424)	366449.34	3776416.57	100.15730c (05090224)
366397.17	3776561.05	90.17734 (05072724)	366369.07	3776685.46	127.61078c (05081024)
366369.07	3776837.96	89.34539c (05082724)	366409.21	3776962.37	67.42079 (06073124)
366457.36	3777078.76	52.64718 (06073124)	366441.31	3777195.14	48.89597 (06051524)
365594.52	3777500.15	58.32845c (05082924)	365534.32	3777544.29	54.90447c (05090624)
365646.69	3777439.95	70.23330c (05082924)	365702.87	3777419.88	71.09596c (05082924)
365385.83	3777435.93	81.11343 (07050124)	365329.64	3777520.21	77.66295 (07050124)
366272.76	3775373.13	105.14807 (06110624)	366373.09	3775401.22	82.04686 (06021324)
366573.75	3775473.46	121.09788 (06030424)	366124.27	3777528.24	37.51500 (07070624)

**MODELOPTs: RegDFAULT CONC ELEV
NODRYDPLT NOWETDPLT

*** THE SUMMARY OF HIGHEST 24-HR RESULTS ***

** CONC OF PM.10 IN MICROGRAMS/M**3 **

GROUP ID		AVERAGE CONC	DATE (YYMMDDHH)	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	NETWORK GRID-ID
ALL	HIGH 1ST HIGH VALUE IS	205.73302	ON 06102724:	AT (366493.48, 3776063.40, 333.67, 365.00, 0.00)	DC	

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

**MODELOPTs: RegDFAULT CONC ELEV
NODRYDPLT NOWETDPLT

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 0 Warning Message(s)
A Total of 1753 Informational Message(s)

A Total of 26280 Hours Were Processed

A Total of 1181 Calm Hours Identified

A Total of 572 Missing Hours Identified (2.18 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********
*** NONE ***

****
*** AERMOD Finishes Successfully ***
****

Alternative 2 Mitigated PM_{10} Localized Emissions

```
**
****************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 6.6.0
** Lakes Environmental Software Inc.
** Date: 7/28/2010
** File: J:\Projects\LADWP Stone Canyon Reservoir Project 2008-057\Air Quality\Construction Emissions\Localized\Alt2\PM10\PM10MT.ADI
**
****************************************
**
**
****************************************
** AERMOD Control Pathway
****************************************
**
**
CO STARTING
   TITLEONE Stone Canyon Reservoir
   TITLETWO PM10MIT
   MODELOPT DFAULT CONC NODRYDPLT NOWETDPLT
   AVERTIME 24
   URBANOPT 9862049
   POLLUTID PM.10
   RUNORNOT RUN
CO FINISHED
**
****************************************
** AERMOD Source Pathway
****************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
   LOCATION AREA1 AREA 365796.443 3776482.259 303.190
** DESCRSRC Dust
   LOCATION VOL1 VOLUME 365893.498 3776581.066 303.930
** DESCRSRC Exhaust
** Source Parameters **
   SRCPARAM AREA1 0.00009338 0.000 195.986 195.986 0.000
   SRCPARAM VOL1 0.1043 5.000 45.578 1.163
   URBANSRC AREA1
   URBANSRC VOL1
   SRCGROUP ALL
SO FINISHED
**
****************************************
** AERMOD Receptor Pathway
****************************************
**
**
RE STARTING
** DESCRREC "" ""
   DISCCART    365205.23   3776966.38  375.93  426.00
   DISCCART    365273.46   3776942.30  371.48  426.00
   DISCCART    365297.54   3776837.96  364.53  426.00
   DISCCART    365261.42   3776781.78  365.63  426.00
   DISCCART    365241.35   3776673.42  365.70  365.68
   DISCCART    365205.23   3776528.94  365.00  364.88
   DISCCART    365153.06   3776456.70  365.00  365.00
   DISCCART    365116.94   3776332.29  365.00  365.00
   DISCCART    365120.95   3776231.96  364.96  364.86
   DISCCART    365137.01   3776115.58  364.26  364.20
   DISCCART    365116.94   3775999.19  364.00  364.00
   DISCCART    365104.90   3775898.86  364.00  364.00
   DISCCART    365132.99   3775754.39  364.00  364.00
   DISCCART    365317.60   3777247.31  388.83  426.00
   DISCCART    365273.46   3777203.17  389.43  426.00
   DISCCART    365100.89   3777094.81  392.86  426.00
   DISCCART    366493.48   3776063.40  333.67  365.00
   DISCCART    366465.39   3776183.80  356.13  365.00
   DISCCART    366453.35   3776308.21  364.45  363.66
   DISCCART    366449.34   3776416.57  364.78  364.59
   DISCCART    366397.17   3776561.05  365.00  365.00
   DISCCART    366369.07   3776685.46  365.00  365.00
   DISCCART    366369.07   3776837.96  365.00  365.00
   DISCCART    366409.21   3776962.37  365.00  365.00
   DISCCART    366457.36   3777078.76  365.00  365.00
   DISCCART    366441.31   3777195.14  365.00  365.00
   DISCCART    365594.52   3777500.15  365.00  426.00
   DISCCART    365534.32   3777544.29  364.93  426.00
   DISCCART    365646.69   3777439.95  365.00  426.00
   DISCCART    365702.87   3777419.88  364.34  426.00
   DISCCART    365385.83   3777435.93  380.85  426.00
   DISCCART    365329.64   3777520.21  382.17  426.00
   DISCCART    366272.76   3775373.13  284.66  365.00
   DISCCART    366373.09   3775401.22  277.95  365.00
   DISCCART    366573.75   3775473.46  276.50  365.00
   DISCCART    366124.27   3777528.24  365.00  365.00
RE FINISHED
**
****************************************
** AERMOD Meteorology Pathway
****************************************
**
**
ME STARTING
   SURFFILE "L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.SFC"
   PROFFILE "L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.PFL"
   SURFDATA 0 2005
   UAIRDATA 3190 2005
   PROFBASE 10 METERS
ME FINISHED
**
****************************************
** AERMOD Output Pathway
****************************************
**
**
OU STARTING
```

```
   RECTABLE ALLAVE 1ST
   RECTABLE 24 1ST
** Auto-Generated Plotfiles
   PLOTFILE 24 ALL 1ST PM10MT.AD\24H1GALL.PLT
OU FINISHED

 **********************************
 *** SETUP Finishes Successfully ***
 **********************************

 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                               ***        07/28/10
                                   *** PM10MIT                                                              ***        09:10:54
                                                                                                                       PAGE   1
 **MODELOPTs:  RegDFAULT CONC                                            ELEV
                                                                NODRYDPLT NOWETDPLT

                                          ***     MODEL SETUP OPTIONS SUMMARY       ***
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

 **Model Is Setup For Calculation of Average CONCentration Values.

   --  DEPOSITION LOGIC  --
 **NO GAS DEPOSITION Data Provided.
 **NO PARTICLE DEPOSITION Data Provided.
 **Model Uses NO DRY DEPLETION.  DRYDPLT  =  F
 **Model Uses NO WET DEPLETION.  WETDPLT  =  F

 **Model Uses URBAN Dispersion Algorithm for the SBL for     2 Source(s),
   for Total of    1 Urban Area(s):
   Urban Population =   9862049.0 ;  Urban Roughness Length =  1.000 m

 **Model Uses Regulatory DEFAULT Options:
         1. Stack-tip Downwash.
         2. Model Accounts for ELEVated Terrain Effects.
         3. Use Calms Processing Routine.
         4. Use Missing Data Processing Routine.
         5. No Exponential Decay for URBAN/Non-SO2.
         6. Urban Roughness Length of 1.0 Meter Assumed.

 **Model Assumes No FLAGPOLE Receptor Heights.

 **Model Calculates  1 Short Term Average(s) of:  24-HR

 **This Run Includes:      2 Source(s);       1 Source Group(s); and      36 Receptor(s)

 **The Model Assumes A Pollutant Type of:  PM.10

 **Model Set To Continue RUNning After the Setup Testing.

 **Output Options Selected:
          Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE Keyword)
          Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)

 **NOTE:  The Following Flags May Appear Following CONC Values:  c for Calm Hours
                                                                m for Missing Hours
                                                                b for Both Calm and Missing Hours

 **Misc. Inputs:  Base Elev. for Pot. Temp. Profile (m MSL) =    10.00 ;  Decay Coef. =    0.000     ; Rot. Angle =     0.0
                  Emission Units = GRAMS/SEC                                ;  Emission Rate Unit Factor =   0.10000E+07
                  Output Units   = MICROGRAMS/M**3

 **Approximate Storage Requirements of Model =      3.5 MB of RAM.

 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                               ***        07/28/10
                                   *** PM10MIT                                                              ***        09:10:54
                                                                                                                       PAGE   2
 **MODELOPTs:  RegDFAULT CONC                                            ELEV
                                                                NODRYDPLT NOWETDPLT


                                              *** VOLUME SOURCE DATA ***

               NUMBER EMISSION RATE                       BASE     RELEASE    INIT.    INIT.   URBAN  EMISSION RATE
     SOURCE     PART.  (GRAMS/SEC)      X         Y       ELEV.    HEIGHT      SY       SZ     SOURCE  SCALAR VARY
      ID        CATS.                (METERS) (METERS) (METERS) (METERS) (METERS) (METERS)            BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

   VOL1          0   0.10430E+00  365893.5 3776581.1   303.9     5.00    45.58     1.16     YES
 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                               ***        07/28/10
                                   *** PM10MIT                                                              ***        09:10:54
                                                                                                                       PAGE   3
 **MODELOPTs:  RegDFAULT CONC                                            ELEV
                                                                NODRYDPLT NOWETDPLT


                                              *** AREA SOURCE DATA ***

               NUMBER EMISSION RATE  COORD (SW CORNER)  BASE     RELEASE  X-DIM     Y-DIM    ORIENT.   INIT.  URBAN  EMISSION RATE
    SOURCE      PART.  (GRAMS/SEC       X         Y      ELEV.    HEIGHT  OF AREA   OF AREA   OF AREA    SZ    SOURCE  SCALAR VARY
      ID        CATS.   /METER**2)   (METERS) (METERS) (METERS) (METERS) (METERS)  (METERS)   (DEG.)  (METERS)           BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

   AREA1         0   0.93380E-04  365796.4 3776482.3   303.2     0.00    195.99    195.99     0.00     0.00    YES
 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                               ***        07/28/10
                                   *** PM10MIT                                                              ***        09:10:54
                                                                                                                       PAGE   4
 **MODELOPTs:  RegDFAULT CONC                                            ELEV
                                                                NODRYDPLT NOWETDPLT


                                     *** SOURCE IDs DEFINING SOURCE GROUPS ***

 GROUP ID                                               SOURCE IDs



  ALL        AREA1   , VOL1    ,
 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                               ***        07/28/10
                                   *** PM10MIT                                                              ***        09:10:54
                                                                                                                       PAGE   5
 **MODELOPTs:  RegDFAULT CONC                                            ELEV
                                                                NODRYDPLT NOWETDPLT

                                         *** DISCRETE CARTESIAN RECEPTORS ***
```

```
                                        (X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
                                                        (METERS)

    ( 365205.2, 3776966.4,     375.9,     426.0,       0.0);        ( 365273.5, 3776942.3,     371.5,     426.0,       0.0);
    ( 365297.5, 3776838.0,     364.5,     426.0,       0.0);        ( 365261.4, 3776781.8,     365.6,     426.0,       0.0);
    ( 365241.3, 3776673.4,     365.7,     365.7,       0.0);        ( 365205.2, 3776528.9,     365.0,     364.9,       0.0);
    ( 365153.1, 3776456.7,     365.0,     365.0,       0.0);        ( 365116.9, 3776332.3,     365.0,     365.0,       0.0);
    ( 365121.0, 3776232.0,     365.0,     364.9,       0.0);        ( 365137.0, 3776115.6,     364.3,     364.2,       0.0);
    ( 365116.9, 3775999.2,     364.0,     364.0,       0.0);        ( 365104.9, 3775898.9,     364.0,     364.0,       0.0);
    ( 365133.0, 3775754.4,     364.0,     364.0,       0.0);        ( 365317.6, 3777247.3,     388.8,     426.0,       0.0);
    ( 365273.5, 3777203.2,     389.4,     426.0,       0.0);        ( 365100.9, 3777094.8,     392.9,     426.0,       0.0);
    ( 366493.5, 3776063.4,     333.7,     365.0,       0.0);        ( 366465.4, 3776183.8,     356.1,     365.0,       0.0);
    ( 366453.3, 3776308.2,     364.4,     363.7,       0.0);        ( 366449.3, 3776416.6,     364.8,     364.6,       0.0);
    ( 366397.2, 3776561.0,     365.0,     365.0,       0.0);        ( 366369.1, 3776685.5,     365.0,     365.0,       0.0);
    ( 366369.1, 3776838.0,     365.0,     365.0,       0.0);        ( 366409.2, 3776962.4,     365.0,     365.0,       0.0);
    ( 366457.4, 3777078.8,     365.0,     365.0,       0.0);        ( 366441.3, 3777195.1,     365.0,     365.0,       0.0);
    ( 365594.5, 3777500.1,     365.0,     426.0,       0.0);        ( 365534.3, 3777544.3,     364.9,     426.0,       0.0);
    ( 365646.7, 3777439.9,     365.0,     426.0,       0.0);        ( 365702.9, 3777419.9,     364.3,     426.0,       0.0);
    ( 365385.8, 3777435.9,     380.9,     426.0,       0.0);        ( 365329.6, 3777520.2,     382.2,     426.0,       0.0);
    ( 366272.8, 3775373.1,     284.7,     365.0,       0.0);        ( 366373.1, 3775401.2,     277.9,     365.0,       0.0);
    ( 366573.8, 3775473.5,     276.5,     365.0,       0.0);        ( 366124.3, 3777528.2,     365.0,     365.0,       0.0);
```



```
                                    *** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***
                                                       (1=YES; 0=NO)

          1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
          1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
          1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
          1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
          1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
          1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
          1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
          1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1

              NOTE:  METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.


                               *** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
                                                       (METERS/SEC)

                                         1.54,   3.09,   5.14,   8.23,  10.80,
```



```
                                  *** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

  Surface file:   L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.SFC    Met Version:  06341
  Profile file:   L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.PFL
  Surface format: FREE
  Profile format: FREE
  Surface station no.:        0                 Upper air station no.:     3190
                Name: UNKNOWN                                Name: UNKNOWN
                Year:   2005                                 Year:   2005

First 24 hours of scalar data
YR MO DY JDY HR     H0     U*     W*  DT/DZ ZICNV ZIMCH  M-O LEN    Z0  BOWEN ALBEDO  REF WS   WD     HT  REF TA     HT
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
05 01 01   1 01   -0.9  0.033 -9.000 -9.000 -999.   14.      3.7  0.45   1.00   1.00    0.50  321.    9.1  281.1    5.5
05 01 01   1 02   -0.9  0.033 -9.000 -9.000 -999.   14.      3.8  0.45   1.00   1.00    0.50  320.    9.1  280.8    5.5
05 01 01   1 03   -0.9  0.033 -9.000 -9.000 -999.   14.      3.7  0.45   1.00   1.00    0.50  323.    9.1  280.9    5.5
05 01 01   1 04   -1.3  0.040 -9.000 -9.000 -999.   18.      4.4  0.45   1.00   1.00    0.60  316.    9.1  280.8    5.5
05 01 01   1 05   -1.3  0.040 -9.000 -9.000 -999.   18.      4.4  0.45   1.00   1.00    0.60  322.    9.1  280.4    5.5
05 01 01   1 06   -0.3  0.020 -9.000 -9.000 -999.    6.      2.3  0.45   1.00   1.00    0.30  352.    9.1  279.9    5.5
05 01 01   1 07   -2.3  0.053 -9.000 -9.000 -999.   28.      5.8  0.45   1.00   1.00    0.80  324.    9.1  279.6    5.5
05 01 01   1 08   -1.2  0.040 -9.000 -9.000 -999.   18.      4.8  0.45   1.00   0.55    0.60  336.    9.1  280.5    5.5
05 01 01   1 09   43.0  0.243  0.490  0.005   99.  276.    -30.3  0.45   1.00   0.32    1.50   44.    9.1  283.4    5.5
05 01 01   1 10  110.6  0.339  1.374  0.005  849.  453.    -31.7  0.45   1.00   0.24    2.10   74.    9.1  285.1    5.5
05 01 01   1 11  135.3  0.321  1.653  0.010 1209.  419.    -22.2  0.45   1.00   0.21    1.90   84.    9.1  286.4    5.5
05 01 01   1 12   14.3  0.223  0.783  0.010 1212.  246.    -70.3  0.45   1.00   0.20    1.50  137.    9.1  286.8    5.5
05 01 01   1 13   27.1  0.187  0.971  0.010 1218.  186.    -21.7  0.45   1.00   0.20    1.10  111.    9.1  286.9    5.5
05 01 01   1 14   17.1  0.179  0.834  0.009 1222.  174.    -30.0  0.45   1.00   0.21    1.10  186.    9.1  286.9    5.5
05 01 01   1 15    3.7  0.172  0.499  0.009 1223.  164.   -124.8  0.45   1.00   0.24    1.20  195.    9.1  286.1    5.5
05 01 01   1 16    0.1  0.147  0.150  0.009 1223.  130.  -2871.4  0.45   1.00   0.33    1.10  182.    9.1  285.9    5.5
05 01 01   1 17   -1.7  0.047 -9.000 -9.000 -999.   31.      5.5  0.45   1.00   0.59    0.70  159.    9.1  285.5    5.5
05 01 01   1 18   -0.2  0.019 -9.000 -9.000 -999.    6.      2.9  0.45   1.00   1.00    0.28  170.    9.1  285.1    5.5
05 01 01   1 19   -0.2  0.019 -9.000 -9.000 -999.    6.      2.9  0.45   1.00   1.00    0.28  186.    9.1  284.4    5.5
05 01 01   1 20 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.45   1.00   1.00    0.00    0.    9.1  284.0    5.5
05 01 01   1 21 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.45   1.00   1.00    0.00    0.    9.1  283.9    5.5
05 01 01   1 22 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.45   1.00   1.00    0.00    0.    9.1  283.4    5.5
05 01 01   1 23   -0.2  0.019 -9.000 -9.000 -999.    6.      2.9  0.45   1.00   1.00    0.28  313.    9.1  283.4    5.5
05 01 01   1 24 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.45   1.00   1.00    0.00    0.    9.1  283.4    5.5


First hour of profile data
YR MO DY HR HEIGHT F  WDIR    WSPD AMB_TMP sigmaA  sigmaW  sigmaV
05 01 01 01    5.5 0 -999.  -99.00   281.2   99.0  -99.00  -99.00
05 01 01 01    9.1 1  321.    0.50  -999.0   99.0  -99.00  -99.00

F indicates top of profile (=1) or below (=0)
```



```
                         *** THE   1ST HIGHEST 24-HR AVERAGE CONCENTRATION   VALUES FOR SOURCE GROUP:  ALL       ***
                             INCLUDING SOURCE(S):      AREA1   , VOL1    ,

                                              *** DISCRETE CARTESIAN RECEPTOR POINTS ***

                                        ** CONC OF PM.10    IN MICROGRAMS/M**3                       **

     X-COORD (M)  Y-COORD (M)        CONC     (YYMMDDHH)                X-COORD (M)  Y-COORD (M)        CONC     (YYMMDDHH)
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
       365205.23   3776966.38       49.94276  (07043024)                 365273.46   3776942.30       50.60670  (07043024)
```

365297.54	3776837.96	53.69089c (05101024)	365261.42	3776781.78	56.28396 (07090324)
365241.35	3776673.42	54.67274 (05122624)	365205.23	3776528.94	55.86817c (06063024)
365153.06	3776456.70	65.62136 (05020624)	365116.94	3776332.29	49.44364 (05020624)
365120.95	3776231.96	48.94645c (06082624)	365137.01	3776115.58	46.05698c (05092124)
365116.94	3775999.19	43.79206c (05090224)	365104.90	3775898.86	52.02437c (06102024)
365132.99	3775754.39	51.13006c (06102024)	365317.60	3777247.31	50.11243c (05111424)
365273.46	3777203.17	43.16694c (05111424)	365100.89	3777094.81	44.08474 (06061424)
366493.48	3776063.40	205.65593 (06102724)	366465.39	3776183.80	198.01399c (05091724)
366453.35	3776308.21	116.50999c (05021424)	366449.34	3776416.57	100.11022c (05090224)
366397.17	3776561.05	90.11845 (05072724)	366369.07	3776685.46	127.53377c (05081024)
366369.07	3776837.96	89.31835c (05082724)	366409.21	3776962.37	67.35743 (06073124)
366457.36	3777078.76	52.58830 (06073124)	366441.31	3777195.14	48.85405 (06051524)
365594.52	3777500.15	58.30959c (05082924)	365534.32	3777544.29	54.86214c (05090624)
365646.69	3777439.95	70.21221c (05082924)	365702.87	3777419.88	71.07316c (05082924)
365385.83	3777435.93	81.06826 (07050124)	365329.64	3777520.21	77.62188 (07050124)
366272.76	3775373.13	105.12652 (06110624)	366373.09	3775401.22	82.01837 (06021324)
366573.75	3775473.46	121.05652 (06030424)	366124.27	3777528.24	37.48224 (07070624)

```
 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                              ***        07/28/10
                                   *** PM10MIT                                                             ***        09:10:54
                                                                                                                      PAGE   9
 **MODELOPTs:  RegDFAULT CONC                                              ELEV
                                                                 NODRYDPLT NOWETDPLT

                                               *** THE SUMMARY OF HIGHEST 24-HR RESULTS ***

                                   ** CONC OF PM.10    IN MICROGRAMS/M**3                           **

                                                     DATE                                                                   NETWORK
GROUP ID                           AVERAGE CONC     (YYMMDDHH)             RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG)    OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

ALL      HIGH  1ST HIGH VALUE IS     205.65593  ON 06102724: AT (  366493.48,  3776063.40,   333.67,   365.00,    0.00)  DC

 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                              ***        07/28/10
                                   *** PM10MIT                                                             ***        09:10:54
                                                                                                                      PAGE  10
 **MODELOPTs:  RegDFAULT CONC                                              ELEV
                                                                 NODRYDPLT NOWETDPLT

 *** Message Summary : AERMOD Model Execution ***

  --------- Summary of Total Messages --------

 A Total of           0 Fatal Error Message(s)
 A Total of           0 Warning Message(s)
 A Total of        1753 Informational Message(s)

 A Total of       26280 Hours Were Processed

 A Total of        1181 Calm Hours Identified

 A Total of         572 Missing Hours Identified (  2.18 Percent)


    ******** FATAL ERROR MESSAGES ********
               ***  NONE  ***


    ********   WARNING MESSAGES   ********
               ***  NONE  ***

    ***********************************
    *** AERMOD Finishes Successfully ***
    ***********************************
```

Alternative 2 $PM_{2.5}$ Localized Emissions

```
**
****************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 6.6.0
** Lakes Environmental Software Inc.
** Date: 7/27/2010
** File: J:\Projects\LADWP Stone Canyon Reservoir Project 2008-057\Air Quality\Construction Emissions\Localized\Alt2\PM2.5\PM25.ADI
**
****************************************
**
**
****************************************
** AERMOD Control Pathway
****************************************
**
**
CO STARTING
   TITLEONE Stone Canyon Reservoir
   TITLETWO PM25
   MODELOPT DFAULT CONC NODRYDPLT NOWETDPLT
   AVERTIME 24
   URBANOPT 9862049
   POLLUTID PM.25
   RUNORNOT RUN
CO FINISHED
**
****************************************
** AERMOD Source Pathway
****************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
   LOCATION AREA1 AREA 365796.443 3776482.259 303.190
** DESCRSRC Dust
   LOCATION VOL1 VOLUME 365893.498 3776581.066 303.930
** DESCRSRC Exhaust
** Source Parameters **
   SRCPARAM AREA1 0.00001939 0.000 195.986 195.986 0.000
   SRCPARAM VOL1 0.101 5.000 45.578 1.163
   URBANSRC AREA1
   URBANSRC VOL1
   SRCGROUP ALL
SO FINISHED
**
****************************************
** AERMOD Receptor Pathway
****************************************
**
**
RE STARTING
** DESCRREC "" ""
   DISCCART    365205.23   3776966.38  375.93  426.00
   DISCCART    365273.46   3776942.30  371.48  426.00
   DISCCART    365297.54   3776837.96  364.53  426.00
   DISCCART    365261.42   3776781.78  365.63  426.00
   DISCCART    365241.35   3776673.42  365.70  365.68
   DISCCART    365205.23   3776528.94  365.00  364.88
   DISCCART    365153.06   3776456.70  365.00  365.00
   DISCCART    365116.94   3776332.29  365.00  365.00
   DISCCART    365120.95   3776231.96  364.96  364.86
   DISCCART    365137.01   3776115.58  364.26  364.20
   DISCCART    365116.94   3775999.19  364.00  364.00
   DISCCART    365104.90   3775898.86  364.00  364.00
   DISCCART    365132.99   3775754.39  364.00  364.00
   DISCCART    365317.60   3777247.31  388.83  426.00
   DISCCART    365273.46   3777203.17  389.43  426.00
   DISCCART    365100.89   3777094.81  392.86  426.00
   DISCCART    366493.48   3776063.40  333.67  365.00
   DISCCART    366465.39   3776183.80  356.13  365.00
   DISCCART    366453.35   3776308.21  364.45  363.66
   DISCCART    366449.34   3776416.57  364.78  364.59
   DISCCART    366397.17   3776561.05  365.00  365.00
   DISCCART    366369.07   3776685.46  365.00  365.00
   DISCCART    366369.07   3776837.96  365.00  365.00
   DISCCART    366409.21   3776962.37  365.00  365.00
   DISCCART    366457.36   3777078.76  365.00  365.00
   DISCCART    366441.31   3777195.14  365.00  365.00
   DISCCART    365594.52   3777500.15  365.00  426.00
   DISCCART    365534.32   3777544.29  364.93  426.00
   DISCCART    365646.69   3777439.95  365.00  426.00
   DISCCART    365702.87   3777419.88  364.34  426.00
   DISCCART    365385.83   3777435.93  380.85  426.00
   DISCCART    365329.64   3777520.21  382.17  426.00
   DISCCART    366272.76   3775373.13  284.66  365.00
   DISCCART    366373.09   3775401.22  277.95  365.00
   DISCCART    366573.75   3775473.46  276.50  365.00
   DISCCART    366124.27   3777528.24  365.00  365.00
RE FINISHED
**
****************************************
** AERMOD Meteorology Pathway
****************************************
**
**
ME STARTING
   SURFFILE "L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.SFC"
   PROFFILE "L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.PFL"
   SURFDATA 0 2005
   UAIRDATA 3190 2005
   PROFBASE 10 METERS
ME FINISHED
**
****************************************
** AERMOD Output Pathway
****************************************
**
**
OU STARTING
```

```
   RECTABLE ALLAVE 1ST
   RECTABLE 24 1ST
** Auto-Generated Plotfiles
   PLOTFILE 24 ALL 1ST PM25.AD\24H1GALL.PLT
OU FINISHED

 **********************************
 *** SETUP Finishes Successfully ***
 **********************************

 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                              ***        07/27/10
                                   *** PM25                                                                ***        15:51:57
                                                                                                                      PAGE   1
 **MODELOPTs:  RegDFAULT CONC                                          ELEV
                                                             NODRYDPLT NOWETDPLT

                                           ***     MODEL SETUP OPTIONS SUMMARY       ***
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

 **Model Is Setup For Calculation of Average CONCentration Values.

   --  DEPOSITION LOGIC  --
 **NO GAS DEPOSITION Data Provided.
 **NO PARTICLE DEPOSITION Data Provided.
 **Model Uses NO DRY DEPLETION.  DRYDPLT  =  F
 **Model Uses NO WET DEPLETION.  WETDPLT  =  F

 **Model Uses URBAN Dispersion Algorithm for the SBL for     2 Source(s),
   for Total of    1 Urban Area(s):
   Urban Population =   9862049.0 ;  Urban Roughness Length =  1.000 m

 **Model Uses Regulatory DEFAULT Options:
         1. Stack-tip Downwash.
         2. Model Accounts for ELEVated Terrain Effects.
         3. Use Calms Processing Routine.
         4. Use Missing Data Processing Routine.
         5. No Exponential Decay for URBAN/Non-SO2.
         6. Urban Roughness Length of 1.0 Meter Assumed.

 **Model Assumes No FLAGPOLE Receptor Heights.

 **Model Calculates  1 Short Term Average(s) of:  24-HR

 **This Run Includes:      2 Source(s);       1 Source Group(s); and      36 Receptor(s)

 **The Model Assumes A Pollutant Type of:  PM.25

 **Model Set To Continue RUNning After the Setup Testing.

 **Output Options Selected:
          Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE Keyword)
          Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)

 **NOTE:  The Following Flags May Appear Following CONC Values:  c for Calm Hours
                                                                 m for Missing Hours
                                                                 b for Both Calm and Missing Hours

 **Misc. Inputs:  Base Elev. for Pot. Temp. Profile (m MSL) =    10.00 ;  Decay Coef. =    0.000     ; Rot. Angle =     0.0
                  Emission Units = GRAMS/SEC                                ;  Emission Rate Unit Factor =   0.10000E+07
                  Output Units   = MICROGRAMS/M**3

 **Approximate Storage Requirements of Model =      3.5 MB of RAM.

 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                              ***        07/27/10
                                   *** PM25                                                                ***        15:51:57
                                                                                                                      PAGE   2
 **MODELOPTs:  RegDFAULT CONC                                          ELEV
                                                             NODRYDPLT NOWETDPLT


                                                 *** VOLUME SOURCE DATA ***

               NUMBER EMISSION RATE                       BASE    RELEASE    INIT.    INIT.   URBAN  EMISSION RATE
     SOURCE    PART.  (GRAMS/SEC)     X        Y       ELEV.   HEIGHT      SY       SZ     SOURCE  SCALAR VARY
      ID       CATS.                (METERS) (METERS) (METERS) (METERS) (METERS) (METERS)             BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

   VOL1         0   0.10100E+00  365893.5 3776581.1   303.9     5.00    45.58     1.16     YES
 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                              ***        07/27/10
                                   *** PM25                                                                ***        15:51:57
                                                                                                                      PAGE   3
 **MODELOPTs:  RegDFAULT CONC                                          ELEV
                                                             NODRYDPLT NOWETDPLT


                                                 *** AREA SOURCE DATA ***

               NUMBER EMISSION RATE  COORD (SW CORNER)  BASE     RELEASE  X-DIM     Y-DIM    ORIENT.    INIT.   URBAN  EMISSION RATE
    SOURCE     PART.  (GRAMS/SEC       X        Y       ELEV.    HEIGHT  OF AREA   OF AREA   OF AREA     SZ     SOURCE  SCALAR VARY
      ID       CATS.   /METER**2)   (METERS) (METERS) (METERS) (METERS) (METERS)  (METERS)   (DEG.)  (METERS)              BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

   AREA1        0   0.19390E-04  365796.4 3776482.3   303.2     0.00    195.99    195.99      0.00     0.00    YES
 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                              ***        07/27/10
                                   *** PM25                                                                ***        15:51:57
                                                                                                                      PAGE   4
 **MODELOPTs:  RegDFAULT CONC                                          ELEV
                                                             NODRYDPLT NOWETDPLT


                                        *** SOURCE IDs DEFINING SOURCE GROUPS ***

 GROUP ID                                             SOURCE IDs



  ALL       AREA1   , VOL1    ,
 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                              ***        07/27/10
                                   *** PM25                                                                ***        15:51:57
                                                                                                                      PAGE   5
 **MODELOPTs:  RegDFAULT CONC                                          ELEV
                                                             NODRYDPLT NOWETDPLT

                                         *** DISCRETE CARTESIAN RECEPTORS ***
```

(X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
(METERS)

(365205.2,	3776966.4,	375.9,	426.0,	0.0);	(365273.5,	3776942.3,	371.5,	426.0,	0.0);
(365297.5,	3776838.0,	364.5,	426.0,	0.0);	(365261.4,	3776781.8,	365.6,	426.0,	0.0);
(365241.3,	3776673.4,	365.7,	365.7,	0.0);	(365205.2,	3776528.9,	365.0,	364.9,	0.0);
(365153.1,	3776456.7,	365.0,	365.0,	0.0);	(365116.9,	3776332.3,	365.0,	365.0,	0.0);
(365121.0,	3776232.0,	365.0,	364.9,	0.0);	(365137.0,	3776115.6,	364.3,	364.2,	0.0);
(365116.9,	3775999.2,	364.0,	364.0,	0.0);	(365104.9,	3775898.9,	364.0,	364.0,	0.0);
(365133.0,	3775754.4,	364.0,	364.0,	0.0);	(365317.6,	3777247.3,	388.8,	426.0,	0.0);
(365273.5,	3777203.2,	389.4,	426.0,	0.0);	(365100.9,	3777094.8,	392.9,	426.0,	0.0);
(366493.5,	3776063.4,	333.7,	365.0,	0.0);	(366465.4,	3776183.8,	356.1,	365.0,	0.0);
(366453.3,	3776308.2,	364.4,	363.7,	0.0);	(366449.3,	3776416.6,	364.8,	364.6,	0.0);
(366397.2,	3776561.0,	365.0,	365.0,	0.0);	(366369.1,	3776685.5,	365.0,	365.0,	0.0);
(366369.1,	3776838.0,	365.0,	365.0,	0.0);	(366409.2,	3776962.4,	365.0,	365.0,	0.0);
(366457.4,	3777078.8,	365.0,	365.0,	0.0);	(366441.3,	3777195.1,	365.0,	365.0,	0.0);
(365594.5,	3777500.1,	365.0,	426.0,	0.0);	(365534.3,	3777544.3,	364.9,	426.0,	0.0);
(365646.7,	3777439.9,	365.0,	426.0,	0.0);	(365702.9,	3777419.9,	364.3,	426.0,	0.0);
(365385.8,	3777435.9,	380.9,	426.0,	0.0);	(365329.6,	3777520.2,	382.2,	426.0,	0.0);
(366272.8,	3775373.1,	284.7,	365.0,	0.0);	(366373.1,	3775401.2,	277.9,	365.0,	0.0);
(366573.8,	3775473.5,	276.5,	365.0,	0.0);	(366124.3,	3777528.2,	365.0,	365.0,	0.0);

*** AERMOD - VERSION 09292 *** *** Stone Canyon Reservoir *** 07/27/10
*** PM25 *** 15:51:57
PAGE 6

**MODELOPTs: RegDFAULT CONC ELEV
NODRYDPLT NOWETDPLT

*** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***
(1=YES; 0=NO)

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
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1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

NOTE: METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.

*** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
(METERS/SEC)

1.54, 3.09, 5.14, 8.23, 10.80,

*** AERMOD - VERSION 09292 *** *** Stone Canyon Reservoir *** 07/27/10
*** PM25 *** 15:51:57
PAGE 7

**MODELOPTs: RegDFAULT CONC ELEV
NODRYDPLT NOWETDPLT

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.SFC Met Version: 06341
Profile file: L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 0 Upper air station no.: 3190
Name: UNKNOWN Name: UNKNOWN
Year: 2005 Year: 2005

First 24 hours of scalar data

YR	MO	DY	JDY	HR	H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O LEN	Z0	BOWEN	ALBEDO	REF WS	WD	HT	REF TA	HT
05	01	01	1	01	-0.9	0.033	-9.000	-9.000	-999.	14.	3.7	0.45	1.00	1.00	0.50	321.	9.1	281.1	5.5
05	01	01	1	02	-0.9	0.033	-9.000	-9.000	-999.	14.	3.8	0.45	1.00	1.00	0.50	320.	9.1	280.8	5.5
05	01	01	1	03	-0.9	0.033	-9.000	-9.000	-999.	14.	3.7	0.45	1.00	1.00	0.50	323.	9.1	280.9	5.5
05	01	01	1	04	-1.3	0.040	-9.000	-9.000	-999.	18.	4.4	0.45	1.00	1.00	0.60	316.	9.1	280.8	5.5
05	01	01	1	05	-1.3	0.040	-9.000	-9.000	-999.	18.	4.4	0.45	1.00	1.00	0.60	322.	9.1	280.4	5.5
05	01	01	1	06	-0.3	0.020	-9.000	-9.000	-999.	6.	2.3	0.45	1.00	1.00	0.30	352.	9.1	279.9	5.5
05	01	01	1	07	-2.3	0.053	-9.000	-9.000	-999.	28.	5.8	0.45	1.00	1.00	0.80	324.	9.1	279.6	5.5
05	01	01	1	08	-1.2	0.040	-9.000	-9.000	-999.	18.	4.8	0.45	1.00	0.55	0.60	336.	9.1	280.5	5.5
05	01	01	1	09	43.0	0.243	0.490	0.005	99.	276.	-30.3	0.45	1.00	0.32	1.50	44.	9.1	283.4	5.5
05	01	01	1	10	110.6	0.339	1.374	0.005	849.	453.	-31.7	0.45	1.00	0.24	2.10	74.	9.1	285.1	5.5
05	01	01	1	11	135.3	0.321	1.653	0.010	1209.	419.	-22.2	0.45	1.00	0.21	1.90	84.	9.1	286.4	5.5
05	01	01	1	12	14.3	0.223	0.783	0.010	1212.	246.	-70.3	0.45	1.00	0.20	1.50	137.	9.1	286.8	5.5
05	01	01	1	13	27.1	0.187	0.971	0.010	1218.	186.	-21.7	0.45	1.00	0.20	1.10	111.	9.1	286.9	5.5
05	01	01	1	14	17.1	0.179	0.834	0.009	1222.	174.	-30.0	0.45	1.00	0.21	1.10	186.	9.1	286.9	5.5
05	01	01	1	15	3.7	0.172	0.499	0.009	1223.	164.	-124.8	0.45	1.00	0.24	1.20	195.	9.1	286.1	5.5
05	01	01	1	16	0.1	0.147	0.150	0.009	1223.	130.	-2871.4	0.45	1.00	0.33	1.10	182.	9.1	285.9	5.5
05	01	01	1	17	-1.7	0.047	-9.000	-9.000	-999.	31.	5.5	0.45	1.00	0.59	0.70	159.	9.1	285.5	5.5
05	01	01	1	18	-0.2	0.019	-9.000	-9.000	-999.	6.	2.9	0.45	1.00	1.00	0.28	170.	9.1	285.1	5.5
05	01	01	1	19	-0.2	0.019	-9.000	-9.000	-999.	6.	2.9	0.45	1.00	1.00	0.28	186.	9.1	284.4	5.5
05	01	01	1	20	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.45	1.00	1.00	0.00	0.	9.1	284.0	5.5
05	01	01	1	21	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.45	1.00	1.00	0.00	0.	9.1	283.9	5.5
05	01	01	1	22	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.45	1.00	1.00	0.00	0.	9.1	283.4	5.5
05	01	01	1	23	-0.2	0.019	-9.000	-9.000	-999.	6.	2.9	0.45	1.00	1.00	0.28	313.	9.1	283.4	5.5
05	01	01	1	24	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.45	1.00	1.00	0.00	0.	9.1	283.4	5.5

First hour of profile data

YR	MO	DY	HR	HEIGHT	F	WDIR	WSPD	AMB_TMP	sigmaA	sigmaW	sigmaV
05	01	01	01	5.5	0	-999.	-99.00	281.2	99.0	-99.00	-99.00
05	01	01	01	9.1	1	321.	0.50	-999.0	99.0	-99.00	-99.00

F indicates top of profile (=1) or below (=0)

*** AERMOD - VERSION 09292 *** *** Stone Canyon Reservoir *** 07/27/10
*** PM25 *** 15:51:57
PAGE 8

**MODELOPTs: RegDFAULT CONC ELEV
NODRYDPLT NOWETDPLT

*** THE 1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): AREA1 , VOL1 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM.25 IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
365205.23	3776966.38	10.94870	(07043024)	365273.46	3776942.30	11.11844	(07043024)

```
        365297.54   3776837.96       11.52422c (05101024)              365261.42   3776781.78       12.33002  (07090324)
        365241.35   3776673.42       12.20851  (05122624)              365205.23   3776528.94       12.21658c (06063024)
        365153.06   3776456.70       14.62743  (05020624)              365116.94   3776332.29       11.04182  (05020624)
        365120.95   3776231.96       10.51673c (06082624)              365137.01   3776115.58        9.90191c (05092124)
        365116.94   3775999.19        9.59128c (05090224)              365104.90   3775898.86       11.03309c (06102024)
        365132.99   3775754.39       10.84488c (06102024)              365317.60   3777247.31       10.79646c (05111424)
        365273.46   3777203.17        9.40809c (05111424)              365100.89   3777094.81        9.65354  (06061424)
        366493.48   3776063.40       43.81577  (06102724)              366465.39   3776183.80       41.61507c (05091724)
        366453.35   3776308.21       24.85949c (05021424)              366449.34   3776416.57       21.46665c (05090224)
        366397.17   3776561.05       19.56225  (05072724)              366369.07   3776685.46       27.59276c (05081024)
        366369.07   3776837.96       18.93679c (05082724)              366409.21   3776962.37       14.90053  (06073124)
        366457.36   3777078.76       11.76907  (06073124)              366441.31   3777195.14       10.80420c (06060724)
        365594.52   3777500.15       12.37985c (05082924)              365534.32   3777544.29       12.00251c (05090624)
        365646.69   3777439.95       14.88348c (05082924)              365702.87   3777419.88       15.08703c (05082924)
        365385.83   3777435.93       17.48513  (07050124)              365329.64   3777520.21       16.71036  (07050124)
        366272.76   3775373.13       22.14007  (06110624)              366373.09   3775401.22       17.44187  (06021324)
        366573.75   3775473.46       25.73363  (06030424)              366124.27   3777528.24        8.25563  (07070624)
 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                                  ***        07/27/10
                                   *** PM25                                                                    ***        15:51:57
                                                                                                                          PAGE   9
 **MODELOPTs:  RegDFAULT CONC                                               ELEV
                                                                  NODRYDPLT NOWETDPLT

                                                 *** THE SUMMARY OF HIGHEST 24-HR RESULTS ***

                                   ** CONC OF PM.25    IN MICROGRAMS/M**3                              **

                                                      DATE                                                                NETWORK
GROUP ID                          AVERAGE CONC     (YYMMDDHH)            RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG)    OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

ALL      HIGH  1ST HIGH VALUE IS      43.81577  ON 06102724: AT (  366493.48,  3776063.40,   333.67,   365.00,    0.00)  DC


 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                                  ***        07/27/10
                                   *** PM25                                                                    ***        15:51:57
                                                                                                                          PAGE  10
 **MODELOPTs:  RegDFAULT CONC                                               ELEV
                                                                  NODRYDPLT NOWETDPLT

 *** Message Summary : AERMOD Model Execution ***

  --------- Summary of Total Messages --------

 A Total of           0 Fatal Error Message(s)
 A Total of           0 Warning Message(s)
 A Total of        1753 Informational Message(s)

 A Total of       26280 Hours Were Processed

 A Total of        1181 Calm Hours Identified

 A Total of         572 Missing Hours Identified (  2.18 Percent)


    ******** FATAL ERROR MESSAGES ********
               ***  NONE  ***


    ********   WARNING MESSAGES   ********
               ***  NONE  ***


    ************************************
    *** AERMOD Finishes Successfully ***
    ************************************
```

Alternative 2 Mitigated $PM_{2.5}$ Localized Emissions

```
**
****************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 6.6.0
** Lakes Environmental Software Inc.
** Date: 7/27/2010
** File: J:\Projects\LADWP Stone Canyon Reservoir Project 2008-057\Air Quality\Construction Emissions\Localized\Alt2\PM2.5\PM25MT.ADI
**
****************************************
**
**
****************************************
** AERMOD Control Pathway
****************************************
**
**
CO STARTING
   TITLEONE Stone Canyon Reservoir
   TITLETWO PM25MT
   MODELOPT DFAULT CONC NODRYDPLT NOWETDPLT
   AVERTIME 24
   URBANOPT 9862049
   POLLUTID PM.25
   RUNORNOT RUN
CO FINISHED
**
****************************************
** AERMOD Source Pathway
****************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
   LOCATION AREA1 AREA 365796.443 3776482.259 303.190
** DESCRSRC Dust
   LOCATION VOL1 VOLUME 365893.498 3776581.066 303.930
** DESCRSRC Exhaust
** Source Parameters **
   SRCPARAM AREA1 0.00001939 0.000 195.986 195.986 0.000
   SRCPARAM VOL1 0.0959 5.000 45.578 1.163
   URBANSRC AREA1
   URBANSRC VOL1
   SRCGROUP ALL
SO FINISHED
**
****************************************
** AERMOD Receptor Pathway
****************************************
**
**
RE STARTING
** DESCRREC "" ""
   DISCCART    365205.23   3776966.38  375.93  426.00
   DISCCART    365273.46   3776942.30  371.48  426.00
   DISCCART    365297.54   3776837.96  364.53  426.00
   DISCCART    365261.42   3776781.78  365.63  426.00
   DISCCART    365241.35   3776673.42  365.70  365.68
   DISCCART    365205.23   3776528.94  365.00  364.88
   DISCCART    365153.06   3776456.70  365.00  365.00
   DISCCART    365116.94   3776332.29  365.00  365.00
   DISCCART    365120.95   3776231.96  364.96  364.86
   DISCCART    365137.01   3776115.58  364.26  364.20
   DISCCART    365116.94   3775999.19  364.00  364.00
   DISCCART    365104.90   3775898.86  364.00  364.00
   DISCCART    365132.99   3775754.39  364.00  364.00
   DISCCART    365317.60   3777247.31  388.83  426.00
   DISCCART    365273.46   3777203.17  389.43  426.00
   DISCCART    365100.89   3777094.81  392.86  426.00
   DISCCART    366493.48   3776063.40  333.67  365.00
   DISCCART    366465.39   3776183.80  356.13  365.00
   DISCCART    366453.35   3776308.21  364.45  363.66
   DISCCART    366449.34   3776416.57  364.78  364.59
   DISCCART    366397.17   3776561.05  365.00  365.00
   DISCCART    366369.07   3776685.46  365.00  365.00
   DISCCART    366369.07   3776837.96  365.00  365.00
   DISCCART    366409.21   3776962.37  365.00  365.00
   DISCCART    366457.36   3777078.76  365.00  365.00
   DISCCART    366441.31   3777195.14  365.00  365.00
   DISCCART    365594.52   3777500.15  365.00  426.00
   DISCCART    365534.32   3777544.29  364.93  426.00
   DISCCART    365646.69   3777439.95  365.00  426.00
   DISCCART    365702.87   3777419.88  364.34  426.00
   DISCCART    365385.83   3777435.93  380.85  426.00
   DISCCART    365329.64   3777520.21  382.17  426.00
   DISCCART    366272.76   3775373.13  284.66  365.00
   DISCCART    366373.09   3775401.22  277.95  365.00
   DISCCART    366573.75   3775473.46  276.50  365.00
   DISCCART    366124.27   3777528.24  365.00  365.00
RE FINISHED
**
****************************************
** AERMOD Meteorology Pathway
****************************************
**
**
ME STARTING
   SURFFILE "L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.SFC"
   PROFFILE "L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.PFL"
   SURFDATA 0 2005
   UAIRDATA 3190 2005
   PROFBASE 10 METERS
ME FINISHED
**
****************************************
** AERMOD Output Pathway
****************************************
**
**
OU STARTING
```

```
   RECTABLE ALLAVE 1ST
   RECTABLE 24 1ST
** Auto-Generated Plotfiles
   PLOTFILE 24 ALL 1ST PM25MT.AD\24H1GALL.PLT
OU FINISHED

 **********************************
 *** SETUP Finishes Successfully ***
 **********************************

 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                                    ***        07/27/10
                                   *** PM25MT                                                                    ***        16:06:23
                                                                                                                            PAGE   1
 **MODELOPTs:  RegDFAULT CONC                                            ELEV
                                                               NODRYDPLT NOWETDPLT

                                         ***     MODEL SETUP OPTIONS SUMMARY       ***
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

 **Model Is Setup For Calculation of Average CONCentration Values.

   --  DEPOSITION LOGIC  --
 **NO GAS DEPOSITION Data Provided.
 **NO PARTICLE DEPOSITION Data Provided.
 **Model Uses NO DRY DEPLETION.  DRYDPLT  =  F
 **Model Uses NO WET DEPLETION.  WETDPLT  =  F

 **Model Uses URBAN Dispersion Algorithm for the SBL for     2 Source(s),
   for Total of    1 Urban Area(s):
   Urban Population =   9862049.0 ;  Urban Roughness Length =  1.000 m

 **Model Uses Regulatory DEFAULT Options:
         1. Stack-tip Downwash.
         2. Model Accounts for ELEVated Terrain Effects.
         3. Use Calms Processing Routine.
         4. Use Missing Data Processing Routine.
         5. No Exponential Decay for URBAN/Non-SO2.
         6. Urban Roughness Length of 1.0 Meter Assumed.

 **Model Assumes No FLAGPOLE Receptor Heights.

 **Model Calculates  1 Short Term Average(s) of:  24-HR

 **This Run Includes:      2 Source(s);       1 Source Group(s); and      36 Receptor(s)

 **The Model Assumes A Pollutant Type of:  PM.25

 **Model Set To Continue RUNning After the Setup Testing.

 **Output Options Selected:
          Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE Keyword)
          Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)

 **NOTE:  The Following Flags May Appear Following CONC Values:  c for Calm Hours
                                                                 m for Missing Hours
                                                                 b for Both Calm and Missing Hours

 **Misc. Inputs:  Base Elev. for Pot. Temp. Profile (m MSL) =    10.00 ;  Decay Coef. =    0.000     ; Rot. Angle =     0.0
                  Emission Units = GRAMS/SEC                                ;  Emission Rate Unit Factor =   0.10000E+07
                  Output Units   = MICROGRAMS/M**3

 **Approximate Storage Requirements of Model =      3.5 MB of RAM.

 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                                    ***        07/27/10
                                   *** PM25MT                                                                    ***        16:06:23
                                                                                                                            PAGE   2
 **MODELOPTs:  RegDFAULT CONC                                            ELEV
                                                               NODRYDPLT NOWETDPLT


                                               *** VOLUME SOURCE DATA ***

              NUMBER EMISSION RATE                     BASE    RELEASE    INIT.    INIT.   URBAN  EMISSION RATE
     SOURCE    PART.  (GRAMS/SEC)     X         Y      ELEV.   HEIGHT      SY       SZ     SOURCE  SCALAR VARY
       ID      CATS.               (METERS) (METERS) (METERS) (METERS) (METERS) (METERS)            BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

   VOL1         0   0.95900E-01  365893.5 3776581.1   303.9     5.00    45.58     1.16     YES
 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                                    ***        07/27/10
                                   *** PM25MT                                                                    ***        16:06:23
                                                                                                                            PAGE   3
 **MODELOPTs:  RegDFAULT CONC                                            ELEV
                                                               NODRYDPLT NOWETDPLT


                                               *** AREA SOURCE DATA ***

              NUMBER EMISSION RATE  COORD (SW CORNER)  BASE     RELEASE  X-DIM     Y-DIM    ORIENT.   INIT.   URBAN  EMISSION RATE
    SOURCE     PART.  (GRAMS/SEC      X         Y      ELEV.    HEIGHT  OF AREA   OF AREA   OF AREA    SZ     SOURCE  SCALAR VARY
      ID       CATS.   /METER**2)  (METERS) (METERS) (METERS) (METERS) (METERS)  (METERS)   (DEG.)  (METERS)             BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

   AREA1        0   0.19390E-04  365796.4 3776482.3   303.2     0.00    195.99    195.99      0.00     0.00    YES
 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                                    ***        07/27/10
                                   *** PM25MT                                                                    ***        16:06:23
                                                                                                                            PAGE   4
 **MODELOPTs:  RegDFAULT CONC                                            ELEV
                                                               NODRYDPLT NOWETDPLT


                                         *** SOURCE IDs DEFINING SOURCE GROUPS ***

 GROUP ID                                              SOURCE IDs



  ALL       AREA1   , VOL1    ,
 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                                    ***        07/27/10
                                   *** PM25MT                                                                    ***        16:06:23
                                                                                                                            PAGE   5
 **MODELOPTs:  RegDFAULT CONC                                            ELEV
                                                               NODRYDPLT NOWETDPLT

                                           *** DISCRETE CARTESIAN RECEPTORS ***
```

(X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
(METERS)

(365205.2,	3776966.4,	375.9,	426.0,	0.0);	(365273.5,	3776942.3,	371.5,	426.0,	0.0);
(365297.5,	3776838.0,	364.5,	426.0,	0.0);	(365261.4,	3776781.8,	365.6,	426.0,	0.0);
(365241.3,	3776673.4,	365.7,	365.7,	0.0);	(365205.2,	3776528.9,	365.0,	364.9,	0.0);
(365153.1,	3776456.7,	365.0,	365.0,	0.0);	(365116.9,	3776332.3,	365.0,	365.0,	0.0);
(365121.0,	3776232.0,	365.0,	364.9,	0.0);	(365137.0,	3776115.6,	364.3,	364.2,	0.0);
(365116.9,	3775999.2,	364.0,	364.0,	0.0);	(365104.9,	3775898.9,	364.0,	364.0,	0.0);
(365133.0,	3775754.4,	364.0,	364.0,	0.0);	(365317.6,	3777247.3,	388.8,	426.0,	0.0);
(365273.5,	3777203.2,	389.4,	426.0,	0.0);	(365100.9,	3777094.8,	392.9,	426.0,	0.0);
(366493.5,	3776063.4,	333.7,	365.0,	0.0);	(366465.4,	3776183.8,	356.1,	365.0,	0.0);
(366453.3,	3776308.2,	364.4,	363.7,	0.0);	(366449.3,	3776416.6,	364.8,	364.6,	0.0);
(366397.2,	3776561.0,	365.0,	365.0,	0.0);	(366369.1,	3776685.5,	365.0,	365.0,	0.0);
(366369.1,	3776838.0,	365.0,	365.0,	0.0);	(366409.2,	3776962.4,	365.0,	365.0,	0.0);
(366457.4,	3777078.8,	365.0,	365.0,	0.0);	(366441.3,	3777195.1,	365.0,	365.0,	0.0);
(365594.5,	3777500.1,	365.0,	426.0,	0.0);	(365534.3,	3777544.3,	364.9,	426.0,	0.0);
(365646.7,	3777439.9,	365.0,	426.0,	0.0);	(365702.9,	3777419.9,	364.3,	426.0,	0.0);
(365385.8,	3777435.9,	380.9,	426.0,	0.0);	(365329.6,	3777520.2,	382.2,	426.0,	0.0);
(366272.8,	3775373.1,	284.7,	365.0,	0.0);	(366373.1,	3775401.2,	277.9,	365.0,	0.0);
(366573.8,	3775473.5,	276.5,	365.0,	0.0);	(366124.3,	3777528.2,	365.0,	365.0,	0.0);

**MODELOPTs: RegDFAULT CONC ELEV
NODRYDPLT NOWETDPLT

*** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***
(1=YES; 0=NO)

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
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1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

NOTE: METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.

*** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
(METERS/SEC)

1.54, 3.09, 5.14, 8.23, 10.80,

**MODELOPTs: RegDFAULT CONC ELEV
NODRYDPLT NOWETDPLT

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.SFC Met Version: 06341
Profile file: L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 0 Upper air station no.: 3190
Name: UNKNOWN Name: UNKNOWN
Year: 2005 Year: 2005

First 24 hours of scalar data

YR	MO	DY	JDY	HR	H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O LEN	Z0	BOWEN	ALBEDO	REF WS	WD	HT	REF TA	HT
05	01	01	1	01	-0.9	0.033	-9.000	-9.000	-999.	14.	3.7	0.45	1.00	1.00	0.50	321.	9.1	281.1	5.5
05	01	01	1	02	-0.9	0.033	-9.000	-9.000	-999.	14.	3.8	0.45	1.00	1.00	0.50	320.	9.1	280.8	5.5
05	01	01	1	03	-0.9	0.033	-9.000	-9.000	-999.	14.	3.7	0.45	1.00	1.00	0.50	323.	9.1	280.9	5.5
05	01	01	1	04	-1.3	0.040	-9.000	-9.000	-999.	18.	4.4	0.45	1.00	1.00	0.60	316.	9.1	280.8	5.5
05	01	01	1	05	-1.3	0.040	-9.000	-9.000	-999.	18.	4.4	0.45	1.00	1.00	0.60	322.	9.1	280.4	5.5
05	01	01	1	06	-0.3	0.020	-9.000	-9.000	-999.	6.	2.3	0.45	1.00	1.00	0.30	352.	9.1	279.9	5.5
05	01	01	1	07	-2.3	0.053	-9.000	-9.000	-999.	28.	5.8	0.45	1.00	1.00	0.80	324.	9.1	279.6	5.5
05	01	01	1	08	-1.2	0.040	-9.000	-9.000	-999.	18.	4.8	0.45	1.00	0.55	0.60	336.	9.1	280.5	5.5
05	01	01	1	09	43.0	0.243	0.490	0.005	99.	276.	-30.3	0.45	1.00	0.32	1.50	44.	9.1	283.4	5.5
05	01	01	1	10	110.6	0.339	1.374	0.005	849.	453.	-31.7	0.45	1.00	0.24	2.10	74.	9.1	285.1	5.5
05	01	01	1	11	135.3	0.321	1.653	0.010	1209.	419.	-22.2	0.45	1.00	0.21	1.90	84.	9.1	286.4	5.5
05	01	01	1	12	14.3	0.223	0.783	0.010	1212.	246.	-70.3	0.45	1.00	0.20	1.50	137.	9.1	286.8	5.5
05	01	01	1	13	27.1	0.187	0.971	0.010	1218.	186.	-21.7	0.45	1.00	0.20	1.10	111.	9.1	286.9	5.5
05	01	01	1	14	17.1	0.179	0.834	0.009	1222.	174.	-30.0	0.45	1.00	0.21	1.10	186.	9.1	286.9	5.5
05	01	01	1	15	3.7	0.172	0.499	0.009	1223.	164.	-124.8	0.45	1.00	0.24	1.20	195.	9.1	286.1	5.5
05	01	01	1	16	0.1	0.147	0.150	0.009	1223.	130.	-2871.4	0.45	1.00	0.33	1.10	182.	9.1	285.9	5.5
05	01	01	1	17	-1.7	0.047	-9.000	-9.000	-999.	31.	5.5	0.45	1.00	0.59	0.70	159.	9.1	285.5	5.5
05	01	01	1	18	-0.2	0.019	-9.000	-9.000	-999.	6.	2.9	0.45	1.00	1.00	0.28	170.	9.1	285.1	5.5
05	01	01	1	19	-0.2	0.019	-9.000	-9.000	-999.	6.	2.9	0.45	1.00	1.00	0.28	186.	9.1	284.4	5.5
05	01	01	1	20	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.45	1.00	1.00	0.00	0.	9.1	284.0	5.5
05	01	01	1	21	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.45	1.00	1.00	0.00	0.	9.1	283.9	5.5
05	01	01	1	22	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.45	1.00	1.00	0.00	0.	9.1	283.4	5.5
05	01	01	1	23	-0.2	0.019	-9.000	-9.000	-999.	6.	2.9	0.45	1.00	1.00	0.28	313.	9.1	283.4	5.5
05	01	01	1	24	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.45	1.00	1.00	0.00	0.	9.1	283.4	5.5

First hour of profile data

YR	MO	DY	HR	HEIGHT	F	WDIR	WSPD	AMB_TMP	sigmaA	sigmaW	sigmaV
05	01	01	01	5.5	0	-999.	-99.00	281.2	99.0	-99.00	-99.00
05	01	01	01	9.1	1	321.	0.50	-999.0	99.0	-99.00	-99.00

F indicates top of profile (=1) or below (=0)

**MODELOPTs: RegDFAULT CONC ELEV
NODRYDPLT NOWETDPLT

*** THE 1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): AREA1 , VOL1 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM.25 IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
365205.23	3776966.38	10.91153	(07043024)	365273.46	3776942.30	11.07922	(07043024)

```
       365297.54   3776837.96       11.50008c (05101024)              365261.42   3776781.78       12.28870  (07090324)
       365241.35   3776673.42       12.15350  (05122624)              365205.23   3776528.94       12.17700c (06063024)
       365153.06   3776456.70       14.56306  (05020624)              365116.94   3776332.29       10.99200  (05020624)
       365120.95   3776231.96       10.49403c (06082624)              365137.01   3776115.58        9.88016c (05092124)
       365116.94   3775999.19        9.55927c (05090224)              365104.90   3775898.86       11.01828c (06102024)
       365132.99   3775754.39       10.83023c (06102024)              365317.60   3777247.31       10.77134c (05111424)
       365273.46   3777203.17        9.37951c (05111424)              365100.89   3777094.81        9.62144  (06061424)
       366493.48   3776063.40       43.74428  (06102724)              366465.39   3776183.80       41.58305c (05091724)
       366453.35   3776308.21       24.81664c (05021424)              366449.34   3776416.57       21.42299c (05090224)
       366397.17   3776561.05       19.50764  (05072724)              366369.07   3776685.46       27.52136c (05081024)
       366369.07   3776837.96       18.91171c (05082724)              366409.21   3776962.37       14.84178  (06073124)
       366457.36   3777078.76       11.71448  (06073124)              366441.31   3777195.14       10.76147c (06060724)
       365594.52   3777500.15       12.36236c (05082924)              365534.32   3777544.29       11.96326c (05090624)
       365646.69   3777439.95       14.86393c (05082924)              365702.87   3777419.88       15.06588c (05082924)
       365385.83   3777435.93       17.44325  (07050124)              365329.64   3777520.21       16.67228  (07050124)
       366272.76   3775373.13       22.12008  (06110624)              366373.09   3775401.22       17.41545  (06021324)
       366573.75   3775473.46       25.69527  (06030424)              366124.27   3777528.24        8.22525  (07070624)
 *** AERMOD - VERSION 09292 ***   *** Stone Canyon Reservoir                                                   ***        07/27/10
                                  *** PM25MT                                                                   ***        16:06:23
                                                                                                                          PAGE   9
 **MODELOPTs:  RegDFAULT CONC                                           ELEV
                                                               NODRYDPLT NOWETDPLT

                                            *** THE SUMMARY OF HIGHEST 24-HR RESULTS ***


                                  ** CONC OF PM.25    IN MICROGRAMS/M**3                          **

                                                     DATE                                                            NETWORK
GROUP ID                          AVERAGE CONC      (YYMMDDHH)            RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG)   OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

ALL      HIGH  1ST HIGH VALUE IS      43.74428  ON 06102724: AT (  366493.48,  3776063.40,   333.67,   365.00,    0.00)  DC


 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
 *** AERMOD - VERSION 09292 ***   *** Stone Canyon Reservoir                                                   ***        07/27/10
                                  *** PM25MT                                                                   ***        16:06:23
                                                                                                                          PAGE  10
 **MODELOPTs:  RegDFAULT CONC                                           ELEV
                                                               NODRYDPLT NOWETDPLT

 *** Message Summary : AERMOD Model Execution ***

  --------- Summary of Total Messages --------

 A Total of           0 Fatal Error Message(s)
 A Total of           0 Warning Message(s)
 A Total of        1753 Informational Message(s)

 A Total of       26280 Hours Were Processed

 A Total of        1181 Calm Hours Identified

 A Total of         572 Missing Hours Identified (  2.18 Percent)


    ******** FATAL ERROR MESSAGES ********
               ***  NONE  ***


    ********   WARNING MESSAGES   ********
               ***  NONE  ***


    ************************************
    *** AERMOD Finishes Successfully ***
    ************************************
```

Alternative 3 CO Localized Emissions

```
**
****************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 6.6.0
** Lakes Environmental Software Inc.
** Date: 7/27/2010
** File: J:\Projects\LADWP Stone Canyon Reservoir Project 2008-057\Air Quality\Construction Emissions\Localized\Alt3\CO\CO.ADI
**
****************************************
**
**
****************************************
** AERMOD Control Pathway
****************************************
**
**
CO STARTING
   TITLEONE Stone Canyon Reservoir
   TITLETWO CO
   MODELOPT DFAULT CONC NODRYDPLT NOWETDPLT
   AVERTIME 1 8
   URBANOPT 9862049
   POLLUTID CO
   RUNORNOT RUN
CO FINISHED
**
****************************************
** AERMOD Source Pathway
****************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
   LOCATION VOL1 VOLUME 365893.498 3776581.066 303.930
** DESCRSRC Exhaust
** Source Parameters **
   SRCPARAM VOL1 2.637 5.000 45.578 1.163
   URBANSRC VOL1
   CONCUNIT 873.2 GRAMS/SEC PPM
   SRCGROUP ALL
SO FINISHED
**
****************************************
** AERMOD Receptor Pathway
****************************************
**
**
RE STARTING
** DESCRREC "" ""
   DISCCART    365205.23   3776966.38  375.93  426.00
   DISCCART    365273.46   3776942.30  371.48  426.00
   DISCCART    365297.54   3776837.96  364.53  426.00
   DISCCART    365261.42   3776781.78  365.63  426.00
   DISCCART    365241.35   3776673.42  365.70  365.68
   DISCCART    365205.23   3776528.94  365.00  364.88
   DISCCART    365153.06   3776456.70  365.00  365.00
   DISCCART    365116.94   3776332.29  365.00  365.00
   DISCCART    365120.95   3776231.96  364.96  364.86
   DISCCART    365137.01   3776115.58  364.26  364.20
   DISCCART    365116.94   3775999.19  364.00  364.00
   DISCCART    365104.90   3775898.86  364.00  364.00
   DISCCART    365132.99   3775754.39  364.00  364.00
   DISCCART    365317.60   3777247.31  388.83  426.00
   DISCCART    365273.46   3777203.17  389.43  426.00
   DISCCART    365100.89   3777094.81  392.86  426.00
   DISCCART    366493.48   3776063.40  333.67  365.00
   DISCCART    366465.39   3776183.80  356.13  365.00
   DISCCART    366453.35   3776308.21  364.45  363.66
   DISCCART    366449.34   3776416.57  364.78  364.59
   DISCCART    366397.17   3776561.05  365.00  365.00
   DISCCART    366369.07   3776685.46  365.00  365.00
   DISCCART    366369.07   3776837.96  365.00  365.00
   DISCCART    366409.21   3776962.37  365.00  365.00
   DISCCART    366457.36   3777078.76  365.00  365.00
   DISCCART    366441.31   3777195.14  365.00  365.00
   DISCCART    365594.52   3777500.15  365.00  426.00
   DISCCART    365534.32   3777544.29  364.93  426.00
   DISCCART    365646.69   3777439.95  365.00  426.00
   DISCCART    365702.87   3777419.88  364.34  426.00
   DISCCART    365385.83   3777435.93  380.85  426.00
   DISCCART    365329.64   3777520.21  382.17  426.00
   DISCCART    366272.76   3775373.13  284.66  365.00
   DISCCART    366373.09   3775401.22  277.95  365.00
   DISCCART    366573.75   3775473.46  276.50  365.00
   DISCCART    366124.27   3777528.24  365.00  365.00
RE FINISHED
**
****************************************
** AERMOD Meteorology Pathway
****************************************
**
**
ME STARTING
   SURFFILE "L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.SFC"
   PROFFILE "L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.PFL"
   SURFDATA 0 2005
   UAIRDATA 3190 2005
   PROFBASE 10 METERS
ME FINISHED
**
****************************************
** AERMOD Output Pathway
****************************************
**
**
OU STARTING
   RECTABLE ALLAVE 1ST
   RECTABLE 1 1ST
   RECTABLE 8 1ST
```

```
** Auto-Generated Plotfiles
   PLOTFILE 1 ALL 1ST CO.AD\01H1GALL.PLT
   PLOTFILE 8 ALL 1ST CO.AD\08H1GALL.PLT
OU FINISHED

 ***********************************
 *** SETUP Finishes Successfully ***
 ***********************************

 *** AERMOD - VERSION 09292 ***   *** Stone Canyon Reservoir                                                   ***        07/27/10
                                  *** CO                                                                       ***        17:52:50
                                                                                                                          PAGE   1
 **MODELOPTs:  RegDFAULT CONC                                                  ELEV
                                                                     NODRYDPLT NOWETDPLT

                                           ***     MODEL SETUP OPTIONS SUMMARY       ***
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

 **Model Is Setup For Calculation of Average CONCentration Values.

   --  DEPOSITION LOGIC  --
 **NO GAS DEPOSITION Data Provided.
 **NO PARTICLE DEPOSITION Data Provided.
 **Model Uses NO DRY DEPLETION.  DRYDPLT  =  F
 **Model Uses NO WET DEPLETION.  WETDPLT  =  F

 **Model Uses URBAN Dispersion Algorithm for the SBL for     1 Source(s),
   for Total of    1 Urban Area(s):
   Urban Population =   9862049.0 ;  Urban Roughness Length =  1.000 m

 **Model Uses Regulatory DEFAULT Options:
         1. Stack-tip Downwash.
         2. Model Accounts for ELEVated Terrain Effects.
         3. Use Calms Processing Routine.
         4. Use Missing Data Processing Routine.
         5. No Exponential Decay for URBAN/Non-SO2.
         6. Urban Roughness Length of 1.0 Meter Assumed.

 **Model Assumes No FLAGPOLE Receptor Heights.

 **Model Calculates  2 Short Term Average(s) of:   1-HR   8-HR

 **This Run Includes:      1 Source(s);       1 Source Group(s); and      36 Receptor(s)

 **The Model Assumes A Pollutant Type of:  CO

 **Model Set To Continue RUNning After the Setup Testing.

 **Output Options Selected:
          Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE Keyword)
          Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)

 **NOTE:  The Following Flags May Appear Following CONC Values:  c for Calm Hours
                                                                 m for Missing Hours
                                                                 b for Both Calm and Missing Hours

 **Misc. Inputs:  Base Elev. for Pot. Temp. Profile (m MSL) =    10.00 ;  Decay Coef. =    0.000     ;  Rot. Angle =     0.0
                  Emission Units = GRAMS/SEC                                ;  Emission Rate Unit Factor =    873.20
                  Output Units   = PPM

 **Approximate Storage Requirements of Model =      3.5 MB of RAM.

 *** AERMOD - VERSION 09292 ***   *** Stone Canyon Reservoir                                                   ***        07/27/10
                                  *** CO                                                                       ***        17:52:50
                                                                                                                          PAGE   2
 **MODELOPTs:  RegDFAULT CONC                                                  ELEV
                                                                     NODRYDPLT NOWETDPLT


                                                 *** VOLUME SOURCE DATA ***

             NUMBER EMISSION RATE                      BASE    RELEASE    INIT.    INIT.   URBAN  EMISSION RATE
    SOURCE    PART. (USER UNITS)      X        Y       ELEV.   HEIGHT      SY       SZ     SOURCE  SCALAR VARY
      ID      CATS.                (METERS) (METERS) (METERS) (METERS) (METERS) (METERS)             BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

   VOL1         0   0.26370E+01  365893.5 3776581.1   303.9     5.00    45.58     1.16     YES
 *** AERMOD - VERSION 09292 ***   *** Stone Canyon Reservoir                                                   ***        07/27/10
                                  *** CO                                                                       ***        17:52:50
                                                                                                                          PAGE   3
 **MODELOPTs:  RegDFAULT CONC                                                  ELEV
                                                                     NODRYDPLT NOWETDPLT


                                          *** SOURCE IDs DEFINING SOURCE GROUPS ***

 GROUP ID                                            SOURCE IDs



  ALL       VOL1     ,
 *** AERMOD - VERSION 09292 ***   *** Stone Canyon Reservoir                                                   ***        07/27/10
                                  *** CO                                                                       ***        17:52:50
                                                                                                                          PAGE   4
 **MODELOPTs:  RegDFAULT CONC                                                  ELEV
                                                                     NODRYDPLT NOWETDPLT

                                            *** DISCRETE CARTESIAN RECEPTORS ***
                                          (X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
                                                          (METERS)

     ( 365205.2, 3776966.4,      375.9,      426.0,        0.0);        ( 365273.5, 3776942.3,      371.5,      426.0,        0.0);
     ( 365297.5, 3776838.0,      364.5,      426.0,        0.0);        ( 365261.4, 3776781.8,      365.6,      426.0,        0.0);
     ( 365241.3, 3776673.4,      365.7,      365.7,        0.0);        ( 365205.2, 3776528.9,      365.0,      364.9,        0.0);
     ( 365153.1, 3776456.7,      365.0,      365.0,        0.0);        ( 365116.9, 3776332.3,      365.0,      365.0,        0.0);
     ( 365121.0, 3776232.0,      365.0,      364.9,        0.0);        ( 365137.0, 3776115.6,      364.3,      364.2,        0.0);
     ( 365116.9, 3775999.2,      364.0,      364.0,        0.0);        ( 365104.9, 3775898.9,      364.0,      364.0,        0.0);
     ( 365133.0, 3775754.4,      364.0,      364.0,        0.0);        ( 365317.6, 3777247.3,      388.8,      426.0,        0.0);
     ( 365273.5, 3777203.2,      389.4,      426.0,        0.0);        ( 365100.9, 3777094.8,      392.9,      426.0,        0.0);
     ( 366493.5, 3776063.4,      333.7,      365.0,        0.0);        ( 366465.4, 3776183.8,      356.1,      365.0,        0.0);
     ( 366453.3, 3776308.2,      364.4,      363.7,        0.0);        ( 366449.3, 3776416.6,      364.8,      364.6,        0.0);
     ( 366397.2, 3776561.0,      365.0,      365.0,        0.0);        ( 366369.1, 3776685.5,      365.0,      365.0,        0.0);
     ( 366369.1, 3776838.0,      365.0,      365.0,        0.0);        ( 366409.2, 3776962.4,      365.0,      365.0,        0.0);
     ( 366457.4, 3777078.8,      365.0,      365.0,        0.0);        ( 366441.3, 3777195.1,      365.0,      365.0,        0.0);
```

```
    ( 365594.5, 3777500.1,     365.0,     426.0,       0.0);        ( 365534.3, 3777544.3,     364.9,     426.0,       0.0);
    ( 365646.7, 3777439.9,     365.0,     426.0,       0.0);        ( 365702.9, 3777419.9,     364.3,     426.0,       0.0);
    ( 365385.8, 3777435.9,     380.9,     426.0,       0.0);        ( 365329.6, 3777520.2,     382.2,     426.0,       0.0);
    ( 366272.8, 3775373.1,     284.7,     365.0,       0.0);        ( 366373.1, 3775401.2,     277.9,     365.0,       0.0);
    ( 366573.8, 3775473.5,     276.5,     365.0,       0.0);        ( 366124.3, 3777528.2,     365.0,     365.0,       0.0);
*** AERMOD - VERSION 09292 ***   *** Stone Canyon Reservoir                                                 ***        07/27/10
                                 *** CO                                                                     ***        17:52:50
                                                                                                                       PAGE   5
**MODELOPTs:  RegDFAULT CONC                                               ELEV
                                                                 NODRYDPLT NOWETDPLT

                                        *** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***
                                                          (1=YES; 0=NO)

           1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1

              NOTE:  METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.


                                  *** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
                                                          (METERS/SEC)

                                               1.54,   3.09,   5.14,   8.23,  10.80,
*** AERMOD - VERSION 09292 ***   *** Stone Canyon Reservoir                                                 ***        07/27/10
                                 *** CO                                                                     ***        17:52:50
                                                                                                                       PAGE   6
**MODELOPTs:  RegDFAULT CONC                                               ELEV
                                                                 NODRYDPLT NOWETDPLT

                                   *** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

  Surface file:   L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.SFC    Met Version:  06341
  Profile file:   L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.PFL
  Surface format: FREE
  Profile format: FREE
  Surface station no.:        0                  Upper air station no.:     3190
                 Name: UNKNOWN                                   Name: UNKNOWN
                 Year:   2005                                    Year:   2005

First 24 hours of scalar data
YR MO DY JDY HR     H0     U*     W*  DT/DZ ZICNV ZIMCH  M-O LEN    Z0  BOWEN ALBEDO  REF WS   WD     HT  REF TA     HT
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
05 01 01   1 01   -0.9  0.033 -9.000 -9.000 -999.   14.       3.7  0.45   1.00   1.00    0.50  321.     9.1  281.1    5.5
05 01 01   1 02   -0.9  0.033 -9.000 -9.000 -999.   14.       3.8  0.45   1.00   1.00    0.50  320.     9.1  280.8    5.5
05 01 01   1 03   -0.9  0.033 -9.000 -9.000 -999.   14.       3.7  0.45   1.00   1.00    0.50  323.     9.1  280.9    5.5
05 01 01   1 04   -1.3  0.040 -9.000 -9.000 -999.   18.       4.4  0.45   1.00   1.00    0.60  316.     9.1  280.8    5.5
05 01 01   1 05   -1.3  0.040 -9.000 -9.000 -999.   18.       4.4  0.45   1.00   1.00    0.60  322.     9.1  280.4    5.5
05 01 01   1 06   -0.3  0.020 -9.000 -9.000 -999.    6.       2.3  0.45   1.00   1.00    0.30  352.     9.1  279.9    5.5
05 01 01   1 07   -2.3  0.053 -9.000 -9.000 -999.   28.       5.8  0.45   1.00   1.00    0.80  324.     9.1  279.6    5.5
05 01 01   1 08   -1.2  0.040 -9.000 -9.000 -999.   18.       4.8  0.45   1.00   0.55    0.60  336.     9.1  280.5    5.5
05 01 01   1 09   43.0  0.243  0.490  0.005   99.  276.     -30.3  0.45   1.00   0.32    1.50   44.     9.1  283.4    5.5
05 01 01   1 10  110.6  0.339  1.374  0.005  849.  453.     -31.7  0.45   1.00   0.24    2.10   74.     9.1  285.1    5.5
05 01 01   1 11  135.3  0.321  1.653  0.010 1209.  419.     -22.2  0.45   1.00   0.21    1.90   84.     9.1  286.4    5.5
05 01 01   1 12   14.3  0.223  0.783  0.010 1212.  246.     -70.3  0.45   1.00   0.20    1.50  137.     9.1  286.8    5.5
05 01 01   1 13   27.1  0.187  0.971  0.010 1218.  186.     -21.7  0.45   1.00   0.20    1.10  111.     9.1  286.9    5.5
05 01 01   1 14   17.1  0.179  0.834  0.009 1222.  174.     -30.0  0.45   1.00   0.21    1.10  186.     9.1  286.9    5.5
05 01 01   1 15    3.7  0.172  0.499  0.009 1223.  164.    -124.8  0.45   1.00   0.24    1.20  195.     9.1  286.1    5.5
05 01 01   1 16    0.1  0.147  0.150  0.009 1223.  130.   -2871.4  0.45   1.00   0.33    1.10  182.     9.1  285.9    5.5
05 01 01   1 17   -1.7  0.047 -9.000 -9.000 -999.   31.       5.5  0.45   1.00   0.59    0.70  159.     9.1  285.5    5.5
05 01 01   1 18   -0.2  0.019 -9.000 -9.000 -999.    6.       2.9  0.45   1.00   1.00    0.28  170.     9.1  285.1    5.5
05 01 01   1 19   -0.2  0.019 -9.000 -9.000 -999.    6.       2.9  0.45   1.00   1.00    0.28  186.     9.1  284.4    5.5
05 01 01   1 20 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.45   1.00   1.00    0.00    0.     9.1  284.0    5.5
05 01 01   1 21 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.45   1.00   1.00    0.00    0.     9.1  283.9    5.5
05 01 01   1 22 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.45   1.00   1.00    0.00    0.     9.1  283.4    5.5
05 01 01   1 23   -0.2  0.019 -9.000 -9.000 -999.    6.       2.9  0.45   1.00   1.00    0.28  313.     9.1  283.4    5.5
05 01 01   1 24 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.45   1.00   1.00    0.00    0.     9.1  283.4    5.5


First hour of profile data
YR MO DY HR HEIGHT F  WDIR    WSPD AMB_TMP sigmaA  sigmaW  sigmaV
05 01 01 01    5.5 0 -999.  -99.00   281.2   99.0  -99.00  -99.00
05 01 01 01    9.1 1  321.    0.50  -999.0   99.0  -99.00  -99.00

F indicates top of profile (=1) or below (=0)
*** AERMOD - VERSION 09292 ***   *** Stone Canyon Reservoir                                                 ***        07/27/10
                                 *** CO                                                                     ***        17:52:50
                                                                                                                       PAGE   7
**MODELOPTs:  RegDFAULT CONC                                               ELEV
                                                                 NODRYDPLT NOWETDPLT

                              *** THE   1ST HIGHEST  1-HR AVERAGE CONCENTRATION   VALUES FOR SOURCE GROUP:  ALL       ***
                                  INCLUDING SOURCE(S):      VOL1    ,

                                             *** DISCRETE CARTESIAN RECEPTOR POINTS ***

                                    ** CONC OF CO        IN PPM                                     **

     X-COORD (M)  Y-COORD (M)        CONC     (YYMMDDHH)               X-COORD (M)  Y-COORD (M)        CONC     (YYMMDDHH)
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
        365205.23   3776966.38        0.30985  (07043007)                365273.46   3776942.30        0.32274  (07043007)
        365297.54   3776837.96        0.26550  (07043007)                365261.42   3776781.78        0.23526  (06082807)
        365241.35   3776673.42        0.34049  (06082207)                365205.23   3776528.94        0.19888  (06121509)
        365153.06   3776456.70        0.22025  (07032008)                365116.94   3776332.29        0.16234  (05052707)
        365120.95   3776231.96        0.19401  (05121209)                365137.01   3776115.58        0.23363  (05090207)
        365116.94   3775999.19        0.27173  (05090207)                365104.90   3775898.86        0.26208  (05103108)
        365132.99   3775754.39        0.17365  (05121809)                365317.60   3777247.31        0.16892  (05083108)
        365273.46   3777203.17        0.26211  (06042607)                365100.89   3777094.81        0.23228  (07043007)
        366493.48   3776063.40        0.38164  (07060207)                366465.39   3776183.80        0.33715  (05040607)
        366453.35   3776308.21        0.34041  (05040607)                366449.34   3776416.57        0.31328  (05101708)
        366397.17   3776561.05        0.42658  (05101708)                366369.07   3776685.46        0.21872  (06080207)
        366369.07   3776837.96        0.25215  (05041307)                366409.21   3776962.37        0.19706  (05071607)
        366457.36   3777078.76        0.17983  (05050607)                366441.31   3777195.14        0.19773  (06042107)
        365594.52   3777500.15        0.15641  (05120109)                365534.32   3777544.29        0.18380  (05120109)
        365646.69   3777439.95        0.14273  (05090608)                365702.87   3777419.88        0.13728  (05102308)
        365385.83   3777435.93        0.21183  (07050107)                365329.64   3777520.21        0.19874  (07050107)
        366272.76   3775373.13        0.20545  (06041807)                366373.09   3775401.22        0.24461  (06041807)
```

366573.75	3775473.46	0.23815	(06030408)	366124.27	3777528.24	0.25052	(06082007)

**MODELOPTs: RegDFAULT CONC   ELEV
NODRYDPLT NOWETDPLT

*** THE 1ST HIGHEST 8-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): VOL1 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF CO IN PPM **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
365205.23	3776966.38	0.05464	(05070908)	365273.46	3776942.30	0.05781	(05070908)
365297.54	3776837.96	0.06783	(05070908)	365261.42	3776781.78	0.05134	(06100908)
365241.35	3776673.42	0.06616c	(06082208)	365205.23	3776528.94	0.05543	(06041108)
365153.06	3776456.70	0.05468	(06041108)	365116.94	3776332.29	0.04939	(05110808)
365120.95	3776231.96	0.04184c	(05071508)	365137.01	3776115.58	0.03875c	(05090208)
365116.94	3775999.19	0.04360c	(05090208)	365104.90	3775898.86	0.04071c	(07031208)
365132.99	3775754.39	0.03335	(05121816)	365317.60	3777247.31	0.03250	(06081824)
365273.46	3777203.17	0.04204c	(06042608)	365100.89	3777094.81	0.03525	(07043008)
366493.48	3776063.40	0.09761	(07123008)	366465.39	3776183.80	0.06931	(07123008)
366453.35	3776308.21	0.08299	(07121008)	366449.34	3776416.57	0.06216	(05012908)
366397.17	3776561.05	0.07292	(05072708)	366369.07	3776685.46	0.06810	(06062308)
366369.07	3776837.96	0.08856	(07110324)	366409.21	3776962.37	0.06939c	(05012524)
366457.36	3777078.76	0.06200	(06073024)	366441.31	3777195.14	0.05506	(05102224)
365594.52	3777500.15	0.03686	(07071424)	365534.32	3777544.29	0.03701	(07071424)
365646.69	3777439.95	0.03849c	(06082924)	365702.87	3777419.88	0.04649c	(06072108)
365385.83	3777435.93	0.03264	(05061508)	365329.64	3777520.21	0.02934	(05061508)
366272.76	3775373.13	0.03512	(06041808)	366373.09	3775401.22	0.03958	(06041808)
366573.75	3775473.46	0.04614	(06030408)	366124.27	3777528.24	0.03327	(07080208)

**MODELOPTs: RegDFAULT CONC   ELEV
NODRYDPLT NOWETDPLT

*** THE SUMMARY OF HIGHEST 1-HR RESULTS ***

** CONC OF CO IN PPM **

GROUP ID	AVERAGE CONC	DATE (YYMMDDHH)	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	NETWORK GRID-ID
ALL HIGH 1ST HIGH VALUE IS	0.42658	ON 05101708:	AT (366397.17, 3776561.05, 365.00, 365.00, 0.00)	DC	

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

**MODELOPTs: RegDFAULT CONC   ELEV
NODRYDPLT NOWETDPLT

*** THE SUMMARY OF HIGHEST 8-HR RESULTS ***

** CONC OF CO IN PPM **

GROUP ID	AVERAGE CONC	DATE (YYMMDDHH)	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	NETWORK GRID-ID
ALL HIGH 1ST HIGH VALUE IS	0.09761	ON 07123008:	AT (366493.48, 3776063.40, 333.67, 365.00, 0.00)	DC	

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

**MODELOPTs: RegDFAULT CONC   ELEV
NODRYDPLT NOWETDPLT

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 0 Warning Message(s)
A Total of 1753 Informational Message(s)

A Total of 26280 Hours Were Processed

A Total of 1181 Calm Hours Identified

A Total of 572 Missing Hours Identified (2.18 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********
*** NONE ***

****
*** AERMOD Finishes Successfully ***
****

Alternative 3 Mitigated CO Localized Emissions

```
**
****************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 6.6.0
** Lakes Environmental Software Inc.
** Date: 7/27/2010
** File: J:\Projects\LADWP Stone Canyon Reservoir Project 2008-057\Air Quality\Construction Emissions\Localized\Alt3\CO\COMT.ADI
**
****************************************
**
**
****************************************
** AERMOD Control Pathway
****************************************
**
**
CO STARTING
   TITLEONE Stone Canyon Reservoir
   TITLETWO COMT
   MODELOPT DFAULT CONC NODRYDPLT NOWETDPLT
   AVERTIME 1 8
   URBANOPT 9862049
   POLLUTID CO
   RUNORNOT RUN
CO FINISHED
**
****************************************
** AERMOD Source Pathway
****************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
   LOCATION VOL1 VOLUME 365893.498 3776581.066 303.930
** DESCRSRC Exhaust
** Source Parameters **
   SRCPARAM VOL1 2.505 5.000 45.578 1.163
   URBANSRC VOL1
   CONCUNIT 873.2 GRAMS/SEC PPM
   SRCGROUP ALL
SO FINISHED
**
****************************************
** AERMOD Receptor Pathway
****************************************
**
**
RE STARTING
** DESCRREC "" ""
   DISCCART    365205.23   3776966.38  375.93  426.00
   DISCCART    365273.46   3776942.30  371.48  426.00
   DISCCART    365297.54   3776837.96  364.53  426.00
   DISCCART    365261.42   3776781.78  365.63  426.00
   DISCCART    365241.35   3776673.42  365.70  365.68
   DISCCART    365205.23   3776528.94  365.00  364.88
   DISCCART    365153.06   3776456.70  365.00  365.00
   DISCCART    365116.94   3776332.29  365.00  365.00
   DISCCART    365120.95   3776231.96  364.96  364.86
   DISCCART    365137.01   3776115.58  364.26  364.20
   DISCCART    365116.94   3775999.19  364.00  364.00
   DISCCART    365104.90   3775898.86  364.00  364.00
   DISCCART    365132.99   3775754.39  364.00  364.00
   DISCCART    365317.60   3777247.31  388.83  426.00
   DISCCART    365273.46   3777203.17  389.43  426.00
   DISCCART    365100.89   3777094.81  392.86  426.00
   DISCCART    366493.48   3776063.40  333.67  365.00
   DISCCART    366465.39   3776183.80  356.13  365.00
   DISCCART    366453.35   3776308.21  364.45  363.66
   DISCCART    366449.34   3776416.57  364.78  364.59
   DISCCART    366397.17   3776561.05  365.00  365.00
   DISCCART    366369.07   3776685.46  365.00  365.00
   DISCCART    366369.07   3776837.96  365.00  365.00
   DISCCART    366409.21   3776962.37  365.00  365.00
   DISCCART    366457.36   3777078.76  365.00  365.00
   DISCCART    366441.31   3777195.14  365.00  365.00
   DISCCART    365594.52   3777500.15  365.00  426.00
   DISCCART    365534.32   3777544.29  364.93  426.00
   DISCCART    365646.69   3777439.95  365.00  426.00
   DISCCART    365702.87   3777419.88  364.34  426.00
   DISCCART    365385.83   3777435.93  380.85  426.00
   DISCCART    365329.64   3777520.21  382.17  426.00
   DISCCART    366272.76   3775373.13  284.66  365.00
   DISCCART    366373.09   3775401.22  277.95  365.00
   DISCCART    366573.75   3775473.46  276.50  365.00
   DISCCART    366124.27   3777528.24  365.00  365.00
RE FINISHED
**
****************************************
** AERMOD Meteorology Pathway
****************************************
**
**
ME STARTING
   SURFFILE "L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.SFC"
   PROFFILE "L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.PFL"
   SURFDATA 0 2005
   UAIRDATA 3190 2005
   PROFBASE 10 METERS
ME FINISHED
**
****************************************
** AERMOD Output Pathway
****************************************
**
**
OU STARTING
   RECTABLE ALLAVE 1ST
   RECTABLE 1 1ST
   RECTABLE 8 1ST
```

```
** Auto-Generated Plotfiles
   PLOTFILE 1 ALL 1ST COMT.AD\01H1GALL.PLT
   PLOTFILE 8 ALL 1ST COMT.AD\08H1GALL.PLT
OU FINISHED

 ***********************************
 *** SETUP Finishes Successfully ***
 ***********************************

 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                              ***        07/27/10
                                   *** COMT                                                                ***        17:55:35
                                                                                                                      PAGE   1
 **MODELOPTs:  RegDFAULT CONC                                          ELEV
                                                                 NODRYDPLT NOWETDPLT

                                          ***     MODEL SETUP OPTIONS SUMMARY       ***
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

 **Model Is Setup For Calculation of Average CONCentration Values.

   --  DEPOSITION LOGIC  --
 **NO GAS DEPOSITION Data Provided.
 **NO PARTICLE DEPOSITION Data Provided.
 **Model Uses NO DRY DEPLETION.  DRYDPLT  =  F
 **Model Uses NO WET DEPLETION.  WETDPLT  =  F

 **Model Uses URBAN Dispersion Algorithm for the SBL for     1 Source(s),
   for Total of    1 Urban Area(s):
   Urban Population =   9862049.0 ;  Urban Roughness Length =  1.000 m

 **Model Uses Regulatory DEFAULT Options:
         1. Stack-tip Downwash.
         2. Model Accounts for ELEVated Terrain Effects.
         3. Use Calms Processing Routine.
         4. Use Missing Data Processing Routine.
         5. No Exponential Decay for URBAN/Non-SO2.
         6. Urban Roughness Length of 1.0 Meter Assumed.

 **Model Assumes No FLAGPOLE Receptor Heights.

 **Model Calculates  2 Short Term Average(s) of:   1-HR   8-HR

 **This Run Includes:      1 Source(s);       1 Source Group(s); and      36 Receptor(s)

 **The Model Assumes A Pollutant Type of:  CO

 **Model Set To Continue RUNning After the Setup Testing.

 **Output Options Selected:
          Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE Keyword)
          Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)

 **NOTE:  The Following Flags May Appear Following CONC Values:  c for Calm Hours
                                                                 m for Missing Hours
                                                                 b for Both Calm and Missing Hours

 **Misc. Inputs:  Base Elev. for Pot. Temp. Profile (m MSL) =    10.00 ;  Decay Coef. =    0.000     ;  Rot. Angle =     0.0
                  Emission Units = GRAMS/SEC                                ;  Emission Rate Unit Factor =    873.20
                  Output Units   = PPM

 **Approximate Storage Requirements of Model =      3.5 MB of RAM.

 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                              ***        07/27/10
                                   *** COMT                                                                ***        17:55:35
                                                                                                                      PAGE   2
 **MODELOPTs:  RegDFAULT CONC                                          ELEV
                                                                 NODRYDPLT NOWETDPLT


                                                *** VOLUME SOURCE DATA ***

             NUMBER EMISSION RATE                       BASE    RELEASE    INIT.    INIT.   URBAN  EMISSION RATE
     SOURCE   PART. (USER UNITS)      X         Y       ELEV.   HEIGHT      SY       SZ     SOURCE  SCALAR VARY
       ID     CATS.                (METERS) (METERS) (METERS) (METERS) (METERS) (METERS)              BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

   VOL1         0   0.25050E+01  365893.5 3776581.1   303.9     5.00    45.58     1.16     YES
 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                              ***        07/27/10
                                   *** COMT                                                                ***        17:55:35
                                                                                                                      PAGE   3
 **MODELOPTs:  RegDFAULT CONC                                          ELEV
                                                                 NODRYDPLT NOWETDPLT


                                         *** SOURCE IDs DEFINING SOURCE GROUPS ***

 GROUP ID                                          SOURCE IDs



  ALL       VOL1     ,
 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                              ***        07/27/10
                                   *** COMT                                                                ***        17:55:35
                                                                                                                      PAGE   4
 **MODELOPTs:  RegDFAULT CONC                                          ELEV
                                                                 NODRYDPLT NOWETDPLT

                                           *** DISCRETE CARTESIAN RECEPTORS ***
                                         (X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
                                                         (METERS)

     ( 365205.2, 3776966.4,      375.9,      426.0,       0.0);         ( 365273.5, 3776942.3,      371.5,      426.0,       0.0);
     ( 365297.5, 3776838.0,      364.5,      426.0,       0.0);         ( 365261.4, 3776781.8,      365.6,      426.0,       0.0);
     ( 365241.3, 3776673.4,      365.7,      365.7,       0.0);         ( 365205.2, 3776528.9,      365.0,      364.9,       0.0);
     ( 365153.1, 3776456.7,      365.0,      365.0,       0.0);         ( 365116.9, 3776332.3,      365.0,      365.0,       0.0);
     ( 365121.0, 3776232.0,      365.0,      364.9,       0.0);         ( 365137.0, 3776115.6,      364.3,      364.2,       0.0);
     ( 365116.9, 3775999.2,      364.0,      364.0,       0.0);         ( 365104.9, 3775898.9,      364.0,      364.0,       0.0);
     ( 365133.0, 3775754.4,      364.0,      364.0,       0.0);         ( 365317.6, 3777247.3,      388.8,      426.0,       0.0);
     ( 365273.5, 3777203.2,      389.4,      426.0,       0.0);         ( 365100.9, 3777094.8,      392.9,      426.0,       0.0);
     ( 366493.5, 3776063.4,      333.7,      365.0,       0.0);         ( 366465.4, 3776183.8,      356.1,      365.0,       0.0);
     ( 366453.3, 3776308.2,      364.4,      363.7,       0.0);         ( 366449.3, 3776416.6,      364.8,      364.6,       0.0);
     ( 366397.2, 3776561.0,      365.0,      365.0,       0.0);         ( 366369.1, 3776685.5,      365.0,      365.0,       0.0);
     ( 366369.1, 3776838.0,      365.0,      365.0,       0.0);         ( 366409.2, 3776962.4,      365.0,      365.0,       0.0);
     ( 366457.4, 3777078.8,      365.0,      365.0,       0.0);         ( 366441.3, 3777195.1,      365.0,      365.0,       0.0);
```

(365594.5,	3777500.1,	365.0,	426.0,	0.0);	(365534.3,	3777544.3,	364.9,	426.0,	0.0);
(365646.7,	3777439.9,	365.0,	426.0,	0.0);	(365702.9,	3777419.9,	364.3,	426.0,	0.0);
(365385.8,	3777435.9,	380.9,	426.0,	0.0);	(365329.6,	3777520.2,	382.2,	426.0,	0.0);
(366272.8,	3775373.1,	284.7,	365.0,	0.0);	(366373.1,	3775401.2,	277.9,	365.0,	0.0);
(366573.8,	3775473.5,	276.5,	365.0,	0.0);	(366124.3,	3777528.2,	365.0,	365.0,	0.0);

*** AERMOD - VERSION 09292 *** *** Stone Canyon Reservoir *** 07/27/10
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**MODELOPTs: RegDFAULT CONC ELEV
NODRYDPLT NOWETDPLT

*** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***
(1=YES; 0=NO)

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

NOTE: METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.

*** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
(METERS/SEC)

1.54, 3.09, 5.14, 8.23, 10.80,

*** AERMOD - VERSION 09292 *** *** Stone Canyon Reservoir *** 07/27/10
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**MODELOPTs: RegDFAULT CONC ELEV
NODRYDPLT NOWETDPLT

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.SFC Met Version: 06341
Profile file: L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 0 Upper air station no.: 3190
Name: UNKNOWN Name: UNKNOWN
Year: 2005 Year: 2005

First 24 hours of scalar data

YR	MO	DY	JDY	HR	H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O LEN	Z0	BOWEN	ALBEDO	REF WS	WD	HT	REF TA	HT
05	01	01	1	01	-0.9	0.033	-9.000	-9.000	-999.	14.	3.7	0.45	1.00	1.00	0.50	321.	9.1	281.1	5.5
05	01	01	1	02	-0.9	0.033	-9.000	-9.000	-999.	14.	3.8	0.45	1.00	1.00	0.50	320.	9.1	280.8	5.5
05	01	01	1	03	-0.9	0.033	-9.000	-9.000	-999.	14.	3.7	0.45	1.00	1.00	0.50	323.	9.1	280.9	5.5
05	01	01	1	04	-1.3	0.040	-9.000	-9.000	-999.	18.	4.4	0.45	1.00	1.00	0.60	316.	9.1	280.8	5.5
05	01	01	1	05	-1.3	0.040	-9.000	-9.000	-999.	18.	4.4	0.45	1.00	1.00	0.60	322.	9.1	280.4	5.5
05	01	01	1	06	-0.3	0.020	-9.000	-9.000	-999.	6.	2.3	0.45	1.00	1.00	0.30	352.	9.1	279.9	5.5
05	01	01	1	07	-2.3	0.053	-9.000	-9.000	-999.	28.	5.8	0.45	1.00	1.00	0.80	324.	9.1	279.6	5.5
05	01	01	1	08	-1.2	0.040	-9.000	-9.000	-999.	18.	4.8	0.45	1.00	0.55	0.60	336.	9.1	280.5	5.5
05	01	01	1	09	43.0	0.243	0.490	0.005	99.	276.	-30.3	0.45	1.00	0.32	1.50	44.	9.1	283.4	5.5
05	01	01	1	10	110.6	0.339	1.374	0.005	849.	453.	-31.7	0.45	1.00	0.24	2.10	74.	9.1	285.1	5.5
05	01	01	1	11	135.3	0.321	1.653	0.010	1209.	419.	-22.2	0.45	1.00	0.21	1.90	84.	9.1	286.4	5.5
05	01	01	1	12	14.3	0.223	0.783	0.010	1212.	246.	-70.3	0.45	1.00	0.20	1.50	137.	9.1	286.8	5.5
05	01	01	1	13	27.1	0.187	0.971	0.010	1218.	186.	-21.7	0.45	1.00	0.20	1.10	111.	9.1	286.9	5.5
05	01	01	1	14	17.1	0.179	0.834	0.009	1222.	174.	-30.0	0.45	1.00	0.21	1.10	186.	9.1	286.9	5.5
05	01	01	1	15	3.7	0.172	0.499	0.009	1223.	164.	-124.8	0.45	1.00	0.24	1.20	195.	9.1	286.1	5.5
05	01	01	1	16	0.1	0.147	0.150	0.009	1223.	130.	-2871.4	0.45	1.00	0.33	1.10	182.	9.1	285.9	5.5
05	01	01	1	17	-1.7	0.047	-9.000	-9.000	-999.	31.	5.5	0.45	1.00	0.59	0.70	159.	9.1	285.5	5.5
05	01	01	1	18	-0.2	0.019	-9.000	-9.000	-999.	6.	2.9	0.45	1.00	1.00	0.28	170.	9.1	285.1	5.5
05	01	01	1	19	-0.2	0.019	-9.000	-9.000	-999.	6.	2.9	0.45	1.00	1.00	0.28	186.	9.1	284.4	5.5
05	01	01	1	20	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.45	1.00	1.00	0.00	0.	9.1	284.0	5.5
05	01	01	1	21	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.45	1.00	1.00	0.00	0.	9.1	283.9	5.5
05	01	01	1	22	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.45	1.00	1.00	0.00	0.	9.1	283.4	5.5
05	01	01	1	23	-0.2	0.019	-9.000	-9.000	-999.	6.	2.9	0.45	1.00	1.00	0.28	313.	9.1	283.4	5.5
05	01	01	1	24	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.45	1.00	1.00	0.00	0.	9.1	283.4	5.5

First hour of profile data

YR	MO	DY	HR	HEIGHT	F	WDIR	WSPD	AMB_TMP	sigmaA	sigmaW	sigmaV
05	01	01	01	5.5	0	-999.	-99.00	281.2	99.0	-99.00	-99.00
05	01	01	01	9.1	1	321.	0.50	-999.0	99.0	-99.00	-99.00

F indicates top of profile (=1) or below (=0)

*** AERMOD - VERSION 09292 *** *** Stone Canyon Reservoir *** 07/27/10
*** COMT *** 17:55:35
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**MODELOPTs: RegDFAULT CONC ELEV
NODRYDPLT NOWETDPLT

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): VOL1 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF CO IN PPM **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
365205.23	3776966.38	0.29434	(07043007)	365273.46	3776942.30	0.30658	(07043007)
365297.54	3776837.96	0.25221	(07043007)	365261.42	3776781.78	0.22348	(06082807)
365241.35	3776673.42	0.32344	(06082207)	365205.23	3776528.94	0.18892	(06121509)
365153.06	3776456.70	0.20922	(07032008)	365116.94	3776332.29	0.15421	(05052707)
365120.95	3776231.96	0.18430	(05121209)	365137.01	3776115.58	0.22193	(05090207)
365116.94	3775999.19	0.25813	(05090207)	365104.90	3775898.86	0.24896	(05103108)
365132.99	3775754.39	0.16496	(05121809)	365317.60	3777247.31	0.16046	(05083108)
365273.46	3777203.17	0.24899	(06042607)	365100.89	3777094.81	0.22065	(07043007)
366493.48	3776063.40	0.36253	(07060207)	366465.39	3776183.80	0.32028	(05040607)
366453.35	3776308.21	0.32337	(05040607)	366449.34	3776416.57	0.29760	(05101708)
366397.17	3776561.05	0.40522	(05101708)	366369.07	3776685.46	0.20778	(06080207)
366369.07	3776837.96	0.23953	(05041307)	366409.21	3776962.37	0.18720	(05071607)
366457.36	3777078.76	0.17083	(05050607)	366441.31	3777195.14	0.18784	(06042107)
365594.52	3777500.15	0.14858	(05120109)	365534.32	3777544.29	0.17460	(05120109)
365646.69	3777439.95	0.13558	(05090608)	365702.87	3777419.88	0.13041	(05102308)
365385.83	3777435.93	0.20123	(07050107)	365329.64	3777520.21	0.18879	(07050107)
366272.76	3775373.13	0.19516	(06041807)	366373.09	3775401.22	0.23237	(06041807)

366573.75	3775473.46	0.22623	(06030408)	366124.27	3777528.24	0.23798	(06082007)

**MODELOPTs: RegDFAULT CONC ELEV
NODRYDPLT NOWETDPLT

*** THE 1ST HIGHEST 8-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): VOL1 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF CO IN PPM **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
365205.23	3776966.38	0.05190	(05070908)	365273.46	3776942.30	0.05492	(05070908)
365297.54	3776837.96	0.06443	(05070908)	365261.42	3776781.78	0.04877	(06100908)
365241.35	3776673.42	0.06285c	(06082208)	365205.23	3776528.94	0.05266	(06041108)
365153.06	3776456.70	0.05195	(06041108)	365116.94	3776332.29	0.04692	(05110808)
365120.95	3776231.96	0.03975c	(05071508)	365137.01	3776115.58	0.03681c	(05090208)
365116.94	3775999.19	0.04142c	(05090208)	365104.90	3775898.86	0.03867c	(07031208)
365132.99	3775754.39	0.03168	(05121816)	365317.60	3777247.31	0.03088	(06081824)
365273.46	3777203.17	0.03994c	(06042608)	365100.89	3777094.81	0.03349	(07043008)
366493.48	3776063.40	0.09272	(07123008)	366465.39	3776183.80	0.06584	(07123008)
366453.35	3776308.21	0.07884	(07121008)	366449.34	3776416.57	0.05905	(05012908)
366397.17	3776561.05	0.06927	(05072708)	366369.07	3776685.46	0.06469	(06062308)
366369.07	3776837.96	0.08412	(07110324)	366409.21	3776962.37	0.06591c	(05012524)
366457.36	3777078.76	0.05889	(06073024)	366441.31	3777195.14	0.05230	(05102224)
365594.52	3777500.15	0.03502	(07071424)	365534.32	3777544.29	0.03516	(07071424)
365646.69	3777439.95	0.03656c	(06082924)	365702.87	3777419.88	0.04416c	(06072108)
365385.83	3777435.93	0.03100	(05061508)	365329.64	3777520.21	0.02787	(05061508)
366272.76	3775373.13	0.03336	(06041808)	366373.09	3775401.22	0.03759	(06041808)
366573.75	3775473.46	0.04383	(06030408)	366124.27	3777528.24	0.03161	(07080208)

**MODELOPTs: RegDFAULT CONC ELEV
NODRYDPLT NOWETDPLT

*** THE SUMMARY OF HIGHEST 1-HR RESULTS ***

** CONC OF CO IN PPM **

GROUP ID		AVERAGE CONC	DATE (YYMMDDHH)	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	NETWORK GRID-ID
ALL	HIGH 1ST HIGH VALUE IS	0.40522	ON 05101708:	AT (366397.17, 3776561.05, 365.00, 365.00, 0.00)	DC	

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

**MODELOPTs: RegDFAULT CONC ELEV
NODRYDPLT NOWETDPLT

*** THE SUMMARY OF HIGHEST 8-HR RESULTS ***

** CONC OF CO IN PPM **

GROUP ID		AVERAGE CONC	DATE (YYMMDDHH)	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	NETWORK GRID-ID
ALL	HIGH 1ST HIGH VALUE IS	0.09272	ON 07123008:	AT (366493.48, 3776063.40, 333.67, 365.00, 0.00)	DC	

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

**MODELOPTs: RegDFAULT CONC ELEV
NODRYDPLT NOWETDPLT

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 0 Warning Message(s)
A Total of 1753 Informational Message(s)

A Total of 26280 Hours Were Processed

A Total of 1181 Calm Hours Identified

A Total of 572 Missing Hours Identified (2.18 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********
*** NONE ***

****
*** AERMOD Finishes Successfully ***
****

Alternative 3 NO_2 Localized Emissions

```
**
****************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 6.6.0
** Lakes Environmental Software Inc.
** Date: 7/27/2010
** File: J:\Projects\LADWP Stone Canyon Reservoir Project 2008-057\Air Quality\Construction Emissions\Localized\Alt3\NO2\NO2.ADI
**
****************************************
**
**
****************************************
** AERMOD Control Pathway
****************************************
**
**
CO STARTING
   TITLEONE Stone Canyon Reservoir
   TITLETWO NO2
   MODELOPT DFAULT CONC NODRYDPLT NOWETDPLT
   AVERTIME 1
   URBANOPT 9862049
   POLLUTID NOX
   RUNORNOT RUN
CO FINISHED
**
****************************************
** AERMOD Source Pathway
****************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
   LOCATION VOL1 VOLUME 365893.498 3776581.066 303.930
** DESCRSRC Exhaust
** Source Parameters **
   SRCPARAM VOL1 0.5836 5.000 45.578 1.163
   URBANSRC VOL1
   CONCUNIT 531.5 GRAMS/SEC PPM
   SRCGROUP ALL
SO FINISHED
**
****************************************
** AERMOD Receptor Pathway
****************************************
**
**
RE STARTING
** DESCRREC "" ""
   DISCCART    365205.23   3776966.38  375.93  426.00
   DISCCART    365273.46   3776942.30  371.48  426.00
   DISCCART    365297.54   3776837.96  364.53  426.00
   DISCCART    365261.42   3776781.78  365.63  426.00
   DISCCART    365241.35   3776673.42  365.70  365.68
   DISCCART    365205.23   3776528.94  365.00  364.88
   DISCCART    365153.06   3776456.70  365.00  365.00
   DISCCART    365116.94   3776332.29  365.00  365.00
   DISCCART    365120.95   3776231.96  364.96  364.86
   DISCCART    365137.01   3776115.58  364.26  364.20
   DISCCART    365116.94   3775999.19  364.00  364.00
   DISCCART    365104.90   3775898.86  364.00  364.00
   DISCCART    365132.99   3775754.39  364.00  364.00
   DISCCART    365317.60   3777247.31  388.83  426.00
   DISCCART    365273.46   3777203.17  389.43  426.00
   DISCCART    365100.89   3777094.81  392.86  426.00
   DISCCART    366493.48   3776063.40  333.67  365.00
   DISCCART    366465.39   3776183.80  356.13  365.00
   DISCCART    366453.35   3776308.21  364.45  363.66
   DISCCART    366449.34   3776416.57  364.78  364.59
   DISCCART    366397.17   3776561.05  365.00  365.00
   DISCCART    366369.07   3776685.46  365.00  365.00
   DISCCART    366369.07   3776837.96  365.00  365.00
   DISCCART    366409.21   3776962.37  365.00  365.00
   DISCCART    366457.36   3777078.76  365.00  365.00
   DISCCART    366441.31   3777195.14  365.00  365.00
   DISCCART    365594.52   3777500.15  365.00  426.00
   DISCCART    365534.32   3777544.29  364.93  426.00
   DISCCART    365646.69   3777439.95  365.00  426.00
   DISCCART    365702.87   3777419.88  364.34  426.00
   DISCCART    365385.83   3777435.93  380.85  426.00
   DISCCART    365329.64   3777520.21  382.17  426.00
   DISCCART    366272.76   3775373.13  284.66  365.00
   DISCCART    366373.09   3775401.22  277.95  365.00
   DISCCART    366573.75   3775473.46  276.50  365.00
   DISCCART    366124.27   3777528.24  365.00  365.00
RE FINISHED
**
****************************************
** AERMOD Meteorology Pathway
****************************************
**
**
ME STARTING
   SURFFILE "L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.SFC"
   PROFFILE "L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.PFL"
   SURFDATA 0 2005
   UAIRDATA 3190 2005
   PROFBASE 10 METERS
ME FINISHED
**
****************************************
** AERMOD Output Pathway
****************************************
**
**
OU STARTING
   RECTABLE ALLAVE 1ST
   RECTABLE 1 1ST
** Auto-Generated Plotfiles
```

```
  PLOTFILE 1 ALL 1ST NO2.AD\01H1GALL.PLT
OU FINISHED

 **********************************
 *** SETUP Finishes Successfully ***
 **********************************

 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                                   ***        07/27/10
                                   *** NO2                                                                      ***        17:44:48
                                                                                                                           PAGE   1
 **MODELOPTs:  RegDFAULT CONC                                        ELEV
                                                            NODRYDPLT NOWETDPLT

                                            ***     MODEL SETUP OPTIONS SUMMARY       ***
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

 **Model Is Setup For Calculation of Average CONCentration Values.

   --  DEPOSITION LOGIC  --
 **NO GAS DEPOSITION Data Provided.
 **NO PARTICLE DEPOSITION Data Provided.
 **Model Uses NO DRY DEPLETION.  DRYDPLT  =  F
 **Model Uses NO WET DEPLETION.  WETDPLT  =  F

 **Model Uses URBAN Dispersion Algorithm for the SBL for     1 Source(s),
   for Total of    1 Urban Area(s):
   Urban Population =   9862049.0 ;  Urban Roughness Length =  1.000 m

 **Model Uses Regulatory DEFAULT Options:
         1. Stack-tip Downwash.
         2. Model Accounts for ELEVated Terrain Effects.
         3. Use Calms Processing Routine.
         4. Use Missing Data Processing Routine.
         5. No Exponential Decay for URBAN/Non-SO2.
         6. Urban Roughness Length of 1.0 Meter Assumed.

 **Model Assumes No FLAGPOLE Receptor Heights.

 **Model Calculates  1 Short Term Average(s) of:   1-HR

 **This Run Includes:      1 Source(s);       1 Source Group(s); and      36 Receptor(s)

 **The Model Assumes A Pollutant Type of:  NOX

 **Model Set To Continue RUNning After the Setup Testing.

 **Output Options Selected:
          Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE Keyword)
          Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)

 **NOTE:  The Following Flags May Appear Following CONC Values:  c for Calm Hours
                                                                 m for Missing Hours
                                                                 b for Both Calm and Missing Hours

 **Misc. Inputs:  Base Elev. for Pot. Temp. Profile (m MSL) =    10.00 ;  Decay Coef. =    0.000     ;  Rot. Angle =     0.0
                  Emission Units = GRAMS/SEC                                ;  Emission Rate Unit Factor =    531.50
                  Output Units   = PPM

 **Approximate Storage Requirements of Model =      3.5 MB of RAM.

 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                                   ***        07/27/10
                                   *** NO2                                                                      ***        17:44:48
                                                                                                                           PAGE   2
 **MODELOPTs:  RegDFAULT CONC                                        ELEV
                                                            NODRYDPLT NOWETDPLT


                                                 *** VOLUME SOURCE DATA ***

             NUMBER EMISSION RATE                         BASE    RELEASE    INIT.    INIT.   URBAN  EMISSION RATE
    SOURCE    PART. (USER UNITS)     X         Y          ELEV.   HEIGHT      SY       SZ     SOURCE  SCALAR VARY
     ID       CATS.               (METERS) (METERS) (METERS) (METERS) (METERS) (METERS)               BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

   VOL1          0   0.58360E+00  365893.5 3776581.1   303.9     5.00    45.58     1.16     YES
 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                                   ***        07/27/10
                                   *** NO2                                                                      ***        17:44:48
                                                                                                                           PAGE   3
 **MODELOPTs:  RegDFAULT CONC                                        ELEV
                                                            NODRYDPLT NOWETDPLT


                                           *** SOURCE IDs DEFINING SOURCE GROUPS ***

 GROUP ID                                                   SOURCE IDs



  ALL       VOL1     ,
 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                                   ***        07/27/10
                                   *** NO2                                                                      ***        17:44:48
                                                                                                                           PAGE   4
 **MODELOPTs:  RegDFAULT CONC                                        ELEV
                                                            NODRYDPLT NOWETDPLT

                                             *** DISCRETE CARTESIAN RECEPTORS ***
                                           (X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
                                                          (METERS)

     ( 365205.2, 3776966.4,     375.9,     426.0,       0.0);        ( 365273.5, 3776942.3,     371.5,     426.0,       0.0);
     ( 365297.5, 3776838.0,     364.5,     426.0,       0.0);        ( 365261.4, 3776781.8,     365.6,     426.0,       0.0);
     ( 365241.3, 3776673.4,     365.7,     365.7,       0.0);        ( 365205.2, 3776528.9,     365.0,     364.9,       0.0);
     ( 365153.1, 3776456.7,     365.0,     365.0,       0.0);        ( 365116.9, 3776332.3,     365.0,     365.0,       0.0);
     ( 365121.0, 3776232.0,     365.0,     364.9,       0.0);        ( 365137.0, 3776115.6,     364.3,     364.2,       0.0);
     ( 365116.9, 3775999.2,     364.0,     364.0,       0.0);        ( 365104.9, 3775898.9,     364.0,     364.0,       0.0);
     ( 365133.0, 3775754.4,     364.0,     364.0,       0.0);        ( 365317.6, 3777247.3,     388.8,     426.0,       0.0);
     ( 365273.5, 3777203.2,     389.4,     426.0,       0.0);        ( 365100.9, 3777094.8,     392.9,     426.0,       0.0);
     ( 366493.5, 3776063.4,     333.7,     365.0,       0.0);        ( 366465.4, 3776183.8,     356.1,     365.0,       0.0);
     ( 366453.3, 3776308.2,     364.4,     363.7,       0.0);        ( 366449.3, 3776416.6,     364.8,     364.6,       0.0);
     ( 366397.2, 3776561.0,     365.0,     365.0,       0.0);        ( 366369.1, 3776685.5,     365.0,     365.0,       0.0);
     ( 366369.1, 3776838.0,     365.0,     365.0,       0.0);        ( 366409.2, 3776962.4,     365.0,     365.0,       0.0);
     ( 366457.4, 3777078.8,     365.0,     365.0,       0.0);        ( 366441.3, 3777195.1,     365.0,     365.0,       0.0);
     ( 365594.5, 3777500.1,     365.0,     426.0,       0.0);        ( 365534.3, 3777544.3,     364.9,     426.0,       0.0);
     ( 365646.7, 3777439.9,     365.0,     426.0,       0.0);        ( 365702.9, 3777419.9,     364.3,     426.0,       0.0);
```

```
   ( 365385.8, 3777435.9,     380.9,     426.0,       0.0);        ( 365329.6, 3777520.2,     382.2,     426.0,       0.0);
   ( 366272.8, 3775373.1,     284.7,     365.0,       0.0);        ( 366373.1, 3775401.2,     277.9,     365.0,       0.0);
   ( 366573.8, 3775473.5,     276.5,     365.0,       0.0);        ( 366124.3, 3777528.2,     365.0,     365.0,       0.0);
*** AERMOD - VERSION 09292 ***   *** Stone Canyon Reservoir                                                ***        07/27/10
                                 *** NO2                                                                   ***        17:44:48
                                                                                                                      PAGE   5
**MODELOPTs:  RegDFAULT CONC                                            ELEV
                                                                NODRYDPLT NOWETDPLT

                                        *** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***
                                                        (1=YES; 0=NO)

          1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
          1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
          1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
          1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
          1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
          1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
          1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
          1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1

            NOTE:  METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.


                                  *** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
                                                          (METERS/SEC)

                                          1.54,   3.09,   5.14,   8.23,  10.80,
*** AERMOD - VERSION 09292 ***   *** Stone Canyon Reservoir                                                ***        07/27/10
                                 *** NO2                                                                   ***        17:44:48
                                                                                                                      PAGE   6
**MODELOPTs:  RegDFAULT CONC                                            ELEV
                                                                NODRYDPLT NOWETDPLT

                                   *** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

  Surface file:   L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.SFC    Met Version:  06341
  Profile file:   L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.PFL
  Surface format: FREE
  Profile format: FREE
  Surface station no.:        0                Upper air station no.:     3190
                Name: UNKNOWN                                 Name: UNKNOWN
                Year:   2005                                  Year:   2005

First 24 hours of scalar data
YR MO DY JDY HR     H0     U*     W*  DT/DZ ZICNV ZIMCH  M-O LEN    Z0  BOWEN ALBEDO  REF WS   WD     HT  REF TA     HT
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
05 01 01   1 01   -0.9  0.033 -9.000 -9.000 -999.   14.      3.7  0.45   1.00   1.00    0.50  321.    9.1  281.1    5.5
05 01 01   1 02   -0.9  0.033 -9.000 -9.000 -999.   14.      3.8  0.45   1.00   1.00    0.50  320.    9.1  280.8    5.5
05 01 01   1 03   -0.9  0.033 -9.000 -9.000 -999.   14.      3.7  0.45   1.00   1.00    0.50  323.    9.1  280.9    5.5
05 01 01   1 04   -1.3  0.040 -9.000 -9.000 -999.   18.      4.4  0.45   1.00   1.00    0.60  316.    9.1  280.8    5.5
05 01 01   1 05   -1.3  0.040 -9.000 -9.000 -999.   18.      4.4  0.45   1.00   1.00    0.60  322.    9.1  280.4    5.5
05 01 01   1 06   -0.3  0.020 -9.000 -9.000 -999.    6.      2.3  0.45   1.00   1.00    0.30  352.    9.1  279.9    5.5
05 01 01   1 07   -2.3  0.053 -9.000 -9.000 -999.   28.      5.8  0.45   1.00   1.00    0.80  324.    9.1  279.6    5.5
05 01 01   1 08   -1.2  0.040 -9.000 -9.000 -999.   18.      4.8  0.45   1.00   0.55    0.60  336.    9.1  280.5    5.5
05 01 01   1 09   43.0  0.243  0.490  0.005   99.  276.    -30.3  0.45   1.00   0.32    1.50   44.    9.1  283.4    5.5
05 01 01   1 10  110.6  0.339  1.374  0.005  849.  453.    -31.7  0.45   1.00   0.24    2.10   74.    9.1  285.1    5.5
05 01 01   1 11  135.3  0.321  1.653  0.010 1209.  419.    -22.2  0.45   1.00   0.21    1.90   84.    9.1  286.4    5.5
05 01 01   1 12   14.3  0.223  0.783  0.010 1212.  246.    -70.3  0.45   1.00   0.20    1.50  137.    9.1  286.8    5.5
05 01 01   1 13   27.1  0.187  0.971  0.010 1218.  186.    -21.7  0.45   1.00   0.20    1.10  111.    9.1  286.9    5.5
05 01 01   1 14   17.1  0.179  0.834  0.009 1222.  174.    -30.0  0.45   1.00   0.21    1.10  186.    9.1  286.9    5.5
05 01 01   1 15    3.7  0.172  0.499  0.009 1223.  164.   -124.8  0.45   1.00   0.24    1.20  195.    9.1  286.1    5.5
05 01 01   1 16    0.1  0.147  0.150  0.009 1223.  130.  -2871.4  0.45   1.00   0.33    1.10  182.    9.1  285.9    5.5
05 01 01   1 17   -1.7  0.047 -9.000 -9.000 -999.   31.      5.5  0.45   1.00   0.59    0.70  159.    9.1  285.5    5.5
05 01 01   1 18   -0.2  0.019 -9.000 -9.000 -999.    6.      2.9  0.45   1.00   1.00    0.28  170.    9.1  285.1    5.5
05 01 01   1 19   -0.2  0.019 -9.000 -9.000 -999.    6.      2.9  0.45   1.00   1.00    0.28  186.    9.1  284.4    5.5
05 01 01   1 20 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.45   1.00   1.00    0.00    0.    9.1  284.0    5.5
05 01 01   1 21 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.45   1.00   1.00    0.00    0.    9.1  283.9    5.5
05 01 01   1 22 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.45   1.00   1.00    0.00    0.    9.1  283.4    5.5
05 01 01   1 23   -0.2  0.019 -9.000 -9.000 -999.    6.      2.9  0.45   1.00   1.00    0.28  313.    9.1  283.4    5.5
05 01 01   1 24 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.45   1.00   1.00    0.00    0.    9.1  283.4    5.5


First hour of profile data
YR MO DY HR HEIGHT F  WDIR    WSPD AMB_TMP sigmaA  sigmaW  sigmaV
05 01 01 01    5.5 0 -999.  -99.00   281.2   99.0  -99.00  -99.00
05 01 01 01    9.1 1  321.    0.50  -999.0   99.0  -99.00  -99.00

F indicates top of profile (=1) or below (=0)
*** AERMOD - VERSION 09292 ***   *** Stone Canyon Reservoir                                                ***        07/27/10
                                 *** NO2                                                                   ***        17:44:48
                                                                                                                      PAGE   7
**MODELOPTs:  RegDFAULT CONC                                            ELEV
                                                                NODRYDPLT NOWETDPLT

                              *** THE   1ST HIGHEST  1-HR AVERAGE CONCENTRATION   VALUES FOR SOURCE GROUP:  ALL       ***
                                 INCLUDING SOURCE(S):      VOL1    ,

                                             *** DISCRETE CARTESIAN RECEPTOR POINTS ***

                                     ** CONC OF NOX      IN PPM                                         **

    X-COORD (M)  Y-COORD (M)        CONC     (YYMMDDHH)              X-COORD (M)  Y-COORD (M)        CONC     (YYMMDDHH)
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
      365205.23   3776966.38        0.04174  (07043007)                365273.46   3776942.30        0.04348  (07043007)
      365297.54   3776837.96        0.03576  (07043007)                365261.42   3776781.78        0.03169  (06082807)
      365241.35   3776673.42        0.04587  (06082207)                365205.23   3776528.94        0.02679  (06121509)
      365153.06   3776456.70        0.02967  (07032008)                365116.94   3776332.29        0.02187  (05052707)
      365120.95   3776231.96        0.02613  (05121209)                365137.01   3776115.58        0.03147  (05090207)
      365116.94   3775999.19        0.03660  (05090207)                365104.90   3775898.86        0.03530  (05103108)
      365132.99   3775754.39        0.02339  (05121809)                365317.60   3777247.31        0.02275  (05083108)
      365273.46   3777203.17        0.03531  (06042607)                365100.89   3777094.81        0.03129  (07043007)
      366493.48   3776063.40        0.05141  (07060207)                366465.39   3776183.80        0.04542  (05040607)
      366453.35   3776308.21        0.04586  (05040607)                366449.34   3776416.57        0.04220  (05101708)
      366397.17   3776561.05        0.05746  (05101708)                366369.07   3776685.46        0.02946  (06080207)
      366369.07   3776837.96        0.03397  (05041307)                366409.21   3776962.37        0.02655  (05071607)
      366457.36   3777078.76        0.02422  (05050607)                366441.31   3777195.14        0.02664  (06042107)
      365594.52   3777500.15        0.02107  (05120109)                365534.32   3777544.29        0.02476  (05120109)
      365646.69   3777439.95        0.01923  (05090608)                365702.87   3777419.88        0.01849  (05102308)
      365385.83   3777435.93        0.02854  (07050107)                365329.64   3777520.21        0.02677  (07050107)
      366272.76   3775373.13        0.02768  (06041807)                366373.09   3775401.22        0.03295  (06041807)
      366573.75   3775473.46        0.03208  (06030408)                366124.27   3777528.24        0.03375  (06082007)
*** AERMOD - VERSION 09292 ***   *** Stone Canyon Reservoir                                                ***        07/27/10
```

```
                                 *** NO2                                                              ***        17:44:48
                                                                                                                 PAGE   8
 **MODELOPTs:  RegDFAULT CONC                                                  ELEV
                                                                      NODRYDPLT NOWETDPLT

                                             *** THE SUMMARY OF HIGHEST  1-HR RESULTS ***

                                  ** CONC OF NOX      IN PPM                                      **

                                                  DATE                                                                     NETWORK
GROUP ID                         AVERAGE CONC     (YYMMDDHH)             RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG)    OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

ALL      HIGH  1ST HIGH VALUE IS       0.05746  ON 05101708: AT (  366397.17,  3776561.05,   365.00,   365.00,    0.00)  DC


 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                         ***        07/27/10
                                   *** NO2                                                            ***        17:44:48
                                                                                                                 PAGE   9
 **MODELOPTs:  RegDFAULT CONC                                                  ELEV
                                                                      NODRYDPLT NOWETDPLT

 *** Message Summary : AERMOD Model Execution ***

  --------- Summary of Total Messages --------

 A Total of            0 Fatal Error Message(s)
 A Total of            0 Warning Message(s)
 A Total of         1753 Informational Message(s)

 A Total of        26280 Hours Were Processed

 A Total of         1181 Calm Hours Identified

 A Total of          572 Missing Hours Identified (  2.18 Percent)


    ******** FATAL ERROR MESSAGES ********
               ***  NONE  ***


    ********   WARNING MESSAGES   ********
               ***  NONE  ***


    ************************************
    *** AERMOD Finishes Successfully ***
    ************************************
```

Alternative 3 Mitigated NO_2 Localized Emissions

```
**
****************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 6.6.0
** Lakes Environmental Software Inc.
** Date: 7/27/2010
** File: J:\Projects\LADWP Stone Canyon Reservoir Project 2008-057\Air Quality\Construction Emissions\Localized\Alt3\NO2\NO2MT.ADI
**
****************************************
**
**
****************************************
** AERMOD Control Pathway
****************************************
**
**
CO STARTING
   TITLEONE Stone Canyon Reservoir
   TITLETWO NO2MT
   MODELOPT DFAULT CONC NODRYDPLT NOWETDPLT
   AVERTIME 1
   URBANOPT 9862049
   POLLUTID NOX
   RUNORNOT RUN
CO FINISHED
**
****************************************
** AERMOD Source Pathway
****************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
   LOCATION VOL1 VOLUME 365893.498 3776581.066 303.930
** DESCRSRC Exhaust
** Source Parameters **
   SRCPARAM VOL1 0.5544 5.000 45.578 1.163
   URBANSRC VOL1
   CONCUNIT 531.5 GRAMS/SEC PPM
   SRCGROUP ALL
SO FINISHED
**
****************************************
** AERMOD Receptor Pathway
****************************************
**
**
RE STARTING
** DESCRREC "" ""
   DISCCART    365205.23   3776966.38  375.93  426.00
   DISCCART    365273.46   3776942.30  371.48  426.00
   DISCCART    365297.54   3776837.96  364.53  426.00
   DISCCART    365261.42   3776781.78  365.63  426.00
   DISCCART    365241.35   3776673.42  365.70  365.68
   DISCCART    365205.23   3776528.94  365.00  364.88
   DISCCART    365153.06   3776456.70  365.00  365.00
   DISCCART    365116.94   3776332.29  365.00  365.00
   DISCCART    365120.95   3776231.96  364.96  364.86
   DISCCART    365137.01   3776115.58  364.26  364.20
   DISCCART    365116.94   3775999.19  364.00  364.00
   DISCCART    365104.90   3775898.86  364.00  364.00
   DISCCART    365132.99   3775754.39  364.00  364.00
   DISCCART    365317.60   3777247.31  388.83  426.00
   DISCCART    365273.46   3777203.17  389.43  426.00
   DISCCART    365100.89   3777094.81  392.86  426.00
   DISCCART    366493.48   3776063.40  333.67  365.00
   DISCCART    366465.39   3776183.80  356.13  365.00
   DISCCART    366453.35   3776308.21  364.45  363.66
   DISCCART    366449.34   3776416.57  364.78  364.59
   DISCCART    366397.17   3776561.05  365.00  365.00
   DISCCART    366369.07   3776685.46  365.00  365.00
   DISCCART    366369.07   3776837.96  365.00  365.00
   DISCCART    366409.21   3776962.37  365.00  365.00
   DISCCART    366457.36   3777078.76  365.00  365.00
   DISCCART    366441.31   3777195.14  365.00  365.00
   DISCCART    365594.52   3777500.15  365.00  426.00
   DISCCART    365534.32   3777544.29  364.93  426.00
   DISCCART    365646.69   3777439.95  365.00  426.00
   DISCCART    365702.87   3777419.88  364.34  426.00
   DISCCART    365385.83   3777435.93  380.85  426.00
   DISCCART    365329.64   3777520.21  382.17  426.00
   DISCCART    366272.76   3775373.13  284.66  365.00
   DISCCART    366373.09   3775401.22  277.95  365.00
   DISCCART    366573.75   3775473.46  276.50  365.00
   DISCCART    366124.27   3777528.24  365.00  365.00
RE FINISHED
**
****************************************
** AERMOD Meteorology Pathway
****************************************
**
**
ME STARTING
   SURFFILE "L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.SFC"
   PROFFILE "L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.PFL"
   SURFDATA 0 2005
   UAIRDATA 3190 2005
   PROFBASE 10 METERS
ME FINISHED
**
****************************************
** AERMOD Output Pathway
****************************************
**
**
OU STARTING
   RECTABLE ALLAVE 1ST
   RECTABLE 1 1ST
** Auto-Generated Plotfiles
```

```
  PLOTFILE 1 ALL 1ST NO2MT.AD\01H1GALL.PLT
OU FINISHED

 **********************************
 *** SETUP Finishes Successfully ***
 **********************************

 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                                 ***        07/27/10
                                   *** NO2MT                                                                  ***        17:48:19
                                                                                                                         PAGE   1
 **MODELOPTs:  RegDFAULT CONC                                              ELEV
                                                                  NODRYDPLT NOWETDPLT

                                         ***     MODEL SETUP OPTIONS SUMMARY       ***
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

 **Model Is Setup For Calculation of Average CONCentration Values.

   -- DEPOSITION LOGIC --
 **NO GAS DEPOSITION Data Provided.
 **NO PARTICLE DEPOSITION Data Provided.
 **Model Uses NO DRY DEPLETION.  DRYDPLT  =  F
 **Model Uses NO WET DEPLETION.  WETDPLT  =  F

 **Model Uses URBAN Dispersion Algorithm for the SBL for     1 Source(s),
   for Total of    1 Urban Area(s):
   Urban Population =   9862049.0 ;  Urban Roughness Length =  1.000 m

 **Model Uses Regulatory DEFAULT Options:
        1. Stack-tip Downwash.
        2. Model Accounts for ELEVated Terrain Effects.
        3. Use Calms Processing Routine.
        4. Use Missing Data Processing Routine.
        5. No Exponential Decay for URBAN/Non-SO2.
        6. Urban Roughness Length of 1.0 Meter Assumed.

 **Model Assumes No FLAGPOLE Receptor Heights.

 **Model Calculates  1 Short Term Average(s) of:   1-HR

 **This Run Includes:      1 Source(s);       1 Source Group(s); and      36 Receptor(s)

 **The Model Assumes A Pollutant Type of:  NOX

 **Model Set To Continue RUNning After the Setup Testing.

 **Output Options Selected:
         Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE Keyword)
         Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)

 **NOTE:  The Following Flags May Appear Following CONC Values:  c for Calm Hours
                                                                 m for Missing Hours
                                                                 b for Both Calm and Missing Hours

 **Misc. Inputs:  Base Elev. for Pot. Temp. Profile (m MSL) =    10.00 ;  Decay Coef. =    0.000     ;  Rot. Angle =     0.0
                  Emission Units = GRAMS/SEC                                ;  Emission Rate Unit Factor =    531.50
                  Output Units   = PPM

 **Approximate Storage Requirements of Model =      3.5 MB of RAM.

 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                                 ***        07/27/10
                                   *** NO2MT                                                                  ***        17:48:19
                                                                                                                         PAGE   2
 **MODELOPTs:  RegDFAULT CONC                                              ELEV
                                                                  NODRYDPLT NOWETDPLT


                                               *** VOLUME SOURCE DATA ***

             NUMBER EMISSION RATE                        BASE    RELEASE    INIT.    INIT.   URBAN  EMISSION RATE
    SOURCE    PART. (USER UNITS)     X         Y        ELEV.   HEIGHT      SY       SZ     SOURCE  SCALAR VARY
      ID      CATS.                (METERS) (METERS) (METERS) (METERS) (METERS) (METERS)            BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

   VOL1          0   0.55440E+00  365893.5 3776581.1   303.9     5.00    45.58     1.16     YES
 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                                 ***        07/27/10
                                   *** NO2MT                                                                  ***        17:48:19
                                                                                                                         PAGE   3
 **MODELOPTs:  RegDFAULT CONC                                              ELEV
                                                                  NODRYDPLT NOWETDPLT


                                        *** SOURCE IDs DEFINING SOURCE GROUPS ***

 GROUP ID                                               SOURCE IDs



  ALL       VOL1     ,
 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                                 ***        07/27/10
                                   *** NO2MT                                                                  ***        17:48:19
                                                                                                                         PAGE   4
 **MODELOPTs:  RegDFAULT CONC                                              ELEV
                                                                  NODRYDPLT NOWETDPLT

                                          *** DISCRETE CARTESIAN RECEPTORS ***
                                        (X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
                                                        (METERS)

     ( 365205.2, 3776966.4,     375.9,     426.0,       0.0);         ( 365273.5, 3776942.3,     371.5,     426.0,       0.0);
     ( 365297.5, 3776838.0,     364.5,     426.0,       0.0);         ( 365261.4, 3776781.8,     365.6,     426.0,       0.0);
     ( 365241.3, 3776673.4,     365.7,     365.7,       0.0);         ( 365205.2, 3776528.9,     365.0,     364.9,       0.0);
     ( 365153.1, 3776456.7,     365.0,     365.0,       0.0);         ( 365116.9, 3776332.3,     365.0,     365.0,       0.0);
     ( 365121.0, 3776232.0,     365.0,     364.9,       0.0);         ( 365137.0, 3776115.6,     364.3,     364.2,       0.0);
     ( 365116.9, 3775999.2,     364.0,     364.0,       0.0);         ( 365104.9, 3775898.9,     364.0,     364.0,       0.0);
     ( 365133.0, 3775754.4,     364.0,     364.0,       0.0);         ( 365317.6, 3777247.3,     388.8,     426.0,       0.0);
     ( 365273.5, 3777203.2,     389.4,     426.0,       0.0);         ( 365100.9, 3777094.8,     392.9,     426.0,       0.0);
     ( 366493.5, 3776063.4,     333.7,     365.0,       0.0);         ( 366465.4, 3776183.8,     356.1,     365.0,       0.0);
     ( 366453.3, 3776308.2,     364.4,     363.7,       0.0);         ( 366449.3, 3776416.6,     364.8,     364.6,       0.0);
     ( 366397.2, 3776561.0,     365.0,     365.0,       0.0);         ( 366369.1, 3776685.5,     365.0,     365.0,       0.0);
     ( 366369.1, 3776838.0,     365.0,     365.0,       0.0);         ( 366409.2, 3776962.4,     365.0,     365.0,       0.0);
     ( 366457.4, 3777078.8,     365.0,     365.0,       0.0);         ( 366441.3, 3777195.1,     365.0,     365.0,       0.0);
     ( 365594.5, 3777500.1,     365.0,     426.0,       0.0);         ( 365534.3, 3777544.3,     364.9,     426.0,       0.0);
     ( 365646.7, 3777439.9,     365.0,     426.0,       0.0);         ( 365702.9, 3777419.9,     364.3,     426.0,       0.0);
```

(365385.8,	3777435.9,	380.9,	426.0,	0.0);	(365329.6,	3777520.2,	382.2,	426.0,	0.0);
(366272.8,	3775373.1,	284.7,	365.0,	0.0);	(366373.1,	3775401.2,	277.9,	365.0,	0.0);
(366573.8,	3775473.5,	276.5,	365.0,	0.0);	(366124.3,	3777528.2,	365.0,	365.0,	0.0);

**MODELOPTs: RegDFAULT CONC ELEV
NODRYDPLT NOWETDPLT

*** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***
(1=YES; 0=NO)

```
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1
```

NOTE: METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.

*** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
(METERS/SEC)

1.54, 3.09, 5.14, 8.23, 10.80,

**MODELOPTs: RegDFAULT CONC ELEV
NODRYDPLT NOWETDPLT

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.SFC Met Version: 06341
Profile file: L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 0 Upper air station no.: 3190
Name: UNKNOWN Name: UNKNOWN
Year: 2005 Year: 2005

First 24 hours of scalar data

YR	MO	DY	JDY	HR	H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O LEN	Z0	BOWEN	ALBEDO	REF WS	WD	HT	REF TA	HT
05	01	01	1	01	-0.9	0.033	-9.000	-9.000	-999.	14.	3.7	0.45	1.00	1.00	0.50	321.	9.1	281.1	5.5
05	01	01	1	02	-0.9	0.033	-9.000	-9.000	-999.	14.	3.8	0.45	1.00	1.00	0.50	320.	9.1	280.8	5.5
05	01	01	1	03	-0.9	0.033	-9.000	-9.000	-999.	14.	3.7	0.45	1.00	1.00	0.50	323.	9.1	280.9	5.5
05	01	01	1	04	-1.3	0.040	-9.000	-9.000	-999.	18.	4.4	0.45	1.00	1.00	0.60	316.	9.1	280.8	5.5
05	01	01	1	05	-1.3	0.040	-9.000	-9.000	-999.	18.	4.4	0.45	1.00	1.00	0.60	322.	9.1	280.4	5.5
05	01	01	1	06	-0.3	0.020	-9.000	-9.000	-999.	6.	2.3	0.45	1.00	1.00	0.30	352.	9.1	279.9	5.5
05	01	01	1	07	-2.3	0.053	-9.000	-9.000	-999.	28.	5.8	0.45	1.00	1.00	0.80	324.	9.1	279.6	5.5
05	01	01	1	08	-1.2	0.040	-9.000	-9.000	-999.	18.	4.8	0.45	1.00	0.55	0.60	336.	9.1	280.5	5.5
05	01	01	1	09	43.0	0.243	0.490	0.005	99.	276.	-30.3	0.45	1.00	0.32	1.50	44.	9.1	283.4	5.5
05	01	01	1	10	110.6	0.339	1.374	0.005	849.	453.	-31.7	0.45	1.00	0.24	2.10	74.	9.1	285.1	5.5
05	01	01	1	11	135.3	0.321	1.653	0.010	1209.	419.	-22.2	0.45	1.00	0.21	1.90	84.	9.1	286.4	5.5
05	01	01	1	12	14.3	0.223	0.783	0.010	1212.	246.	-70.3	0.45	1.00	0.20	1.50	137.	9.1	286.8	5.5
05	01	01	1	13	27.1	0.187	0.971	0.010	1218.	186.	-21.7	0.45	1.00	0.20	1.10	111.	9.1	286.9	5.5
05	01	01	1	14	17.1	0.179	0.834	0.009	1222.	174.	-30.0	0.45	1.00	0.21	1.10	186.	9.1	286.9	5.5
05	01	01	1	15	3.7	0.172	0.499	0.009	1223.	164.	-124.8	0.45	1.00	0.24	1.20	195.	9.1	286.1	5.5
05	01	01	1	16	0.1	0.147	0.150	0.009	1223.	130.	-2871.4	0.45	1.00	0.33	1.10	182.	9.1	285.9	5.5
05	01	01	1	17	-1.7	0.047	-9.000	-9.000	-999.	31.	5.5	0.45	1.00	0.59	0.70	159.	9.1	285.5	5.5
05	01	01	1	18	-0.2	0.019	-9.000	-9.000	-999.	6.	2.9	0.45	1.00	1.00	0.28	170.	9.1	285.1	5.5
05	01	01	1	19	-0.2	0.019	-9.000	-9.000	-999.	6.	2.9	0.45	1.00	1.00	0.28	186.	9.1	284.4	5.5
05	01	01	1	20	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.45	1.00	1.00	0.00	0.	9.1	284.0	5.5
05	01	01	1	21	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.45	1.00	1.00	0.00	0.	9.1	283.9	5.5
05	01	01	1	22	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.45	1.00	1.00	0.00	0.	9.1	283.4	5.5
05	01	01	1	23	-0.2	0.019	-9.000	-9.000	-999.	6.	2.9	0.45	1.00	1.00	0.28	313.	9.1	283.4	5.5
05	01	01	1	24	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.45	1.00	1.00	0.00	0.	9.1	283.4	5.5

First hour of profile data

YR	MO	DY	HR	HEIGHT	F	WDIR	WSPD	AMB_TMP	sigmaA	sigmaW	sigmaV
05	01	01	01	5.5	0	-999.	-99.00	281.2	99.0	-99.00	-99.00
05	01	01	01	9.1	1	321.	0.50	-999.0	99.0	-99.00	-99.00

F indicates top of profile (=1) or below (=0)

**MODELOPTs: RegDFAULT CONC ELEV
NODRYDPLT NOWETDPLT

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): VOL1 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF NOX IN PPM **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
365205.23	3776966.38	0.03965	(07043007)	365273.46	3776942.30	0.04130	(07043007)
365297.54	3776837.96	0.03398	(07043007)	365261.42	3776781.78	0.03011	(06082807)
365241.35	3776673.42	0.04357	(06082207)	365205.23	3776528.94	0.02545	(06121509)
365153.06	3776456.70	0.02818	(07032008)	365116.94	3776332.29	0.02077	(05052707)
365120.95	3776231.96	0.02483	(05121209)	365137.01	3776115.58	0.02990	(05090207)
365116.94	3775999.19	0.03477	(05090207)	365104.90	3775898.86	0.03354	(05103108)
365132.99	3775754.39	0.02222	(05121809)	365317.60	3777247.31	0.02162	(05083108)
365273.46	3777203.17	0.03354	(06042607)	365100.89	3777094.81	0.02972	(07043007)
366493.48	3776063.40	0.04884	(07060207)	366465.39	3776183.80	0.04315	(05040607)
366453.35	3776308.21	0.04356	(05040607)	366449.34	3776416.57	0.04009	(05101708)
366397.17	3776561.05	0.05459	(05101708)	366369.07	3776685.46	0.02799	(06080207)
366369.07	3776837.96	0.03227	(05041307)	366409.21	3776962.37	0.02522	(05071607)
366457.36	3777078.76	0.02301	(05050607)	366441.31	3777195.14	0.02530	(06042107)
365594.52	3777500.15	0.02002	(05120109)	365534.32	3777544.29	0.02352	(05120109)
365646.69	3777439.95	0.01826	(05090608)	365702.87	3777419.88	0.01757	(05102308)
365385.83	3777435.93	0.02711	(07050107)	365329.64	3777520.21	0.02543	(07050107)
366272.76	3775373.13	0.02629	(06041807)	366373.09	3775401.22	0.03130	(06041807)
366573.75	3775473.46	0.03048	(06030408)	366124.27	3777528.24	0.03206	(06082007)

```
                                    *** NO2MT                                                                     ***        17:48:19
                                                                                                                             PAGE   8
 **MODELOPTs:  RegDFAULT CONC                                                   ELEV
                                                                       NODRYDPLT NOWETDPLT

                                                 *** THE SUMMARY OF HIGHEST  1-HR RESULTS ***


                                     ** CONC OF NOX      IN PPM                                           **

                                                      DATE                                                                      NETWORK
GROUP ID                         AVERAGE CONC     (YYMMDDHH)            RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG)    OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

ALL      HIGH  1ST HIGH VALUE IS       0.05459  ON 05101708: AT (  366397.17,  3776561.05,   365.00,   365.00,    0.00)  DC


 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                                     ***        07/27/10
                                    *** NO2MT                                                                     ***        17:48:19
                                                                                                                             PAGE   9
 **MODELOPTs:  RegDFAULT CONC                                                   ELEV
                                                                       NODRYDPLT NOWETDPLT

 *** Message Summary : AERMOD Model Execution ***

  --------- Summary of Total Messages --------

 A Total of           0 Fatal Error Message(s)
 A Total of           0 Warning Message(s)
 A Total of        1753 Informational Message(s)

 A Total of       26280 Hours Were Processed

 A Total of        1181 Calm Hours Identified

 A Total of         572 Missing Hours Identified (  2.18 Percent)


    ******** FATAL ERROR MESSAGES ********
               ***  NONE  ***


    ********   WARNING MESSAGES   ********
               ***  NONE  ***


    ************************************
    *** AERMOD Finishes Successfully ***
    ************************************
```

Alternative 3 PM_{10} Localized Emissions

```
**
****************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 6.6.0
** Lakes Environmental Software Inc.
** Date: 7/28/2010
** File: J:\Projects\LADWP Stone Canyon Reservoir Project 2008-057\Air Quality\Construction Emissions\Localized\Alt3\PM10\PM10.ADI
**
****************************************
**
**
****************************************
** AERMOD Control Pathway
****************************************
**
**
CO STARTING
   TITLEONE Stone Canyon Reservoir
   TITLETWO PM10
   MODELOPT DFAULT CONC NODRYDPLT NOWETDPLT
   AVERTIME 24
   URBANOPT 9862049
   POLLUTID PM.10
   RUNORNOT RUN
CO FINISHED
**
****************************************
** AERMOD Source Pathway
****************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
   LOCATION AREA1 AREA 365796.443 3776482.259 303.190
** DESCRSRC Dust
   LOCATION VOL1 VOLUME 365893.498 3776581.066 303.930
** DESCRSRC Exhaust
** Source Parameters **
   SRCPARAM AREA1 0.00009735 0.000 195.986 195.986 0.000
   SRCPARAM VOL1 0.2572 5.000 45.578 1.163
   URBANSRC AREA1
   URBANSRC VOL1
   SRCGROUP ALL
SO FINISHED
**
****************************************
** AERMOD Receptor Pathway
****************************************
**
**
RE STARTING
** DESCRREC "" ""
   DISCCART    365205.23   3776966.38  375.93  426.00
   DISCCART    365273.46   3776942.30  371.48  426.00
   DISCCART    365297.54   3776837.96  364.53  426.00
   DISCCART    365261.42   3776781.78  365.63  426.00
   DISCCART    365241.35   3776673.42  365.70  365.68
   DISCCART    365205.23   3776528.94  365.00  364.88
   DISCCART    365153.06   3776456.70  365.00  365.00
   DISCCART    365116.94   3776332.29  365.00  365.00
   DISCCART    365120.95   3776231.96  364.96  364.86
   DISCCART    365137.01   3776115.58  364.26  364.20
   DISCCART    365116.94   3775999.19  364.00  364.00
   DISCCART    365104.90   3775898.86  364.00  364.00
   DISCCART    365132.99   3775754.39  364.00  364.00
   DISCCART    365317.60   3777247.31  388.83  426.00
   DISCCART    365273.46   3777203.17  389.43  426.00
   DISCCART    365100.89   3777094.81  392.86  426.00
   DISCCART    366493.48   3776063.40  333.67  365.00
   DISCCART    366465.39   3776183.80  356.13  365.00
   DISCCART    366453.35   3776308.21  364.45  363.66
   DISCCART    366449.34   3776416.57  364.78  364.59
   DISCCART    366397.17   3776561.05  365.00  365.00
   DISCCART    366369.07   3776685.46  365.00  365.00
   DISCCART    366369.07   3776837.96  365.00  365.00
   DISCCART    366409.21   3776962.37  365.00  365.00
   DISCCART    366457.36   3777078.76  365.00  365.00
   DISCCART    366441.31   3777195.14  365.00  365.00
   DISCCART    365594.52   3777500.15  365.00  426.00
   DISCCART    365534.32   3777544.29  364.93  426.00
   DISCCART    365646.69   3777439.95  365.00  426.00
   DISCCART    365702.87   3777419.88  364.34  426.00
   DISCCART    365385.83   3777435.93  380.85  426.00
   DISCCART    365329.64   3777520.21  382.17  426.00
   DISCCART    366272.76   3775373.13  284.66  365.00
   DISCCART    366373.09   3775401.22  277.95  365.00
   DISCCART    366573.75   3775473.46  276.50  365.00
   DISCCART    366124.27   3777528.24  365.00  365.00
RE FINISHED
**
****************************************
** AERMOD Meteorology Pathway
****************************************
**
**
ME STARTING
   SURFFILE "L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.SFC"
   PROFFILE "L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.PFL"
   SURFDATA 0 2005
   UAIRDATA 3190 2005
   PROFBASE 10 METERS
ME FINISHED
**
****************************************
** AERMOD Output Pathway
****************************************
**
**
OU STARTING
```

```
   RECTABLE ALLAVE 1ST
   RECTABLE 24 1ST
** Auto-Generated Plotfiles
   PLOTFILE 24 ALL 1ST PM10.AD\24H1GALL.PLT
OU FINISHED

 **********************************
 *** SETUP Finishes Successfully ***
 **********************************

 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                              ***        07/28/10
                                   *** PM10                                                                ***        09:38:45
                                                                                                                      PAGE   1
 **MODELOPTs:  RegDFAULT CONC                                         ELEV
                                                                 NODRYDPLT NOWETDPLT

                                          ***     MODEL SETUP OPTIONS SUMMARY       ***
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

 **Model Is Setup For Calculation of Average CONCentration Values.

   --  DEPOSITION LOGIC  --
 **NO GAS DEPOSITION Data Provided.
 **NO PARTICLE DEPOSITION Data Provided.
 **Model Uses NO DRY DEPLETION.  DRYDPLT  =  F
 **Model Uses NO WET DEPLETION.  WETDPLT  =  F

 **Model Uses URBAN Dispersion Algorithm for the SBL for     2 Source(s),
   for Total of    1 Urban Area(s):
   Urban Population =   9862049.0 ;  Urban Roughness Length =  1.000 m

 **Model Uses Regulatory DEFAULT Options:
         1. Stack-tip Downwash.
         2. Model Accounts for ELEVated Terrain Effects.
         3. Use Calms Processing Routine.
         4. Use Missing Data Processing Routine.
         5. No Exponential Decay for URBAN/Non-SO2.
         6. Urban Roughness Length of 1.0 Meter Assumed.

 **Model Assumes No FLAGPOLE Receptor Heights.

 **Model Calculates  1 Short Term Average(s) of:  24-HR

 **This Run Includes:      2 Source(s);       1 Source Group(s); and      36 Receptor(s)

 **The Model Assumes A Pollutant Type of:  PM.10

 **Model Set To Continue RUNning After the Setup Testing.

 **Output Options Selected:
          Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE Keyword)
          Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)

 **NOTE:  The Following Flags May Appear Following CONC Values:  c for Calm Hours
                                                                 m for Missing Hours
                                                                 b for Both Calm and Missing Hours

 **Misc. Inputs:  Base Elev. for Pot. Temp. Profile (m MSL) =    10.00 ;  Decay Coef. =    0.000     ; Rot. Angle =     0.0
                  Emission Units = GRAMS/SEC                                ;  Emission Rate Unit Factor =   0.10000E+07
                  Output Units   = MICROGRAMS/M**3

 **Approximate Storage Requirements of Model =      3.5 MB of RAM.

 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                              ***        07/28/10
                                   *** PM10                                                                ***        09:38:45
                                                                                                                      PAGE   2
 **MODELOPTs:  RegDFAULT CONC                                         ELEV
                                                                 NODRYDPLT NOWETDPLT


                                                *** VOLUME SOURCE DATA ***

               NUMBER EMISSION RATE                      BASE     RELEASE    INIT.    INIT.   URBAN  EMISSION RATE
     SOURCE     PART.  (GRAMS/SEC)     X         Y       ELEV.    HEIGHT      SY       SZ     SOURCE  SCALAR VARY
      ID        CATS.              (METERS) (METERS) (METERS) (METERS) (METERS) (METERS)             BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

   VOL1          0   0.25720E+00  365893.5 3776581.1   303.9     5.00    45.58     1.16     YES
 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                              ***        07/28/10
                                   *** PM10                                                                ***        09:38:45
                                                                                                                      PAGE   3
 **MODELOPTs:  RegDFAULT CONC                                         ELEV
                                                                 NODRYDPLT NOWETDPLT


                                                *** AREA SOURCE DATA ***

               NUMBER EMISSION RATE  COORD (SW CORNER)  BASE     RELEASE  X-DIM     Y-DIM    ORIENT.    INIT.   URBAN  EMISSION RATE
     SOURCE     PART.  (GRAMS/SEC       X         Y      ELEV.    HEIGHT  OF AREA   OF AREA   OF AREA     SZ     SOURCE  SCALAR VARY
      ID        CATS.   /METER**2)   (METERS) (METERS) (METERS) (METERS) (METERS)  (METERS)   (DEG.)  (METERS)            BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

   AREA1         0   0.97350E-04  365796.4 3776482.3   303.2     0.00    195.99    195.99     0.00     0.00    YES
 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                              ***        07/28/10
                                   *** PM10                                                                ***        09:38:45
                                                                                                                      PAGE   4
 **MODELOPTs:  RegDFAULT CONC                                         ELEV
                                                                 NODRYDPLT NOWETDPLT


                                        *** SOURCE IDs DEFINING SOURCE GROUPS ***

 GROUP ID                                              SOURCE IDs



  ALL       AREA1    , VOL1     ,
 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                              ***        07/28/10
                                   *** PM10                                                                ***        09:38:45
                                                                                                                      PAGE   5
 **MODELOPTs:  RegDFAULT CONC                                         ELEV
                                                                 NODRYDPLT NOWETDPLT

                                           *** DISCRETE CARTESIAN RECEPTORS ***
```

```
                                    (X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
                                                  (METERS)

  ( 365205.2, 3776966.4,     375.9,     426.0,       0.0);       ( 365273.5, 3776942.3,     371.5,     426.0,       0.0);
  ( 365297.5, 3776838.0,     364.5,     426.0,       0.0);       ( 365261.4, 3776781.8,     365.6,     426.0,       0.0);
  ( 365241.3, 3776673.4,     365.7,     365.7,       0.0);       ( 365205.2, 3776528.9,     365.0,     364.9,       0.0);
  ( 365153.1, 3776456.7,     365.0,     365.0,       0.0);       ( 365116.9, 3776332.3,     365.0,     365.0,       0.0);
  ( 365121.0, 3776232.0,     365.0,     364.9,       0.0);       ( 365137.0, 3776115.6,     364.3,     364.2,       0.0);
  ( 365116.9, 3775999.2,     364.0,     364.0,       0.0);       ( 365104.9, 3775898.9,     364.0,     364.0,       0.0);
  ( 365133.0, 3775754.4,     364.0,     364.0,       0.0);       ( 365317.6, 3777247.3,     388.8,     426.0,       0.0);
  ( 365273.5, 3777203.2,     389.4,     426.0,       0.0);       ( 365100.9, 3777094.8,     392.9,     426.0,       0.0);
  ( 366493.5, 3776063.4,     333.7,     365.0,       0.0);       ( 366465.4, 3776183.8,     356.1,     365.0,       0.0);
  ( 366453.3, 3776308.2,     364.4,     363.7,       0.0);       ( 366449.3, 3776416.6,     364.8,     364.6,       0.0);
  ( 366397.2, 3776561.0,     365.0,     365.0,       0.0);       ( 366369.1, 3776685.5,     365.0,     365.0,       0.0);
  ( 366369.1, 3776838.0,     365.0,     365.0,       0.0);       ( 366409.2, 3776962.4,     365.0,     365.0,       0.0);
  ( 366457.4, 3777078.8,     365.0,     365.0,       0.0);       ( 366441.3, 3777195.1,     365.0,     365.0,       0.0);
  ( 365594.5, 3777500.1,     365.0,     426.0,       0.0);       ( 365534.3, 3777544.3,     364.9,     426.0,       0.0);
  ( 365646.7, 3777439.9,     365.0,     426.0,       0.0);       ( 365702.9, 3777419.9,     364.3,     426.0,       0.0);
  ( 365385.8, 3777435.9,     380.9,     426.0,       0.0);       ( 365329.6, 3777520.2,     382.2,     426.0,       0.0);
  ( 366272.8, 3775373.1,     284.7,     365.0,       0.0);       ( 366373.1, 3775401.2,     277.9,     365.0,       0.0);
  ( 366573.8, 3775473.5,     276.5,     365.0,       0.0);       ( 366124.3, 3777528.2,     365.0,     365.0,       0.0);
*** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                                 ***        07/28/10
                                  *** PM10                                                                   ***        09:38:45
                                                                                                                        PAGE   6
**MODELOPTs:  RegDFAULT CONC                                                  ELEV
                                                                   NODRYDPLT NOWETDPLT

                                     *** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***
                                                        (1=YES; 0=NO)

          1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
          1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
          1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
          1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
          1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
          1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
          1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
          1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1

              NOTE:  METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.


                              *** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
                                                       (METERS/SEC)

                                            1.54,   3.09,   5.14,   8.23,  10.80,
*** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                                 ***        07/28/10
                                  *** PM10                                                                   ***        09:38:45
                                                                                                                        PAGE   7
**MODELOPTs:  RegDFAULT CONC                                                  ELEV
                                                                   NODRYDPLT NOWETDPLT

                                   *** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

  Surface file:   L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.SFC    Met Version:  06341
  Profile file:   L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.PFL
  Surface format: FREE
  Profile format: FREE
  Surface station no.:        0                 Upper air station no.:     3190
                Name: UNKNOWN                                   Name: UNKNOWN
                Year:   2005                                    Year:   2005

First 24 hours of scalar data
YR MO DY JDY HR     H0     U*     W*  DT/DZ ZICNV ZIMCH  M-O LEN    Z0  BOWEN ALBEDO  REF WS   WD     HT  REF TA     HT
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
05 01 01   1 01   -0.9  0.033 -9.000 -9.000 -999.   14.      3.7  0.45   1.00   1.00    0.50  321.    9.1  281.1    5.5
05 01 01   1 02   -0.9  0.033 -9.000 -9.000 -999.   14.      3.8  0.45   1.00   1.00    0.50  320.    9.1  280.8    5.5
05 01 01   1 03   -0.9  0.033 -9.000 -9.000 -999.   14.      3.7  0.45   1.00   1.00    0.50  323.    9.1  280.9    5.5
05 01 01   1 04   -1.3  0.040 -9.000 -9.000 -999.   18.      4.4  0.45   1.00   1.00    0.60  316.    9.1  280.8    5.5
05 01 01   1 05   -1.3  0.040 -9.000 -9.000 -999.   18.      4.4  0.45   1.00   1.00    0.60  322.    9.1  280.4    5.5
05 01 01   1 06   -0.3  0.020 -9.000 -9.000 -999.    6.      2.3  0.45   1.00   1.00    0.30  352.    9.1  279.9    5.5
05 01 01   1 07   -2.3  0.053 -9.000 -9.000 -999.   28.      5.8  0.45   1.00   1.00    0.80  324.    9.1  279.6    5.5
05 01 01   1 08   -1.2  0.040 -9.000 -9.000 -999.   18.      4.8  0.45   1.00   0.55    0.60  336.    9.1  280.5    5.5
05 01 01   1 09   43.0  0.243  0.490  0.005   99.  276.    -30.3  0.45   1.00   0.32    1.50   44.    9.1  283.4    5.5
05 01 01   1 10  110.6  0.339  1.374  0.005  849.  453.    -31.7  0.45   1.00   0.24    2.10   74.    9.1  285.1    5.5
05 01 01   1 11  135.3  0.321  1.653  0.010 1209.  419.    -22.2  0.45   1.00   0.21    1.90   84.    9.1  286.4    5.5
05 01 01   1 12   14.3  0.223  0.783  0.010 1212.  246.    -70.3  0.45   1.00   0.20    1.50  137.    9.1  286.8    5.5
05 01 01   1 13   27.1  0.187  0.971  0.010 1218.  186.    -21.7  0.45   1.00   0.20    1.10  111.    9.1  286.9    5.5
05 01 01   1 14   17.1  0.179  0.834  0.009 1222.  174.    -30.0  0.45   1.00   0.21    1.10  186.    9.1  286.9    5.5
05 01 01   1 15    3.7  0.172  0.499  0.009 1223.  164.   -124.8  0.45   1.00   0.24    1.20  195.    9.1  286.1    5.5
05 01 01   1 16    0.1  0.147  0.150  0.009 1223.  130.  -2871.4  0.45   1.00   0.33    1.10  182.    9.1  285.9    5.5
05 01 01   1 17   -1.7  0.047 -9.000 -9.000 -999.   31.      5.5  0.45   1.00   0.59    0.70  159.    9.1  285.5    5.5
05 01 01   1 18   -0.2  0.019 -9.000 -9.000 -999.    6.      2.9  0.45   1.00   1.00    0.28  170.    9.1  285.1    5.5
05 01 01   1 19   -0.2  0.019 -9.000 -9.000 -999.    6.      2.9  0.45   1.00   1.00    0.28  186.    9.1  284.4    5.5
05 01 01   1 20 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.45   1.00   1.00    0.00    0.    9.1  284.0    5.5
05 01 01   1 21 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.45   1.00   1.00    0.00    0.    9.1  283.9    5.5
05 01 01   1 22 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.45   1.00   1.00    0.00    0.    9.1  283.4    5.5
05 01 01   1 23   -0.2  0.019 -9.000 -9.000 -999.    6.      2.9  0.45   1.00   1.00    0.28  313.    9.1  283.4    5.5
05 01 01   1 24 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.45   1.00   1.00    0.00    0.    9.1  283.4    5.5


First hour of profile data
YR MO DY HR HEIGHT F  WDIR    WSPD AMB_TMP sigmaA  sigmaW  sigmaV
05 01 01 01    5.5 0 -999.  -99.00   281.2   99.0  -99.00  -99.00
05 01 01 01    9.1 1  321.    0.50  -999.0   99.0  -99.00  -99.00

F indicates top of profile (=1) or below (=0)
*** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                                 ***        07/28/10
                                  *** PM10                                                                   ***        09:38:45
                                                                                                                        PAGE   8
**MODELOPTs:  RegDFAULT CONC                                                  ELEV
                                                                   NODRYDPLT NOWETDPLT

                            *** THE   1ST HIGHEST 24-HR AVERAGE CONCENTRATION   VALUES FOR SOURCE GROUP:  ALL       ***
                                INCLUDING SOURCE(S):      AREA1   , VOL1    ,

                                            *** DISCRETE CARTESIAN RECEPTOR POINTS ***

                                       ** CONC OF PM.10    IN MICROGRAMS/M**3                               **

     X-COORD (M)  Y-COORD (M)        CONC      (YYMMDDHH)              X-COORD (M)  Y-COORD (M)        CONC      (YYMMDDHH)
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
       365205.23   3776966.38       53.14812  (07043024)                365273.46   3776942.30       53.89994  (07043024)
```

```
      365297.54   3776837.96       56.67618c (05101024)             365261.42  3776781.78       59.87978  (07090324)
      365241.35   3776673.42       58.59874  (05122624)             365205.23  3776528.94       59.39560c (06063024)
      365153.06   3776456.70       70.28505  (05020624)             365116.94  3776332.29       52.99596  (05020624)
      365120.95   3776231.96       51.68827c (06082624)             365137.01  3776115.58       48.64819c (05092124)
      365116.94   3775999.19       46.58577c (05090224)             365104.90  3775898.86       54.66734c (06102024)
      365132.99   3775754.39       53.73030c (06102024)             365317.60  3777247.31       52.97421c (05111424)
      365273.46   3777203.17       45.83416c (05111424)             365100.89  3777094.81       46.89367  (06061424)
      366493.48   3776063.40      216.48024  (06102724)             366465.39  3776183.80      207.36473c (05091724)
      366453.35   3776308.21      122.71076c (05021424)             366449.34  3776416.57      105.63717c (05090224)
      366397.17   3776561.05       95.53937  (05072724)             366369.07  3776685.46      135.03445c (05081024)
      366369.07   3776837.96       93.84577c (05082724)             366409.21  3776962.37       71.93140  (06073124)
      366457.36   3777078.76       56.41329  (06073124)             366441.31  3777195.14       52.15053c (06060724)
      365594.52   3777500.15       61.29772c (05082924)             365534.32  3777544.29       58.33711c (05090624)
      365646.69   3777439.95       73.76644c (05082924)             365702.87  3777419.88       74.71034c (05082924)
      365385.83   3777435.93       85.73414  (07050124)             365329.64  3777520.21       82.03057  (07050124)
      366272.76   3775373.13      110.17776  (06110624)             366373.09  3775401.22       86.27453  (06021324)
      366573.75   3775473.46      127.31973  (06030424)             366124.27  3777528.24       39.96007  (07070624)
 *** AERMOD - VERSION 09292 ***   *** Stone Canyon Reservoir                                             ***        07/28/10
                                  *** PM10                                                               ***        09:38:45
                                                                                                                    PAGE   9
 **MODELOPTs:  RegDFAULT CONC                                            ELEV
                                                                  NODRYDPLT NOWETDPLT

                                            *** THE SUMMARY OF HIGHEST 24-HR RESULTS ***

                                  ** CONC OF PM.10    IN MICROGRAMS/M**3                       **

                                                      DATE                                                              NETWORK
GROUP ID                          AVERAGE CONC     (YYMMDDHH)            RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG)    OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

ALL      HIGH  1ST HIGH VALUE IS     216.48024  ON 06102724: AT (  366493.48,  3776063.40,   333.67,   365.00,    0.00)  DC


 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
 *** AERMOD - VERSION 09292 ***   *** Stone Canyon Reservoir                                             ***        07/28/10
                                  *** PM10                                                               ***        09:38:45
                                                                                                                    PAGE  10
 **MODELOPTs:  RegDFAULT CONC                                            ELEV
                                                                  NODRYDPLT NOWETDPLT

 *** Message Summary : AERMOD Model Execution ***

  --------- Summary of Total Messages --------

 A Total of           0 Fatal Error Message(s)
 A Total of           0 Warning Message(s)
 A Total of        1753 Informational Message(s)

 A Total of       26280 Hours Were Processed

 A Total of        1181 Calm Hours Identified

 A Total of         572 Missing Hours Identified (  2.18 Percent)


   ******** FATAL ERROR MESSAGES ********
              ***  NONE  ***


   ********   WARNING MESSAGES   ********
              ***  NONE  ***

   ************************************
   *** AERMOD Finishes Successfully ***
   ************************************
```

Alternative 3 Mitigated PM_{10} Localized Emissions

```
**
****************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 6.6.0
** Lakes Environmental Software Inc.
** Date: 7/27/2010
** File: J:\Projects\LADWP Stone Canyon Reservoir Project 2008-057\Air Quality\Construction Emissions\Localized\Alt3\PM10\PM10MT.ADI
**
****************************************
**
**
****************************************
** AERMOD Control Pathway
****************************************
**
**
CO STARTING
   TITLEONE Stone Canyon Reservoir
   TITLETWO PM10MIT
   MODELOPT DFAULT CONC NODRYDPLT NOWETDPLT
   AVERTIME 24
   URBANOPT 9862049
   POLLUTID PM.10
   RUNORNOT RUN
CO FINISHED
**
****************************************
** AERMOD Source Pathway
****************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
   LOCATION AREA1 AREA 365796.443 3776482.259 303.190
** DESCRSRC Dust
   LOCATION VOL1 VOLUME 365893.498 3776581.066 303.930
** DESCRSRC Exhaust
** Source Parameters **
   SRCPARAM AREA1 0.00009735 0.000 195.986 195.986 0.000
   SRCPARAM VOL1 0.2443 5.000 45.578 1.163
   URBANSRC AREA1
   URBANSRC VOL1
   SRCGROUP ALL
SO FINISHED
**
****************************************
** AERMOD Receptor Pathway
****************************************
**
**
RE STARTING
** DESCRREC "" ""
   DISCCART    365205.23   3776966.38  375.93  426.00
   DISCCART    365273.46   3776942.30  371.48  426.00
   DISCCART    365297.54   3776837.96  364.53  426.00
   DISCCART    365261.42   3776781.78  365.63  426.00
   DISCCART    365241.35   3776673.42  365.70  365.68
   DISCCART    365205.23   3776528.94  365.00  364.88
   DISCCART    365153.06   3776456.70  365.00  365.00
   DISCCART    365116.94   3776332.29  365.00  365.00
   DISCCART    365120.95   3776231.96  364.96  364.86
   DISCCART    365137.01   3776115.58  364.26  364.20
   DISCCART    365116.94   3775999.19  364.00  364.00
   DISCCART    365104.90   3775898.86  364.00  364.00
   DISCCART    365132.99   3775754.39  364.00  364.00
   DISCCART    365317.60   3777247.31  388.83  426.00
   DISCCART    365273.46   3777203.17  389.43  426.00
   DISCCART    365100.89   3777094.81  392.86  426.00
   DISCCART    366493.48   3776063.40  333.67  365.00
   DISCCART    366465.39   3776183.80  356.13  365.00
   DISCCART    366453.35   3776308.21  364.45  363.66
   DISCCART    366449.34   3776416.57  364.78  364.59
   DISCCART    366397.17   3776561.05  365.00  365.00
   DISCCART    366369.07   3776685.46  365.00  365.00
   DISCCART    366369.07   3776837.96  365.00  365.00
   DISCCART    366409.21   3776962.37  365.00  365.00
   DISCCART    366457.36   3777078.76  365.00  365.00
   DISCCART    366441.31   3777195.14  365.00  365.00
   DISCCART    365594.52   3777500.15  365.00  426.00
   DISCCART    365534.32   3777544.29  364.93  426.00
   DISCCART    365646.69   3777439.95  365.00  426.00
   DISCCART    365702.87   3777419.88  364.34  426.00
   DISCCART    365385.83   3777435.93  380.85  426.00
   DISCCART    365329.64   3777520.21  382.17  426.00
   DISCCART    366272.76   3775373.13  284.66  365.00
   DISCCART    366373.09   3775401.22  277.95  365.00
   DISCCART    366573.75   3775473.46  276.50  365.00
   DISCCART    366124.27   3777528.24  365.00  365.00
RE FINISHED
**
****************************************
** AERMOD Meteorology Pathway
****************************************
**
**
ME STARTING
   SURFFILE "L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.SFC"
   PROFFILE "L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.PFL"
   SURFDATA 0 2005
   UAIRDATA 3190 2005
   PROFBASE 10 METERS
ME FINISHED
**
****************************************
** AERMOD Output Pathway
****************************************
**
**
OU STARTING
```

```
   RECTABLE ALLAVE 1ST
   RECTABLE 24 1ST
** Auto-Generated Plotfiles
   PLOTFILE 24 ALL 1ST PM10MT.AD\24H1GALL.PLT
OU FINISHED

 ***********************************
 *** SETUP Finishes Successfully ***
 ***********************************

 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                                    ***        07/27/10
                                   *** PM10MIT                                                                   ***        17:03:50
                                                                                                                            PAGE   1
 **MODELOPTs:  RegDFAULT CONC                                              ELEV
                                                                 NODRYDPLT NOWETDPLT

                                            ***     MODEL SETUP OPTIONS SUMMARY       ***
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

 **Model Is Setup For Calculation of Average CONCentration Values.

   --  DEPOSITION LOGIC  --
 **NO GAS DEPOSITION Data Provided.
 **NO PARTICLE DEPOSITION Data Provided.
 **Model Uses NO DRY DEPLETION.  DRYDPLT  =  F
 **Model Uses NO WET DEPLETION.  WETDPLT  =  F

 **Model Uses URBAN Dispersion Algorithm for the SBL for     2 Source(s),
   for Total of    1 Urban Area(s):
   Urban Population =   9862049.0 ;  Urban Roughness Length =  1.000 m

 **Model Uses Regulatory DEFAULT Options:
         1. Stack-tip Downwash.
         2. Model Accounts for ELEVated Terrain Effects.
         3. Use Calms Processing Routine.
         4. Use Missing Data Processing Routine.
         5. No Exponential Decay for URBAN/Non-SO2.
         6. Urban Roughness Length of 1.0 Meter Assumed.

 **Model Assumes No FLAGPOLE Receptor Heights.

 **Model Calculates  1 Short Term Average(s) of:  24-HR

 **This Run Includes:      2 Source(s);       1 Source Group(s); and      36 Receptor(s)

 **The Model Assumes A Pollutant Type of:  PM.10

 **Model Set To Continue RUNning After the Setup Testing.

 **Output Options Selected:
          Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE Keyword)
          Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)

 **NOTE:  The Following Flags May Appear Following CONC Values:  c for Calm Hours
                                                                 m for Missing Hours
                                                                 b for Both Calm and Missing Hours

 **Misc. Inputs:  Base Elev. for Pot. Temp. Profile (m MSL) =    10.00 ;  Decay Coef. =    0.000     ;  Rot. Angle =     0.0
                  Emission Units = GRAMS/SEC                                 ;  Emission Rate Unit Factor =   0.10000E+07
                  Output Units   = MICROGRAMS/M**3

 **Approximate Storage Requirements of Model =      3.5 MB of RAM.

 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                                    ***        07/27/10
                                   *** PM10MIT                                                                   ***        17:03:50
                                                                                                                            PAGE   2
 **MODELOPTs:  RegDFAULT CONC                                              ELEV
                                                                 NODRYDPLT NOWETDPLT


                                                  *** VOLUME SOURCE DATA ***

              NUMBER EMISSION RATE                      BASE     RELEASE    INIT.    INIT.   URBAN  EMISSION RATE
     SOURCE    PART.  (GRAMS/SEC)     X         Y       ELEV.    HEIGHT      SY       SZ     SOURCE  SCALAR VARY
      ID       CATS.                (METERS) (METERS) (METERS) (METERS) (METERS) (METERS)              BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

   VOL1         0   0.24430E+00  365893.5 3776581.1   303.9     5.00    45.58     1.16     YES
 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                                    ***        07/27/10
                                   *** PM10MIT                                                                   ***        17:03:50
                                                                                                                            PAGE   3
 **MODELOPTs:  RegDFAULT CONC                                              ELEV
                                                                 NODRYDPLT NOWETDPLT


                                                  *** AREA SOURCE DATA ***

              NUMBER EMISSION RATE  COORD (SW CORNER)  BASE     RELEASE  X-DIM     Y-DIM    ORIENT.    INIT.   URBAN  EMISSION RATE
    SOURCE     PART.  (GRAMS/SEC       X         Y      ELEV.    HEIGHT  OF AREA   OF AREA   OF AREA     SZ     SOURCE  SCALAR VARY
     ID        CATS.   /METER**2)   (METERS) (METERS) (METERS) (METERS) (METERS)  (METERS)   (DEG.)  (METERS)             BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

   AREA1        0   0.97350E-04  365796.4 3776482.3   303.2     0.00    195.99    195.99      0.00     0.00    YES
 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                                    ***        07/27/10
                                   *** PM10MIT                                                                   ***        17:03:50
                                                                                                                            PAGE   4
 **MODELOPTs:  RegDFAULT CONC                                              ELEV
                                                                 NODRYDPLT NOWETDPLT


                                             *** SOURCE IDs DEFINING SOURCE GROUPS ***

 GROUP ID                                             SOURCE IDs



  ALL       AREA1   , VOL1    ,
 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                                    ***        07/27/10
                                   *** PM10MIT                                                                   ***        17:03:50
                                                                                                                            PAGE   5
 **MODELOPTs:  RegDFAULT CONC                                              ELEV
                                                                 NODRYDPLT NOWETDPLT

                                              *** DISCRETE CARTESIAN RECEPTORS ***
```

(X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
(METERS)

X-COORD	Y-COORD	ZELEV	ZHILL	ZFLAG	X-COORD	Y-COORD	ZELEV	ZHILL	ZFLAG
(365205.2,	3776966.4,	375.9,	426.0,	0.0);	(365273.5,	3776942.3,	371.5,	426.0,	0.0);
(365297.5,	3776838.0,	364.5,	426.0,	0.0);	(365261.4,	3776781.8,	365.6,	426.0,	0.0);
(365241.3,	3776673.4,	365.7,	365.7,	0.0);	(365205.2,	3776528.9,	365.0,	364.9,	0.0);
(365153.1,	3776456.7,	365.0,	365.0,	0.0);	(365116.9,	3776332.3,	365.0,	365.0,	0.0);
(365121.0,	3776232.0,	365.0,	364.9,	0.0);	(365137.0,	3776115.6,	364.3,	364.2,	0.0);
(365116.9,	3775999.2,	364.0,	364.0,	0.0);	(365104.9,	3775898.9,	364.0,	364.0,	0.0);
(365133.0,	3775754.4,	364.0,	364.0,	0.0);	(365317.6,	3777247.3,	388.8,	426.0,	0.0);
(365273.5,	3777203.2,	389.4,	426.0,	0.0);	(365100.9,	3777094.8,	392.9,	426.0,	0.0);
(366493.5,	3776063.4,	333.7,	365.0,	0.0);	(366465.4,	3776183.8,	356.1,	365.0,	0.0);
(366453.3,	3776308.2,	364.4,	363.7,	0.0);	(366449.3,	3776416.6,	364.8,	364.6,	0.0);
(366397.2,	3776561.0,	365.0,	365.0,	0.0);	(366369.1,	3776685.5,	365.0,	365.0,	0.0);
(366369.1,	3776838.0,	365.0,	365.0,	0.0);	(366409.2,	3776962.4,	365.0,	365.0,	0.0);
(366457.4,	3777078.8,	365.0,	365.0,	0.0);	(366441.3,	3777195.1,	365.0,	365.0,	0.0);
(365594.5,	3777500.1,	365.0,	426.0,	0.0);	(365534.3,	3777544.3,	364.9,	426.0,	0.0);
(365646.7,	3777439.9,	365.0,	426.0,	0.0);	(365702.9,	3777419.9,	364.3,	426.0,	0.0);
(365385.8,	3777435.9,	380.9,	426.0,	0.0);	(365329.6,	3777520.2,	382.2,	426.0,	0.0);
(366272.8,	3775373.1,	284.7,	365.0,	0.0);	(366373.1,	3775401.2,	277.9,	365.0,	0.0);
(366573.8,	3775473.5,	276.5,	365.0,	0.0);	(366124.3,	3777528.2,	365.0,	365.0,	0.0);

**MODELOPTs: RegDFAULT CONC ELEV
NODRYDPLT NOWETDPLT

*** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***
(1=YES; 0=NO)

```
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1
```

NOTE: METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.

*** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
(METERS/SEC)

1.54, 3.09, 5.14, 8.23, 10.80,

**MODELOPTs: RegDFAULT CONC ELEV
NODRYDPLT NOWETDPLT

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.SFC Met Version: 06341
Profile file: L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 0 Upper air station no.: 3190
Name: UNKNOWN Name: UNKNOWN
Year: 2005 Year: 2005

First 24 hours of scalar data

YR	MO	DY	JDY	HR	H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O LEN	Z0	BOWEN	ALBEDO	REF WS	WD	HT	REF TA	HT
05	01	01	1	01	-0.9	0.033	-9.000	-9.000	-999.	14.	3.7	0.45	1.00	1.00	0.50	321.	9.1	281.1	5.5
05	01	01	1	02	-0.9	0.033	-9.000	-9.000	-999.	14.	3.8	0.45	1.00	1.00	0.50	320.	9.1	280.8	5.5
05	01	01	1	03	-0.9	0.033	-9.000	-9.000	-999.	14.	3.7	0.45	1.00	1.00	0.50	323.	9.1	280.9	5.5
05	01	01	1	04	-1.3	0.040	-9.000	-9.000	-999.	18.	4.4	0.45	1.00	1.00	0.60	316.	9.1	280.8	5.5
05	01	01	1	05	-1.3	0.040	-9.000	-9.000	-999.	18.	4.4	0.45	1.00	1.00	0.60	322.	9.1	280.4	5.5
05	01	01	1	06	-0.3	0.020	-9.000	-9.000	-999.	6.	2.3	0.45	1.00	1.00	0.30	352.	9.1	279.9	5.5
05	01	01	1	07	-2.3	0.053	-9.000	-9.000	-999.	28.	5.8	0.45	1.00	1.00	0.80	324.	9.1	279.6	5.5
05	01	01	1	08	-1.2	0.040	-9.000	-9.000	-999.	18.	4.8	0.45	1.00	0.55	0.60	336.	9.1	280.5	5.5
05	01	01	1	09	43.0	0.243	0.490	0.005	99.	276.	-30.3	0.45	1.00	0.32	1.50	44.	9.1	283.4	5.5
05	01	01	1	10	110.6	0.339	1.374	0.005	849.	453.	-31.7	0.45	1.00	0.24	2.10	74.	9.1	285.1	5.5
05	01	01	1	11	135.3	0.321	1.653	0.010	1209.	419.	-22.2	0.45	1.00	0.21	1.90	84.	9.1	286.4	5.5
05	01	01	1	12	14.3	0.223	0.783	0.010	1212.	246.	-70.3	0.45	1.00	0.20	1.50	137.	9.1	286.8	5.5
05	01	01	1	13	27.1	0.187	0.971	0.010	1218.	186.	-21.7	0.45	1.00	0.20	1.10	111.	9.1	286.9	5.5
05	01	01	1	14	17.1	0.179	0.834	0.009	1222.	174.	-30.0	0.45	1.00	0.21	1.10	186.	9.1	286.9	5.5
05	01	01	1	15	3.7	0.172	0.499	0.009	1223.	164.	-124.8	0.45	1.00	0.24	1.20	195.	9.1	286.1	5.5
05	01	01	1	16	0.1	0.147	0.150	0.009	1223.	130.	-2871.4	0.45	1.00	0.33	1.10	182.	9.1	285.9	5.5
05	01	01	1	17	-1.7	0.047	-9.000	-9.000	-999.	31.	5.5	0.45	1.00	0.59	0.70	159.	9.1	285.5	5.5
05	01	01	1	18	-0.2	0.019	-9.000	-9.000	-999.	6.	2.9	0.45	1.00	1.00	0.28	170.	9.1	285.1	5.5
05	01	01	1	19	-0.2	0.019	-9.000	-9.000	-999.	6.	2.9	0.45	1.00	1.00	0.28	186.	9.1	284.4	5.5
05	01	01	1	20	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.45	1.00	1.00	0.00	0.	9.1	284.0	5.5
05	01	01	1	21	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.45	1.00	1.00	0.00	0.	9.1	283.9	5.5
05	01	01	1	22	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.45	1.00	1.00	0.00	0.	9.1	283.4	5.5
05	01	01	1	23	-0.2	0.019	-9.000	-9.000	-999.	6.	2.9	0.45	1.00	1.00	0.28	313.	9.1	283.4	5.5
05	01	01	1	24	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.45	1.00	1.00	0.00	0.	9.1	283.4	5.5

First hour of profile data

YR	MO	DY	HR	HEIGHT	F	WDIR	WSPD	AMB_TMP	sigmaA	sigmaW	sigmaV
05	01	01	01	5.5	0	-999.	-99.00	281.2	99.0	-99.00	-99.00
05	01	01	01	9.1	1	321.	0.50	-999.0	99.0	-99.00	-99.00

F indicates top of profile (=1) or below (=0)

**MODELOPTs: RegDFAULT CONC ELEV
NODRYDPLT NOWETDPLT

*** THE 1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): AREA1 , VOL1 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM.10 IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
365205.23	3776966.38	53.05410	(07043024)	365273.46	3776942.30	53.80073	(07043024)

365297.54	3776837.96	56.61513c (05101024)	365261.42	3776781.78	59.77526 (07090324)
365241.35	3776673.42	58.45957 (05122624)	365205.23	3776528.94	59.29548c (06063024)
365153.06	3776456.70	70.12223 (05020624)	365116.94	3776332.29	52.86995 (05020624)
365120.95	3776231.96	51.63085c (06082624)	365137.01	3776115.58	48.59318c (05092124)
365116.94	3775999.19	46.50480c (05090224)	365104.90	3775898.86	54.62987c (06102024)
365132.99	3775754.39	53.69325c (06102024)	365317.60	3777247.31	52.91067c (05111424)
365273.46	3777203.17	45.76187c (05111424)	365100.89	3777094.81	46.81246 (06061424)
366493.48	3776063.40	216.29943 (06102724)	366465.39	3776183.80	207.28372c (05091724)
366453.35	3776308.21	122.60237c (05021424)	366449.34	3776416.57	105.52675c (05090224)
366397.17	3776561.05	95.40125 (05072724)	366369.07	3776685.46	134.85383c (05081024)
366369.07	3776837.96	93.78234c (05082724)	366409.21	3776962.37	71.78279 (06073124)
366457.36	3777078.76	56.27521 (06073124)	366441.31	3777195.14	52.04246c (06060724)
365594.52	3777500.15	61.25348c (05082924)	365534.32	3777544.29	58.23784c (05090624)
365646.69	3777439.95	73.71698c (05082924)	365702.87	3777419.88	74.65685c (05082924)
365385.83	3777435.93	85.62820 (07050124)	365329.64	3777520.21	81.93424 (07050124)
366272.76	3775373.13	110.12721 (06110624)	366373.09	3775401.22	86.20770 (06021324)
366573.75	3775473.46	127.22271 (06030424)	366124.27	3777528.24	39.88324 (07070624)

```
*** AERMOD - VERSION 09292 ***   *** Stone Canyon Reservoir                                                  ***        07/27/10
                                 *** PM10MIT                                                                 ***        17:03:50
                                                                                                                        PAGE   9
**MODELOPTs:  RegDFAULT CONC                                          ELEV
                                                             NODRYDPLT NOWETDPLT

                                           *** THE SUMMARY OF HIGHEST 24-HR RESULTS ***

                                 ** CONC OF PM.10    IN MICROGRAMS/M**3                           **

                                                       DATE                                                                 NETWORK
GROUP ID                          AVERAGE CONC     (YYMMDDHH)             RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG)    OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

ALL      HIGH  1ST HIGH VALUE IS     216.29943  ON 06102724: AT (  366493.48,  3776063.40,   333.67,   365.00,    0.00)  DC


 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
 *** AERMOD - VERSION 09292 ***   *** Stone Canyon Reservoir                                                  ***        07/27/10
                                  *** PM10MIT                                                                 ***        17:03:50
                                                                                                                         PAGE  10
 **MODELOPTs:  RegDFAULT CONC                                          ELEV
                                                              NODRYDPLT NOWETDPLT

 *** Message Summary : AERMOD Model Execution ***

  --------- Summary of Total Messages --------

 A Total of           0 Fatal Error Message(s)
 A Total of           0 Warning Message(s)
 A Total of        1753 Informational Message(s)

 A Total of       26280 Hours Were Processed

 A Total of        1181 Calm Hours Identified

 A Total of         572 Missing Hours Identified (  2.18 Percent)


    ******** FATAL ERROR MESSAGES ********
               ***  NONE  ***


    ********   WARNING MESSAGES   ********
               ***  NONE  ***


    ************************************
    *** AERMOD Finishes Successfully ***
    ************************************
```

Alternative 3 $PM_{2.5}$ Localized Emissions

```
**
****************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 6.6.0
** Lakes Environmental Software Inc.
** Date: 7/27/2010
** File: J:\Projects\LADWP Stone Canyon Reservoir Project 2008-057\Air Quality\Construction Emissions\Localized\Alt3\PM25\PM25.ADI
**
****************************************
**
**
****************************************
** AERMOD Control Pathway
****************************************
**
**
CO STARTING
   TITLEONE Stone Canyon Reservoir
   TITLETWO PM25
   MODELOPT DFAULT CONC NODRYDPLT NOWETDPLT
   AVERTIME 24
   URBANOPT 9862049
   POLLUTID PM.25
   RUNORNOT RUN
CO FINISHED
**
****************************************
** AERMOD Source Pathway
****************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
   LOCATION AREA1 AREA 365796.443 3776482.259 303.190
** DESCRSRC Dust
   LOCATION VOL1 VOLUME 365893.498 3776581.066 303.930
** DESCRSRC Exhaust
** Source Parameters **
   SRCPARAM AREA1 0.00002004 0.000 195.986 195.986 0.000
   SRCPARAM VOL1 0.2366 5.000 45.578 1.163
   URBANSRC AREA1
   URBANSRC VOL1
   SRCGROUP ALL
SO FINISHED
**
****************************************
** AERMOD Receptor Pathway
****************************************
**
**
RE STARTING
** DESCRREC "" ""
   DISCCART    365205.23   3776966.38  375.93  426.00
   DISCCART    365273.46   3776942.30  371.48  426.00
   DISCCART    365297.54   3776837.96  364.53  426.00
   DISCCART    365261.42   3776781.78  365.63  426.00
   DISCCART    365241.35   3776673.42  365.70  365.68
   DISCCART    365205.23   3776528.94  365.00  364.88
   DISCCART    365153.06   3776456.70  365.00  365.00
   DISCCART    365116.94   3776332.29  365.00  365.00
   DISCCART    365120.95   3776231.96  364.96  364.86
   DISCCART    365137.01   3776115.58  364.26  364.20
   DISCCART    365116.94   3775999.19  364.00  364.00
   DISCCART    365104.90   3775898.86  364.00  364.00
   DISCCART    365132.99   3775754.39  364.00  364.00
   DISCCART    365317.60   3777247.31  388.83  426.00
   DISCCART    365273.46   3777203.17  389.43  426.00
   DISCCART    365100.89   3777094.81  392.86  426.00
   DISCCART    366493.48   3776063.40  333.67  365.00
   DISCCART    366465.39   3776183.80  356.13  365.00
   DISCCART    366453.35   3776308.21  364.45  363.66
   DISCCART    366449.34   3776416.57  364.78  364.59
   DISCCART    366397.17   3776561.05  365.00  365.00
   DISCCART    366369.07   3776685.46  365.00  365.00
   DISCCART    366369.07   3776837.96  365.00  365.00
   DISCCART    366409.21   3776962.37  365.00  365.00
   DISCCART    366457.36   3777078.76  365.00  365.00
   DISCCART    366441.31   3777195.14  365.00  365.00
   DISCCART    365594.52   3777500.15  365.00  426.00
   DISCCART    365534.32   3777544.29  364.93  426.00
   DISCCART    365646.69   3777439.95  365.00  426.00
   DISCCART    365702.87   3777419.88  364.34  426.00
   DISCCART    365385.83   3777435.93  380.85  426.00
   DISCCART    365329.64   3777520.21  382.17  426.00
   DISCCART    366272.76   3775373.13  284.66  365.00
   DISCCART    366373.09   3775401.22  277.95  365.00
   DISCCART    366573.75   3775473.46  276.50  365.00
   DISCCART    366124.27   3777528.24  365.00  365.00
RE FINISHED
**
****************************************
** AERMOD Meteorology Pathway
****************************************
**
**
ME STARTING
   SURFFILE "L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.SFC"
   PROFFILE "L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.PFL"
   SURFDATA 0 2005
   UAIRDATA 3190 2005
   PROFBASE 10 METERS
ME FINISHED
**
****************************************
** AERMOD Output Pathway
****************************************
**
**
OU STARTING
```

```
   RECTABLE ALLAVE 1ST
   RECTABLE 24 1ST
** Auto-Generated Plotfiles
   PLOTFILE 24 ALL 1ST PM25.AD\24H1GALL.PLT
OU FINISHED

 **********************************
 *** SETUP Finishes Successfully ***
 **********************************

 *** AERMOD - VERSION 09292 ***   *** Stone Canyon Reservoir                                            ***        07/27/10
                                  *** PM25                                                              ***        17:10:48
                                                                                                                   PAGE   1
 **MODELOPTs:  RegDFAULT CONC                                         ELEV
                                                            NODRYDPLT NOWETDPLT

                                           ***     MODEL SETUP OPTIONS SUMMARY       ***
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

 **Model Is Setup For Calculation of Average CONCentration Values.

   --  DEPOSITION LOGIC  --
 **NO GAS DEPOSITION Data Provided.
 **NO PARTICLE DEPOSITION Data Provided.
 **Model Uses NO DRY DEPLETION.  DRYDPLT  =  F
 **Model Uses NO WET DEPLETION.  WETDPLT  =  F

 **Model Uses URBAN Dispersion Algorithm for the SBL for     2 Source(s),
   for Total of    1 Urban Area(s):
   Urban Population =   9862049.0 ;  Urban Roughness Length =  1.000 m

 **Model Uses Regulatory DEFAULT Options:
         1. Stack-tip Downwash.
         2. Model Accounts for ELEVated Terrain Effects.
         3. Use Calms Processing Routine.
         4. Use Missing Data Processing Routine.
         5. No Exponential Decay for URBAN/Non-SO2.
         6. Urban Roughness Length of 1.0 Meter Assumed.

 **Model Assumes No FLAGPOLE Receptor Heights.

 **Model Calculates  1 Short Term Average(s) of:  24-HR

 **This Run Includes:      2 Source(s);       1 Source Group(s); and      36 Receptor(s)

 **The Model Assumes A Pollutant Type of:  PM.25

 **Model Set To Continue RUNning After the Setup Testing.

 **Output Options Selected:
          Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE Keyword)
          Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)

 **NOTE:  The Following Flags May Appear Following CONC Values:  c for Calm Hours
                                                                m for Missing Hours
                                                                b for Both Calm and Missing Hours

 **Misc. Inputs:  Base Elev. for Pot. Temp. Profile (m MSL) =    10.00 ;  Decay Coef. =    0.000     ;  Rot. Angle =     0.0
                  Emission Units = GRAMS/SEC                                ;  Emission Rate Unit Factor =   0.10000E+07
                  Output Units   = MICROGRAMS/M**3

 **Approximate Storage Requirements of Model =      3.5 MB of RAM.

 *** AERMOD - VERSION 09292 ***   *** Stone Canyon Reservoir                                            ***        07/27/10
                                  *** PM25                                                              ***        17:10:48
                                                                                                                   PAGE   2
 **MODELOPTs:  RegDFAULT CONC                                         ELEV
                                                            NODRYDPLT NOWETDPLT


                                                *** VOLUME SOURCE DATA ***

              NUMBER EMISSION RATE                    BASE    RELEASE    INIT.    INIT.   URBAN  EMISSION RATE
    SOURCE    PART.  (GRAMS/SEC)     X        Y       ELEV.   HEIGHT      SY       SZ     SOURCE  SCALAR VARY
     ID       CATS.                (METERS) (METERS) (METERS) (METERS) (METERS) (METERS)             BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

   VOL1        0   0.23660E+00  365893.5 3776581.1   303.9     5.00    45.58     1.16     YES
 *** AERMOD - VERSION 09292 ***   *** Stone Canyon Reservoir                                            ***        07/27/10
                                  *** PM25                                                              ***        17:10:48
                                                                                                                   PAGE   3
 **MODELOPTs:  RegDFAULT CONC                                         ELEV
                                                            NODRYDPLT NOWETDPLT


                                                *** AREA SOURCE DATA ***

              NUMBER EMISSION RATE  COORD (SW CORNER)  BASE     RELEASE  X-DIM     Y-DIM    ORIENT.    INIT.   URBAN  EMISSION RATE
   SOURCE     PART.  (GRAMS/SEC       X         Y      ELEV.    HEIGHT  OF AREA   OF AREA   OF AREA     SZ     SOURCE  SCALAR VARY
     ID       CATS.   /METER**2)   (METERS) (METERS) (METERS) (METERS) (METERS)  (METERS)   (DEG.)  (METERS)             BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

   AREA1       0   0.20040E-04  365796.4 3776482.3   303.2     0.00   195.99    195.99      0.00     0.00    YES
 *** AERMOD - VERSION 09292 ***   *** Stone Canyon Reservoir                                            ***        07/27/10
                                  *** PM25                                                              ***        17:10:48
                                                                                                                   PAGE   4
 **MODELOPTs:  RegDFAULT CONC                                         ELEV
                                                            NODRYDPLT NOWETDPLT


                                         *** SOURCE IDs DEFINING SOURCE GROUPS ***

 GROUP ID                                         SOURCE IDs



  ALL       AREA1   , VOL1    ,
 *** AERMOD - VERSION 09292 ***   *** Stone Canyon Reservoir                                            ***        07/27/10
                                  *** PM25                                                              ***        17:10:48
                                                                                                                   PAGE   5
 **MODELOPTs:  RegDFAULT CONC                                         ELEV
                                                            NODRYDPLT NOWETDPLT

                                           *** DISCRETE CARTESIAN RECEPTORS ***
```

(X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
(METERS)

(365205.2,	3776966.4,	375.9,	426.0,	0.0);	(365273.5,	3776942.3,	371.5,	426.0,	0.0);
(365297.5,	3776838.0,	364.5,	426.0,	0.0);	(365261.4,	3776781.8,	365.6,	426.0,	0.0);
(365241.3,	3776673.4,	365.7,	365.7,	0.0);	(365205.2,	3776528.9,	365.0,	364.9,	0.0);
(365153.1,	3776456.7,	365.0,	365.0,	0.0);	(365116.9,	3776332.3,	365.0,	365.0,	0.0);
(365121.0,	3776232.0,	365.0,	364.9,	0.0);	(365137.0,	3776115.6,	364.3,	364.2,	0.0);
(365116.9,	3775999.2,	364.0,	364.0,	0.0);	(365104.9,	3775898.9,	364.0,	364.0,	0.0);
(365133.0,	3775754.4,	364.0,	364.0,	0.0);	(365317.6,	3777247.3,	388.8,	426.0,	0.0);
(365273.5,	3777203.2,	389.4,	426.0,	0.0);	(365100.9,	3777094.8,	392.9,	426.0,	0.0);
(366493.5,	3776063.4,	333.7,	365.0,	0.0);	(366465.4,	3776183.8,	356.1,	365.0,	0.0);
(366453.3,	3776308.2,	364.4,	363.7,	0.0);	(366449.3,	3776416.6,	364.8,	364.6,	0.0);
(366397.2,	3776561.0,	365.0,	365.0,	0.0);	(366369.1,	3776685.5,	365.0,	365.0,	0.0);
(366369.1,	3776838.0,	365.0,	365.0,	0.0);	(366409.2,	3776962.4,	365.0,	365.0,	0.0);
(366457.4,	3777078.8,	365.0,	365.0,	0.0);	(366441.3,	3777195.1,	365.0,	365.0,	0.0);
(365594.5,	3777500.1,	365.0,	426.0,	0.0);	(365534.3,	3777544.3,	364.9,	426.0,	0.0);
(365646.7,	3777439.9,	365.0,	426.0,	0.0);	(365702.9,	3777419.9,	364.3,	426.0,	0.0);
(365385.8,	3777435.9,	380.9,	426.0,	0.0);	(365329.6,	3777520.2,	382.2,	426.0,	0.0);
(366272.8,	3775373.1,	284.7,	365.0,	0.0);	(366373.1,	3775401.2,	277.9,	365.0,	0.0);
(366573.8,	3775473.5,	276.5,	365.0,	0.0);	(366124.3,	3777528.2,	365.0,	365.0,	0.0);

*** AERMOD - VERSION 09292 *** *** Stone Canyon Reservoir *** 07/27/10
*** PM25 *** 17:10:48
PAGE 6

**MODELOPTs: RegDFAULT CONC ELEV
NODRYDPLT NOWETDPLT

*** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***
(1=YES; 0=NO)

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

NOTE: METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.

*** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
(METERS/SEC)

1.54, 3.09, 5.14, 8.23, 10.80,

*** AERMOD - VERSION 09292 *** *** Stone Canyon Reservoir *** 07/27/10
*** PM25 *** 17:10:48
PAGE 7

**MODELOPTs: RegDFAULT CONC ELEV
NODRYDPLT NOWETDPLT

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.SFC Met Version: 06341
Profile file: L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 0 Upper air station no.: 3190
Name: UNKNOWN Name: UNKNOWN
Year: 2005 Year: 2005

First 24 hours of scalar data

YR MO DY	JDY HR	H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O LEN	Z0	BOWEN	ALBEDO	REF WS	WD	HT	REF TA	HT
05 01 01	1 01	-0.9	0.033	-9.000	-9.000	-999.	14.	3.7	0.45	1.00	1.00	0.50	321.	9.1	281.1	5.5
05 01 01	1 02	-0.9	0.033	-9.000	-9.000	-999.	14.	3.8	0.45	1.00	1.00	0.50	320.	9.1	280.8	5.5
05 01 01	1 03	-0.9	0.033	-9.000	-9.000	-999.	14.	3.7	0.45	1.00	1.00	0.50	323.	9.1	280.9	5.5
05 01 01	1 04	-1.3	0.040	-9.000	-9.000	-999.	18.	4.4	0.45	1.00	1.00	0.60	316.	9.1	280.8	5.5
05 01 01	1 05	-1.3	0.040	-9.000	-9.000	-999.	18.	4.4	0.45	1.00	1.00	0.60	322.	9.1	280.4	5.5
05 01 01	1 06	-0.3	0.020	-9.000	-9.000	-999.	6.	2.3	0.45	1.00	1.00	0.30	352.	9.1	279.9	5.5
05 01 01	1 07	-2.3	0.053	-9.000	-9.000	-999.	28.	5.8	0.45	1.00	1.00	0.80	324.	9.1	279.6	5.5
05 01 01	1 08	-1.2	0.040	-9.000	-9.000	-999.	18.	4.8	0.45	1.00	0.55	0.60	336.	9.1	280.5	5.5
05 01 01	1 09	43.0	0.243	0.490	0.005	99.	276.	-30.3	0.45	1.00	0.32	1.50	44.	9.1	283.4	5.5
05 01 01	1 10	110.6	0.339	1.374	0.005	849.	453.	-31.7	0.45	1.00	0.24	2.10	74.	9.1	285.1	5.5
05 01 01	1 11	135.3	0.321	1.653	0.010	1209.	419.	-22.2	0.45	1.00	0.21	1.90	84.	9.1	286.4	5.5
05 01 01	1 12	14.3	0.223	0.783	0.010	1212.	246.	-70.3	0.45	1.00	0.20	1.50	137.	9.1	286.8	5.5
05 01 01	1 13	27.1	0.187	0.971	0.010	1218.	186.	-21.7	0.45	1.00	0.20	1.10	111.	9.1	286.9	5.5
05 01 01	1 14	17.1	0.179	0.834	0.009	1222.	174.	-30.0	0.45	1.00	0.21	1.10	186.	9.1	286.9	5.5
05 01 01	1 15	3.7	0.172	0.499	0.009	1223.	164.	-124.8	0.45	1.00	0.24	1.20	195.	9.1	286.1	5.5
05 01 01	1 16	0.1	0.147	0.150	0.009	1223.	130.	-2871.4	0.45	1.00	0.33	1.10	182.	9.1	285.9	5.5
05 01 01	1 17	-1.7	0.047	-9.000	-9.000	-999.	31.	5.5	0.45	1.00	0.59	0.70	159.	9.1	285.5	5.5
05 01 01	1 18	-0.2	0.019	-9.000	-9.000	-999.	6.	2.9	0.45	1.00	1.00	0.28	170.	9.1	285.1	5.5
05 01 01	1 19	-0.2	0.019	-9.000	-9.000	-999.	6.	2.9	0.45	1.00	1.00	0.28	186.	9.1	284.4	5.5
05 01 01	1 20	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.45	1.00	1.00	0.00	0.	9.1	284.0	5.5
05 01 01	1 21	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.45	1.00	1.00	0.00	0.	9.1	283.9	5.5
05 01 01	1 22	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.45	1.00	1.00	0.00	0.	9.1	283.4	5.5
05 01 01	1 23	-0.2	0.019	-9.000	-9.000	-999.	6.	2.9	0.45	1.00	1.00	0.28	313.	9.1	283.4	5.5
05 01 01	1 24	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.45	1.00	1.00	0.00	0.	9.1	283.4	5.5

First hour of profile data

YR MO DY HR	HEIGHT	F	WDIR	WSPD	AMB_TMP	sigmaA	sigmaW	sigmaV
05 01 01 01	5.5	0	-999.	-99.00	281.2	99.0	-99.00	-99.00
05 01 01 01	9.1	1	321.	0.50	-999.0	99.0	-99.00	-99.00

F indicates top of profile (=1) or below (=0)

*** AERMOD - VERSION 09292 *** *** Stone Canyon Reservoir *** 07/27/10
*** PM25 *** 17:10:48
PAGE 8

**MODELOPTs: RegDFAULT CONC ELEV
NODRYDPLT NOWETDPLT

*** THE 1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): AREA1 , VOL1 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM.25 IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
365205.23	3776966.38	12.27936	(07043024)	365273.46	3776942.30	12.50791	(07043024)

```
       365297.54   3776837.96       13.14345  (05070924)              365261.42  3776781.78      13.81462  (07090324)
       365241.35   3776673.42       14.04407  (05122624)              365205.23  3776528.94      13.65221c (06063024)
       365153.06   3776456.70       16.78649  (05020624)              365116.94  3776332.29      12.70348  (05020624)
       365120.95   3776231.96       11.45783c (06082624)              365137.01  3776115.58      10.79766c (05092124)
       365116.94   3775999.19       10.74271c (05090224)              365104.90  3775898.86      12.13520c (07031224)
       365132.99   3775754.39       11.58822c (06102024)              365317.60  3777247.31      11.80961c (05111424)
       365273.46   3777203.17       10.46440c (05111424)              365100.89  3777094.81      10.80954  (06061424)
       366493.48   3776063.40       47.13775  (06102724)              366465.39  3776183.80      43.84034c (05091724)
       366453.35   3776308.21       26.80371c (05021424)              366449.34  3776416.57      23.31797c (05090224)
       366397.17   3776561.05       21.63360  (05072724)              366369.07  3776685.46      30.36885c (05081024)
       366369.07   3776837.96       20.22179c (05082724)              366409.21  3776962.37      16.92312  (06073124)
       366457.36   3777078.76       13.57886  (06073124)              366441.31  3777195.14      12.27397c (06060724)
       365594.52   3777500.15       13.24825c (05082924)              365534.32  3777544.29      13.42234c (05090624)
       365646.69   3777439.95       15.88930c (05082924)              365702.87  3777419.88      16.14094c (05082924)
       365385.83   3777435.93       19.15711  (07050124)              365329.64  3777520.21      18.25782  (07050124)
       366272.76   3775373.13       23.40042  (06110624)              366373.09  3775401.22      18.71157  (06021324)
       366573.75   3775473.46       27.59062  (06030424)              366124.27  3777528.24       9.31987  (07070624)
 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                                 ***        07/27/10
                                   *** PM25                                                                   ***        17:10:48
                                                                                                                         PAGE   9
 **MODELOPTs:  RegDFAULT CONC                                                ELEV
                                                                    NODRYDPLT NOWETDPLT

                                                *** THE SUMMARY OF HIGHEST 24-HR RESULTS ***

                                   ** CONC OF PM.25    IN MICROGRAMS/M**3                              **

                                                      DATE                                                                   NETWORK
GROUP ID                          AVERAGE CONC     (YYMMDDHH)            RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG)    OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

ALL      HIGH  1ST HIGH VALUE IS      47.13775  ON 06102724: AT (  366493.48,  3776063.40,   333.67,   365.00,    0.00)  DC


 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                                 ***        07/27/10
                                   *** PM25                                                                   ***        17:10:48
                                                                                                                         PAGE  10
 **MODELOPTs:  RegDFAULT CONC                                                ELEV
                                                                    NODRYDPLT NOWETDPLT

 *** Message Summary : AERMOD Model Execution ***

  --------- Summary of Total Messages --------

 A Total of           0 Fatal Error Message(s)
 A Total of           0 Warning Message(s)
 A Total of        1753 Informational Message(s)

 A Total of       26280 Hours Were Processed

 A Total of        1181 Calm Hours Identified

 A Total of         572 Missing Hours Identified (  2.18 Percent)


    ******** FATAL ERROR MESSAGES ********
               ***  NONE  ***


    ********   WARNING MESSAGES   ********
               ***  NONE  ***

    ************************************
    *** AERMOD Finishes Successfully ***
    ************************************
```

Alternative 3 Mitigated $PM_{2.5}$ Localized Emissions

```
**
****************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 6.6.0
** Lakes Environmental Software Inc.
** Date: 7/27/2010
** File: J:\Projects\LADWP Stone Canyon Reservoir Project 2008-057\Air Quality\Construction Emissions\Localized\Alt3\PM25\PM25MT.ADI
**
****************************************
**
**
****************************************
** AERMOD Control Pathway
****************************************
**
**
CO STARTING
   TITLEONE Stone Canyon Reservoir
   TITLETWO PM25MT
   MODELOPT DFAULT CONC NODRYDPLT NOWETDPLT
   AVERTIME 24
   URBANOPT 9862049
   POLLUTID PM.25
   RUNORNOT RUN
CO FINISHED
**
****************************************
** AERMOD Source Pathway
****************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
   LOCATION AREA1 AREA 365796.443 3776482.259 303.190
** DESCRSRC Dust
   LOCATION VOL1 VOLUME 365893.498 3776581.066 303.930
** DESCRSRC Exhaust
** Source Parameters **
   SRCPARAM AREA1 0.00002004 0.000 195.986 195.986 0.000
   SRCPARAM VOL1 0.2247 5.000 45.578 1.163
   URBANSRC AREA1
   URBANSRC VOL1
   SRCGROUP ALL
SO FINISHED
**
****************************************
** AERMOD Receptor Pathway
****************************************
**
**
RE STARTING
** DESCRREC "" ""
   DISCCART    365205.23   3776966.38  375.93  426.00
   DISCCART    365273.46   3776942.30  371.48  426.00
   DISCCART    365297.54   3776837.96  364.53  426.00
   DISCCART    365261.42   3776781.78  365.63  426.00
   DISCCART    365241.35   3776673.42  365.70  365.68
   DISCCART    365205.23   3776528.94  365.00  364.88
   DISCCART    365153.06   3776456.70  365.00  365.00
   DISCCART    365116.94   3776332.29  365.00  365.00
   DISCCART    365120.95   3776231.96  364.96  364.86
   DISCCART    365137.01   3776115.58  364.26  364.20
   DISCCART    365116.94   3775999.19  364.00  364.00
   DISCCART    365104.90   3775898.86  364.00  364.00
   DISCCART    365132.99   3775754.39  364.00  364.00
   DISCCART    365317.60   3777247.31  388.83  426.00
   DISCCART    365273.46   3777203.17  389.43  426.00
   DISCCART    365100.89   3777094.81  392.86  426.00
   DISCCART    366493.48   3776063.40  333.67  365.00
   DISCCART    366465.39   3776183.80  356.13  365.00
   DISCCART    366453.35   3776308.21  364.45  363.66
   DISCCART    366449.34   3776416.57  364.78  364.59
   DISCCART    366397.17   3776561.05  365.00  365.00
   DISCCART    366369.07   3776685.46  365.00  365.00
   DISCCART    366369.07   3776837.96  365.00  365.00
   DISCCART    366409.21   3776962.37  365.00  365.00
   DISCCART    366457.36   3777078.76  365.00  365.00
   DISCCART    366441.31   3777195.14  365.00  365.00
   DISCCART    365594.52   3777500.15  365.00  426.00
   DISCCART    365534.32   3777544.29  364.93  426.00
   DISCCART    365646.69   3777439.95  365.00  426.00
   DISCCART    365702.87   3777419.88  364.34  426.00
   DISCCART    365385.83   3777435.93  380.85  426.00
   DISCCART    365329.64   3777520.21  382.17  426.00
   DISCCART    366272.76   3775373.13  284.66  365.00
   DISCCART    366373.09   3775401.22  277.95  365.00
   DISCCART    366573.75   3775473.46  276.50  365.00
   DISCCART    366124.27   3777528.24  365.00  365.00
RE FINISHED
**
****************************************
** AERMOD Meteorology Pathway
****************************************
**
**
ME STARTING
   SURFFILE "L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.SFC"
   PROFFILE "L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.PFL"
   SURFDATA 0 2005
   UAIRDATA 3190 2005
   PROFBASE 10 METERS
ME FINISHED
**
****************************************
** AERMOD Output Pathway
****************************************
**
**
OU STARTING
```

```
   RECTABLE ALLAVE 1ST
   RECTABLE 24 1ST
** Auto-Generated Plotfiles
   PLOTFILE 24 ALL 1ST PM25MT.AD\24H1GALL.PLT
OU FINISHED

 **********************************
 *** SETUP Finishes Successfully ***
 **********************************

 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                                 ***        07/27/10
                                   *** PM25MT                                                                 ***        17:39:37
                                                                                                                         PAGE   1
 **MODELOPTs:  RegDFAULT CONC                                                ELEV
                                                                    NODRYDPLT NOWETDPLT

                                            ***     MODEL SETUP OPTIONS SUMMARY       ***
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

 **Model Is Setup For Calculation of Average CONCentration Values.

   --  DEPOSITION LOGIC  --
 **NO GAS DEPOSITION Data Provided.
 **NO PARTICLE DEPOSITION Data Provided.
 **Model Uses NO DRY DEPLETION.  DRYDPLT  =  F
 **Model Uses NO WET DEPLETION.  WETDPLT  =  F

 **Model Uses URBAN Dispersion Algorithm for the SBL for     2 Source(s),
   for Total of    1 Urban Area(s):
   Urban Population =   9862049.0 ;  Urban Roughness Length =  1.000 m

 **Model Uses Regulatory DEFAULT Options:
         1. Stack-tip Downwash.
         2. Model Accounts for ELEVated Terrain Effects.
         3. Use Calms Processing Routine.
         4. Use Missing Data Processing Routine.
         5. No Exponential Decay for URBAN/Non-SO2.
         6. Urban Roughness Length of 1.0 Meter Assumed.

 **Model Assumes No FLAGPOLE Receptor Heights.

 **Model Calculates  1 Short Term Average(s) of:  24-HR

 **This Run Includes:      2 Source(s);       1 Source Group(s); and      36 Receptor(s)

 **The Model Assumes A Pollutant Type of:  PM.25

 **Model Set To Continue RUNning After the Setup Testing.

 **Output Options Selected:
          Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE Keyword)
          Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)

 **NOTE:  The Following Flags May Appear Following CONC Values:  c for Calm Hours
                                                                 m for Missing Hours
                                                                 b for Both Calm and Missing Hours

 **Misc. Inputs:  Base Elev. for Pot. Temp. Profile (m MSL) =    10.00 ;  Decay Coef. =    0.000     ;  Rot. Angle =     0.0
                  Emission Units = GRAMS/SEC                                ;  Emission Rate Unit Factor =   0.10000E+07
                  Output Units   = MICROGRAMS/M**3

 **Approximate Storage Requirements of Model =      3.5 MB of RAM.

 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                                 ***        07/27/10
                                   *** PM25MT                                                                 ***        17:39:37
                                                                                                                         PAGE   2
 **MODELOPTs:  RegDFAULT CONC                                                ELEV
                                                                    NODRYDPLT NOWETDPLT


                                                  *** VOLUME SOURCE DATA ***
```

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
VOL1	0	0.22470E+00	365893.5	3776581.1	303.9	5.00	45.58	1.16	YES	

```
 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                                 ***        07/27/10
                                   *** PM25MT                                                                 ***        17:39:37
                                                                                                                         PAGE   3
 **MODELOPTs:  RegDFAULT CONC                                                ELEV
                                                                    NODRYDPLT NOWETDPLT


                                                  *** AREA SOURCE DATA ***
```

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC /METER**2)	COORD (SW CORNER) X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	X-DIM OF AREA (METERS)	Y-DIM OF AREA (METERS)	ORIENT. OF AREA (DEG.)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
AREA1	0	0.20040E-04	365796.4	3776482.3	303.2	0.00	195.99	195.99	0.00	0.00	YES	

```
 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                                 ***        07/27/10
                                   *** PM25MT                                                                 ***        17:39:37
                                                                                                                         PAGE   4
 **MODELOPTs:  RegDFAULT CONC                                                ELEV
                                                                    NODRYDPLT NOWETDPLT


                                           *** SOURCE IDs DEFINING SOURCE GROUPS ***

 GROUP ID                                           SOURCE IDs


  ALL      AREA1   , VOL1    ,
 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                                 ***        07/27/10
                                   *** PM25MT                                                                 ***        17:39:37
                                                                                                                         PAGE   5
 **MODELOPTs:  RegDFAULT CONC                                                ELEV
                                                                    NODRYDPLT NOWETDPLT

                                           *** DISCRETE CARTESIAN RECEPTORS ***
```

(X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
(METERS)

```
( 365205.2, 3776966.4,     375.9,     426.0,       0.0);        ( 365273.5, 3776942.3,     371.5,     426.0,       0.0);
( 365297.5, 3776838.0,     364.5,     426.0,       0.0);        ( 365261.4, 3776781.8,     365.6,     426.0,       0.0);
( 365241.3, 3776673.4,     365.7,     365.7,       0.0);        ( 365205.2, 3776528.9,     365.0,     364.9,       0.0);
( 365153.1, 3776456.7,     365.0,     365.0,       0.0);        ( 365116.9, 3776332.3,     365.0,     365.0,       0.0);
( 365121.0, 3776232.0,     365.0,     364.9,       0.0);        ( 365137.0, 3776115.6,     364.3,     364.2,       0.0);
( 365116.9, 3775999.2,     364.0,     364.0,       0.0);        ( 365104.9, 3775898.9,     364.0,     364.0,       0.0);
( 365133.0, 3775754.4,     364.0,     364.0,       0.0);        ( 365317.6, 3777247.3,     388.8,     426.0,       0.0);
( 365273.5, 3777203.2,     389.4,     426.0,       0.0);        ( 365100.9, 3777094.8,     392.9,     426.0,       0.0);
( 366493.5, 3776063.4,     333.7,     365.0,       0.0);        ( 366465.4, 3776183.8,     356.1,     365.0,       0.0);
( 366453.3, 3776308.2,     364.4,     363.7,       0.0);        ( 366449.3, 3776416.6,     364.8,     364.6,       0.0);
( 366397.2, 3776561.0,     365.0,     365.0,       0.0);        ( 366369.1, 3776685.5,     365.0,     365.0,       0.0);
( 366369.1, 3776838.0,     365.0,     365.0,       0.0);        ( 366409.2, 3776962.4,     365.0,     365.0,       0.0);
( 366457.4, 3777078.8,     365.0,     365.0,       0.0);        ( 366441.3, 3777195.1,     365.0,     365.0,       0.0);
( 365594.5, 3777500.1,     365.0,     426.0,       0.0);        ( 365534.3, 3777544.3,     364.9,     426.0,       0.0);
( 365646.7, 3777439.9,     365.0,     426.0,       0.0);        ( 365702.9, 3777419.9,     364.3,     426.0,       0.0);
( 365385.8, 3777435.9,     380.9,     426.0,       0.0);        ( 365329.6, 3777520.2,     382.2,     426.0,       0.0);
( 366272.8, 3775373.1,     284.7,     365.0,       0.0);        ( 366373.1, 3775401.2,     277.9,     365.0,       0.0);
( 366573.8, 3775473.5,     276.5,     365.0,       0.0);        ( 366124.3, 3777528.2,     365.0,     365.0,       0.0);
```


*** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***
(1=YES; 0=NO)

```
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1
```

NOTE: METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.

*** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
(METERS/SEC)

1.54, 3.09, 5.14, 8.23, 10.80,

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

```
Surface file:   L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.SFC    Met Version:  06341
Profile file:   L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.PFL
Surface format: FREE
Profile format: FREE
Surface station no.:       0                Upper air station no.:     3190
           Name: UNKNOWN                               Name: UNKNOWN
           Year:   2005                                Year:   2005
```

First 24 hours of scalar data

YR	MO	DY	JDY	HR	H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O LEN	Z0	BOWEN	ALBEDO	REF WS	WD	HT	REF TA	HT
05	01	01	1	01	-0.9	0.033	-9.000	-9.000	-999.	14.	3.7	0.45	1.00	1.00	0.50	321.	9.1	281.1	5.5
05	01	01	1	02	-0.9	0.033	-9.000	-9.000	-999.	14.	3.8	0.45	1.00	1.00	0.50	320.	9.1	280.8	5.5
05	01	01	1	03	-0.9	0.033	-9.000	-9.000	-999.	14.	3.7	0.45	1.00	1.00	0.50	323.	9.1	280.9	5.5
05	01	01	1	04	-1.3	0.040	-9.000	-9.000	-999.	18.	4.4	0.45	1.00	1.00	0.60	316.	9.1	280.8	5.5
05	01	01	1	05	-1.3	0.040	-9.000	-9.000	-999.	18.	4.4	0.45	1.00	1.00	0.60	322.	9.1	280.4	5.5
05	01	01	1	06	-0.3	0.020	-9.000	-9.000	-999.	6.	2.3	0.45	1.00	1.00	0.30	352.	9.1	279.9	5.5
05	01	01	1	07	-2.3	0.053	-9.000	-9.000	-999.	28.	5.8	0.45	1.00	1.00	0.80	324.	9.1	279.6	5.5
05	01	01	1	08	-1.2	0.040	-9.000	-9.000	-999.	18.	4.8	0.45	1.00	0.55	0.60	336.	9.1	280.5	5.5
05	01	01	1	09	43.0	0.243	0.490	0.005	99.	276.	-30.3	0.45	1.00	0.32	1.50	44.	9.1	283.4	5.5
05	01	01	1	10	110.6	0.339	1.374	0.005	849.	453.	-31.7	0.45	1.00	0.24	2.10	74.	9.1	285.1	5.5
05	01	01	1	11	135.3	0.321	1.653	0.010	1209.	419.	-22.2	0.45	1.00	0.21	1.90	84.	9.1	286.4	5.5
05	01	01	1	12	14.3	0.223	0.783	0.010	1212.	246.	-70.3	0.45	1.00	0.20	1.50	137.	9.1	286.8	5.5
05	01	01	1	13	27.1	0.187	0.971	0.010	1218.	186.	-21.7	0.45	1.00	0.20	1.10	111.	9.1	286.9	5.5
05	01	01	1	14	17.1	0.179	0.834	0.009	1222.	174.	-30.0	0.45	1.00	0.21	1.10	186.	9.1	286.9	5.5
05	01	01	1	15	3.7	0.172	0.499	0.009	1223.	164.	-124.8	0.45	1.00	0.24	1.20	195.	9.1	286.1	5.5
05	01	01	1	16	0.1	0.147	0.150	0.009	1223.	130.	-2871.4	0.45	1.00	0.33	1.10	182.	9.1	285.9	5.5
05	01	01	1	17	-1.7	0.047	-9.000	-9.000	-999.	31.	5.5	0.45	1.00	0.59	0.70	159.	9.1	285.5	5.5
05	01	01	1	18	-0.2	0.019	-9.000	-9.000	-999.	6.	2.9	0.45	1.00	1.00	0.28	170.	9.1	285.1	5.5
05	01	01	1	19	-0.2	0.019	-9.000	-9.000	-999.	6.	2.9	0.45	1.00	1.00	0.28	186.	9.1	284.4	5.5
05	01	01	1	20	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.45	1.00	1.00	0.00	0.	9.1	284.0	5.5
05	01	01	1	21	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.45	1.00	1.00	0.00	0.	9.1	283.9	5.5
05	01	01	1	22	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.45	1.00	1.00	0.00	0.	9.1	283.4	5.5
05	01	01	1	23	-0.2	0.019	-9.000	-9.000	-999.	6.	2.9	0.45	1.00	1.00	0.28	313.	9.1	283.4	5.5
05	01	01	1	24	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.45	1.00	1.00	0.00	0.	9.1	283.4	5.5

First hour of profile data

YR	MO	DY	HR	HEIGHT	F	WDIR	WSPD	AMB_TMP	sigmaA	sigmaW	sigmaV
05	01	01	01	5.5	0	-999.	-99.00	281.2	99.0	-99.00	-99.00
05	01	01	01	9.1	1	321.	0.50	-999.0	99.0	-99.00	-99.00

F indicates top of profile (=1) or below (=0)

*** THE 1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): AREA1 , VOL1 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM.25 IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
365205.23	3776966.38	12.19263	(07043024)	365273.46	3776942.30	12.41639	(07043024)

365297.54	3776837.96	13.02046 (05070924)		365261.42	3776781.78	13.71820 (07090324)
365241.35	3776673.42	13.91569 (05122624)		365205.23	3776528.94	13.55985c (06063024)
365153.06	3776456.70	16.63630 (05020624)		365116.94	3776332.29	12.58724 (05020624)
365120.95	3776231.96	11.40486c (06082624)		365137.01	3776115.58	10.74691c (05092124)
365116.94	3775999.19	10.66801c (05090224)		365104.90	3775898.86	12.05818c (07031224)
365132.99	3775754.39	11.55403c (06102024)		365317.60	3777247.31	11.75100c (05111424)
365273.46	3777203.17	10.39771c (05111424)		365100.89	3777094.81	10.73462 (06061424)
366493.48	3776063.40	46.97096 (06102724)		366465.39	3776183.80	43.76562c (05091724)
366453.35	3776308.21	26.70373c (05021424)		366449.34	3776416.57	23.21611c (05090224)
366397.17	3776561.05	21.50619 (05072724)		366369.07	3776685.46	30.20224c (05081024)
366369.07	3776837.96	20.16327c (05082724)		366409.21	3776962.37	16.78603 (06073124)
366457.36	3777078.76	13.45148 (06073124)		366441.31	3777195.14	12.17428c (06060724)
365594.52	3777500.15	13.20744c (05082924)		365534.32	3777544.29	13.33076c (05090624)
365646.69	3777439.95	15.84368c (05082924)		365702.87	3777419.88	16.09160c (05082924)
365385.83	3777435.93	19.05938 (07050124)		365329.64	3777520.21	18.16895 (07050124)
366272.76	3775373.13	23.35378 (06110624)		366373.09	3775401.22	18.64992 (06021324)
366573.75	3775473.46	27.50112 (06030424)		366124.27	3777528.24	9.24899 (07070624)

**MODELOPTs: RegDFAULT CONC ELEV
NODRYDPLT NOWETDPLT

*** THE SUMMARY OF HIGHEST 24-HR RESULTS ***

** CONC OF PM.25 IN MICROGRAMS/M**3 **

GROUP ID		AVERAGE CONC	DATE (YYMMDDHH)	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	NETWORK GRID-ID
ALL	HIGH 1ST HIGH VALUE IS	46.97096	ON 06102724: AT	(366493.48, 3776063.40, 333.67, 365.00, 0.00)	DC	

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

**MODELOPTs: RegDFAULT CONC ELEV
NODRYDPLT NOWETDPLT

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 0 Warning Message(s)
A Total of 1753 Informational Message(s)

A Total of 26280 Hours Were Processed

A Total of 1181 Calm Hours Identified

A Total of 572 Missing Hours Identified (2.18 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********
*** NONE ***

****
*** AERMOD Finishes Successfully ***
****

Appendix E

Health Risk Assessment Dispersion Modeling

Title   : Diesel PM2.5
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2011/01/26 10:04:36
Scen Year: 2014 -- All model years in the range 1970 to 2014 selected
Season   : Annual
Area   : Los Angeles
****

Year: 2014 -- Model Years 1970 to 2014 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

County Average   Los Angeles   County Average

Table 1: Running Exhaust Emissions (grams/mile; grams/idle-hour)

Pollutant Name: Total Organic Gases   Temperature: 75F Relative Humidity: 30%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0.000	0.000	0.000	11.434	0.000	0.000	11.434
15	0.000	0.000	0.000	2.659	0.000	0.000	2.659
30	0.000	0.000	0.000	0.979	0.000	0.000	0.979

Pollutant Name: Carbon Monoxide   Temperature: 75F Relative Humidity: 30%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0.000	0.000	0.000	44.090	0.000	0.000	44.090
15	0.000	0.000	0.000	8.987	0.000	0.000	8.987
30	0.000	0.000	0.000	4.797	0.000	0.000	4.797

Pollutant Name: Oxides of Nitrogen   Temperature: 75F Relative Humidity: 30%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0.000	0.000	0.000	113.043	0.000	0.000	113.043
15	0.000	0.000	0.000	13.043	0.000	0.000	13.043
30	0.000	0.000	0.000	9.968	0.000	0.000	9.968

Pollutant Name: Carbon Dioxide   Temperature: 75F Relative Humidity: 30%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0.000	0.000	0.000	6437.659	0.000	0.000	6437.659
15	0.000	0.000	0.000	2557.430	0.000	0.000	2557.430
30	0.000	0.000	0.000	1887.446	0.000	0.000	1887.446

Pollutant Name: Sulfur Dioxide   Temperature: 75F Relative Humidity: 30%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0.000	0.000	0.000	0.061	0.000	0.000	0.061
15	0.000	0.000	0.000	0.024	0.000	0.000	0.024
30	0.000	0.000	0.000	0.018	0.000	0.000	0.018

Pollutant Name: PM2.5   Temperature: 75F Relative Humidity: 30%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0.000	0.000	0.000	1.024	0.000	0.000	1.024
15	0.000	0.000	0.000	0.598	0.000	0.000	0.598
30	0.000	0.000	0.000	0.317	0.000	0.000	0.317

Pollutant Name: PM2.5 - Tire Wear Temperature: 75F Relative Humidity: 30%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
15	0.000	0.000	0.000	0.009	0.000	0.000	0.009
30	0.000	0.000	0.000	0.009	0.000	0.000	0.009

Pollutant Name: PM2.5 - Brake Wear Temperature: 75F Relative Humidity: 30%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
15	0.000	0.000	0.000	0.012	0.000	0.000	0.012
30	0.000	0.000	0.000	0.012	0.000	0.000	0.012

Pollutant Name: Gasoline - mi/gal Temperature: 75F Relative Humidity: 30%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
15	0.000	0.000	0.000	6.606	0.000	0.000	6.606
30	0.000	0.000	0.000	13.713	0.000	0.000	13.713

Pollutant Name: Diesel - mi/gal Temperature: 75F Relative Humidity: 30%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
15	0.000	0.000	0.000	3.883	0.000	0.000	3.883
30	0.000	0.000	0.000	5.238	0.000	0.000	5.238

Title   : Diesel PM2.5
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2011/01/26 10:04:36
Scen Year: 2015 -- All model years in the range 1971 to 2015 selected
Season   : Annual
Area   : Los Angeles

****

Year: 2015 -- Model Years 1971 to 2015 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

County Average   Los Angeles   County Average

Table 1: Running Exhaust Emissions (grams/mile; grams/idle-hour)

Pollutant Name: Total Organic Gases   Temperature: 75F Relative Humidity: 30%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0.000	0.000	0.000	10.988	0.000	0.000	10.988
15	0.000	0.000	0.000	2.341	0.000	0.000	2.341
30	0.000	0.000	0.000	0.875	0.000	0.000	0.875

Pollutant Name: Carbon Monoxide   Temperature: 75F Relative Humidity: 30%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0.000	0.000	0.000	43.621	0.000	0.000	43.621
15	0.000	0.000	0.000	7.814	0.000	0.000	7.814
30	0.000	0.000	0.000	4.200	0.000	0.000	4.200

Pollutant Name: Oxides of Nitrogen   Temperature: 75F Relative Humidity: 30%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0.000	0.000	0.000	114.525	0.000	0.000	114.525
15	0.000	0.000	0.000	11.545	0.000	0.000	11.545
30	0.000	0.000	0.000	8.722	0.000	0.000	8.722

Pollutant Name: Carbon Dioxide   Temperature: 75F Relative Humidity: 30%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0.000	0.000	0.000	6456.258	0.000	0.000	6456.258
15	0.000	0.000	0.000	2561.423	0.000	0.000	2561.423
30	0.000	0.000	0.000	1891.258	0.000	0.000	1891.258

Pollutant Name: Sulfur Dioxide   Temperature: 75F Relative Humidity: 30%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0.000	0.000	0.000	0.062	0.000	0.000	0.062
15	0.000	0.000	0.000	0.024	0.000	0.000	0.024
30	0.000	0.000	0.000	0.018	0.000	0.000	0.018

Pollutant Name: PM2.5   Temperature: 75F Relative Humidity: 30%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0.000	0.000	0.000	0.900	0.000	0.000	0.900
15	0.000	0.000	0.000	0.500	0.000	0.000	0.500
30	0.000	0.000	0.000	0.272	0.000	0.000	0.272

Pollutant Name: PM2.5 - Tire Wear Temperature: 75F Relative Humidity: 30%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
15	0.000	0.000	0.000	0.009	0.000	0.000	0.009
30	0.000	0.000	0.000	0.009	0.000	0.000	0.009

Pollutant Name: PM2.5 - Brake Wear Temperature: 75F Relative Humidity: 30%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
15	0.000	0.000	0.000	0.012	0.000	0.000	0.012
30	0.000	0.000	0.000	0.012	0.000	0.000	0.012

Pollutant Name: Gasoline - mi/gal Temperature: 75F Relative Humidity: 30%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
15	0.000	0.000	0.000	6.630	0.000	0.000	6.630
30	0.000	0.000	0.000	13.760	0.000	0.000	13.760

Pollutant Name: Diesel - mi/gal Temperature: 75F Relative Humidity: 30%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
15	0.000	0.000	0.000	3.883	0.000	0.000	3.883
30	0.000	0.000	0.000	5.238	0.000	0.000	5.238

UNMITIGATED CONSTRUCTION EMISSIONS CALCULATIONS

Buried Concrete Cover Off-Road Equipment Emissions		
Daily Emissions (ppd)	PM2.5	
	11.6	
Conversion to Grams/Second	PM2.5	
	0.1827	*(pounds/day) * (453.59 grams/pound) * (1 day/8 hours) * (1 hour/60 mins) * (1 min/60 secs)*

Haul Truck Emissions Calcs

Total Trucks	Construction Schedule					Trips/Day	Work Schedule	
	Weeks/Year	*Days Per Week*	Total Months	Total Weeks	*Total Days*		Equip. Hrs/Day	Truck Hrs/Day
140,364	48	5	48	192	960	146	8	8

IDLE EMISSIONS CALCS *(gr/idle-hr) * (min/day of idle) * (1 day/1440 min) * (1 hr/3600 sec) * (truck trips/day) = Daily Emissions (g/sec)*

Emission Type	*Emissions (g/idle-hr)*	*Time Idle (mins)*	Single Truck Emissions (g/sec)	Total Daily (g/sec)
PM2.5	1.433	5	0.00000	0.00020

OFF-SITE TRUCK TRAVEL *(gr/mi) * (mi/trip) * (trips/day) * (1 day/hours of haul activity) * (1 hour/60 min) * (1 min/60 sec) = Daily Emissions (g/sec)*

Emission Type	*Emissions (g/mi)*	Trips/Day	Distance Traveled to Freeway (miles)	Truck Haul Hours/Day	Single Truck Emissions (g/sec)	Total Daily (g/sec)
PM2.5	0.48	1	1.1	8	0.00002	0.00275

ON-SITE TRUCK TRAVEL *(gr/mi) * (mi/trip) * (trips/day) * (1 day/hours of haul activity) * (1 hour/60 min) * (1 min/60 sec) = Daily Emissions (g/sec)*

Emission Type	*Emissions (g/mi)*	Trips/Day	Distance Traveled to Mulholland (miles)	Truck Haul Hours/Day	Single Truck Emissions (g/sec)	Total Daily (g/sec)
PM2.5	0.951	1	0.7	8	0.00002	0.00338

Diesel trucks are prohibited from idling more than 5 minutes on and off site.
It is assumed that on-site truck travel is 15mph, and off-site is 30mph.

Floating Cover Off-Road Equipment Emissions

Daily Emissions (ppd)	PM2.5
	6.9
Conversion to Grams/Second	**PM2.5**
	0.1087

*(pounds/day) * (453.59 grams/pound) * (1 day/8 hours) * (1 hour/60 mins) * (1 min/60 secs)*

Haul Truck Emissions Calcs

Total Trucks	Construction Schedule					Trips/Day	Work Schedule	
	Weeks/Year	*Days Per Week*	Total Months	Total Weeks	*Total Days*		Equip. Hrs/Day	Truck Hrs/Day
16,640	48	5	17	68	340	49	8	8

IDLE EMISSIONS CALCS *(gr/idle-hr) * (min/day of idle) * (1 day/1440 min) * (1 hr/3600 sec) * (truck trips/day) = Daily Emissions (g/sec)*

Emission Type	*Emissions (g/idle-hr)*	*Time Idle (mins)*	Single Truck Emissions (g/sec)	Total Daily (g/sec)
PM2.5	1.024	5	0.00000	0.00005

OFF-SITE TRUCK TRAVEL *(gr/mi) * (mi/trip) * (trips/day) * (1 day/hours of haul activity) * (1 hour/60 min) * (1 min/60 sec) = Daily Emissions (g/sec)*

Emission Type	*Emissions (g/mi)*	Trips/Day	Distance Traveled to Freeway (miles)	Truck Haul Hours/Day	Single Truck Emissions (g/sec)	Total Daily (g/sec)
PM2.5	0.317	1	1.1	8	0.00001	0.00059

ON-SITE TRUCK TRAVEL *(gr/mi) * (mi/trip) * (trips/day) * (1 day/hours of haul activity) * (1 hour/60 min) * (1 min/60 sec) = Daily Emissions (g/sec)*

Emission Type	*Emissions (g/mi)*	Trips/Day	Distance Traveled to Mulholland (miles)	Truck Haul Hours/Day	Single Truck Emissions (g/sec)	Total Daily (g/sec)
PM2.5	0.598	1	0.7	8	0.00001	0.00071

Diesel trucks are prohibited from idling more than 5 minutes on and off site.
It is assumed that on-site truck travel is 15mph, and off-site is 30mph.

Aluminum Cover Off-Road Equipment Emissions

Daily Emissions (ppd)	PM2.5
	15.0

Conversion to Grams/Second	PM2.5	
	0.2362	*(pounds/day) * (453.59 grams/pound) * (1 day/8 hours) * (1 hour/60 mins) * (1 min/60 secs)*

Haul Truck Emissions Calcs

Total Trucks	Construction Schedule					Trips/Day	Work Schedule	
	Weeks/Year	*Days Per Week*	Total Months	Total Weeks	*Total Days*		Equip. Hrs/Day	Truck Hrs/Day
43,468	48	5	46	184	920	47	8	8

IDLE EMISSIONS CALCS *(gr/idle-hr) * (min/day of idle) * (1 day/1440 min) * (1 hr/3600 sec) * (truck trips/day) = Daily Emissions (g/sec)*

Emission Type	*Emissions (g/idle-hr)*	*Time Idle (mins)*	Single Truck Emissions (g/sec)	Total Daily (g/sec)
PM2.5	1.024	5	9.8765E-07	0.00005

OFF-SITE TRUCK TRAVEL *(gr/mi) * (mi/trip) * (trips/day) * (1 day/hours of haul activity) * (1 hour/60 min) * (1 min/60 sec) = Daily Emissions (g/sec)*

Emission Type	*Emissions (g/mi)*	Trips/Day	Distance Traveled to Freeway (miles)	Truck Haul Hours/Day	Single Truck Emissions (g/sec)	Total Daily (g/sec)
PM2.5	0.317	1	1.1	8	1.2108E-05	0.00057

ON-SITE TRUCK TRAVEL *(gr/mi) * (mi/trip) * (trips/day) * (1 day/hours of haul activity) * (1 hour/60 min) * (1 min/60 sec) = Daily Emissions (g/sec)*

Emission Type	*Emissions (g/mi)*	Trips/Day	Distance Traveled to Mulholland (miles)	Truck Haul Hours/Day	Single Truck Emissions (g/sec)	Total Daily (g/sec)
PM2.5	0.598	1	0.7	8	1.4535E-05	0.00069

Diesel trucks are prohibited from idling more than 5 minutes on and off site.
It is assumed that on-site truck travel is 15mph, and off-site is 30mph.

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**
****************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 6.7.1
** Lakes Environmental Software Inc.
** Date: 1/26/2011
** File: C:\Documents and Settings\jbailey\Desktop\1_19 Stone Canyon HRA\Alt1 ArMd\Alt1HRA.ADI
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**
**
****************************************
** AERMOD Control Pathway
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CO STARTING
   TITLEONE Stone Canyon Reservoir
   TITLETWO PM25
   MODELOPT DFAULT CONC NODRYDPLT NOWETDPLT
   AVERTIME 24
   URBANOPT 9862049
   POLLUTID PM.25
   RUNORNOT RUN
CO FINISHED
**
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** AERMOD Source Pathway
****************************************
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SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
   LOCATION VOL1 VOLUME 365893.498 3776581.066 303.780
** DESCRSRC EquipExhaust
** Line Source represented by Separated Volume Sources
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** LINE Source ID = SLINE1
** DESCRSRC onsite haul
** Length of Side = 6.50
** Emission Rate = 0.00178
** Vertical Dimension = 5.00
** SZINIT = 2.33
** Nodes = 21
** 365849.55, 3776597.32, 303.88, 0.00, 0.0
** 365526.44, 3777395.28, 364.79, 0.00, 6.02
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   LOCATION L0000933 VOLUME 365849.982 3776626.457 303.93
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   LOCATION L0000959 VOLUME 365697.553 3776900.006 310.41
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   LOCATION L0000964 VOLUME 365641.175 3776908.546 318.10
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** Line Source represented by Separated Volume Sources
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** 364036.84, 3776959.65, 364.24, 0.00, 7.41
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   LOCATION VOL2 VOLUME 365892.910 3776580.800 303.780
** DESCRSRC haulidle
** Source Parameters **
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   SRCPARAM L0000932 0.00002 0.00 6.02 2.33
   SRCPARAM L0000933 0.00002 0.00 6.02 2.33
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** AERMOD Receptor Pathway
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   DISCCART    365261.42   3776781.78  365.93  426.00
   DISCCART    365241.35   3776673.42  365.68  426.00
   DISCCART    365205.23   3776528.94  364.88  364.88
   DISCCART    365153.06   3776456.70  365.00  365.00
   DISCCART    365116.94   3776332.29  365.00  365.00
   DISCCART    365120.95   3776231.96  364.86  364.86
   DISCCART    365137.01   3776115.58  364.20  364.20
   DISCCART    365116.94   3775999.19  364.00  364.00
   DISCCART    365104.90   3775898.86  364.00  364.00
   DISCCART    365132.99   3775754.39  364.00  364.00
   DISCCART    365317.60   3777247.31  387.78  426.00
   DISCCART    365273.46   3777203.17  389.25  426.00
   DISCCART    365100.89   3777094.81  392.97  426.00
   DISCCART    366493.48   3776063.40  337.33  365.00
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   DISCCART    366453.35   3776308.21  363.66  363.66
   DISCCART    366449.34   3776416.57  364.59  364.59
   DISCCART    366397.17   3776561.05  365.00  365.00
   DISCCART    366369.07   3776685.46  365.00  365.00
   DISCCART    366369.07   3776837.96  365.00  365.00
   DISCCART    366409.21   3776962.37  365.00  365.00
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   DISCCART    365534.32   3777544.29  364.73  426.00
   DISCCART    365646.69   3777439.95  365.00  426.00
   DISCCART    365702.87   3777419.88  364.46  426.00
   DISCCART    365385.83   3777435.93  378.82  426.00
   DISCCART    365329.64   3777520.21  381.58  426.00
   DISCCART    366272.76   3775373.13  283.06  365.00
   DISCCART    366373.09   3775401.22  276.51  365.00
   DISCCART    366573.75   3775473.46  273.85  365.00
   DISCCART    366124.27   3777528.24  365.00  365.00
   DISCCART    364354.78   3777168.81  414.71  426.00
   DISCCART    364481.63   3777294.00  425.37  425.37
   DISCCART    365124.08   3777445.55  425.61  425.61
   DISCCART    365081.25   3777422.49  426.00  426.00
   DISCCART    365048.30   3777399.43  425.22  425.22
   DISCCART    365008.77   3777419.20  421.94  421.94
   DISCCART    364850.63   3777346.72  420.18  420.18
   DISCCART    364794.62   3777356.60  416.02  416.02
   DISCCART    364751.79   3777323.65  415.44  415.44
   DISCCART    364722.13   3777237.99  417.53  417.53
   DISCCART    364761.67   3777241.29  417.36  417.36
   DISCCART    364797.91   3777251.17  419.27  419.27
   DISCCART    364672.72   3777343.42  414.34  426.00
   DISCCART    364666.13   3777264.35  420.77  420.77
   DISCCART    364633.18   3777274.23  422.65  422.65
   DISCCART    364590.35   3777389.55  411.48  426.00
   DISCCART    365311.87   3777458.73  391.96  426.00
   DISCCART    365272.34   3777475.21  397.84  426.00
   DISCCART    364455.27   3777435.67  415.61  426.00
   DISCCART    364346.55   3777109.50  417.15  417.15
   DISCCART    364326.78   3777053.49  419.90  419.90
   DISCCART    364310.31   3776994.19  424.53  424.53
   DISCCART    364290.54   3776934.89  425.77  425.77
   DISCCART    364900.04   3777185.28  425.39  425.39
   DISCCART    364628.44   3777199.41  420.54  420.54
RE FINISHED
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** AERMOD Meteorology Pathway
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ME STARTING
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   PROFFILE "L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.PFL"
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   UAIRDATA 3190 2005
   PROFBASE 10 METERS
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** AERMOD Output Pathway
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**
**
OU STARTING
   RECTABLE ALLAVE 1ST
   RECTABLE 24 1ST
** Auto-Generated Plotfiles
   PLOTFILE 24 ALL 1ST ALT1HRA.AD\24H1GALL.PLT
   PLOTFILE 24 SRCGP1 1ST ALT1HRA.AD\24H1G001.PLT
OU FINISHED

 ***********************************
 *** SETUP Finishes Successfully ***
 ***********************************

 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                           ***        01/26/11
                                   *** PM25                                                             ***        10:07:51
                                                                                                                   PAGE   1
 **MODELOPTs:  RegDFAULT CONC                                          ELEV
                                                             NODRYDPLT NOWETDPLT

                                            ***     MODEL SETUP OPTIONS SUMMARY       ***
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

 **Model Is Setup For Calculation of Average CONCentration Values.

   --  DEPOSITION LOGIC  --
 **NO GAS DEPOSITION Data Provided.
 **NO PARTICLE DEPOSITION Data Provided.
 **Model Uses NO DRY DEPLETION.  DRYDPLT  =  F
 **Model Uses NO WET DEPLETION.  WETDPLT  =  F

 **Model Uses URBAN Dispersion Algorithm for the SBL for   206 Source(s),
   for Total of    1 Urban Area(s):
   Urban Population =   9862049.0 ;  Urban Roughness Length =  1.000 m

 **Model Uses Regulatory DEFAULT Options:
         1. Stack-tip Downwash.
         2. Model Accounts for ELEVated Terrain Effects.
         3. Use Calms Processing Routine.
         4. Use Missing Data Processing Routine.
         5. No Exponential Decay for URBAN/Non-SO2.
         6. Urban Roughness Length of 1.0 Meter Assumed.

 **Model Assumes No FLAGPOLE Receptor Heights.

 **Model Calculates  1 Short Term Average(s) of:  24-HR

 **This Run Includes:    206 Source(s);       2 Source Group(s); and      61 Receptor(s)

 **The Model Assumes A Pollutant Type of:  PM.25

 **Model Set To Continue RUNning After the Setup Testing.

 **Output Options Selected:
          Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE Keyword)
          Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)

 **NOTE:  The Following Flags May Appear Following CONC Values:  c for Calm Hours
                                                                m for Missing Hours
                                                                b for Both Calm and Missing Hours

 **Misc. Inputs:  Base Elev. for Pot. Temp. Profile (m MSL) =    10.00 ;  Decay Coef. =    0.000     ;  Rot. Angle =     0.0
                  Emission Units = GRAMS/SEC                                ;  Emission Rate Unit Factor =   0.10000E+07
                  Output Units   = MICROGRAMS/M**3

 **Approximate Storage Requirements of Model =      3.6 MB of RAM.

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 **MODELOPTs:  RegDFAULT CONC                                          ELEV
                                                             NODRYDPLT NOWETDPLT


                                                  *** VOLUME SOURCE DATA ***
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SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
VOL1	0	0.18270E+00	365893.5	3776581.1	303.8	5.00	45.58	1.16	YES	
L0000931	0	0.20000E-04	365849.6	3776600.6	303.9	0.00	6.02	2.33	YES	
L0000932	0	0.20000E-04	365849.8	3776613.5	303.9	0.00	6.02	2.33	YES	
L0000933	0	0.20000E-04	365850.0	3776626.5	303.9	0.00	6.02	2.33	YES	
L0000934	0	0.20000E-04	365850.2	3776639.4	303.9	0.00	6.02	2.33	YES	
L0000935	0	0.20000E-04	365850.4	3776652.3	304.0	0.00	6.02	2.33	YES	
L0000936	0	0.20000E-04	365850.6	3776665.3	304.0	0.00	6.02	2.33	YES	
L0000937	0	0.20000E-04	365846.7	3776677.5	304.0	0.00	6.02	2.33	YES	
L0000938	0	0.20000E-04	365842.1	3776689.6	304.1	0.00	6.02	2.33	YES	
L0000939	0	0.20000E-04	365837.5	3776701.7	304.1	0.00	6.02	2.33	YES	
L0000940	0	0.20000E-04	365832.8	3776713.8	304.1	0.00	6.02	2.33	YES	
L0000941	0	0.20000E-04	365828.2	3776725.9	304.2	0.00	6.02	2.33	YES	
L0000942	0	0.20000E-04	365823.6	3776738.0	304.2	0.00	6.02	2.33	YES	
L0000943	0	0.20000E-04	365817.6	3776749.4	304.2	0.00	6.02	2.33	YES	
L0000944	0	0.20000E-04	365810.7	3776760.3	304.2	0.00	6.02	2.33	YES	
L0000945	0	0.20000E-04	365804.0	3776771.4	304.2	0.00	6.02	2.33	YES	
L0000946	0	0.20000E-04	365800.4	3776783.8	304.3	0.00	6.02	2.33	YES	
L0000947	0	0.20000E-04	365796.8	3776796.3	304.3	0.00	6.02	2.33	YES	
L0000948	0	0.20000E-04	365793.3	3776808.7	304.3	0.00	6.02	2.33	YES	
L0000949	0	0.20000E-04	365789.7	3776821.2	304.4	0.00	6.02	2.33	YES	
L0000950	0	0.20000E-04	365786.2	3776833.6	304.4	0.00	6.02	2.33	YES	
L0000951	0	0.20000E-04	365781.2	3776845.3	304.4	0.00	6.02	2.33	YES	
L0000952	0	0.20000E-04	365772.1	3776854.4	304.3	0.00	6.02	2.33	YES	
L0000953	0	0.20000E-04	365762.9	3776863.6	304.2	0.00	6.02	2.33	YES	
L0000954	0	0.20000E-04	365753.8	3776872.7	304.1	0.00	6.02	2.33	YES	

L0000955	0	0.20000E-04	365744.6	3776881.9	304.0	0.00	6.02	2.33	YES	
L0000956	0	0.20000E-04	365732.1	3776885.0	305.8	0.00	6.02	2.33	YES	
L0000957	0	0.20000E-04	365719.5	3776887.9	307.7	0.00	6.02	2.33	YES	
L0000958	0	0.20000E-04	365707.2	3776891.3	309.5	0.00	6.02	2.33	YES	
L0000959	0	0.20000E-04	365697.6	3776900.0	310.4	0.00	6.02	2.33	YES	
L0000960	0	0.20000E-04	365687.9	3776908.7	311.3	0.00	6.02	2.33	YES	
L0000961	0	0.20000E-04	365678.3	3776917.3	312.3	0.00	6.02	2.33	YES	
L0000962	0	0.20000E-04	365666.2	3776915.4	314.1	0.00	6.02	2.33	YES	
L0000963	0	0.20000E-04	365653.7	3776912.0	316.1	0.00	6.02	2.33	YES	
L0000964	0	0.20000E-04	365641.2	3776908.5	318.1	0.00	6.02	2.33	YES	
L0000965	0	0.20000E-04	365628.7	3776905.1	320.1	0.00	6.02	2.33	YES	
L0000966	0	0.20000E-04	365616.2	3776901.7	322.1	0.00	6.02	2.33	YES	
L0000967	0	0.20000E-04	365603.7	3776898.3	324.1	0.00	6.02	2.33	YES	
L0000968	0	0.20000E-04	365591.1	3776897.9	325.9	0.00	6.02	2.33	YES	
L0000969	0	0.20000E-04	365578.3	3776900.2	327.6	0.00	6.02	2.33	YES	

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**MODELOPTs: RegDFAULT CONC   ELEV
NODRYDPLT NOWETDPLT

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000970	0	0.20000E-04	365565.6	3776902.5	329.4	0.00	6.02	2.33	YES	
L0000971	0	0.20000E-04	365555.3	3776910.0	331.6	0.00	6.02	2.33	YES	
L0000972	0	0.20000E-04	365545.5	3776918.4	334.0	0.00	6.02	2.33	YES	
L0000973	0	0.20000E-04	365535.7	3776926.9	336.4	0.00	6.02	2.33	YES	
L0000974	0	0.20000E-04	365525.9	3776935.3	338.8	0.00	6.02	2.33	YES	
L0000975	0	0.20000E-04	365516.6	3776944.3	340.4	0.00	6.02	2.33	YES	
L0000976	0	0.20000E-04	365508.5	3776954.4	340.5	0.00	6.02	2.33	YES	
L0000977	0	0.20000E-04	365500.5	3776964.5	340.7	0.00	6.02	2.33	YES	
L0000978	0	0.20000E-04	365502.2	3776976.1	340.7	0.00	6.02	2.33	YES	
L0000979	0	0.20000E-04	365506.9	3776988.2	340.6	0.00	6.02	2.33	YES	
L0000980	0	0.20000E-04	365514.1	3776998.0	340.1	0.00	6.02	2.33	YES	
L0000981	0	0.20000E-04	365525.6	3777004.1	338.9	0.00	6.02	2.33	YES	
L0000982	0	0.20000E-04	365537.0	3777010.1	337.6	0.00	6.02	2.33	YES	
L0000983	0	0.20000E-04	365548.5	3777016.2	336.3	0.00	6.02	2.33	YES	
L0000984	0	0.20000E-04	365559.9	3777022.3	335.0	0.00	6.02	2.33	YES	
L0000985	0	0.20000E-04	365571.3	3777028.3	333.7	0.00	6.02	2.33	YES	
L0000986	0	0.20000E-04	365582.8	3777034.4	332.4	0.00	6.02	2.33	YES	
L0000987	0	0.20000E-04	365594.2	3777040.5	331.2	0.00	6.02	2.33	YES	
L0000988	0	0.20000E-04	365605.7	3777046.5	329.9	0.00	6.02	2.33	YES	
L0000989	0	0.20000E-04	365615.4	3777054.4	328.8	0.00	6.02	2.33	YES	
L0000990	0	0.20000E-04	365621.9	3777065.6	328.1	0.00	6.02	2.33	YES	
L0000991	0	0.20000E-04	365622.7	3777077.6	329.1	0.00	6.02	2.33	YES	
L0000992	0	0.20000E-04	365619.7	3777090.2	331.1	0.00	6.02	2.33	YES	
L0000993	0	0.20000E-04	365616.7	3777102.8	333.1	0.00	6.02	2.33	YES	
L0000994	0	0.20000E-04	365613.7	3777115.4	335.1	0.00	6.02	2.33	YES	
L0000995	0	0.20000E-04	365610.7	3777128.0	337.2	0.00	6.02	2.33	YES	
L0000996	0	0.20000E-04	365607.7	3777140.6	339.2	0.00	6.02	2.33	YES	
L0000997	0	0.20000E-04	365604.7	3777153.1	341.2	0.00	6.02	2.33	YES	
L0000998	0	0.20000E-04	365601.6	3777165.7	343.3	0.00	6.02	2.33	YES	
L0000999	0	0.20000E-04	365598.6	3777178.3	345.3	0.00	6.02	2.33	YES	
L0001000	0	0.20000E-04	365595.6	3777190.9	347.3	0.00	6.02	2.33	YES	
L0001001	0	0.20000E-04	365592.6	3777203.5	349.4	0.00	6.02	2.33	YES	
L0001002	0	0.20000E-04	365591.3	3777216.1	351.2	0.00	6.02	2.33	YES	
L0001003	0	0.20000E-04	365594.5	3777228.7	352.3	0.00	6.02	2.33	YES	
L0001004	0	0.20000E-04	365597.6	3777241.2	353.5	0.00	6.02	2.33	YES	
L0001005	0	0.20000E-04	365600.8	3777253.8	354.6	0.00	6.02	2.33	YES	
L0001006	0	0.20000E-04	365598.1	3777265.8	355.9	0.00	6.02	2.33	YES	
L0001007	0	0.20000E-04	365592.5	3777277.5	357.2	0.00	6.02	2.33	YES	
L0001008	0	0.20000E-04	365587.0	3777289.1	358.6	0.00	6.02	2.33	YES	
L0001009	0	0.20000E-04	365581.4	3777300.8	359.9	0.00	6.02	2.33	YES	

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**MODELOPTs: RegDFAULT CONC   ELEV
NODRYDPLT NOWETDPLT

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001010	0	0.20000E-04	365575.9	3777312.5	361.2	0.00	6.02	2.33	YES	
L0001011	0	0.20000E-04	365568.6	3777322.6	362.4	0.00	6.02	2.33	YES	
L0001012	0	0.20000E-04	365557.0	3777328.4	363.0	0.00	6.02	2.33	YES	
L0001013	0	0.20000E-04	365545.5	3777334.2	363.7	0.00	6.02	2.33	YES	
L0001014	0	0.20000E-04	365533.9	3777339.9	364.3	0.00	6.02	2.33	YES	
L0001015	0	0.20000E-04	365522.3	3777345.7	364.9	0.00	6.02	2.33	YES	
L0001016	0	0.20000E-04	365515.7	3777356.4	365.2	0.00	6.02	2.33	YES	
L0001017	0	0.20000E-04	365515.5	3777368.3	365.2	0.00	6.02	2.33	YES	
L0001018	0	0.20000E-04	365520.3	3777380.3	365.0	0.00	6.02	2.33	YES	
L0001019	0	0.20000E-04	365525.2	3777392.3	364.8	0.00	6.02	2.33	YES	
L0001020	0	0.13565E-04	365516.3	3777395.0	366.1	0.00	7.41	2.33	YES	
L0001021	0	0.13565E-04	365500.4	3777394.0	366.7	0.00	7.41	2.33	YES	
L0001022	0	0.13565E-04	365484.5	3777392.9	367.2	0.00	7.41	2.33	YES	
L0001023	0	0.13565E-04	365468.6	3777391.8	367.8	0.00	7.41	2.33	YES	
L0001024	0	0.13565E-04	365452.7	3777390.8	368.3	0.00	7.41	2.33	YES	
L0001025	0	0.13565E-04	365437.4	3777387.5	370.1	0.00	7.41	2.33	YES	
L0001026	0	0.13565E-04	365423.0	3777380.7	373.8	0.00	7.41	2.33	YES	
L0001027	0	0.13565E-04	365407.4	3777381.5	376.4	0.00	7.41	2.33	YES	
L0001028	0	0.13565E-04	365391.5	3777383.4	378.7	0.00	7.41	2.33	YES	
L0001029	0	0.13565E-04	365375.9	3777386.5	382.4	0.00	7.41	2.33	YES	
L0001030	0	0.13565E-04	365360.4	3777390.1	386.7	0.00	7.41	2.33	YES	
L0001031	0	0.13565E-04	365347.7	3777398.9	389.1	0.00	7.41	2.33	YES	
L0001032	0	0.13565E-04	365336.0	3777409.8	390.7	0.00	7.41	2.33	YES	
L0001033	0	0.13565E-04	365323.1	3777418.7	392.9	0.00	7.41	2.33	YES	
L0001034	0	0.13565E-04	365308.5	3777425.3	395.8	0.00	7.41	2.33	YES	
L0001035	0	0.13565E-04	365293.8	3777431.3	398.8	0.00	7.41	2.33	YES	
L0001036	0	0.13565E-04	365278.4	3777435.3	402.0	0.00	7.41	2.33	YES	
L0001037	0	0.13565E-04	365263.0	3777439.4	405.2	0.00	7.41	2.33	YES	
L0001038	0	0.13565E-04	365248.9	3777446.4	408.0	0.00	7.41	2.33	YES	
L0001039	0	0.13565E-04	365235.4	3777454.8	410.4	0.00	7.41	2.33	YES	
L0001040	0	0.13565E-04	365221.8	3777463.2	412.9	0.00	7.41	2.33	YES	

L0001041	0	0.13565E-04	365206.5	3777467.2	413.8	0.00	7.41	2.33	YES	
L0001042	0	0.13565E-04	365190.9	3777470.4	414.3	0.00	7.41	2.33	YES	
L0001043	0	0.13565E-04	365175.8	3777470.6	416.1	0.00	7.41	2.33	YES	
L0001044	0	0.13565E-04	365161.9	3777462.8	421.2	0.00	7.41	2.33	YES	
L0001045	0	0.13565E-04	365151.6	3777452.0	424.2	0.00	7.41	2.33	YES	
L0001046	0	0.13565E-04	365146.3	3777437.0	424.6	0.00	7.41	2.33	YES	
L0001047	0	0.13565E-04	365141.0	3777421.9	424.9	0.00	7.41	2.33	YES	
L0001048	0	0.13565E-04	365131.2	3777409.6	425.2	0.00	7.41	2.33	YES	
L0001049	0	0.13565E-04	365120.7	3777397.6	425.7	0.00	7.41	2.33	YES	

*** AERMOD - VERSION 09292 *** *** Stone Canyon Reservoir *** 01/26/11
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**MODELOPTs: RegDFAULT CONC ELEV
NODRYDPLT NOWETDPLT

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001050	0	0.13565E-04	365109.9	3777385.9	426.0	0.00	7.41	2.33	YES	
L0001051	0	0.13565E-04	365096.7	3777377.0	426.0	0.00	7.41	2.33	YES	
L0001052	0	0.13565E-04	365083.5	3777368.0	426.0	0.00	7.41	2.33	YES	
L0001053	0	0.13565E-04	365070.3	3777359.1	426.0	0.00	7.41	2.33	YES	
L0001054	0	0.13565E-04	365057.2	3777350.1	426.0	0.00	7.41	2.33	YES	
L0001055	0	0.13565E-04	365041.6	3777352.6	425.7	0.00	7.41	2.33	YES	
L0001056	0	0.13565E-04	365025.9	3777355.5	425.5	0.00	7.41	2.33	YES	
L0001057	0	0.13565E-04	365010.2	3777358.3	425.3	0.00	7.41	2.33	YES	
L0001058	0	0.13565E-04	364994.6	3777361.2	425.0	0.00	7.41	2.33	YES	
L0001059	0	0.13565E-04	364978.9	3777364.0	424.8	0.00	7.41	2.33	YES	
L0001060	0	0.13565E-04	364963.2	3777366.9	424.5	0.00	7.41	2.33	YES	
L0001061	0	0.13565E-04	364947.7	3777366.5	424.6	0.00	7.41	2.33	YES	
L0001062	0	0.13565E-04	364932.3	3777362.3	425.2	0.00	7.41	2.33	YES	
L0001063	0	0.13565E-04	364919.1	3777354.5	425.2	0.00	7.41	2.33	YES	
L0001064	0	0.13565E-04	364908.0	3777343.1	424.9	0.00	7.41	2.33	YES	
L0001065	0	0.13565E-04	364896.9	3777331.6	424.6	0.00	7.41	2.33	YES	
L0001066	0	0.13565E-04	364883.4	3777323.9	423.9	0.00	7.41	2.33	YES	
L0001067	0	0.13565E-04	364868.4	3777318.7	423.1	0.00	7.41	2.33	YES	
L0001068	0	0.13565E-04	364853.4	3777313.4	422.2	0.00	7.41	2.33	YES	
L0001069	0	0.13565E-04	364838.4	3777308.1	421.3	0.00	7.41	2.33	YES	
L0001070	0	0.13565E-04	364823.1	3777303.5	419.9	0.00	7.41	2.33	YES	
L0001071	0	0.13565E-04	364811.4	3777294.6	419.1	0.00	7.41	2.33	YES	
L0001072	0	0.13565E-04	364803.6	3777280.8	419.4	0.00	7.41	2.33	YES	
L0001073	0	0.13565E-04	364790.4	3777273.0	418.9	0.00	7.41	2.33	YES	
L0001074	0	0.13565E-04	364775.6	3777266.9	418.1	0.00	7.41	2.33	YES	
L0001075	0	0.13565E-04	364759.9	3777267.4	418.0	0.00	7.41	2.33	YES	
L0001076	0	0.13565E-04	364744.4	3777270.1	418.0	0.00	7.41	2.33	YES	
L0001077	0	0.13565E-04	364730.2	3777277.3	418.0	0.00	7.41	2.33	YES	
L0001078	0	0.13565E-04	364715.9	3777284.4	418.0	0.00	7.41	2.33	YES	
L0001079	0	0.13565E-04	364701.7	3777291.5	418.0	0.00	7.41	2.33	YES	
L0001080	0	0.13565E-04	364687.0	3777297.6	418.1	0.00	7.41	2.33	YES	
L0001081	0	0.13565E-04	364672.1	3777303.2	418.2	0.00	7.41	2.33	YES	
L0001082	0	0.13565E-04	364657.1	3777308.7	418.3	0.00	7.41	2.33	YES	
L0001083	0	0.13565E-04	364642.2	3777314.3	418.4	0.00	7.41	2.33	YES	
L0001084	0	0.13565E-04	364627.9	3777320.9	418.3	0.00	7.41	2.33	YES	
L0001085	0	0.13565E-04	364614.6	3777329.8	418.0	0.00	7.41	2.33	YES	
L0001086	0	0.13565E-04	364601.3	3777338.6	417.6	0.00	7.41	2.33	YES	
L0001087	0	0.13565E-04	364588.1	3777347.4	417.2	0.00	7.41	2.33	YES	
L0001088	0	0.13565E-04	364574.8	3777356.3	416.8	0.00	7.41	2.33	YES	
L0001089	0	0.13565E-04	364559.6	3777360.7	418.0	0.00	7.41	2.33	YES	

*** AERMOD - VERSION 09292 *** *** Stone Canyon Reservoir *** 01/26/11
*** PM25 *** 10:07:51
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**MODELOPTs: RegDFAULT CONC ELEV
NODRYDPLT NOWETDPLT

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001090	0	0.13565E-04	364544.2	3777364.8	419.3	0.00	7.41	2.33	YES	
L0001091	0	0.13565E-04	364528.8	3777368.8	420.6	0.00	7.41	2.33	YES	
L0001092	0	0.13565E-04	364513.0	3777368.0	421.7	0.00	7.41	2.33	YES	
L0001093	0	0.13565E-04	364497.2	3777366.3	422.9	0.00	7.41	2.33	YES	
L0001094	0	0.13565E-04	364481.4	3777364.6	424.0	0.00	7.41	2.33	YES	
L0001095	0	0.13565E-04	364465.9	3777361.7	424.9	0.00	7.41	2.33	YES	
L0001096	0	0.13565E-04	364451.4	3777355.0	425.3	0.00	7.41	2.33	YES	
L0001097	0	0.13565E-04	364436.9	3777348.4	425.6	0.00	7.41	2.33	YES	
L0001098	0	0.13565E-04	364422.4	3777341.8	425.9	0.00	7.41	2.33	YES	
L0001099	0	0.13565E-04	364410.9	3777331.0	426.0	0.00	7.41	2.33	YES	
L0001100	0	0.13565E-04	364400.0	3777319.4	426.0	0.00	7.41	2.33	YES	
L0001101	0	0.13565E-04	364389.6	3777307.4	425.7	0.00	7.41	2.33	YES	
L0001102	0	0.13565E-04	364381.7	3777293.6	423.5	0.00	7.41	2.33	YES	
L0001103	0	0.13565E-04	364373.7	3777279.8	421.4	0.00	7.41	2.33	YES	
L0001104	0	0.13565E-04	364365.8	3777266.0	419.3	0.00	7.41	2.33	YES	
L0001105	0	0.13565E-04	364357.8	3777252.2	417.1	0.00	7.41	2.33	YES	
L0001106	0	0.13565E-04	364349.9	3777238.4	415.0	0.00	7.41	2.33	YES	
L0001107	0	0.13565E-04	364341.9	3777224.6	412.9	0.00	7.41	2.33	YES	
L0001108	0	0.13565E-04	364334.0	3777210.8	410.7	0.00	7.41	2.33	YES	
L0001109	0	0.13565E-04	364326.0	3777197.0	408.6	0.00	7.41	2.33	YES	
L0001110	0	0.13565E-04	364318.1	3777183.2	406.5	0.00	7.41	2.33	YES	
L0001111	0	0.13565E-04	364310.1	3777169.4	404.3	0.00	7.41	2.33	YES	
L0001112	0	0.13565E-04	364302.2	3777155.6	402.2	0.00	7.41	2.33	YES	
L0001113	0	0.13565E-04	364293.2	3777142.4	400.5	0.00	7.41	2.33	YES	
L0001114	0	0.13565E-04	364284.2	3777129.3	398.9	0.00	7.41	2.33	YES	
L0001115	0	0.13565E-04	364275.1	3777116.2	397.2	0.00	7.41	2.33	YES	
L0001116	0	0.13565E-04	364266.0	3777103.1	395.6	0.00	7.41	2.33	YES	
L0001117	0	0.13565E-04	364256.9	3777090.0	393.9	0.00	7.41	2.33	YES	
L0001118	0	0.13565E-04	364247.8	3777076.9	392.3	0.00	7.41	2.33	YES	
L0001119	0	0.13565E-04	364238.8	3777063.8	390.7	0.00	7.41	2.33	YES	
L0001120	0	0.13565E-04	364229.7	3777050.7	389.0	0.00	7.41	2.33	YES	
L0001121	0	0.13565E-04	364220.6	3777037.7	387.4	0.00	7.41	2.33	YES	
L0001122	0	0.13565E-04	364211.4	3777024.7	386.1	0.00	7.41	2.33	YES	
L0001123	0	0.13565E-04	364200.8	3777012.7	388.5	0.00	7.41	2.33	YES	
L0001124	0	0.13565E-04	364190.3	3777000.8	390.9	0.00	7.41	2.33	YES	
L0001125	0	0.13565E-04	364176.8	3776992.5	386.5	0.00	7.41	2.33	YES	
L0001126	0	0.13565E-04	364162.8	3776985.0	380.8	0.00	7.41	2.33	YES	

L0001127	0	0.13565E-04	364148.8	3776977.4	375.1	0.00	7.41	2.33	YES	
L0001128	0	0.13565E-04	364134.8	3776969.8	369.4	0.00	7.41	2.33	YES	
L0001129	0	0.13565E-04	364120.4	3776963.6	364.9	0.00	7.41	2.33	YES	

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**MODELOPTs: RegDFAULT CONC ELEV
NODRYDPLT NOWETDPLT

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001130	0	0.13565E-04	364104.5	3776962.9	364.7	0.00	7.41	2.33	YES	
L0001131	0	0.13565E-04	364088.6	3776962.1	364.6	0.00	7.41	2.33	YES	
L0001132	0	0.13565E-04	364072.7	3776961.4	364.5	0.00	7.41	2.33	YES	
L0001133	0	0.13565E-04	364056.7	3776960.6	364.4	0.00	7.41	2.33	YES	
L0001134	0	0.13565E-04	364040.8	3776959.8	364.3	0.00	7.41	2.33	YES	
VOL2	0	0.13000E-03	365892.9	3776580.8	303.8	5.00	45.61	1.16	YES	

*** AERMOD - VERSION 09292 *** *** Stone Canyon Reservoir *** 01/26/11
*** PM25 *** 10:07:51
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**MODELOPTs: RegDFAULT CONC ELEV
NODRYDPLT NOWETDPLT

*** SOURCE IDs DEFINING SOURCE GROUPS ***

GROUP ID SOURCE IDs

SRCGP1 VOL1 , L0000931, L0000932, L0000933, L0000934, L0000935, L0000936, L0000937, L0000938, L0000939, L0000940, L0000941,

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L0000978, L0000979, L0000980, L0000981, L0000982, L0000983, L0000984, L0000985, L0000986, L0000987, L0000988, L0000989,

L0000990, L0000991, L0000992, L0000993, L0000994, L0000995, L0000996, L0000997, L0000998, L0000999, L0001000, L0001001,

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L0001134, VOL2 ,

ALL VOL1 , L0000931, L0000932, L0000933, L0000934, L0000935, L0000936, L0000937, L0000938, L0000939, L0000940, L0000941,

L0000942, L0000943, L0000944, L0000945, L0000946, L0000947, L0000948, L0000949, L0000950, L0000951, L0000952, L0000953,

*** AERMOD - VERSION 09292 *** *** Stone Canyon Reservoir *** 01/26/11
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**MODELOPTs: RegDFAULT CONC ELEV
NODRYDPLT NOWETDPLT

*** SOURCE IDs DEFINING SOURCE GROUPS ***

GROUP ID SOURCE IDs

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          L0001134, VOL2    ,
 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                                   ***        01/26/11
                                   *** PM25                                                                     ***        10:07:51
                                                                                                                           PAGE  10
 **MODELOPTs:  RegDFAULT CONC                                               ELEV
                                                                  NODRYDPLT NOWETDPLT

                                             *** DISCRETE CARTESIAN RECEPTORS ***
                                           (X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
                                                            (METERS)

     ( 365205.2, 3776966.4,     375.5,     426.0,       0.0);         ( 365273.5, 3776942.3,     371.0,     426.0,       0.0);
     ( 365297.5, 3776838.0,     365.3,     426.0,       0.0);         ( 365261.4, 3776781.8,     365.9,     426.0,       0.0);
     ( 365241.3, 3776673.4,     365.7,     426.0,       0.0);         ( 365205.2, 3776528.9,     364.9,     364.9,       0.0);
     ( 365153.1, 3776456.7,     365.0,     365.0,       0.0);         ( 365116.9, 3776332.3,     365.0,     365.0,       0.0);
     ( 365121.0, 3776232.0,     364.9,     364.9,       0.0);         ( 365137.0, 3776115.6,     364.2,     364.2,       0.0);
     ( 365116.9, 3775999.2,     364.0,     364.0,       0.0);         ( 365104.9, 3775898.9,     364.0,     364.0,       0.0);
     ( 365133.0, 3775754.4,     364.0,     364.0,       0.0);         ( 365317.6, 3777247.3,     387.8,     426.0,       0.0);
     ( 365273.5, 3777203.2,     389.2,     426.0,       0.0);         ( 365100.9, 3777094.8,     393.0,     426.0,       0.0);
     ( 366493.5, 3776063.4,     337.3,     365.0,       0.0);         ( 366465.4, 3776183.8,     356.2,     365.0,       0.0);
     ( 366453.3, 3776308.2,     363.7,     363.7,       0.0);         ( 366449.3, 3776416.6,     364.6,     364.6,       0.0);
     ( 366397.2, 3776561.0,     365.0,     365.0,       0.0);         ( 366369.1, 3776685.5,     365.0,     365.0,       0.0);
     ( 366369.1, 3776838.0,     365.0,     365.0,       0.0);         ( 366409.2, 3776962.4,     365.0,     365.0,       0.0);
     ( 366457.4, 3777078.8,     365.0,     365.0,       0.0);         ( 366441.3, 3777195.1,     365.0,     365.0,       0.0);
     ( 365594.5, 3777500.1,     365.0,     426.0,       0.0);         ( 365534.3, 3777544.3,     364.7,     426.0,       0.0);
     ( 365646.7, 3777439.9,     365.0,     426.0,       0.0);         ( 365702.9, 3777419.9,     364.5,     426.0,       0.0);
     ( 365385.8, 3777435.9,     378.8,     426.0,       0.0);         ( 365329.6, 3777520.2,     381.6,     426.0,       0.0);
     ( 366272.8, 3775373.1,     283.1,     365.0,       0.0);         ( 366373.1, 3775401.2,     276.5,     365.0,       0.0);
     ( 366573.8, 3775473.5,     273.9,     365.0,       0.0);         ( 366124.3, 3777528.2,     365.0,     365.0,       0.0);
     ( 364354.8, 3777168.8,     414.7,     426.0,       0.0);         ( 364481.6, 3777294.0,     425.4,     425.4,       0.0);
     ( 365124.1, 3777445.5,     425.6,     425.6,       0.0);         ( 365081.2, 3777422.5,     426.0,     426.0,       0.0);
     ( 365048.3, 3777399.4,     425.2,     425.2,       0.0);         ( 365008.8, 3777419.2,     421.9,     421.9,       0.0);
     ( 364850.6, 3777346.7,     420.2,     420.2,       0.0);         ( 364794.6, 3777356.6,     416.0,     416.0,       0.0);
     ( 364751.8, 3777323.6,     415.4,     415.4,       0.0);         ( 364722.1, 3777238.0,     417.5,     417.5,       0.0);
     ( 364761.7, 3777241.3,     417.4,     417.4,       0.0);         ( 364797.9, 3777251.2,     419.3,     419.3,       0.0);
     ( 364672.7, 3777343.4,     414.3,     426.0,       0.0);         ( 364666.1, 3777264.3,     420.8,     420.8,       0.0);
     ( 364633.2, 3777274.2,     422.7,     422.7,       0.0);         ( 364590.3, 3777389.5,     411.5,     426.0,       0.0);
     ( 365311.9, 3777458.7,     392.0,     426.0,       0.0);         ( 365272.3, 3777475.2,     397.8,     426.0,       0.0);
     ( 364455.3, 3777435.7,     415.6,     426.0,       0.0);         ( 364346.5, 3777109.5,     417.2,     417.2,       0.0);
     ( 364326.8, 3777053.5,     419.9,     419.9,       0.0);         ( 364310.3, 3776994.2,     424.5,     424.5,       0.0);
     ( 364290.5, 3776934.9,     425.8,     425.8,       0.0);         ( 364900.0, 3777185.3,     425.4,     425.4,       0.0);
     ( 364628.4, 3777199.4,     420.5,     420.5,       0.0);
 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                                   ***        01/26/11
                                   *** PM25                                                                     ***        10:07:51
                                                                                                                           PAGE  11
 **MODELOPTs:  RegDFAULT CONC                                               ELEV
                                                                  NODRYDPLT NOWETDPLT

                                            *** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***
                                                           (1=YES; 0=NO)

          1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
          1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
          1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
          1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
          1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
          1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
          1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
          1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1

              NOTE:  METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.


                                  *** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
                                                          (METERS/SEC)

                                                1.54,   3.09,   5.14,   8.23,  10.80,
 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                                   ***        01/26/11
                                   *** PM25                                                                     ***        10:07:51
                                                                                                                           PAGE  12
 **MODELOPTs:  RegDFAULT CONC                                               ELEV
                                                                  NODRYDPLT NOWETDPLT

                                   *** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

   Surface file:   L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.SFC    Met Version:  06341
   Profile file:   L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.PFL
   Surface format: FREE
   Profile format: FREE
   Surface station no.:        0                 Upper air station no.:     3190
                  Name: UNKNOWN                                   Name: UNKNOWN
                  Year:   2005                                    Year:   2005

 First 24 hours of scalar data
 YR MO DY JDY HR     H0     U*     W*  DT/DZ ZICNV ZIMCH  M-O LEN    Z0  BOWEN ALBEDO  REF WS   WD     HT  REF TA     HT
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 05 01 01   1 01   -0.9  0.033 -9.000 -9.000 -999.   14.       3.7  0.45   1.00   1.00    0.50  321.    9.1  281.1    5.5
 05 01 01   1 02   -0.9  0.033 -9.000 -9.000 -999.   14.       3.8  0.45   1.00   1.00    0.50  320.    9.1  280.8    5.5
 05 01 01   1 03   -0.9  0.033 -9.000 -9.000 -999.   14.       3.7  0.45   1.00   1.00    0.50  323.    9.1  280.9    5.5
 05 01 01   1 04   -1.3  0.040 -9.000 -9.000 -999.   18.       4.4  0.45   1.00   1.00    0.60  316.    9.1  280.8    5.5
 05 01 01   1 05   -1.3  0.040 -9.000 -9.000 -999.   18.       4.4  0.45   1.00   1.00    0.60  322.    9.1  280.4    5.5
 05 01 01   1 06   -0.3  0.020 -9.000 -9.000 -999.    6.       2.3  0.45   1.00   1.00    0.30  352.    9.1  279.9    5.5
 05 01 01   1 07   -2.3  0.053 -9.000 -9.000 -999.   28.       5.8  0.45   1.00   1.00    0.80  324.    9.1  279.6    5.5
 05 01 01   1 08   -1.2  0.040 -9.000 -9.000 -999.   18.       4.8  0.45   1.00   0.55    0.60  336.    9.1  280.5    5.5
 05 01 01   1 09   43.0  0.243  0.490  0.005   99.  276.     -30.3  0.45   1.00   0.32    1.50   44.    9.1  283.4    5.5
 05 01 01   1 10  110.6  0.339  1.374  0.005  849.  453.     -31.7  0.45   1.00   0.24    2.10   74.    9.1  285.1    5.5
 05 01 01   1 11  135.3  0.321  1.653  0.010 1209.  419.     -22.2  0.45   1.00   0.21    1.90   84.    9.1  286.4    5.5
 05 01 01   1 12   14.3  0.223  0.783  0.010 1212.  246.     -70.3  0.45   1.00   0.20    1.50  137.    9.1  286.8    5.5
 05 01 01   1 13   27.1  0.187  0.971  0.010 1218.  186.     -21.7  0.45   1.00   0.20    1.10  111.    9.1  286.9    5.5
 05 01 01   1 14   17.1  0.179  0.834  0.009 1222.  174.     -30.0  0.45   1.00   0.21    1.10  186.    9.1  286.9    5.5
 05 01 01   1 15    3.7  0.172  0.499  0.009 1223.  164.    -124.8  0.45   1.00   0.24    1.20  195.    9.1  286.1    5.5
 05 01 01   1 16    0.1  0.147  0.150  0.009 1223.  130.   -2871.4  0.45   1.00   0.33    1.10  182.    9.1  285.9    5.5
 05 01 01   1 17   -1.7  0.047 -9.000 -9.000 -999.   31.       5.5  0.45   1.00   0.59    0.70  159.    9.1  285.5    5.5
 05 01 01   1 18   -0.2  0.019 -9.000 -9.000 -999.    6.       2.9  0.45   1.00   1.00    0.28  170.    9.1  285.1    5.5
 05 01 01   1 19   -0.2  0.019 -9.000 -9.000 -999.    6.       2.9  0.45   1.00   1.00    0.28  186.    9.1  284.4    5.5
 05 01 01   1 20 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.45   1.00   1.00    0.00    0.    9.1  284.0    5.5
 05 01 01   1 21 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.45   1.00   1.00    0.00    0.    9.1  283.9    5.5
 05 01 01   1 22 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.45   1.00   1.00    0.00    0.    9.1  283.4    5.5
 05 01 01   1 23   -0.2  0.019 -9.000 -9.000 -999.    6.       2.9  0.45   1.00   1.00    0.28  313.    9.1  283.4    5.5
```

```
05 01 01   1 24 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.45   1.00   1.00    0.00    0.    9.1  283.4    5.5


First hour of profile data
YR MO DY HR HEIGHT F  WDIR    WSPD AMB_TMP sigmaA  sigmaW  sigmaV
05 01 01 01    5.5 0 -999.  -99.00   281.2   99.0  -99.00  -99.00
05 01 01 01    9.1 1  321.    0.50  -999.0   99.0  -99.00  -99.00

F indicates top of profile (=1) or below (=0)
*** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                                ***        01/26/11
                                  *** PM25                                                                  ***        10:07:51
                                                                                                                       PAGE  13
**MODELOPTs:  RegDFAULT CONC                                                   ELEV
                                                                      NODRYDPLT NOWETDPLT

                              *** THE   1ST HIGHEST 24-HR AVERAGE CONCENTRATION   VALUES FOR SOURCE GROUP:  SRCGP1   ***
                                  INCLUDING SOURCE(S):      VOL1    , L0000931, L0000932, L0000933, L0000934, L0000935, L0000936,
         L0000937, L0000938, L0000939, L0000940, L0000941, L0000942, L0000943, L0000944, L0000945, L0000946, L0000947, L0000948,
         L0000949, L0000950, L0000951, L0000952, L0000953, L0000954, L0000955, L0000956, L0000957, L0000958, L0000959,  . . . ,

                                               *** DISCRETE CARTESIAN RECEPTOR POINTS ***

                                            ** CONC OF PM.25    IN MICROGRAMS/M**3                                  **
```

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
365205.23	3776966.38	1.52636	(05070924)	365273.46	3776942.30	1.62461	(05070924)
365297.54	3776837.96	1.89569	(05070924)	365261.42	3776781.78	2.02980	(05102424)
365241.35	3776673.42	1.98652	(05122624)	365205.23	3776528.94	1.89620	(05020624)
365153.06	3776456.70	2.31499	(05020624)	365116.94	3776332.29	1.78957	(05020624)
365120.95	3776231.96	1.31085c	(06090124)	365137.01	3776115.58	1.16643c	(05121824)
365116.94	3775999.19	1.15192c	(05090224)	365104.90	3775898.86	1.18930c	(07031224)
365132.99	3775754.39	1.13318c	(05121824)	365317.60	3777247.31	1.23536c	(06070124)
365273.46	3777203.17	1.30314c	(06070124)	365100.89	3777094.81	1.16558	(06061424)
366493.48	3776063.40	3.74808	(06011924)	366465.39	3776183.80	3.32087	(06011924)
366453.35	3776308.21	2.83983	(05112724)	366449.34	3776416.57	2.36576	(07122724)
366397.17	3776561.05	2.69585c	(05101724)	366369.07	3776685.46	2.56561c	(05081024)
366369.07	3776837.96	2.63768	(05072624)	366409.21	3776962.37	2.27178	(05080724)
366457.36	3777078.76	1.97528c	(06080324)	366441.31	3777195.14	1.90635c	(05102224)
365594.52	3777500.15	1.61489c	(06082424)	365534.32	3777544.29	1.51221c	(06082424)
365646.69	3777439.95	1.65266c	(06082424)	365702.87	3777419.88	1.50667c	(07050924)
365385.83	3777435.93	1.58731	(07050124)	365329.64	3777520.21	1.41811	(07050124)
366272.76	3775373.13	1.11143	(05120824)	366373.09	3775401.22	1.22222	(06041824)
366573.75	3775473.46	1.37117	(06030424)	366124.27	3777528.24	1.13674	(07080224)
364354.78	3777168.81	0.68428	(05102424)	364481.63	3777294.00	0.76383	(07043024)
365124.08	3777445.55	0.92339c	(06070124)	365081.25	3777422.49	0.91731c	(06070124)
365048.30	3777399.43	1.00549c	(06042624)	365008.77	3777419.20	0.98701c	(06042624)
364850.63	3777346.72	0.90598	(06061424)	364794.62	3777356.60	0.83746	(06061424)
364751.79	3777323.65	0.76590	(06061424)	364722.13	3777237.99	0.92502	(07043024)
364761.67	3777241.29	0.93531	(07043024)	364797.91	3777251.17	0.90059	(07043024)
364672.72	3777343.42	0.79958	(07043024)	364666.13	3777264.35	0.90324	(07043024)
364633.18	3777274.23	0.88381	(07043024)	364590.35	3777389.55	0.76405	(07043024)
365311.87	3777458.73	1.35755	(07050124)	365272.34	3777475.21	1.16969	(07050124)
364455.27	3777435.67	0.75198	(07043024)	364346.55	3777109.50	0.67553c	(06082824)
364326.78	3777053.49	0.65931c	(06082824)	364310.31	3776994.19	0.54470c	(06082824)
364290.54	3776934.89	0.69357c	(06082224)	364900.04	3777185.28	0.92612	(07043024)
364628.44	3777199.41	0.78128	(07043024)				

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*** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                                ***        01/26/11
                                  *** PM25                                                                  ***        10:07:51
                                                                                                                       PAGE  14
**MODELOPTs:  RegDFAULT CONC                                                   ELEV
                                                                      NODRYDPLT NOWETDPLT

                              *** THE   1ST HIGHEST 24-HR AVERAGE CONCENTRATION   VALUES FOR SOURCE GROUP:  ALL      ***
                                  INCLUDING SOURCE(S):      VOL1    , L0000931, L0000932, L0000933, L0000934, L0000935, L0000936,
         L0000937, L0000938, L0000939, L0000940, L0000941, L0000942, L0000943, L0000944, L0000945, L0000946, L0000947, L0000948,
         L0000949, L0000950, L0000951, L0000952, L0000953, L0000954, L0000955, L0000956, L0000957, L0000958, L0000959,  . . . ,

                                               *** DISCRETE CARTESIAN RECEPTOR POINTS ***

                                            ** CONC OF PM.25    IN MICROGRAMS/M**3                                  **
```

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
365205.23	3776966.38	1.52636	(05070924)	365273.46	3776942.30	1.62461	(05070924)
365297.54	3776837.96	1.89569	(05070924)	365261.42	3776781.78	2.02980	(05102424)
365241.35	3776673.42	1.98652	(05122624)	365205.23	3776528.94	1.89620	(05020624)
365153.06	3776456.70	2.31499	(05020624)	365116.94	3776332.29	1.78957	(05020624)
365120.95	3776231.96	1.31085c	(06090124)	365137.01	3776115.58	1.16643c	(05121824)
365116.94	3775999.19	1.15192c	(05090224)	365104.90	3775898.86	1.18930c	(07031224)
365132.99	3775754.39	1.13318c	(05121824)	365317.60	3777247.31	1.23536c	(06070124)
365273.46	3777203.17	1.30314c	(06070124)	365100.89	3777094.81	1.16558	(06061424)
366493.48	3776063.40	3.74808	(06011924)	366465.39	3776183.80	3.32087	(06011924)
366453.35	3776308.21	2.83983	(05112724)	366449.34	3776416.57	2.36576	(07122724)
366397.17	3776561.05	2.69585c	(05101724)	366369.07	3776685.46	2.56561c	(05081024)
366369.07	3776837.96	2.63768	(05072624)	366409.21	3776962.37	2.27178	(05080724)
366457.36	3777078.76	1.97528c	(06080324)	366441.31	3777195.14	1.90635c	(05102224)
365594.52	3777500.15	1.61489c	(06082424)	365534.32	3777544.29	1.51221c	(06082424)
365646.69	3777439.95	1.65266c	(06082424)	365702.87	3777419.88	1.50667c	(07050924)
365385.83	3777435.93	1.58731	(07050124)	365329.64	3777520.21	1.41811	(07050124)
366272.76	3775373.13	1.11143	(05120824)	366373.09	3775401.22	1.22222	(06041824)
366573.75	3775473.46	1.37117	(06030424)	366124.27	3777528.24	1.13674	(07080224)
364354.78	3777168.81	0.68428	(05102424)	364481.63	3777294.00	0.76383	(07043024)
365124.08	3777445.55	0.92339c	(06070124)	365081.25	3777422.49	0.91731c	(06070124)
365048.30	3777399.43	1.00549c	(06042624)	365008.77	3777419.20	0.98701c	(06042624)
364850.63	3777346.72	0.90598	(06061424)	364794.62	3777356.60	0.83746	(06061424)
364751.79	3777323.65	0.76590	(06061424)	364722.13	3777237.99	0.92502	(07043024)
364761.67	3777241.29	0.93531	(07043024)	364797.91	3777251.17	0.90059	(07043024)
364672.72	3777343.42	0.79958	(07043024)	364666.13	3777264.35	0.90324	(07043024)
364633.18	3777274.23	0.88381	(07043024)	364590.35	3777389.55	0.76405	(07043024)
365311.87	3777458.73	1.35755	(07050124)	365272.34	3777475.21	1.16969	(07050124)
364455.27	3777435.67	0.75198	(07043024)	364346.55	3777109.50	0.67553c	(06082824)
364326.78	3777053.49	0.65931c	(06082824)	364310.31	3776994.19	0.54470c	(06082824)
364290.54	3776934.89	0.69357c	(06082224)	364900.04	3777185.28	0.92612	(07043024)
364628.44	3777199.41	0.78128	(07043024)				

```
*** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                                ***        01/26/11
                                  *** PM25                                                                  ***        10:07:51
                                                                                                                       PAGE  15
**MODELOPTs:  RegDFAULT CONC                                                   ELEV
                                                                      NODRYDPLT NOWETDPLT

                                                  *** THE SUMMARY OF HIGHEST 24-HR RESULTS ***
```

```
                              ** CONC OF PM.25    IN MICROGRAMS/M**3                          **

                                                       DATE                                                                   NETWORK
GROUP ID                         AVERAGE CONC      (YYMMDDHH)             RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG)    OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

SRCGP1   HIGH  1ST HIGH VALUE IS       3.74808  ON 06011924: AT (  366493.48,  3776063.40,   337.33,   365.00,    0.00)  DC

ALL      HIGH  1ST HIGH VALUE IS       3.74808  ON 06011924: AT (  366493.48,  3776063.40,   337.33,   365.00,    0.00)  DC


 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                             ***        01/26/11
                                   *** PM25                                                               ***        10:07:51
                                                                                                                     PAGE  16
 **MODELOPTs:  RegDFAULT CONC                                           ELEV
                                                               NODRYDPLT NOWETDPLT

 *** Message Summary : AERMOD Model Execution ***

  --------- Summary of Total Messages --------

 A Total of           0 Fatal Error Message(s)
 A Total of           0 Warning Message(s)
 A Total of        1753 Informational Message(s)

 A Total of       26280 Hours Were Processed

 A Total of        1181 Calm Hours Identified

 A Total of         572 Missing Hours Identified (  2.18 Percent)


    ******** FATAL ERROR MESSAGES ********
               ***  NONE  ***


    ********   WARNING MESSAGES   ********
               ***  NONE  ***


    ************************************
    *** AERMOD Finishes Successfully ***
    ************************************
```

```
**
****************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 6.7.1
** Lakes Environmental Software Inc.
** Date: 1/26/2011
** File: C:\Documents and Settings\jbailey\Desktop\1_19 Stone Canyon HRA\Alt2 ArMd\Alt2HRA.ADI
**
****************************************
**
**
****************************************
** AERMOD Control Pathway
****************************************
**
**
CO STARTING
   TITLEONE Stone Canyon Reservoir
   TITLETWO PM25
   MODELOPT DFAULT CONC NODRYDPLT NOWETDPLT
   AVERTIME 24
   URBANOPT 9862049
   POLLUTID PM.25
   RUNORNOT RUN
CO FINISHED
**
****************************************
** AERMOD Source Pathway
****************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
   LOCATION VOL1 VOLUME 365893.498 3776581.066 303.780
** DESCRSRC EquipExhaust
** Line Source represented by Separated Volume Sources
** ------------------------------------------------------------------------
** LINE Source ID = SLINE1
** DESCRSRC onsite haul
** Length of Side = 6.50
** Emission Rate = 0.00071
** Vertical Dimension = 5.00
** SZINIT = 2.33
** Nodes = 21
** 365849.55, 3776597.32, 303.88, 0.00, 0.0
** 365526.44, 3777395.28, 364.79, 0.00, 6.02
** ------------------------------------------------------------------------
   LOCATION L0000751 VOLUME 365849.601 3776600.565 303.99
   LOCATION L0000752 VOLUME 365849.792 3776613.511 304.00
   LOCATION L0000753 VOLUME 365849.982 3776626.457 304.00
   LOCATION L0000754 VOLUME 365850.172 3776639.402 304.00
   LOCATION L0000755 VOLUME 365850.363 3776652.348 304.00
   LOCATION L0000756 VOLUME 365850.553 3776665.294 304.00
   LOCATION L0000757 VOLUME 365846.744 3776677.529 304.00
   LOCATION L0000758 VOLUME 365842.107 3776689.618 304.00
   LOCATION L0000759 VOLUME 365837.470 3776701.706 304.00
   LOCATION L0000760 VOLUME 365832.834 3776713.794 304.00
   LOCATION L0000761 VOLUME 365828.197 3776725.883 304.00
   LOCATION L0000762 VOLUME 365823.560 3776737.971 304.00
   LOCATION L0000763 VOLUME 365817.578 3776749.386 304.08
   LOCATION L0000764 VOLUME 365810.680 3776760.342 304.22
   LOCATION L0000765 VOLUME 365803.952 3776771.375 304.41
   LOCATION L0000766 VOLUME 365800.395 3776783.824 304.57
   LOCATION L0000767 VOLUME 365796.838 3776796.273 304.62
   LOCATION L0000768 VOLUME 365793.281 3776808.722 304.60
   LOCATION L0000769 VOLUME 365789.724 3776821.171 304.56
   LOCATION L0000770 VOLUME 365786.167 3776833.619 304.49
   LOCATION L0000771 VOLUME 365781.232 3776845.257 304.42
   LOCATION L0000772 VOLUME 365772.077 3776854.412 304.37
   LOCATION L0000773 VOLUME 365762.922 3776863.567 304.29
   LOCATION L0000774 VOLUME 365753.767 3776872.722 304.15
   LOCATION L0000775 VOLUME 365744.612 3776881.877 304.38
   LOCATION L0000776 VOLUME 365732.124 3776885.003 306.03
   LOCATION L0000777 VOLUME 365719.502 3776887.888 307.71
   LOCATION L0000778 VOLUME 365707.177 3776891.345 309.38
   LOCATION L0000779 VOLUME 365697.553 3776900.006 310.80
   LOCATION L0000780 VOLUME 365687.930 3776908.667 312.26
   LOCATION L0000781 VOLUME 365678.306 3776917.328 313.77
   LOCATION L0000782 VOLUME 365666.157 3776915.359 315.46
   LOCATION L0000783 VOLUME 365653.666 3776911.953 317.22
   LOCATION L0000784 VOLUME 365641.175 3776908.546 318.96
   LOCATION L0000785 VOLUME 365628.684 3776905.139 320.69
   LOCATION L0000786 VOLUME 365616.193 3776901.733 322.40
   LOCATION L0000787 VOLUME 365603.703 3776898.326 324.10
   LOCATION L0000788 VOLUME 365591.084 3776897.880 325.91
   LOCATION L0000789 VOLUME 365578.345 3776900.196 327.81
   LOCATION L0000790 VOLUME 365565.607 3776902.512 329.70
   LOCATION L0000791 VOLUME 365555.334 3776909.994 331.43
   LOCATION L0000792 VOLUME 365545.520 3776918.439 333.12
   LOCATION L0000793 VOLUME 365535.706 3776926.884 334.81
   LOCATION L0000794 VOLUME 365525.892 3776935.328 336.50
   LOCATION L0000795 VOLUME 365516.630 3776944.306 338.16
   LOCATION L0000796 VOLUME 365508.542 3776954.416 339.88
   LOCATION L0000797 VOLUME 365500.454 3776964.526 341.59
   LOCATION L0000798 VOLUME 365502.205 3776976.125 341.70
   LOCATION L0000799 VOLUME 365506.940 3776988.176 341.18
   LOCATION L0000800 VOLUME 365514.147 3776998.018 340.20
   LOCATION L0000801 VOLUME 365525.586 3777004.081 338.61
   LOCATION L0000802 VOLUME 365537.026 3777010.144 337.12
   LOCATION L0000803 VOLUME 365548.466 3777016.207 335.63
   LOCATION L0000804 VOLUME 365559.905 3777022.270 334.14
   LOCATION L0000805 VOLUME 365571.345 3777028.333 332.65
   LOCATION L0000806 VOLUME 365582.785 3777034.397 331.16
   LOCATION L0000807 VOLUME 365594.225 3777040.460 329.67
   LOCATION L0000808 VOLUME 365605.664 3777046.523 328.06
   LOCATION L0000809 VOLUME 365615.395 3777054.359 326.73
   LOCATION L0000810 VOLUME 365621.882 3777065.564 325.99
   LOCATION L0000811 VOLUME 365622.723 3777077.594 327.02
   LOCATION L0000812 VOLUME 365619.711 3777090.186 328.84
   LOCATION L0000813 VOLUME 365616.700 3777102.778 330.67
   LOCATION L0000814 VOLUME 365613.689 3777115.370 332.51
   LOCATION L0000815 VOLUME 365610.678 3777127.962 334.36
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   LOCATION L0000816 VOLUME 365607.667 3777140.554 336.23
   LOCATION L0000817 VOLUME 365604.656 3777153.146 338.10
   LOCATION L0000818 VOLUME 365601.645 3777165.738 340.32
   LOCATION L0000819 VOLUME 365598.633 3777178.331 342.90
   LOCATION L0000820 VOLUME 365595.622 3777190.923 345.30
   LOCATION L0000821 VOLUME 365592.611 3777203.515 347.64
   LOCATION L0000822 VOLUME 365591.330 3777216.098 349.79
   LOCATION L0000823 VOLUME 365594.470 3777228.658 351.53
   LOCATION L0000824 VOLUME 365597.611 3777241.219 353.31
   LOCATION L0000825 VOLUME 365600.751 3777253.780 354.90
   LOCATION L0000826 VOLUME 365598.105 3777265.763 356.25
   LOCATION L0000827 VOLUME 365592.546 3777277.456 357.61
   LOCATION L0000828 VOLUME 365586.987 3777289.149 358.90
   LOCATION L0000829 VOLUME 365581.428 3777300.842 360.11
   LOCATION L0000830 VOLUME 365575.869 3777312.535 361.25
   LOCATION L0000831 VOLUME 365568.625 3777322.576 362.26
   LOCATION L0000832 VOLUME 365557.045 3777328.366 363.07
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** Line Source represented by Separated Volume Sources
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SRCPARAM L0001170 5.1304E-06 0.00 7.41 2.33
SRCPARAM L0001171 5.1304E-06 0.00 7.41 2.33
SRCPARAM L0001172 5.1304E-06 0.00 7.41 2.33
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SRCPARAM L0001181 5.1304E-06 0.00 7.41 2.33
SRCPARAM L0001182 5.1304E-06 0.00 7.41 2.33
SRCPARAM VOL2 0.00005 5.000 45.614 1.160
URBANSRC VOL1
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SRCGROUP SRCGP1 L0000757 L0000758 L0000759 L0000760 L0000761 L0000762
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   SRCGROUP SRCGP1 L0000769 L0000770 L0000771 L0000772 L0000773 L0000774
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   SRCGROUP SRCGP1 L0000781 L0000782 L0000783 L0000784 L0000785 L0000786
   SRCGROUP SRCGP1 L0000787 L0000788 L0000789 L0000790 L0000791 L0000792
   SRCGROUP SRCGP1 L0000793 L0000794 L0000795 L0000796 L0000797 L0000798
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   SRCGROUP SRCGP1 L0001165 L0001166 L0001167 L0001168 L0001169 L0001170
   SRCGROUP SRCGP1 L0001171 L0001172 L0001173 L0001174 L0001175 L0001176
   SRCGROUP SRCGP1 L0001177 L0001178 L0001179 L0001180 L0001181 L0001182
   SRCGROUP SRCGP1 VOL2
   SRCGROUP ALL
SO FINISHED
**
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** AERMOD Receptor Pathway
****************************************
**
**
RE STARTING
** DESCRREC "" ""
   DISCCART    365054.81   3776241.76  364.11  364.11
   DISCCART    364363.05   3777163.05  417.10  417.10
   DISCCART    365205.23   3776966.38  375.49  426.00
   DISCCART    365273.46   3776942.30  371.03  426.00
   DISCCART    365297.54   3776837.96  365.34  426.00
   DISCCART    365261.42   3776781.78  365.93  426.00
   DISCCART    365241.35   3776673.42  365.68  426.00
   DISCCART    365205.23   3776528.94  364.88  364.88
   DISCCART    365153.06   3776456.70  365.00  365.00
   DISCCART    365116.94   3776332.29  365.00  365.00
   DISCCART    365120.95   3776231.96  364.86  364.86
   DISCCART    365137.01   3776115.58  364.20  364.20
   DISCCART    365116.94   3775999.19  364.00  364.00
   DISCCART    365104.90   3775898.86  364.00  364.00
   DISCCART    365132.99   3775754.39  364.00  364.00
   DISCCART    365317.60   3777247.31  387.78  426.00
   DISCCART    365273.46   3777203.17  389.25  426.00
   DISCCART    365100.89   3777094.81  392.97  426.00
   DISCCART    366493.48   3776063.40  337.33  365.00
   DISCCART    366465.39   3776183.80  356.19  365.00
   DISCCART    366453.35   3776308.21  363.66  363.66
   DISCCART    366449.34   3776416.57  364.59  364.59
   DISCCART    366397.17   3776561.05  365.00  365.00
   DISCCART    366369.07   3776685.46  365.00  365.00
   DISCCART    366369.07   3776837.96  365.00  365.00
   DISCCART    366409.21   3776962.37  365.00  365.00
   DISCCART    366457.36   3777078.76  365.00  365.00
   DISCCART    366441.31   3777195.14  365.00  365.00
   DISCCART    365594.52   3777500.15  365.00  426.00
   DISCCART    365534.32   3777544.29  364.73  426.00
   DISCCART    365646.69   3777439.95  365.00  426.00
   DISCCART    365702.87   3777419.88  364.46  426.00
   DISCCART    365385.83   3777435.93  378.82  426.00
   DISCCART    365329.64   3777520.21  381.58  426.00
   DISCCART    366272.76   3775373.13  283.06  365.00
   DISCCART    366373.09   3775401.22  276.51  365.00
   DISCCART    366573.75   3775473.46  273.85  365.00
   DISCCART    366124.27   3777528.24  365.00  365.00
   DISCCART    364354.78   3777168.81  414.71  426.00
   DISCCART    364481.63   3777294.00  425.37  425.37
   DISCCART    365124.08   3777445.55  425.61  425.61
   DISCCART    365081.25   3777422.49  426.00  426.00
   DISCCART    365048.30   3777399.43  425.22  425.22
   DISCCART    365008.77   3777419.20  421.94  421.94
   DISCCART    364850.63   3777346.72  420.18  420.18
   DISCCART    364794.62   3777356.60  416.02  416.02
   DISCCART    364751.79   3777323.65  415.44  415.44
   DISCCART    364722.13   3777237.99  417.53  417.53
   DISCCART    364761.67   3777241.29  417.36  417.36
   DISCCART    364797.91   3777251.17  419.27  419.27
   DISCCART    364672.72   3777343.42  414.34  426.00
   DISCCART    364666.13   3777264.35  420.77  420.77
   DISCCART    364633.18   3777274.23  422.65  422.65
   DISCCART    364590.35   3777389.55  411.48  426.00
   DISCCART    365311.87   3777458.73  391.96  426.00
   DISCCART    365272.34   3777475.21  397.84  426.00
   DISCCART    364455.27   3777435.67  415.61  426.00
   DISCCART    364346.55   3777109.50  417.15  417.15
   DISCCART    364326.78   3777053.49  419.90  419.90
   DISCCART    364310.31   3776994.19  424.53  424.53
   DISCCART    364290.54   3776934.89  425.77  425.77
   DISCCART    364900.04   3777185.28  425.39  425.39
   DISCCART    364628.44   3777199.41  420.54  420.54
RE FINISHED
**
****************************************
** AERMOD Meteorology Pathway
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**
**
ME STARTING
```

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   SURFFILE "L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.SFC"
   PROFFILE "L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.PFL"
   SURFDATA 0 2005
   UAIRDATA 3190 2005
   PROFBASE 10 METERS
ME FINISHED
**
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** AERMOD Output Pathway
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**
**
OU STARTING
   RECTABLE ALLAVE 1ST
   RECTABLE 24 1ST
** Auto-Generated Plotfiles
   PLOTFILE 24 ALL 1ST ALT2HRA.AD\24H1GALL.PLT
   PLOTFILE 24 SRCGP1 1ST ALT2HRA.AD\24H1G001.PLT
OU FINISHED

 **********************************
 *** SETUP Finishes Successfully ***
 **********************************

 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                               ***        01/26/11
                                   *** PM25                                                                 ***        09:40:07
                                                                                                                       PAGE   1
 **MODELOPTs:  RegDFAULT CONC                                                ELEV
                                                                   NODRYDPLT NOWETDPLT

                                            ***     MODEL SETUP OPTIONS SUMMARY       ***
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

 **Model Is Setup For Calculation of Average CONCentration Values.

   --  DEPOSITION LOGIC  --
 **NO GAS DEPOSITION Data Provided.
 **NO PARTICLE DEPOSITION Data Provided.
 **Model Uses NO DRY DEPLETION.  DRYDPLT  =  F
 **Model Uses NO WET DEPLETION.  WETDPLT  =  F

 **Model Uses URBAN Dispersion Algorithm for the SBL for   206 Source(s),
   for Total of    1 Urban Area(s):
   Urban Population =   9862049.0 ;  Urban Roughness Length =  1.000 m

 **Model Uses Regulatory DEFAULT Options:
         1. Stack-tip Downwash.
         2. Model Accounts for ELEVated Terrain Effects.
         3. Use Calms Processing Routine.
         4. Use Missing Data Processing Routine.
         5. No Exponential Decay for URBAN/Non-SO2.
         6. Urban Roughness Length of 1.0 Meter Assumed.

 **Model Assumes No FLAGPOLE Receptor Heights.

 **Model Calculates  1 Short Term Average(s) of:  24-HR

 **This Run Includes:    206 Source(s);       2 Source Group(s); and      63 Receptor(s)

 **The Model Assumes A Pollutant Type of:  PM.25

 **Model Set To Continue RUNning After the Setup Testing.

 **Output Options Selected:
          Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE Keyword)
          Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)

 **NOTE:  The Following Flags May Appear Following CONC Values:  c for Calm Hours
                                                                  m for Missing Hours
                                                                  b for Both Calm and Missing Hours

 **Misc. Inputs:  Base Elev. for Pot. Temp. Profile (m MSL) =    10.00 ;  Decay Coef. =    0.000     ;  Rot. Angle =     0.0
                  Emission Units = GRAMS/SEC                              ;  Emission Rate Unit Factor =   0.10000E+07
                  Output Units   = MICROGRAMS/M**3

 **Approximate Storage Requirements of Model =      3.6 MB of RAM.

 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                               ***        01/26/11
                                   *** PM25                                                                 ***        09:40:07
                                                                                                                       PAGE   2
 **MODELOPTs:  RegDFAULT CONC                                                ELEV
                                                                   NODRYDPLT NOWETDPLT


                                                  *** VOLUME SOURCE DATA ***

            NUMBER EMISSION RATE                    BASE    RELEASE    INIT.    INIT.   URBAN  EMISSION RATE
   SOURCE    PART.  (GRAMS/SEC)     X         Y     ELEV.   HEIGHT      SY       SZ     SOURCE  SCALAR VARY
     ID      CATS.               (METERS) (METERS) (METERS) (METERS) (METERS) (METERS)           BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

   VOL1         0   0.89800E-01  365893.5 3776581.1   303.8     5.00    45.58     1.16     YES
   L0000751     0   0.79775E-05  365849.6 3776600.6   304.0     0.00     6.02     2.33     YES
   L0000752     0   0.79775E-05  365849.8 3776613.5   304.0     0.00     6.02     2.33     YES
   L0000753     0   0.79775E-05  365850.0 3776626.5   304.0     0.00     6.02     2.33     YES
   L0000754     0   0.79775E-05  365850.2 3776639.4   304.0     0.00     6.02     2.33     YES
   L0000755     0   0.79775E-05  365850.4 3776652.3   304.0     0.00     6.02     2.33     YES
   L0000756     0   0.79775E-05  365850.6 3776665.3   304.0     0.00     6.02     2.33     YES
   L0000757     0   0.79775E-05  365846.7 3776677.5   304.0     0.00     6.02     2.33     YES
   L0000758     0   0.79775E-05  365842.1 3776689.6   304.0     0.00     6.02     2.33     YES
   L0000759     0   0.79775E-05  365837.5 3776701.7   304.0     0.00     6.02     2.33     YES
   L0000760     0   0.79775E-05  365832.8 3776713.8   304.0     0.00     6.02     2.33     YES
   L0000761     0   0.79775E-05  365828.2 3776725.9   304.0     0.00     6.02     2.33     YES
   L0000762     0   0.79775E-05  365823.6 3776738.0   304.0     0.00     6.02     2.33     YES
   L0000763     0   0.79775E-05  365817.6 3776749.4   304.1     0.00     6.02     2.33     YES
   L0000764     0   0.79775E-05  365810.7 3776760.3   304.2     0.00     6.02     2.33     YES
   L0000765     0   0.79775E-05  365804.0 3776771.4   304.4     0.00     6.02     2.33     YES
   L0000766     0   0.79775E-05  365800.4 3776783.8   304.6     0.00     6.02     2.33     YES
   L0000767     0   0.79775E-05  365796.8 3776796.3   304.6     0.00     6.02     2.33     YES
   L0000768     0   0.79775E-05  365793.3 3776808.7   304.6     0.00     6.02     2.33     YES
   L0000769     0   0.79775E-05  365789.7 3776821.2   304.6     0.00     6.02     2.33     YES
   L0000770     0   0.79775E-05  365786.2 3776833.6   304.5     0.00     6.02     2.33     YES
   L0000771     0   0.79775E-05  365781.2 3776845.3   304.4     0.00     6.02     2.33     YES
   L0000772     0   0.79775E-05  365772.1 3776854.4   304.4     0.00     6.02     2.33     YES
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L0000773	0	0.79775E-05	365762.9	3776863.6	304.3	0.00	6.02	2.33	YES	
L0000774	0	0.79775E-05	365753.8	3776872.7	304.2	0.00	6.02	2.33	YES	
L0000775	0	0.79775E-05	365744.6	3776881.9	304.4	0.00	6.02	2.33	YES	
L0000776	0	0.79775E-05	365732.1	3776885.0	306.0	0.00	6.02	2.33	YES	
L0000777	0	0.79775E-05	365719.5	3776887.9	307.7	0.00	6.02	2.33	YES	
L0000778	0	0.79775E-05	365707.2	3776891.3	309.4	0.00	6.02	2.33	YES	
L0000779	0	0.79775E-05	365697.6	3776900.0	310.8	0.00	6.02	2.33	YES	
L0000780	0	0.79775E-05	365687.9	3776908.7	312.3	0.00	6.02	2.33	YES	
L0000781	0	0.79775E-05	365678.3	3776917.3	313.8	0.00	6.02	2.33	YES	
L0000782	0	0.79775E-05	365666.2	3776915.4	315.5	0.00	6.02	2.33	YES	
L0000783	0	0.79775E-05	365653.7	3776912.0	317.2	0.00	6.02	2.33	YES	
L0000784	0	0.79775E-05	365641.2	3776908.5	319.0	0.00	6.02	2.33	YES	
L0000785	0	0.79775E-05	365628.7	3776905.1	320.7	0.00	6.02	2.33	YES	
L0000786	0	0.79775E-05	365616.2	3776901.7	322.4	0.00	6.02	2.33	YES	
L0000787	0	0.79775E-05	365603.7	3776898.3	324.1	0.00	6.02	2.33	YES	
L0000788	0	0.79775E-05	365591.1	3776897.9	325.9	0.00	6.02	2.33	YES	
L0000789	0	0.79775E-05	365578.3	3776900.2	327.8	0.00	6.02	2.33	YES	

*** AERMOD - VERSION 09292 ***   *** Stone Canyon Reservoir   ***   01/26/11
*** PM25   ***   09:40:07
PAGE 3

**MODELOPTs: RegDFAULT CONC   ELEV
NODRYDPLT NOWETDPLT

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000790	0	0.79775E-05	365565.6	3776902.5	329.7	0.00	6.02	2.33	YES	
L0000791	0	0.79775E-05	365555.3	3776910.0	331.4	0.00	6.02	2.33	YES	
L0000792	0	0.79775E-05	365545.5	3776918.4	333.1	0.00	6.02	2.33	YES	
L0000793	0	0.79775E-05	365535.7	3776926.9	334.8	0.00	6.02	2.33	YES	
L0000794	0	0.79775E-05	365525.9	3776935.3	336.5	0.00	6.02	2.33	YES	
L0000795	0	0.79775E-05	365516.6	3776944.3	338.2	0.00	6.02	2.33	YES	
L0000796	0	0.79775E-05	365508.5	3776954.4	339.9	0.00	6.02	2.33	YES	
L0000797	0	0.79775E-05	365500.5	3776964.5	341.6	0.00	6.02	2.33	YES	
L0000798	0	0.79775E-05	365502.2	3776976.1	341.7	0.00	6.02	2.33	YES	
L0000799	0	0.79775E-05	365506.9	3776988.2	341.2	0.00	6.02	2.33	YES	
L0000800	0	0.79775E-05	365514.1	3776998.0	340.2	0.00	6.02	2.33	YES	
L0000801	0	0.79775E-05	365525.6	3777004.1	338.6	0.00	6.02	2.33	YES	
L0000802	0	0.79775E-05	365537.0	3777010.1	337.1	0.00	6.02	2.33	YES	
L0000803	0	0.79775E-05	365548.5	3777016.2	335.6	0.00	6.02	2.33	YES	
L0000804	0	0.79775E-05	365559.9	3777022.3	334.1	0.00	6.02	2.33	YES	
L0000805	0	0.79775E-05	365571.3	3777028.3	332.7	0.00	6.02	2.33	YES	
L0000806	0	0.79775E-05	365582.8	3777034.4	331.2	0.00	6.02	2.33	YES	
L0000807	0	0.79775E-05	365594.2	3777040.5	329.7	0.00	6.02	2.33	YES	
L0000808	0	0.79775E-05	365605.7	3777046.5	328.1	0.00	6.02	2.33	YES	
L0000809	0	0.79775E-05	365615.4	3777054.4	326.7	0.00	6.02	2.33	YES	
L0000810	0	0.79775E-05	365621.9	3777065.6	326.0	0.00	6.02	2.33	YES	
L0000811	0	0.79775E-05	365622.7	3777077.6	327.0	0.00	6.02	2.33	YES	
L0000812	0	0.79775E-05	365619.7	3777090.2	328.8	0.00	6.02	2.33	YES	
L0000813	0	0.79775E-05	365616.7	3777102.8	330.7	0.00	6.02	2.33	YES	
L0000814	0	0.79775E-05	365613.7	3777115.4	332.5	0.00	6.02	2.33	YES	
L0000815	0	0.79775E-05	365610.7	3777128.0	334.4	0.00	6.02	2.33	YES	
L0000816	0	0.79775E-05	365607.7	3777140.6	336.2	0.00	6.02	2.33	YES	
L0000817	0	0.79775E-05	365604.7	3777153.1	338.1	0.00	6.02	2.33	YES	
L0000818	0	0.79775E-05	365601.6	3777165.7	340.3	0.00	6.02	2.33	YES	
L0000819	0	0.79775E-05	365598.6	3777178.3	342.9	0.00	6.02	2.33	YES	
L0000820	0	0.79775E-05	365595.6	3777190.9	345.3	0.00	6.02	2.33	YES	
L0000821	0	0.79775E-05	365592.6	3777203.5	347.6	0.00	6.02	2.33	YES	
L0000822	0	0.79775E-05	365591.3	3777216.1	349.8	0.00	6.02	2.33	YES	
L0000823	0	0.79775E-05	365594.5	3777228.7	351.5	0.00	6.02	2.33	YES	
L0000824	0	0.79775E-05	365597.6	3777241.2	353.3	0.00	6.02	2.33	YES	
L0000825	0	0.79775E-05	365600.8	3777253.8	354.9	0.00	6.02	2.33	YES	
L0000826	0	0.79775E-05	365598.1	3777265.8	356.2	0.00	6.02	2.33	YES	
L0000827	0	0.79775E-05	365592.5	3777277.5	357.6	0.00	6.02	2.33	YES	
L0000828	0	0.79775E-05	365587.0	3777289.1	358.9	0.00	6.02	2.33	YES	
L0000829	0	0.79775E-05	365581.4	3777300.8	360.1	0.00	6.02	2.33	YES	

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**MODELOPTs: RegDFAULT CONC   ELEV
NODRYDPLT NOWETDPLT

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000830	0	0.79775E-05	365575.9	3777312.5	361.2	0.00	6.02	2.33	YES	
L0000831	0	0.79775E-05	365568.6	3777322.6	362.3	0.00	6.02	2.33	YES	
L0000832	0	0.79775E-05	365557.0	3777328.4	363.1	0.00	6.02	2.33	YES	
L0000833	0	0.79775E-05	365545.5	3777334.2	363.8	0.00	6.02	2.33	YES	
L0000834	0	0.79775E-05	365533.9	3777339.9	364.4	0.00	6.02	2.33	YES	
L0000835	0	0.79775E-05	365522.3	3777345.7	365.1	0.00	6.02	2.33	YES	
L0000836	0	0.79775E-05	365515.7	3777356.4	365.5	0.00	6.02	2.33	YES	
L0000837	0	0.79775E-05	365515.5	3777368.3	365.5	0.00	6.02	2.33	YES	
L0000838	0	0.79775E-05	365520.3	3777380.3	365.2	0.00	6.02	2.33	YES	
L0000839	0	0.79775E-05	365525.2	3777392.3	365.0	0.00	6.02	2.33	YES	
L0001068	0	0.51304E-05	365516.3	3777395.0	365.5	0.00	7.41	2.33	YES	
L0001069	0	0.51304E-05	365500.4	3777394.0	366.4	0.00	7.41	2.33	YES	
L0001070	0	0.51304E-05	365484.5	3777392.9	367.3	0.00	7.41	2.33	YES	
L0001071	0	0.51304E-05	365468.6	3777391.8	368.3	0.00	7.41	2.33	YES	
L0001072	0	0.51304E-05	365452.7	3777390.8	369.2	0.00	7.41	2.33	YES	
L0001073	0	0.51304E-05	365437.4	3777387.5	371.2	0.00	7.41	2.33	YES	
L0001074	0	0.51304E-05	365423.0	3777380.7	373.8	0.00	7.41	2.33	YES	
L0001075	0	0.51304E-05	365407.4	3777381.5	376.5	0.00	7.41	2.33	YES	
L0001076	0	0.51304E-05	365391.5	3777383.4	379.2	0.00	7.41	2.33	YES	
L0001077	0	0.51304E-05	365375.9	3777386.5	381.8	0.00	7.41	2.33	YES	
L0001078	0	0.51304E-05	365360.4	3777390.1	385.1	0.00	7.41	2.33	YES	
L0001079	0	0.51304E-05	365347.7	3777398.9	387.9	0.00	7.41	2.33	YES	
L0001080	0	0.51304E-05	365336.0	3777409.8	390.3	0.00	7.41	2.33	YES	
L0001081	0	0.51304E-05	365323.1	3777418.7	392.9	0.00	7.41	2.33	YES	
L0001082	0	0.51304E-05	365308.5	3777425.3	395.9	0.00	7.41	2.33	YES	
L0001083	0	0.51304E-05	365293.8	3777431.3	398.8	0.00	7.41	2.33	YES	
L0001084	0	0.51304E-05	365278.4	3777435.3	401.9	0.00	7.41	2.33	YES	
L0001085	0	0.51304E-05	365263.0	3777439.4	405.1	0.00	7.41	2.33	YES	
L0001086	0	0.51304E-05	365248.9	3777446.4	407.4	0.00	7.41	2.33	YES	

L0001087	0	0.51304E-05	365235.4	3777454.8	408.9	0.00	7.41	2.33	YES	
L0001088	0	0.51304E-05	365221.8	3777463.2	410.3	0.00	7.41	2.33	YES	
L0001089	0	0.51304E-05	365206.5	3777467.2	412.0	0.00	7.41	2.33	YES	
L0001090	0	0.51304E-05	365190.9	3777470.4	413.4	0.00	7.41	2.33	YES	
L0001091	0	0.51304E-05	365175.8	3777470.6	415.3	0.00	7.41	2.33	YES	
L0001092	0	0.51304E-05	365161.9	3777462.8	418.8	0.00	7.41	2.33	YES	
L0001093	0	0.51304E-05	365151.6	3777452.0	422.6	0.00	7.41	2.33	YES	
L0001094	0	0.51304E-05	365146.3	3777437.0	425.2	0.00	7.41	2.33	YES	
L0001095	0	0.51304E-05	365141.0	3777421.9	425.9	0.00	7.41	2.33	YES	
L0001096	0	0.51304E-05	365131.2	3777409.6	426.0	0.00	7.41	2.33	YES	
L0001097	0	0.51304E-05	365120.7	3777397.6	426.0	0.00	7.41	2.33	YES	

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**MODELOPTs: RegDFAULT CONC   ELEV
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*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001098	0	0.51304E-05	365109.9	3777385.9	426.0	0.00	7.41	2.33	YES	
L0001099	0	0.51304E-05	365096.7	3777377.0	426.0	0.00	7.41	2.33	YES	
L0001100	0	0.51304E-05	365083.5	3777368.0	426.0	0.00	7.41	2.33	YES	
L0001101	0	0.51304E-05	365070.3	3777359.1	426.0	0.00	7.41	2.33	YES	
L0001102	0	0.51304E-05	365057.2	3777350.1	425.8	0.00	7.41	2.33	YES	
L0001103	0	0.51304E-05	365041.6	3777352.6	426.0	0.00	7.41	2.33	YES	
L0001104	0	0.51304E-05	365025.9	3777355.5	425.9	0.00	7.41	2.33	YES	
L0001105	0	0.51304E-05	365010.2	3777358.3	425.7	0.00	7.41	2.33	YES	
L0001106	0	0.51304E-05	364994.6	3777361.2	425.4	0.00	7.41	2.33	YES	
L0001107	0	0.51304E-05	364978.9	3777364.0	425.1	0.00	7.41	2.33	YES	
L0001108	0	0.51304E-05	364963.2	3777366.9	424.7	0.00	7.41	2.33	YES	
L0001109	0	0.51304E-05	364947.7	3777366.5	424.7	0.00	7.41	2.33	YES	
L0001110	0	0.51304E-05	364932.3	3777362.3	425.1	0.00	7.41	2.33	YES	
L0001111	0	0.51304E-05	364919.1	3777354.5	426.0	0.00	7.41	2.33	YES	
L0001112	0	0.51304E-05	364908.0	3777343.1	425.9	0.00	7.41	2.33	YES	
L0001113	0	0.51304E-05	364896.9	3777331.6	424.9	0.00	7.41	2.33	YES	
L0001114	0	0.51304E-05	364883.4	3777323.9	423.7	0.00	7.41	2.33	YES	
L0001115	0	0.51304E-05	364868.4	3777318.7	422.5	0.00	7.41	2.33	YES	
L0001116	0	0.51304E-05	364853.4	3777313.4	421.3	0.00	7.41	2.33	YES	
L0001117	0	0.51304E-05	364838.4	3777308.1	420.1	0.00	7.41	2.33	YES	
L0001118	0	0.51304E-05	364823.1	3777303.5	419.3	0.00	7.41	2.33	YES	
L0001119	0	0.51304E-05	364811.4	3777294.6	419.1	0.00	7.41	2.33	YES	
L0001120	0	0.51304E-05	364803.6	3777280.8	419.3	0.00	7.41	2.33	YES	
L0001121	0	0.51304E-05	364790.4	3777273.0	419.1	0.00	7.41	2.33	YES	
L0001122	0	0.51304E-05	364775.6	3777266.9	418.7	0.00	7.41	2.33	YES	
L0001123	0	0.51304E-05	364759.9	3777267.4	418.1	0.00	7.41	2.33	YES	
L0001124	0	0.51304E-05	364744.4	3777270.1	418.0	0.00	7.41	2.33	YES	
L0001125	0	0.51304E-05	364730.2	3777277.3	417.9	0.00	7.41	2.33	YES	
L0001126	0	0.51304E-05	364715.9	3777284.4	417.8	0.00	7.41	2.33	YES	
L0001127	0	0.51304E-05	364701.7	3777291.5	417.6	0.00	7.41	2.33	YES	
L0001128	0	0.51304E-05	364687.0	3777297.6	417.4	0.00	7.41	2.33	YES	
L0001129	0	0.51304E-05	364672.1	3777303.2	417.5	0.00	7.41	2.33	YES	
L0001130	0	0.51304E-05	364657.1	3777308.7	418.0	0.00	7.41	2.33	YES	
L0001131	0	0.51304E-05	364642.2	3777314.3	418.4	0.00	7.41	2.33	YES	
L0001132	0	0.51304E-05	364627.9	3777320.9	418.6	0.00	7.41	2.33	YES	
L0001133	0	0.51304E-05	364614.6	3777329.8	418.4	0.00	7.41	2.33	YES	
L0001134	0	0.51304E-05	364601.3	3777338.6	418.2	0.00	7.41	2.33	YES	
L0001135	0	0.51304E-05	364588.1	3777347.4	418.0	0.00	7.41	2.33	YES	
L0001136	0	0.51304E-05	364574.8	3777356.3	418.0	0.00	7.41	2.33	YES	
L0001137	0	0.51304E-05	364559.6	3777360.7	418.5	0.00	7.41	2.33	YES	

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**MODELOPTs: RegDFAULT CONC   ELEV
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*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001138	0	0.51304E-05	364544.2	3777364.8	418.9	0.00	7.41	2.33	YES	
L0001139	0	0.51304E-05	364528.8	3777368.8	419.2	0.00	7.41	2.33	YES	
L0001140	0	0.51304E-05	364513.0	3777368.0	420.4	0.00	7.41	2.33	YES	
L0001141	0	0.51304E-05	364497.2	3777366.3	421.9	0.00	7.41	2.33	YES	
L0001142	0	0.51304E-05	364481.4	3777364.6	423.2	0.00	7.41	2.33	YES	
L0001143	0	0.51304E-05	364465.9	3777361.7	424.7	0.00	7.41	2.33	YES	
L0001144	0	0.51304E-05	364451.4	3777355.0	425.8	0.00	7.41	2.33	YES	
L0001145	0	0.51304E-05	364436.9	3777348.4	426.0	0.00	7.41	2.33	YES	
L0001146	0	0.51304E-05	364422.4	3777341.8	426.0	0.00	7.41	2.33	YES	
L0001147	0	0.51304E-05	364410.9	3777331.0	426.0	0.00	7.41	2.33	YES	
L0001148	0	0.51304E-05	364400.0	3777319.4	426.0	0.00	7.41	2.33	YES	
L0001149	0	0.51304E-05	364389.6	3777307.4	426.0	0.00	7.41	2.33	YES	
L0001150	0	0.51304E-05	364381.7	3777293.6	426.0	0.00	7.41	2.33	YES	
L0001151	0	0.51304E-05	364373.7	3777279.8	426.0	0.00	7.41	2.33	YES	
L0001152	0	0.51304E-05	364365.8	3777266.0	424.2	0.00	7.41	2.33	YES	
L0001153	0	0.51304E-05	364357.8	3777252.2	420.1	0.00	7.41	2.33	YES	
L0001154	0	0.51304E-05	364349.9	3777238.4	416.3	0.00	7.41	2.33	YES	
L0001155	0	0.51304E-05	364341.9	3777224.6	412.8	0.00	7.41	2.33	YES	
L0001156	0	0.51304E-05	364334.0	3777210.8	409.5	0.00	7.41	2.33	YES	
L0001157	0	0.51304E-05	364326.0	3777197.0	406.5	0.00	7.41	2.33	YES	
L0001158	0	0.51304E-05	364318.1	3777183.2	403.8	0.00	7.41	2.33	YES	
L0001159	0	0.51304E-05	364310.1	3777169.4	402.9	0.00	7.41	2.33	YES	
L0001160	0	0.51304E-05	364302.2	3777155.6	403.5	0.00	7.41	2.33	YES	
L0001161	0	0.51304E-05	364293.2	3777142.4	404.3	0.00	7.41	2.33	YES	
L0001162	0	0.51304E-05	364284.2	3777129.3	403.2	0.00	7.41	2.33	YES	
L0001163	0	0.51304E-05	364275.1	3777116.2	400.7	0.00	7.41	2.33	YES	
L0001164	0	0.51304E-05	364266.0	3777103.1	397.5	0.00	7.41	2.33	YES	
L0001165	0	0.51304E-05	364256.9	3777090.0	393.7	0.00	7.41	2.33	YES	
L0001166	0	0.51304E-05	364247.8	3777076.9	390.5	0.00	7.41	2.33	YES	
L0001167	0	0.51304E-05	364238.8	3777063.8	388.2	0.00	7.41	2.33	YES	
L0001168	0	0.51304E-05	364229.7	3777050.7	386.7	0.00	7.41	2.33	YES	
L0001169	0	0.51304E-05	364220.6	3777037.7	385.9	0.00	7.41	2.33	YES	
L0001170	0	0.51304E-05	364211.4	3777024.7	385.8	0.00	7.41	2.33	YES	
L0001171	0	0.51304E-05	364200.8	3777012.7	386.4	0.00	7.41	2.33	YES	
L0001172	0	0.51304E-05	364190.3	3777000.8	386.0	0.00	7.41	2.33	YES	

L0001173	0	0.51304E-05	364176.8	3776992.5	382.4	0.00	7.41	2.33	YES	
L0001174	0	0.51304E-05	364162.8	3776985.0	377.6	0.00	7.41	2.33	YES	
L0001175	0	0.51304E-05	364148.8	3776977.4	371.8	0.00	7.41	2.33	YES	
L0001176	0	0.51304E-05	364134.8	3776969.8	365.1	0.00	7.41	2.33	YES	
L0001177	0	0.51304E-05	364120.4	3776963.6	364.9	0.00	7.41	2.33	YES	

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**MODELOPTs: RegDFAULT CONC   ELEV
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*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001178	0	0.51304E-05	364104.5	3776962.9	364.8	0.00	7.41	2.33	YES	
L0001179	0	0.51304E-05	364088.6	3776962.1	364.6	0.00	7.41	2.33	YES	
L0001180	0	0.51304E-05	364072.7	3776961.4	364.5	0.00	7.41	2.33	YES	
L0001181	0	0.51304E-05	364056.7	3776960.6	364.4	0.00	7.41	2.33	YES	
L0001182	0	0.51304E-05	364040.8	3776959.8	364.3	0.00	7.41	2.33	YES	
VOL2	0	0.50000E-04	365892.9	3776580.8	303.8	5.00	45.61	1.16	YES	

*** AERMOD - VERSION 09292 ***   *** Stone Canyon Reservoir   *** 01/26/11
*** PM25   *** 09:40:07
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**MODELOPTs: RegDFAULT CONC   ELEV
NODRYDPLT NOWETDPLT

*** SOURCE IDs DEFINING SOURCE GROUPS ***

GROUP ID   SOURCE IDs

SRCGP1   VOL1   , L0000751, L0000752, L0000753, L0000754, L0000755, L0000756, L0000757, L0000758, L0000759, L0000760, L0000761,

L0000762, L0000763, L0000764, L0000765, L0000766, L0000767, L0000768, L0000769, L0000770, L0000771, L0000772, L0000773,

L0000774, L0000775, L0000776, L0000777, L0000778, L0000779, L0000780, L0000781, L0000782, L0000783, L0000784, L0000785,

L0000786, L0000787, L0000788, L0000789, L0000790, L0000791, L0000792, L0000793, L0000794, L0000795, L0000796, L0000797,

L0000798, L0000799, L0000800, L0000801, L0000802, L0000803, L0000804, L0000805, L0000806, L0000807, L0000808, L0000809,

L0000810, L0000811, L0000812, L0000813, L0000814, L0000815, L0000816, L0000817, L0000818, L0000819, L0000820, L0000821,

L0000822, L0000823, L0000824, L0000825, L0000826, L0000827, L0000828, L0000829, L0000830, L0000831, L0000832, L0000833,

L0000834, L0000835, L0000836, L0000837, L0000838, L0000839, L0001068, L0001069, L0001070, L0001071, L0001072, L0001073,

L0001074, L0001075, L0001076, L0001077, L0001078, L0001079, L0001080, L0001081, L0001082, L0001083, L0001084, L0001085,

L0001086, L0001087, L0001088, L0001089, L0001090, L0001091, L0001092, L0001093, L0001094, L0001095, L0001096, L0001097,

L0001098, L0001099, L0001100, L0001101, L0001102, L0001103, L0001104, L0001105, L0001106, L0001107, L0001108, L0001109,

L0001110, L0001111, L0001112, L0001113, L0001114, L0001115, L0001116, L0001117, L0001118, L0001119, L0001120, L0001121,

L0001122, L0001123, L0001124, L0001125, L0001126, L0001127, L0001128, L0001129, L0001130, L0001131, L0001132, L0001133,

L0001134, L0001135, L0001136, L0001137, L0001138, L0001139, L0001140, L0001141, L0001142, L0001143, L0001144, L0001145,

L0001146, L0001147, L0001148, L0001149, L0001150, L0001151, L0001152, L0001153, L0001154, L0001155, L0001156, L0001157,

L0001158, L0001159, L0001160, L0001161, L0001162, L0001163, L0001164, L0001165, L0001166, L0001167, L0001168, L0001169,

L0001170, L0001171, L0001172, L0001173, L0001174, L0001175, L0001176, L0001177, L0001178, L0001179, L0001180, L0001181,

L0001182, VOL2   ,

ALL   VOL1   , L0000751, L0000752, L0000753, L0000754, L0000755, L0000756, L0000757, L0000758, L0000759, L0000760, L0000761,

L0000762, L0000763, L0000764, L0000765, L0000766, L0000767, L0000768, L0000769, L0000770, L0000771, L0000772, L0000773,

*** AERMOD - VERSION 09292 ***   *** Stone Canyon Reservoir   *** 01/26/11
*** PM25   *** 09:40:07
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**MODELOPTs: RegDFAULT CONC   ELEV
NODRYDPLT NOWETDPLT

*** SOURCE IDs DEFINING SOURCE GROUPS ***

GROUP ID   SOURCE IDs

L0000774, L0000775, L0000776, L0000777, L0000778, L0000779, L0000780, L0000781, L0000782, L0000783, L0000784, L0000785,

L0000786, L0000787, L0000788, L0000789, L0000790, L0000791, L0000792, L0000793, L0000794, L0000795, L0000796, L0000797,

L0000798, L0000799, L0000800, L0000801, L0000802, L0000803, L0000804, L0000805, L0000806, L0000807, L0000808, L0000809,

L0000810, L0000811, L0000812, L0000813, L0000814, L0000815, L0000816, L0000817, L0000818, L0000819, L0000820, L0000821,

L0000822, L0000823, L0000824, L0000825, L0000826, L0000827, L0000828, L0000829, L0000830, L0000831, L0000832, L0000833,

L0000834, L0000835, L0000836, L0000837, L0000838, L0000839, L0001068, L0001069, L0001070, L0001071, L0001072, L0001073,

L0001074, L0001075, L0001076, L0001077, L0001078, L0001079, L0001080, L0001081, L0001082, L0001083, L0001084, L0001085,

L0001086, L0001087, L0001088, L0001089, L0001090, L0001091, L0001092, L0001093, L0001094, L0001095, L0001096, L0001097,

L0001098, L0001099, L0001100, L0001101, L0001102, L0001103, L0001104, L0001105, L0001106, L0001107, L0001108, L0001109,

L0001110, L0001111, L0001112, L0001113, L0001114, L0001115, L0001116, L0001117, L0001118, L0001119, L0001120, L0001121,

L0001122, L0001123, L0001124, L0001125, L0001126, L0001127, L0001128, L0001129, L0001130, L0001131, L0001132, L0001133,

L0001134, L0001135, L0001136, L0001137, L0001138, L0001139, L0001140, L0001141, L0001142, L0001143, L0001144, L0001145,

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          L0001146, L0001147, L0001148, L0001149, L0001150, L0001151, L0001152, L0001153, L0001154, L0001155, L0001156, L0001157,

          L0001158, L0001159, L0001160, L0001161, L0001162, L0001163, L0001164, L0001165, L0001166, L0001167, L0001168, L0001169,

          L0001170, L0001171, L0001172, L0001173, L0001174, L0001175, L0001176, L0001177, L0001178, L0001179, L0001180, L0001181,

          L0001182, VOL2    ,
*** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                                ***        01/26/11
                                  *** PM25                                                                  ***        09:40:07
                                                                                                                       PAGE  10
**MODELOPTs:  RegDFAULT CONC                                          ELEV
                                                                 NODRYDPLT NOWETDPLT

                                         *** DISCRETE CARTESIAN RECEPTORS ***
                                        (X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
                                                       (METERS)

    ( 365054.8, 3776241.8,     364.1,     364.1,       0.0);         ( 364363.0, 3777163.0,     417.1,     417.1,       0.0);
    ( 365205.2, 3776966.4,     375.5,     426.0,       0.0);         ( 365273.5, 3776942.3,     371.0,     426.0,       0.0);
    ( 365297.5, 3776838.0,     365.3,     426.0,       0.0);         ( 365261.4, 3776781.8,     365.9,     426.0,       0.0);
    ( 365241.3, 3776673.4,     365.7,     426.0,       0.0);         ( 365205.2, 3776528.9,     364.9,     364.9,       0.0);
    ( 365153.1, 3776456.7,     365.0,     365.0,       0.0);         ( 365116.9, 3776332.3,     365.0,     365.0,       0.0);
    ( 365121.0, 3776232.0,     364.9,     364.9,       0.0);         ( 365137.0, 3776115.6,     364.2,     364.2,       0.0);
    ( 365116.9, 3775999.2,     364.0,     364.0,       0.0);         ( 365104.9, 3775898.9,     364.0,     364.0,       0.0);
    ( 365133.0, 3775754.4,     364.0,     364.0,       0.0);         ( 365317.6, 3777247.3,     387.8,     426.0,       0.0);
    ( 365273.5, 3777203.2,     389.2,     426.0,       0.0);         ( 365100.9, 3777094.8,     393.0,     426.0,       0.0);
    ( 366493.5, 3776063.4,     337.3,     365.0,       0.0);         ( 366465.4, 3776183.8,     356.2,     365.0,       0.0);
    ( 366453.3, 3776308.2,     363.7,     363.7,       0.0);         ( 366449.3, 3776416.6,     364.6,     364.6,       0.0);
    ( 366397.2, 3776561.0,     365.0,     365.0,       0.0);         ( 366369.1, 3776685.5,     365.0,     365.0,       0.0);
    ( 366369.1, 3776838.0,     365.0,     365.0,       0.0);         ( 366409.2, 3776962.4,     365.0,     365.0,       0.0);
    ( 366457.4, 3777078.8,     365.0,     365.0,       0.0);         ( 366441.3, 3777195.1,     365.0,     365.0,       0.0);
    ( 365594.5, 3777500.1,     365.0,     426.0,       0.0);         ( 365534.3, 3777544.3,     364.7,     426.0,       0.0);
    ( 365646.7, 3777439.9,     365.0,     426.0,       0.0);         ( 365702.9, 3777419.9,     364.5,     426.0,       0.0);
    ( 365385.8, 3777435.9,     378.8,     426.0,       0.0);         ( 365329.6, 3777520.2,     381.6,     426.0,       0.0);
    ( 366272.8, 3775373.1,     283.1,     365.0,       0.0);         ( 366373.1, 3775401.2,     276.5,     365.0,       0.0);
    ( 366573.8, 3775473.5,     273.9,     365.0,       0.0);         ( 366124.3, 3777528.2,     365.0,     365.0,       0.0);
    ( 364354.8, 3777168.8,     414.7,     426.0,       0.0);         ( 364481.6, 3777294.0,     425.4,     425.4,       0.0);
    ( 365124.1, 3777445.5,     425.6,     425.6,       0.0);         ( 365081.2, 3777422.5,     426.0,     426.0,       0.0);
    ( 365048.3, 3777399.4,     425.2,     425.2,       0.0);         ( 365008.8, 3777419.2,     421.9,     421.9,       0.0);
    ( 364850.6, 3777346.7,     420.2,     420.2,       0.0);         ( 364794.6, 3777356.6,     416.0,     416.0,       0.0);
    ( 364751.8, 3777323.6,     415.4,     415.4,       0.0);         ( 364722.1, 3777238.0,     417.5,     417.5,       0.0);
    ( 364761.7, 3777241.3,     417.4,     417.4,       0.0);         ( 364797.9, 3777251.2,     419.3,     419.3,       0.0);
    ( 364672.7, 3777343.4,     414.3,     426.0,       0.0);         ( 364666.1, 3777264.3,     420.8,     420.8,       0.0);
    ( 364633.2, 3777274.2,     422.7,     422.7,       0.0);         ( 364590.3, 3777389.5,     411.5,     426.0,       0.0);
    ( 365311.9, 3777458.7,     392.0,     426.0,       0.0);         ( 365272.3, 3777475.2,     397.8,     426.0,       0.0);
    ( 364455.3, 3777435.7,     415.6,     426.0,       0.0);         ( 364346.5, 3777109.5,     417.2,     417.2,       0.0);
    ( 364326.8, 3777053.5,     419.9,     419.9,       0.0);         ( 364310.3, 3776994.2,     424.5,     424.5,       0.0);
    ( 364290.5, 3776934.9,     425.8,     425.8,       0.0);         ( 364900.0, 3777185.3,     425.4,     425.4,       0.0);
    ( 364628.4, 3777199.4,     420.5,     420.5,       0.0);
*** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                                ***        01/26/11
                                  *** PM25                                                                  ***        09:40:07
                                                                                                                       PAGE  11
**MODELOPTs:  RegDFAULT CONC                                          ELEV
                                                                 NODRYDPLT NOWETDPLT

                                          *** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***
                                                             (1=YES; 0=NO)

           1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1

               NOTE:  METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.


                                *** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
                                                          (METERS/SEC)

                                                  1.54,   3.09,   5.14,   8.23,  10.80,
*** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                                ***        01/26/11
                                  *** PM25                                                                  ***        09:40:07
                                                                                                                       PAGE  12
**MODELOPTs:  RegDFAULT CONC                                          ELEV
                                                                 NODRYDPLT NOWETDPLT

                                   *** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

  Surface file:   L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.SFC     Met Version:  06341
  Profile file:   L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.PFL
  Surface format: FREE
  Profile format: FREE
  Surface station no.:        0                 Upper air station no.:     3190
                Name: UNKNOWN                                  Name: UNKNOWN
                Year:   2005                                   Year:   2005

 First 24 hours of scalar data
 YR MO DY JDY HR     H0     U*     W*  DT/DZ ZICNV ZIMCH  M-O LEN    Z0  BOWEN ALBEDO  REF WS   WD     HT  REF TA     HT
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 05 01 01   1 01   -0.9  0.033 -9.000 -9.000 -999.   14.      3.7  0.45   1.00   1.00    0.50  321.    9.1  281.1    5.5
 05 01 01   1 02   -0.9  0.033 -9.000 -9.000 -999.   14.      3.8  0.45   1.00   1.00    0.50  320.    9.1  280.8    5.5
 05 01 01   1 03   -0.9  0.033 -9.000 -9.000 -999.   14.      3.7  0.45   1.00   1.00    0.50  323.    9.1  280.9    5.5
 05 01 01   1 04   -1.3  0.040 -9.000 -9.000 -999.   18.      4.4  0.45   1.00   1.00    0.60  316.    9.1  280.8    5.5
 05 01 01   1 05   -1.3  0.040 -9.000 -9.000 -999.   18.      4.4  0.45   1.00   1.00    0.60  322.    9.1  280.4    5.5
 05 01 01   1 06   -0.3  0.020 -9.000 -9.000 -999.    6.      2.3  0.45   1.00   1.00    0.30  352.    9.1  279.9    5.5
 05 01 01   1 07   -2.3  0.053 -9.000 -9.000 -999.   28.      5.8  0.45   1.00   1.00    0.80  324.    9.1  279.6    5.5
 05 01 01   1 08   -1.2  0.040 -9.000 -9.000 -999.   18.      4.8  0.45   1.00   0.55    0.60  336.    9.1  280.5    5.5
 05 01 01   1 09   43.0  0.243  0.490  0.005   99.  276.    -30.3  0.45   1.00   0.32    1.50   44.    9.1  283.4    5.5
 05 01 01   1 10  110.6  0.339  1.374  0.005  849.  453.    -31.7  0.45   1.00   0.24    2.10   74.    9.1  285.1    5.5
 05 01 01   1 11  135.3  0.321  1.653  0.010 1209.  419.    -22.2  0.45   1.00   0.21    1.90   84.    9.1  286.4    5.5
 05 01 01   1 12   14.3  0.223  0.783  0.010 1212.  246.    -70.3  0.45   1.00   0.20    1.50  137.    9.1  286.8    5.5
 05 01 01   1 13   27.1  0.187  0.971  0.010 1218.  186.    -21.7  0.45   1.00   0.20    1.10  111.    9.1  286.9    5.5
 05 01 01   1 14   17.1  0.179  0.834  0.009 1222.  174.    -30.0  0.45   1.00   0.21    1.10  186.    9.1  286.9    5.5
 05 01 01   1 15    3.7  0.172  0.499  0.009 1223.  164.   -124.8  0.45   1.00   0.24    1.20  195.    9.1  286.1    5.5
 05 01 01   1 16    0.1  0.147  0.150  0.009 1223.  130.  -2871.4  0.45   1.00   0.33    1.10  182.    9.1  285.9    5.5
 05 01 01   1 17   -1.7  0.047 -9.000 -9.000 -999.   31.      5.5  0.45   1.00   0.59    0.70  159.    9.1  285.5    5.5
 05 01 01   1 18   -0.2  0.019 -9.000 -9.000 -999.    6.      2.9  0.45   1.00   1.00    0.28  170.    9.1  285.1    5.5
 05 01 01   1 19   -0.2  0.019 -9.000 -9.000 -999.    6.      2.9  0.45   1.00   1.00    0.28  186.    9.1  284.4    5.5
 05 01 01   1 20 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.45   1.00   1.00    0.00    0.    9.1  284.0    5.5
```

```
05 01 01   1 21 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.45   1.00   1.00    0.00    0.    9.1  283.9    5.5
05 01 01   1 22 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.45   1.00   1.00    0.00    0.    9.1  283.4    5.5
05 01 01   1 23   -0.2  0.019 -9.000 -9.000 -999.    6.      2.9  0.45   1.00   1.00    0.28  313.    9.1  283.4    5.5
05 01 01   1 24 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.45   1.00   1.00    0.00    0.    9.1  283.4    5.5


First hour of profile data
YR MO DY HR HEIGHT F  WDIR    WSPD AMB_TMP sigmaA  sigmaW  sigmaV
05 01 01 01    5.5 0 -999.  -99.00   281.2   99.0  -99.00  -99.00
05 01 01 01    9.1 1  321.    0.50  -999.0   99.0  -99.00  -99.00

F indicates top of profile (=1) or below (=0)
*** AERMOD - VERSION 09292 ***   *** Stone Canyon Reservoir                                                ***       01/26/11
                                 *** PM25                                                                  ***       09:40:07
                                                                                                                     PAGE  13
**MODELOPTs:  RegDFAULT CONC                                                ELEV
                                                                     NODRYDPLT NOWETDPLT

                              *** THE   1ST HIGHEST 24-HR AVERAGE CONCENTRATION   VALUES FOR SOURCE GROUP:  SRCGP1   ***
                                  INCLUDING SOURCE(S):      VOL1    , L0000751, L0000752, L0000753, L0000754, L0000755, L0000756,
         L0000757, L0000758, L0000759, L0000760, L0000761, L0000762, L0000763, L0000764, L0000765, L0000766, L0000767, L0000768,
         L0000769, L0000770, L0000771, L0000772, L0000773, L0000774, L0000775, L0000776, L0000777, L0000778, L0000779,  . . . ,

                                               *** DISCRETE CARTESIAN RECEPTOR POINTS ***

                                          ** CONC OF PM.25    IN MICROGRAMS/M**3                                **
```

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
365054.81	3776241.76	0.69018c	(06090124)	364363.05	3777163.05	0.32892	(05102424)
365205.23	3776966.38	0.74892	(05070924)	365273.46	3776942.30	0.79708	(05070924)
365297.54	3776837.96	0.93068	(05070924)	365261.42	3776781.78	0.99632	(05102424)
365241.35	3776673.42	0.97463	(05122624)	365205.23	3776528.94	0.93083	(05020624)
365153.06	3776456.70	1.13692	(05020624)	365116.94	3776332.29	0.87903	(05020624)
365120.95	3776231.96	0.64325c	(06090124)	365137.01	3776115.58	0.57217c	(05121824)
365116.94	3775999.19	0.56564c	(05090224)	365104.90	3775898.86	0.58385c	(07031224)
365132.99	3775754.39	0.55622c	(05121824)	365317.60	3777247.31	0.60331c	(06070124)
365273.46	3777203.17	0.63724c	(06070124)	365100.89	3777094.81	0.57124	(06061424)
366493.48	3776063.40	1.84011	(06011924)	366465.39	3776183.80	1.62950	(06011924)
366453.35	3776308.21	1.39417	(05112724)	366449.34	3776416.57	1.16125	(07122724)
366397.17	3776561.05	1.32388c	(05101724)	366369.07	3776685.46	1.26021c	(05081024)
366369.07	3776837.96	1.29529	(05072624)	366409.21	3776962.37	1.11587	(05080724)
366457.36	3777078.76	0.97016c	(06080324)	366441.31	3777195.14	0.93585c	(05102224)
365594.52	3777500.15	0.78954c	(06082424)	365534.32	3777544.29	0.73868c	(06082424)
365646.69	3777439.95	0.80822c	(06082424)	365702.87	3777419.88	0.73809c	(07050924)
365385.83	3777435.93	0.77150	(07050124)	365329.64	3777520.21	0.69153	(07050124)
366272.76	3775373.13	0.54549	(05120824)	366373.09	3775401.22	0.59947	(06041824)
366573.75	3775473.46	0.67235	(06030424)	366124.27	3777528.24	0.55759	(07080224)
364354.78	3777168.81	0.32935	(05102424)	364481.63	3777294.00	0.37028	(07043024)
365124.08	3777445.55	0.44074c	(06070124)	365081.25	3777422.49	0.44200c	(06070124)
365048.30	3777399.43	0.48388c	(06042624)	365008.77	3777419.20	0.47696c	(06042624)
364850.63	3777346.72	0.43472	(06061424)	364794.62	3777356.60	0.40525	(06061424)
364751.79	3777323.65	0.36863	(06061424)	364722.13	3777237.99	0.44888	(07043024)
364761.67	3777241.29	0.45216	(07043024)	364797.91	3777251.17	0.43438	(07043024)
364672.72	3777343.42	0.38421	(07043024)	364666.13	3777264.35	0.43733	(07043024)
364633.18	3777274.23	0.42825	(07043024)	364590.35	3777389.55	0.36736	(07043024)
365311.87	3777458.73	0.65757	(07050124)	365272.34	3777475.21	0.56614	(07050124)
364455.27	3777435.67	0.36410	(07043024)	364346.55	3777109.50	0.32958c	(06082824)
364326.78	3777053.49	0.32233c	(06082824)	364310.31	3776994.19	0.26641c	(06082824)
364290.54	3776934.89	0.33934c	(06082224)	364900.04	3777185.28	0.45265	(07043024)
364628.44	3777199.41	0.38117	(07043024)				

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*** AERMOD - VERSION 09292 ***   *** Stone Canyon Reservoir                                                ***       01/26/11
                                 *** PM25                                                                  ***       09:40:07
                                                                                                                     PAGE  14
**MODELOPTs:  RegDFAULT CONC                                                ELEV
                                                                     NODRYDPLT NOWETDPLT

                              *** THE   1ST HIGHEST 24-HR AVERAGE CONCENTRATION   VALUES FOR SOURCE GROUP:  ALL      ***
                                  INCLUDING SOURCE(S):      VOL1    , L0000751, L0000752, L0000753, L0000754, L0000755, L0000756,
         L0000757, L0000758, L0000759, L0000760, L0000761, L0000762, L0000763, L0000764, L0000765, L0000766, L0000767, L0000768,
         L0000769, L0000770, L0000771, L0000772, L0000773, L0000774, L0000775, L0000776, L0000777, L0000778, L0000779,  . . . ,

                                               *** DISCRETE CARTESIAN RECEPTOR POINTS ***

                                          ** CONC OF PM.25    IN MICROGRAMS/M**3                                **
```

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
365054.81	3776241.76	0.69018c	(06090124)	364363.05	3777163.05	0.32892	(05102424)
365205.23	3776966.38	0.74892	(05070924)	365273.46	3776942.30	0.79708	(05070924)
365297.54	3776837.96	0.93068	(05070924)	365261.42	3776781.78	0.99632	(05102424)
365241.35	3776673.42	0.97463	(05122624)	365205.23	3776528.94	0.93083	(05020624)
365153.06	3776456.70	1.13692	(05020624)	365116.94	3776332.29	0.87903	(05020624)
365120.95	3776231.96	0.64325c	(06090124)	365137.01	3776115.58	0.57217c	(05121824)
365116.94	3775999.19	0.56564c	(05090224)	365104.90	3775898.86	0.58385c	(07031224)
365132.99	3775754.39	0.55622c	(05121824)	365317.60	3777247.31	0.60331c	(06070124)
365273.46	3777203.17	0.63724c	(06070124)	365100.89	3777094.81	0.57124	(06061424)
366493.48	3776063.40	1.84011	(06011924)	366465.39	3776183.80	1.62950	(06011924)
366453.35	3776308.21	1.39417	(05112724)	366449.34	3776416.57	1.16125	(07122724)
366397.17	3776561.05	1.32388c	(05101724)	366369.07	3776685.46	1.26021c	(05081024)
366369.07	3776837.96	1.29529	(05072624)	366409.21	3776962.37	1.11587	(05080724)
366457.36	3777078.76	0.97016c	(06080324)	366441.31	3777195.14	0.93585c	(05102224)
365594.52	3777500.15	0.78954c	(06082424)	365534.32	3777544.29	0.73868c	(06082424)
365646.69	3777439.95	0.80822c	(06082424)	365702.87	3777419.88	0.73809c	(07050924)
365385.83	3777435.93	0.77150	(07050124)	365329.64	3777520.21	0.69153	(07050124)
366272.76	3775373.13	0.54549	(05120824)	366373.09	3775401.22	0.59947	(06041824)
366573.75	3775473.46	0.67235	(06030424)	366124.27	3777528.24	0.55759	(07080224)
364354.78	3777168.81	0.32935	(05102424)	364481.63	3777294.00	0.37028	(07043024)
365124.08	3777445.55	0.44074c	(06070124)	365081.25	3777422.49	0.44200c	(06070124)
365048.30	3777399.43	0.48388c	(06042624)	365008.77	3777419.20	0.47696c	(06042624)
364850.63	3777346.72	0.43472	(06061424)	364794.62	3777356.60	0.40525	(06061424)
364751.79	3777323.65	0.36863	(06061424)	364722.13	3777237.99	0.44888	(07043024)
364761.67	3777241.29	0.45216	(07043024)	364797.91	3777251.17	0.43438	(07043024)
364672.72	3777343.42	0.38421	(07043024)	364666.13	3777264.35	0.43733	(07043024)
364633.18	3777274.23	0.42825	(07043024)	364590.35	3777389.55	0.36736	(07043024)
365311.87	3777458.73	0.65757	(07050124)	365272.34	3777475.21	0.56614	(07050124)
364455.27	3777435.67	0.36410	(07043024)	364346.55	3777109.50	0.32958c	(06082824)
364326.78	3777053.49	0.32233c	(06082824)	364310.31	3776994.19	0.26641c	(06082824)
364290.54	3776934.89	0.33934c	(06082224)	364900.04	3777185.28	0.45265	(07043024)
364628.44	3777199.41	0.38117	(07043024)				

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*** AERMOD - VERSION 09292 ***   *** Stone Canyon Reservoir                                                ***       01/26/11
                                 *** PM25                                                                  ***       09:40:07
                                                                                                                     PAGE  15
**MODELOPTs:  RegDFAULT CONC                                                ELEV
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                                                                       NODRYDPLT NOWETDPLT

                                                     *** THE SUMMARY OF HIGHEST 24-HR RESULTS ***

                                    ** CONC OF PM.25    IN MICROGRAMS/M**3                          **

                                                         DATE                                                               NETWORK
GROUP ID                         AVERAGE CONC     (YYMMDDHH)            RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG)    OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

SRCGP1   HIGH  1ST HIGH VALUE IS       1.84011  ON 06011924: AT (  366493.48,  3776063.40,   337.33,   365.00,    0.00)  DC

ALL      HIGH  1ST HIGH VALUE IS       1.84011  ON 06011924: AT (  366493.48,  3776063.40,   337.33,   365.00,    0.00)  DC


 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                                ***        01/26/11
                                   *** PM25                                                                  ***        09:40:07
                                                                                                                        PAGE  16
 **MODELOPTs:  RegDFAULT CONC                                                ELEV
                                                                   NODRYDPLT NOWETDPLT

 *** Message Summary : AERMOD Model Execution ***

  --------- Summary of Total Messages --------

 A Total of            0 Fatal Error Message(s)
 A Total of            0 Warning Message(s)
 A Total of         1753 Informational Message(s)

 A Total of        26280 Hours Were Processed

 A Total of         1181 Calm Hours Identified

 A Total of          572 Missing Hours Identified (  2.18 Percent)


    ******** FATAL ERROR MESSAGES ********
               ***  NONE  ***


    ********   WARNING MESSAGES   ********
               ***  NONE  ***


    ************************************
    *** AERMOD Finishes Successfully ***
    ************************************
```

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**
****************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 6.7.1
** Lakes Environmental Software Inc.
** Date: 1/26/2011
** File: C:\Documents and Settings\jbailey\Desktop\1_19 Stone Canyon HRA\Alt3 ArMd\Alt3HRA.ADI
**
****************************************
**
**
****************************************
** AERMOD Control Pathway
****************************************
**
**
CO STARTING
   TITLEONE Stone Canyon Reservoir
   TITLETWO PM25
   MODELOPT DFAULT CONC NODRYDPLT NOWETDPLT
   AVERTIME 24
   URBANOPT 9862049
   POLLUTID PM.25
   RUNORNOT RUN
CO FINISHED
**
****************************************
** AERMOD Source Pathway
****************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
   LOCATION VOL1 VOLUME 365893.498 3776581.066 303.780
** DESCRSRC EquipExhaust
** Line Source represented by Separated Volume Sources
** --------------------------------------------------------------------
** LINE Source ID = SLINE1
** DESCRSRC onsite haul
** Length of Side = 6.50
** Emission Rate = 0.00069
** Vertical Dimension = 5.00
** SZINIT = 2.33
** Nodes = 21
** 365849.55, 3776597.32, 303.88, 0.00, 0.0
** 365526.44, 3777395.28, 364.79, 0.00, 6.02
** --------------------------------------------------------------------
   LOCATION L0000979 VOLUME 365849.601 3776600.565 303.99
   LOCATION L0000980 VOLUME 365849.792 3776613.511 304.00
   LOCATION L0000981 VOLUME 365849.982 3776626.457 304.00
   LOCATION L0000982 VOLUME 365850.172 3776639.402 304.00
   LOCATION L0000983 VOLUME 365850.363 3776652.348 304.00
   LOCATION L0000984 VOLUME 365850.553 3776665.294 304.00
   LOCATION L0000985 VOLUME 365846.744 3776677.529 304.00
   LOCATION L0000986 VOLUME 365842.107 3776689.618 304.00
   LOCATION L0000987 VOLUME 365837.470 3776701.706 304.00
   LOCATION L0000988 VOLUME 365832.834 3776713.794 304.00
   LOCATION L0000989 VOLUME 365828.197 3776725.883 304.00
   LOCATION L0000990 VOLUME 365823.560 3776737.971 304.00
   LOCATION L0000991 VOLUME 365817.578 3776749.386 304.08
   LOCATION L0000992 VOLUME 365810.680 3776760.342 304.22
   LOCATION L0000993 VOLUME 365803.952 3776771.375 304.41
   LOCATION L0000994 VOLUME 365800.395 3776783.824 304.57
   LOCATION L0000995 VOLUME 365796.838 3776796.273 304.62
   LOCATION L0000996 VOLUME 365793.281 3776808.722 304.60
   LOCATION L0000997 VOLUME 365789.724 3776821.171 304.56
   LOCATION L0000998 VOLUME 365786.167 3776833.619 304.49
   LOCATION L0000999 VOLUME 365781.232 3776845.257 304.42
   LOCATION L0001000 VOLUME 365772.077 3776854.412 304.37
   LOCATION L0001001 VOLUME 365762.922 3776863.567 304.29
   LOCATION L0001002 VOLUME 365753.767 3776872.722 304.15
   LOCATION L0001003 VOLUME 365744.612 3776881.877 304.38
   LOCATION L0001004 VOLUME 365732.124 3776885.003 306.03
   LOCATION L0001005 VOLUME 365719.502 3776887.888 307.71
   LOCATION L0001006 VOLUME 365707.177 3776891.345 309.38
   LOCATION L0001007 VOLUME 365697.553 3776900.006 310.80
   LOCATION L0001008 VOLUME 365687.930 3776908.667 312.26
   LOCATION L0001009 VOLUME 365678.306 3776917.328 313.77
   LOCATION L0001010 VOLUME 365666.157 3776915.359 315.46
   LOCATION L0001011 VOLUME 365653.666 3776911.953 317.22
   LOCATION L0001012 VOLUME 365641.175 3776908.546 318.96
   LOCATION L0001013 VOLUME 365628.684 3776905.139 320.69
   LOCATION L0001014 VOLUME 365616.193 3776901.733 322.40
   LOCATION L0001015 VOLUME 365603.703 3776898.326 324.10
   LOCATION L0001016 VOLUME 365591.084 3776897.880 325.91
   LOCATION L0001017 VOLUME 365578.345 3776900.196 327.81
   LOCATION L0001018 VOLUME 365565.607 3776902.512 329.70
   LOCATION L0001019 VOLUME 365555.334 3776909.994 331.43
   LOCATION L0001020 VOLUME 365545.520 3776918.439 333.12
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   LOCATION L0001022 VOLUME 365525.892 3776935.328 336.50
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   LOCATION L0001029 VOLUME 365525.586 3777004.081 338.61
   LOCATION L0001030 VOLUME 365537.026 3777010.144 337.12
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   LOCATION L0001032 VOLUME 365559.905 3777022.270 334.14
   LOCATION L0001033 VOLUME 365571.345 3777028.333 332.65
   LOCATION L0001034 VOLUME 365582.785 3777034.397 331.16
   LOCATION L0001035 VOLUME 365594.225 3777040.460 329.67
   LOCATION L0001036 VOLUME 365605.664 3777046.523 328.06
   LOCATION L0001037 VOLUME 365615.395 3777054.359 326.73
   LOCATION L0001038 VOLUME 365621.882 3777065.564 325.99
   LOCATION L0001039 VOLUME 365622.723 3777077.594 327.02
   LOCATION L0001040 VOLUME 365619.711 3777090.186 328.84
   LOCATION L0001041 VOLUME 365616.700 3777102.778 330.67
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   LOCATION L0001043 VOLUME 365610.678 3777127.962 334.36
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   LOCATION L0001050 VOLUME 365591.330 3777216.098 349.79
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   LOCATION L0001052 VOLUME 365597.611 3777241.219 353.31
   LOCATION L0001053 VOLUME 365600.751 3777253.780 354.90
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   LOCATION L0001055 VOLUME 365592.546 3777277.456 357.61
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   LOCATION L0001063 VOLUME 365522.304 3777345.737 365.08
   LOCATION L0001064 VOLUME 365515.746 3777356.416 365.50
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** End of Line Source
** Line Source represented by Separated Volume Sources
** ------------------------------------------------------------------
** LINE Source ID = SLINE2
** DESCRSRC offsitehaul
** Length of Side = 8.00
** Emission Rate = 0.00057
** Vertical Dimension = 5.00
** SZINIT = 2.33
** Nodes = 34
** 365520.25, 3777395.28, 365.99, 0.00, 0.0
** 364036.84, 3776959.65, 364.24, 0.00, 7.41
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   LOCATION L0001083 VOLUME 365293.821 3777431.288 398.84
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   LOCATION L0001098 VOLUME 365109.879 3777385.948 426.00
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   LOCATION L0001100 VOLUME 365083.526 3777368.048 426.00
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   LOCATION L0001106 VOLUME 364994.565 3777361.166 425.40
   LOCATION L0001107 VOLUME 364978.893 3777364.016 425.07
   LOCATION L0001108 VOLUME 364963.222 3777366.865 424.74
   LOCATION L0001109 VOLUME 364947.691 3777366.549 424.71
   LOCATION L0001110 VOLUME 364932.336 3777362.313 425.12
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   LOCATION L0001112 VOLUME 364908.022 3777343.054 425.95
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   LOCATION L0001125 VOLUME 364730.179 3777277.266 417.95
   LOCATION L0001126 VOLUME 364715.932 3777284.389 417.83
   LOCATION L0001127 VOLUME 364701.684 3777291.513 417.64
   LOCATION L0001128 VOLUME 364687.001 3777297.632 417.43
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   LOCATION L0001135 VOLUME 364588.090 3777347.449 418.01
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   LOCATION L0001137 VOLUME 364559.619 3777360.742 418.51
   LOCATION L0001138 VOLUME 364544.206 3777364.763 418.86
   LOCATION L0001139 VOLUME 364528.793 3777368.784 419.21
   LOCATION L0001140 VOLUME 364513.031 3777368.043 420.45
   LOCATION L0001141 VOLUME 364497.196 3777366.315 421.86
   LOCATION L0001142 VOLUME 364481.361 3777364.588 423.23
   LOCATION L0001143 VOLUME 364465.855 3777361.668 424.71
   LOCATION L0001144 VOLUME 364451.375 3777355.031 425.77
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   LOCATION L0001147 VOLUME 364410.899 3777331.009 426.00
   LOCATION L0001148 VOLUME 364400.031 3777319.364 426.00
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   SRCGROUP SRCGP1 L0001021 L0001022 L0001023 L0001024 L0001025 L0001026
   SRCGROUP SRCGP1 L0001027 L0001028 L0001029 L0001030 L0001031 L0001032
   SRCGROUP SRCGP1 L0001033 L0001034 L0001035 L0001036 L0001037 L0001038
   SRCGROUP SRCGP1 L0001039 L0001040 L0001041 L0001042 L0001043 L0001044
   SRCGROUP SRCGP1 L0001045 L0001046 L0001047 L0001048 L0001049 L0001050
   SRCGROUP SRCGP1 L0001051 L0001052 L0001053 L0001054 L0001055 L0001056
   SRCGROUP SRCGP1 L0001057 L0001058 L0001059 L0001060 L0001061 L0001062
   SRCGROUP SRCGP1 L0001063 L0001064 L0001065 L0001066 L0001067 L0001068
   SRCGROUP SRCGP1 L0001069 L0001070 L0001071 L0001072 L0001073 L0001074
   SRCGROUP SRCGP1 L0001075 L0001076 L0001077 L0001078 L0001079 L0001080
   SRCGROUP SRCGP1 L0001081 L0001082 L0001083 L0001084 L0001085 L0001086
   SRCGROUP SRCGP1 L0001087 L0001088 L0001089 L0001090 L0001091 L0001092
   SRCGROUP SRCGP1 L0001093 L0001094 L0001095 L0001096 L0001097 L0001098
   SRCGROUP SRCGP1 L0001099 L0001100 L0001101 L0001102 L0001103 L0001104
   SRCGROUP SRCGP1 L0001105 L0001106 L0001107 L0001108 L0001109 L0001110
   SRCGROUP SRCGP1 L0001111 L0001112 L0001113 L0001114 L0001115 L0001116
   SRCGROUP SRCGP1 L0001117 L0001118 L0001119 L0001120 L0001121 L0001122
   SRCGROUP SRCGP1 L0001123 L0001124 L0001125 L0001126 L0001127 L0001128
   SRCGROUP SRCGP1 L0001129 L0001130 L0001131 L0001132 L0001133 L0001134
   SRCGROUP SRCGP1 L0001135 L0001136 L0001137 L0001138 L0001139 L0001140
   SRCGROUP SRCGP1 L0001141 L0001142 L0001143 L0001144 L0001145 L0001146
   SRCGROUP SRCGP1 L0001147 L0001148 L0001149 L0001150 L0001151 L0001152
   SRCGROUP SRCGP1 L0001153 L0001154 L0001155 L0001156 L0001157 L0001158
   SRCGROUP SRCGP1 L0001159 L0001160 L0001161 L0001162 L0001163 L0001164
   SRCGROUP SRCGP1 L0001165 L0001166 L0001167 L0001168 L0001169 L0001170
   SRCGROUP SRCGP1 L0001171 L0001172 L0001173 L0001174 L0001175 L0001176
   SRCGROUP SRCGP1 L0001177 L0001178 L0001179 L0001180 L0001181 L0001182
   SRCGROUP SRCGP1 VOL2
   SRCGROUP ALL
SO FINISHED
**
****************************************
** AERMOD Receptor Pathway
****************************************
**
**
RE STARTING
** DESCRREC "" ""
   DISCCART    365205.23   3776966.38  375.49  426.00
   DISCCART    365273.46   3776942.30  371.03  426.00
   DISCCART    365297.54   3776837.96  365.34  426.00
   DISCCART    365261.42   3776781.78  365.93  426.00
   DISCCART    365241.35   3776673.42  365.68  426.00
   DISCCART    365205.23   3776528.94  364.88  364.88
   DISCCART    365153.06   3776456.70  365.00  365.00
   DISCCART    365116.94   3776332.29  365.00  365.00
   DISCCART    365120.95   3776231.96  364.86  364.86
   DISCCART    365137.01   3776115.58  364.20  364.20
   DISCCART    365116.94   3775999.19  364.00  364.00
   DISCCART    365104.90   3775898.86  364.00  364.00
   DISCCART    365132.99   3775754.39  364.00  364.00
   DISCCART    365317.60   3777247.31  387.78  426.00
   DISCCART    365273.46   3777203.17  389.25  426.00
   DISCCART    365100.89   3777094.81  392.97  426.00
   DISCCART    366493.48   3776063.40  337.33  365.00
   DISCCART    366465.39   3776183.80  356.19  365.00
   DISCCART    366453.35   3776308.21  363.66  363.66
   DISCCART    366449.34   3776416.57  364.59  364.59
   DISCCART    366397.17   3776561.05  365.00  365.00
   DISCCART    366369.07   3776685.46  365.00  365.00
   DISCCART    366369.07   3776837.96  365.00  365.00
   DISCCART    366409.21   3776962.37  365.00  365.00
   DISCCART    366457.36   3777078.76  365.00  365.00
   DISCCART    366441.31   3777195.14  365.00  365.00
   DISCCART    365594.52   3777500.15  365.00  426.00
   DISCCART    365534.32   3777544.29  364.73  426.00
   DISCCART    365646.69   3777439.95  365.00  426.00
   DISCCART    365702.87   3777419.88  364.46  426.00
   DISCCART    365385.83   3777435.93  378.82  426.00
   DISCCART    365329.64   3777520.21  381.58  426.00
   DISCCART    366272.76   3775373.13  283.06  365.00
   DISCCART    366373.09   3775401.22  276.51  365.00
   DISCCART    366573.75   3775473.46  273.85  365.00
   DISCCART    366124.27   3777528.24  365.00  365.00
   DISCCART    364354.78   3777168.81  414.71  426.00
   DISCCART    364481.63   3777294.00  425.37  425.37
   DISCCART    365124.08   3777445.55  425.61  425.61
   DISCCART    365081.25   3777422.49  426.00  426.00
   DISCCART    365048.30   3777399.43  425.22  425.22
   DISCCART    365008.77   3777419.20  421.94  421.94
   DISCCART    364850.63   3777346.72  420.18  420.18
   DISCCART    364794.62   3777356.60  416.02  416.02
   DISCCART    364751.79   3777323.65  415.44  415.44
   DISCCART    364722.13   3777237.99  417.53  417.53
   DISCCART    364761.67   3777241.29  417.36  417.36
   DISCCART    364797.91   3777251.17  419.27  419.27
   DISCCART    364672.72   3777343.42  414.34  426.00
   DISCCART    364666.13   3777264.35  420.77  420.77
   DISCCART    364633.18   3777274.23  422.65  422.65
   DISCCART    364590.35   3777389.55  411.48  426.00
   DISCCART    365311.87   3777458.73  391.96  426.00
   DISCCART    365272.34   3777475.21  397.84  426.00
   DISCCART    364455.27   3777435.67  415.61  426.00
   DISCCART    364346.55   3777109.50  417.15  417.15
   DISCCART    364326.78   3777053.49  419.90  419.90
   DISCCART    364310.31   3776994.19  424.53  424.53
   DISCCART    364290.54   3776934.89  425.77  425.77
   DISCCART    364900.04   3777185.28  425.39  425.39
   DISCCART    364628.44   3777199.41  420.54  420.54
RE FINISHED
**
****************************************
** AERMOD Meteorology Pathway
****************************************
**
**
ME STARTING
   SURFFILE "L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.SFC"
   PROFFILE "L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.PFL"
```

```
   SURFDATA 0 2005
   UAIRDATA 3190 2005
   PROFBASE 10 METERS
ME FINISHED
**
****************************************
** AERMOD Output Pathway
****************************************
**
**
OU STARTING
   RECTABLE ALLAVE 1ST
   RECTABLE 24 1ST
** Auto-Generated Plotfiles
   PLOTFILE 24 ALL 1ST ALT3HRA.AD\24H1GALL.PLT
   PLOTFILE 24 SRCGP1 1ST ALT3HRA.AD\24H1G001.PLT
OU FINISHED

 ***********************************
 *** SETUP Finishes Successfully ***
 ***********************************

 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                                     ***        01/26/11
                                   *** PM25                                                                       ***        09:52:29
                                                                                                                             PAGE   1
 **MODELOPTs:  RegDFAULT CONC                                               ELEV
                                                                  NODRYDPLT NOWETDPLT

                                            ***     MODEL SETUP OPTIONS SUMMARY       ***
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

 **Model Is Setup For Calculation of Average CONCentration Values.

   --  DEPOSITION LOGIC  --
 **NO GAS DEPOSITION Data Provided.
 **NO PARTICLE DEPOSITION Data Provided.
 **Model Uses NO DRY DEPLETION.  DRYDPLT  =  F
 **Model Uses NO WET DEPLETION.  WETDPLT  =  F

 **Model Uses URBAN Dispersion Algorithm for the SBL for   206 Source(s),
   for Total of    1 Urban Area(s):
   Urban Population =   9862049.0 ;  Urban Roughness Length =  1.000 m

 **Model Uses Regulatory DEFAULT Options:
         1. Stack-tip Downwash.
         2. Model Accounts for ELEVated Terrain Effects.
         3. Use Calms Processing Routine.
         4. Use Missing Data Processing Routine.
         5. No Exponential Decay for URBAN/Non-SO2.
         6. Urban Roughness Length of 1.0 Meter Assumed.

 **Model Assumes No FLAGPOLE Receptor Heights.

 **Model Calculates  1 Short Term Average(s) of:  24-HR

 **This Run Includes:    206 Source(s);       2 Source Group(s); and      61 Receptor(s)

 **The Model Assumes A Pollutant Type of:  PM.25

 **Model Set To Continue RUNning After the Setup Testing.

 **Output Options Selected:
          Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE Keyword)
          Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)

 **NOTE:  The Following Flags May Appear Following CONC Values:  c for Calm Hours
                                                                 m for Missing Hours
                                                                 b for Both Calm and Missing Hours

 **Misc. Inputs:  Base Elev. for Pot. Temp. Profile (m MSL) =    10.00 ;  Decay Coef. =    0.000     ;  Rot. Angle =     0.0
                  Emission Units = GRAMS/SEC                                ;  Emission Rate Unit Factor =   0.10000E+07
                  Output Units   = MICROGRAMS/M**3

 **Approximate Storage Requirements of Model =      3.6 MB of RAM.

 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                                     ***        01/26/11
                                   *** PM25                                                                       ***        09:52:29
                                                                                                                             PAGE   2
 **MODELOPTs:  RegDFAULT CONC                                               ELEV
                                                                  NODRYDPLT NOWETDPLT
```

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
VOL1	0	0.19690E+00	365893.5	3776581.1	303.8	5.00	45.58	1.16	YES	
L0000979	0	0.77528E-05	365849.6	3776600.6	304.0	0.00	6.02	2.33	YES	
L0000980	0	0.77528E-05	365849.8	3776613.5	304.0	0.00	6.02	2.33	YES	
L0000981	0	0.77528E-05	365850.0	3776626.5	304.0	0.00	6.02	2.33	YES	
L0000982	0	0.77528E-05	365850.2	3776639.4	304.0	0.00	6.02	2.33	YES	
L0000983	0	0.77528E-05	365850.4	3776652.3	304.0	0.00	6.02	2.33	YES	
L0000984	0	0.77528E-05	365850.6	3776665.3	304.0	0.00	6.02	2.33	YES	
L0000985	0	0.77528E-05	365846.7	3776677.5	304.0	0.00	6.02	2.33	YES	
L0000986	0	0.77528E-05	365842.1	3776689.6	304.0	0.00	6.02	2.33	YES	
L0000987	0	0.77528E-05	365837.5	3776701.7	304.0	0.00	6.02	2.33	YES	
L0000988	0	0.77528E-05	365832.8	3776713.8	304.0	0.00	6.02	2.33	YES	
L0000989	0	0.77528E-05	365828.2	3776725.9	304.0	0.00	6.02	2.33	YES	
L0000990	0	0.77528E-05	365823.6	3776738.0	304.0	0.00	6.02	2.33	YES	
L0000991	0	0.77528E-05	365817.6	3776749.4	304.1	0.00	6.02	2.33	YES	
L0000992	0	0.77528E-05	365810.7	3776760.3	304.2	0.00	6.02	2.33	YES	
L0000993	0	0.77528E-05	365804.0	3776771.4	304.4	0.00	6.02	2.33	YES	
L0000994	0	0.77528E-05	365800.4	3776783.8	304.6	0.00	6.02	2.33	YES	
L0000995	0	0.77528E-05	365796.8	3776796.3	304.6	0.00	6.02	2.33	YES	
L0000996	0	0.77528E-05	365793.3	3776808.7	304.6	0.00	6.02	2.33	YES	
L0000997	0	0.77528E-05	365789.7	3776821.2	304.6	0.00	6.02	2.33	YES	
L0000998	0	0.77528E-05	365786.2	3776833.6	304.5	0.00	6.02	2.33	YES	
L0000999	0	0.77528E-05	365781.2	3776845.3	304.4	0.00	6.02	2.33	YES	
L0001000	0	0.77528E-05	365772.1	3776854.4	304.4	0.00	6.02	2.33	YES	
L0001001	0	0.77528E-05	365762.9	3776863.6	304.3	0.00	6.02	2.33	YES	
L0001002	0	0.77528E-05	365753.8	3776872.7	304.2	0.00	6.02	2.33	YES	

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001003	0	0.77528E-05	365744.6	3776881.9	304.4	0.00	6.02	2.33	YES	
L0001004	0	0.77528E-05	365732.1	3776885.0	306.0	0.00	6.02	2.33	YES	
L0001005	0	0.77528E-05	365719.5	3776887.9	307.7	0.00	6.02	2.33	YES	
L0001006	0	0.77528E-05	365707.2	3776891.3	309.4	0.00	6.02	2.33	YES	
L0001007	0	0.77528E-05	365697.6	3776900.0	310.8	0.00	6.02	2.33	YES	
L0001008	0	0.77528E-05	365687.9	3776908.7	312.3	0.00	6.02	2.33	YES	
L0001009	0	0.77528E-05	365678.3	3776917.3	313.8	0.00	6.02	2.33	YES	
L0001010	0	0.77528E-05	365666.2	3776915.4	315.5	0.00	6.02	2.33	YES	
L0001011	0	0.77528E-05	365653.7	3776912.0	317.2	0.00	6.02	2.33	YES	
L0001012	0	0.77528E-05	365641.2	3776908.5	319.0	0.00	6.02	2.33	YES	
L0001013	0	0.77528E-05	365628.7	3776905.1	320.7	0.00	6.02	2.33	YES	
L0001014	0	0.77528E-05	365616.2	3776901.7	322.4	0.00	6.02	2.33	YES	
L0001015	0	0.77528E-05	365603.7	3776898.3	324.1	0.00	6.02	2.33	YES	
L0001016	0	0.77528E-05	365591.1	3776897.9	325.9	0.00	6.02	2.33	YES	
L0001017	0	0.77528E-05	365578.3	3776900.2	327.8	0.00	6.02	2.33	YES	

*** AERMOD - VERSION 09292 *** *** Stone Canyon Reservoir *** 01/26/11
*** PM25 *** 09:52:29
PAGE 3

**MODELOPTs: RegDFAULT CONC ELEV
NODRYDPLT NOWETDPLT

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001018	0	0.77528E-05	365565.6	3776902.5	329.7	0.00	6.02	2.33	YES	
L0001019	0	0.77528E-05	365555.3	3776910.0	331.4	0.00	6.02	2.33	YES	
L0001020	0	0.77528E-05	365545.5	3776918.4	333.1	0.00	6.02	2.33	YES	
L0001021	0	0.77528E-05	365535.7	3776926.9	334.8	0.00	6.02	2.33	YES	
L0001022	0	0.77528E-05	365525.9	3776935.3	336.5	0.00	6.02	2.33	YES	
L0001023	0	0.77528E-05	365516.6	3776944.3	338.2	0.00	6.02	2.33	YES	
L0001024	0	0.77528E-05	365508.5	3776954.4	339.9	0.00	6.02	2.33	YES	
L0001025	0	0.77528E-05	365500.5	3776964.5	341.6	0.00	6.02	2.33	YES	
L0001026	0	0.77528E-05	365502.2	3776976.1	341.7	0.00	6.02	2.33	YES	
L0001027	0	0.77528E-05	365506.9	3776988.2	341.2	0.00	6.02	2.33	YES	
L0001028	0	0.77528E-05	365514.1	3776998.0	340.2	0.00	6.02	2.33	YES	
L0001029	0	0.77528E-05	365525.6	3777004.1	338.6	0.00	6.02	2.33	YES	
L0001030	0	0.77528E-05	365537.0	3777010.1	337.1	0.00	6.02	2.33	YES	
L0001031	0	0.77528E-05	365548.5	3777016.2	335.6	0.00	6.02	2.33	YES	
L0001032	0	0.77528E-05	365559.9	3777022.3	334.1	0.00	6.02	2.33	YES	
L0001033	0	0.77528E-05	365571.3	3777028.3	332.7	0.00	6.02	2.33	YES	
L0001034	0	0.77528E-05	365582.8	3777034.4	331.2	0.00	6.02	2.33	YES	
L0001035	0	0.77528E-05	365594.2	3777040.5	329.7	0.00	6.02	2.33	YES	
L0001036	0	0.77528E-05	365605.7	3777046.5	328.1	0.00	6.02	2.33	YES	
L0001037	0	0.77528E-05	365615.4	3777054.4	326.7	0.00	6.02	2.33	YES	
L0001038	0	0.77528E-05	365621.9	3777065.6	326.0	0.00	6.02	2.33	YES	
L0001039	0	0.77528E-05	365622.7	3777077.6	327.0	0.00	6.02	2.33	YES	
L0001040	0	0.77528E-05	365619.7	3777090.2	328.8	0.00	6.02	2.33	YES	
L0001041	0	0.77528E-05	365616.7	3777102.8	330.7	0.00	6.02	2.33	YES	
L0001042	0	0.77528E-05	365613.7	3777115.4	332.5	0.00	6.02	2.33	YES	
L0001043	0	0.77528E-05	365610.7	3777128.0	334.4	0.00	6.02	2.33	YES	
L0001044	0	0.77528E-05	365607.7	3777140.6	336.2	0.00	6.02	2.33	YES	
L0001045	0	0.77528E-05	365604.7	3777153.1	338.1	0.00	6.02	2.33	YES	
L0001046	0	0.77528E-05	365601.6	3777165.7	340.3	0.00	6.02	2.33	YES	
L0001047	0	0.77528E-05	365598.6	3777178.3	342.9	0.00	6.02	2.33	YES	
L0001048	0	0.77528E-05	365595.6	3777190.9	345.3	0.00	6.02	2.33	YES	
L0001049	0	0.77528E-05	365592.6	3777203.5	347.6	0.00	6.02	2.33	YES	
L0001050	0	0.77528E-05	365591.3	3777216.1	349.8	0.00	6.02	2.33	YES	
L0001051	0	0.77528E-05	365594.5	3777228.7	351.5	0.00	6.02	2.33	YES	
L0001052	0	0.77528E-05	365597.6	3777241.2	353.3	0.00	6.02	2.33	YES	
L0001053	0	0.77528E-05	365600.8	3777253.8	354.9	0.00	6.02	2.33	YES	
L0001054	0	0.77528E-05	365598.1	3777265.8	356.2	0.00	6.02	2.33	YES	
L0001055	0	0.77528E-05	365592.5	3777277.5	357.6	0.00	6.02	2.33	YES	
L0001056	0	0.77528E-05	365587.0	3777289.1	358.9	0.00	6.02	2.33	YES	
L0001057	0	0.77528E-05	365581.4	3777300.8	360.1	0.00	6.02	2.33	YES	

*** AERMOD - VERSION 09292 *** *** Stone Canyon Reservoir *** 01/26/11
*** PM25 *** 09:52:29
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**MODELOPTs: RegDFAULT CONC ELEV
NODRYDPLT NOWETDPLT

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001058	0	0.77528E-05	365575.9	3777312.5	361.2	0.00	6.02	2.33	YES	
L0001059	0	0.77528E-05	365568.6	3777322.6	362.3	0.00	6.02	2.33	YES	
L0001060	0	0.77528E-05	365557.0	3777328.4	363.1	0.00	6.02	2.33	YES	
L0001061	0	0.77528E-05	365545.5	3777334.2	363.8	0.00	6.02	2.33	YES	
L0001062	0	0.77528E-05	365533.9	3777339.9	364.4	0.00	6.02	2.33	YES	
L0001063	0	0.77528E-05	365522.3	3777345.7	365.1	0.00	6.02	2.33	YES	
L0001064	0	0.77528E-05	365515.7	3777356.4	365.5	0.00	6.02	2.33	YES	
L0001065	0	0.77528E-05	365515.5	3777368.3	365.5	0.00	6.02	2.33	YES	
L0001066	0	0.77528E-05	365520.3	3777380.3	365.2	0.00	6.02	2.33	YES	
L0001067	0	0.77528E-05	365525.2	3777392.3	365.0	0.00	6.02	2.33	YES	
L0001068	0	0.49565E-05	365516.3	3777395.0	365.5	0.00	7.41	2.33	YES	
L0001069	0	0.49565E-05	365500.4	3777394.0	366.4	0.00	7.41	2.33	YES	
L0001070	0	0.49565E-05	365484.5	3777392.9	367.3	0.00	7.41	2.33	YES	
L0001071	0	0.49565E-05	365468.6	3777391.8	368.3	0.00	7.41	2.33	YES	
L0001072	0	0.49565E-05	365452.7	3777390.8	369.2	0.00	7.41	2.33	YES	
L0001073	0	0.49565E-05	365437.4	3777387.5	371.2	0.00	7.41	2.33	YES	
L0001074	0	0.49565E-05	365423.0	3777380.7	373.8	0.00	7.41	2.33	YES	
L0001075	0	0.49565E-05	365407.4	3777381.5	376.5	0.00	7.41	2.33	YES	
L0001076	0	0.49565E-05	365391.5	3777383.4	379.2	0.00	7.41	2.33	YES	
L0001077	0	0.49565E-05	365375.9	3777386.5	381.8	0.00	7.41	2.33	YES	
L0001078	0	0.49565E-05	365360.4	3777390.1	385.1	0.00	7.41	2.33	YES	
L0001079	0	0.49565E-05	365347.7	3777398.9	387.9	0.00	7.41	2.33	YES	
L0001080	0	0.49565E-05	365336.0	3777409.8	390.3	0.00	7.41	2.33	YES	
L0001081	0	0.49565E-05	365323.1	3777418.7	392.9	0.00	7.41	2.33	YES	
L0001082	0	0.49565E-05	365308.5	3777425.3	395.9	0.00	7.41	2.33	YES	
L0001083	0	0.49565E-05	365293.8	3777431.3	398.8	0.00	7.41	2.33	YES	
L0001084	0	0.49565E-05	365278.4	3777435.3	401.9	0.00	7.41	2.33	YES	
L0001085	0	0.49565E-05	365263.0	3777439.4	405.1	0.00	7.41	2.33	YES	
L0001086	0	0.49565E-05	365248.9	3777446.4	407.4	0.00	7.41	2.33	YES	
L0001087	0	0.49565E-05	365235.4	3777454.8	408.9	0.00	7.41	2.33	YES	
L0001088	0	0.49565E-05	365221.8	3777463.2	410.3	0.00	7.41	2.33	YES	

L0001089	0	0.49565E-05	365206.5	3777467.2	412.0	0.00	7.41	2.33	YES	
L0001090	0	0.49565E-05	365190.9	3777470.4	413.4	0.00	7.41	2.33	YES	
L0001091	0	0.49565E-05	365175.8	3777470.6	415.3	0.00	7.41	2.33	YES	
L0001092	0	0.49565E-05	365161.9	3777462.8	418.8	0.00	7.41	2.33	YES	
L0001093	0	0.49565E-05	365151.6	3777452.0	422.6	0.00	7.41	2.33	YES	
L0001094	0	0.49565E-05	365146.3	3777437.0	425.2	0.00	7.41	2.33	YES	
L0001095	0	0.49565E-05	365141.0	3777421.9	425.9	0.00	7.41	2.33	YES	
L0001096	0	0.49565E-05	365131.2	3777409.6	426.0	0.00	7.41	2.33	YES	
L0001097	0	0.49565E-05	365120.7	3777397.6	426.0	0.00	7.41	2.33	YES	

*** AERMOD - VERSION 09292 *** *** Stone Canyon Reservoir *** 01/26/11
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PAGE 5

**MODELOPTs: RegDFAULT CONC ELEV
NODRYDPLT NOWETDPLT

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001098	0	0.49565E-05	365109.9	3777385.9	426.0	0.00	7.41	2.33	YES	
L0001099	0	0.49565E-05	365096.7	3777377.0	426.0	0.00	7.41	2.33	YES	
L0001100	0	0.49565E-05	365083.5	3777368.0	426.0	0.00	7.41	2.33	YES	
L0001101	0	0.49565E-05	365070.3	3777359.1	426.0	0.00	7.41	2.33	YES	
L0001102	0	0.49565E-05	365057.2	3777350.1	425.8	0.00	7.41	2.33	YES	
L0001103	0	0.49565E-05	365041.6	3777352.6	426.0	0.00	7.41	2.33	YES	
L0001104	0	0.49565E-05	365025.9	3777355.5	425.9	0.00	7.41	2.33	YES	
L0001105	0	0.49565E-05	365010.2	3777358.3	425.7	0.00	7.41	2.33	YES	
L0001106	0	0.49565E-05	364994.6	3777361.2	425.4	0.00	7.41	2.33	YES	
L0001107	0	0.49565E-05	364978.9	3777364.0	425.1	0.00	7.41	2.33	YES	
L0001108	0	0.49565E-05	364963.2	3777366.9	424.7	0.00	7.41	2.33	YES	
L0001109	0	0.49565E-05	364947.7	3777366.5	424.7	0.00	7.41	2.33	YES	
L0001110	0	0.49565E-05	364932.3	3777362.3	425.1	0.00	7.41	2.33	YES	
L0001111	0	0.49565E-05	364919.1	3777354.5	426.0	0.00	7.41	2.33	YES	
L0001112	0	0.49565E-05	364908.0	3777343.1	425.9	0.00	7.41	2.33	YES	
L0001113	0	0.49565E-05	364896.9	3777331.6	424.9	0.00	7.41	2.33	YES	
L0001114	0	0.49565E-05	364883.4	3777323.9	423.7	0.00	7.41	2.33	YES	
L0001115	0	0.49565E-05	364868.4	3777318.7	422.5	0.00	7.41	2.33	YES	
L0001116	0	0.49565E-05	364853.4	3777313.4	421.3	0.00	7.41	2.33	YES	
L0001117	0	0.49565E-05	364838.4	3777308.1	420.1	0.00	7.41	2.33	YES	
L0001118	0	0.49565E-05	364823.1	3777303.5	419.3	0.00	7.41	2.33	YES	
L0001119	0	0.49565E-05	364811.4	3777294.6	419.1	0.00	7.41	2.33	YES	
L0001120	0	0.49565E-05	364803.6	3777280.8	419.3	0.00	7.41	2.33	YES	
L0001121	0	0.49565E-05	364790.4	3777273.0	419.1	0.00	7.41	2.33	YES	
L0001122	0	0.49565E-05	364775.6	3777266.9	418.7	0.00	7.41	2.33	YES	
L0001123	0	0.49565E-05	364759.9	3777267.4	418.1	0.00	7.41	2.33	YES	
L0001124	0	0.49565E-05	364744.4	3777270.1	418.0	0.00	7.41	2.33	YES	
L0001125	0	0.49565E-05	364730.2	3777277.3	417.9	0.00	7.41	2.33	YES	
L0001126	0	0.49565E-05	364715.9	3777284.4	417.8	0.00	7.41	2.33	YES	
L0001127	0	0.49565E-05	364701.7	3777291.5	417.6	0.00	7.41	2.33	YES	
L0001128	0	0.49565E-05	364687.0	3777297.6	417.4	0.00	7.41	2.33	YES	
L0001129	0	0.49565E-05	364672.1	3777303.2	417.5	0.00	7.41	2.33	YES	
L0001130	0	0.49565E-05	364657.1	3777308.7	418.0	0.00	7.41	2.33	YES	
L0001131	0	0.49565E-05	364642.2	3777314.3	418.4	0.00	7.41	2.33	YES	
L0001132	0	0.49565E-05	364627.9	3777320.9	418.6	0.00	7.41	2.33	YES	
L0001133	0	0.49565E-05	364614.6	3777329.8	418.4	0.00	7.41	2.33	YES	
L0001134	0	0.49565E-05	364601.3	3777338.6	418.2	0.00	7.41	2.33	YES	
L0001135	0	0.49565E-05	364588.1	3777347.4	418.0	0.00	7.41	2.33	YES	
L0001136	0	0.49565E-05	364574.8	3777356.3	418.0	0.00	7.41	2.33	YES	
L0001137	0	0.49565E-05	364559.6	3777360.7	418.5	0.00	7.41	2.33	YES	

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**MODELOPTs: RegDFAULT CONC ELEV
NODRYDPLT NOWETDPLT

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001138	0	0.49565E-05	364544.2	3777364.8	418.9	0.00	7.41	2.33	YES	
L0001139	0	0.49565E-05	364528.8	3777368.8	419.2	0.00	7.41	2.33	YES	
L0001140	0	0.49565E-05	364513.0	3777368.0	420.4	0.00	7.41	2.33	YES	
L0001141	0	0.49565E-05	364497.2	3777366.3	421.9	0.00	7.41	2.33	YES	
L0001142	0	0.49565E-05	364481.4	3777364.6	423.2	0.00	7.41	2.33	YES	
L0001143	0	0.49565E-05	364465.9	3777361.7	424.7	0.00	7.41	2.33	YES	
L0001144	0	0.49565E-05	364451.4	3777355.0	425.8	0.00	7.41	2.33	YES	
L0001145	0	0.49565E-05	364436.9	3777348.4	426.0	0.00	7.41	2.33	YES	
L0001146	0	0.49565E-05	364422.4	3777341.8	426.0	0.00	7.41	2.33	YES	
L0001147	0	0.49565E-05	364410.9	3777331.0	426.0	0.00	7.41	2.33	YES	
L0001148	0	0.49565E-05	364400.0	3777319.4	426.0	0.00	7.41	2.33	YES	
L0001149	0	0.49565E-05	364389.6	3777307.4	426.0	0.00	7.41	2.33	YES	
L0001150	0	0.49565E-05	364381.7	3777293.6	426.0	0.00	7.41	2.33	YES	
L0001151	0	0.49565E-05	364373.7	3777279.8	426.0	0.00	7.41	2.33	YES	
L0001152	0	0.49565E-05	364365.8	3777266.0	424.2	0.00	7.41	2.33	YES	
L0001153	0	0.49565E-05	364357.8	3777252.2	420.1	0.00	7.41	2.33	YES	
L0001154	0	0.49565E-05	364349.9	3777238.4	416.3	0.00	7.41	2.33	YES	
L0001155	0	0.49565E-05	364341.9	3777224.6	412.8	0.00	7.41	2.33	YES	
L0001156	0	0.49565E-05	364334.0	3777210.8	409.5	0.00	7.41	2.33	YES	
L0001157	0	0.49565E-05	364326.0	3777197.0	406.5	0.00	7.41	2.33	YES	
L0001158	0	0.49565E-05	364318.1	3777183.2	403.8	0.00	7.41	2.33	YES	
L0001159	0	0.49565E-05	364310.1	3777169.4	402.9	0.00	7.41	2.33	YES	
L0001160	0	0.49565E-05	364302.2	3777155.6	403.5	0.00	7.41	2.33	YES	
L0001161	0	0.49565E-05	364293.2	3777142.4	404.3	0.00	7.41	2.33	YES	
L0001162	0	0.49565E-05	364284.2	3777129.3	403.2	0.00	7.41	2.33	YES	
L0001163	0	0.49565E-05	364275.1	3777116.2	400.7	0.00	7.41	2.33	YES	
L0001164	0	0.49565E-05	364266.0	3777103.1	397.5	0.00	7.41	2.33	YES	
L0001165	0	0.49565E-05	364256.9	3777090.0	393.7	0.00	7.41	2.33	YES	
L0001166	0	0.49565E-05	364247.8	3777076.9	390.5	0.00	7.41	2.33	YES	
L0001167	0	0.49565E-05	364238.8	3777063.8	388.2	0.00	7.41	2.33	YES	
L0001168	0	0.49565E-05	364229.7	3777050.7	386.7	0.00	7.41	2.33	YES	
L0001169	0	0.49565E-05	364220.6	3777037.7	385.9	0.00	7.41	2.33	YES	
L0001170	0	0.49565E-05	364211.4	3777024.7	385.8	0.00	7.41	2.33	YES	
L0001171	0	0.49565E-05	364200.8	3777012.7	386.4	0.00	7.41	2.33	YES	
L0001172	0	0.49565E-05	364190.3	3777000.8	386.0	0.00	7.41	2.33	YES	
L0001173	0	0.49565E-05	364176.8	3776992.5	382.4	0.00	7.41	2.33	YES	
L0001174	0	0.49565E-05	364162.8	3776985.0	377.6	0.00	7.41	2.33	YES	

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  L0001175      0   0.49565E-05  364148.8 3776977.4   371.8     0.00     7.41     2.33     YES
  L0001176      0   0.49565E-05  364134.8 3776969.8   365.1     0.00     7.41     2.33     YES
  L0001177      0   0.49565E-05  364120.4 3776963.6   364.9     0.00     7.41     2.33     YES
*** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                                 ***       01/26/11
                                  *** PM25                                                                   ***       09:52:29
                                                                                                                       PAGE   7
**MODELOPTs:  RegDFAULT CONC                                                 ELEV
                                                                   NODRYDPLT NOWETDPLT


                                                    *** VOLUME SOURCE DATA ***

             NUMBER EMISSION RATE                    BASE    RELEASE    INIT.    INIT.   URBAN  EMISSION RATE
   SOURCE     PART.  (GRAMS/SEC)    X         Y      ELEV.   HEIGHT      SY       SZ     SOURCE  SCALAR VARY
     ID       CATS.                (METERS) (METERS) (METERS) (METERS) (METERS) (METERS)              BY
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

  L0001178      0   0.49565E-05  364104.5 3776962.9   364.8     0.00     7.41     2.33     YES
  L0001179      0   0.49565E-05  364088.6 3776962.1   364.6     0.00     7.41     2.33     YES
  L0001180      0   0.49565E-05  364072.7 3776961.4   364.5     0.00     7.41     2.33     YES
  L0001181      0   0.49565E-05  364056.7 3776960.6   364.4     0.00     7.41     2.33     YES
  L0001182      0   0.49565E-05  364040.8 3776959.8   364.3     0.00     7.41     2.33     YES
  VOL2          0   0.50000E-04  365892.9 3776580.8   303.8     5.00    45.61     1.16     YES
*** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                                 ***       01/26/11
                                  *** PM25                                                                   ***       09:52:29
                                                                                                                       PAGE   8
**MODELOPTs:  RegDFAULT CONC                                                 ELEV
                                                                   NODRYDPLT NOWETDPLT


                                             *** SOURCE IDs DEFINING SOURCE GROUPS ***

GROUP ID                                                      SOURCE IDs


 SRCGP1     VOL1     , L0000979, L0000980, L0000981, L0000982, L0000983, L0000984, L0000985, L0000986, L0000987, L0000988, L0000989,

           L0000990, L0000991, L0000992, L0000993, L0000994, L0000995, L0000996, L0000997, L0000998, L0000999, L0001000, L0001001,

           L0001002, L0001003, L0001004, L0001005, L0001006, L0001007, L0001008, L0001009, L0001010, L0001011, L0001012, L0001013,

           L0001014, L0001015, L0001016, L0001017, L0001018, L0001019, L0001020, L0001021, L0001022, L0001023, L0001024, L0001025,

           L0001026, L0001027, L0001028, L0001029, L0001030, L0001031, L0001032, L0001033, L0001034, L0001035, L0001036, L0001037,

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           L0001170, L0001171, L0001172, L0001173, L0001174, L0001175, L0001176, L0001177, L0001178, L0001179, L0001180, L0001181,

           L0001182, VOL2     ,

 ALL        VOL1     , L0000979, L0000980, L0000981, L0000982, L0000983, L0000984, L0000985, L0000986, L0000987, L0000988, L0000989,

           L0000990, L0000991, L0000992, L0000993, L0000994, L0000995, L0000996, L0000997, L0000998, L0000999, L0001000, L0001001,
*** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                                 ***       01/26/11
                                  *** PM25                                                                   ***       09:52:29
                                                                                                                       PAGE   9
**MODELOPTs:  RegDFAULT CONC                                                 ELEV
                                                                   NODRYDPLT NOWETDPLT


                                             *** SOURCE IDs DEFINING SOURCE GROUPS ***

GROUP ID                                                      SOURCE IDs

           L0001002, L0001003, L0001004, L0001005, L0001006, L0001007, L0001008, L0001009, L0001010, L0001011, L0001012, L0001013,

           L0001014, L0001015, L0001016, L0001017, L0001018, L0001019, L0001020, L0001021, L0001022, L0001023, L0001024, L0001025,

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           L0001146, L0001147, L0001148, L0001149, L0001150, L0001151, L0001152, L0001153, L0001154, L0001155, L0001156, L0001157,
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L0001158, L0001159, L0001160, L0001161, L0001162, L0001163, L0001164, L0001165, L0001166, L0001167, L0001168, L0001169,

L0001170, L0001171, L0001172, L0001173, L0001174, L0001175, L0001176, L0001177, L0001178, L0001179, L0001180, L0001181,

L0001182, VOL2 ,

*** AERMOD - VERSION 09292 *** *** Stone Canyon Reservoir *** 01/26/11
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**MODELOPTs: RegDFAULT CONC ELEV
NODRYDPLT NOWETDPLT

*** DISCRETE CARTESIAN RECEPTORS ***
(X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
(METERS)

(365205.2, 3776966.4, 375.5, 426.0, 0.0); (365273.5, 3776942.3, 371.0, 426.0, 0.0);
(365297.5, 3776838.0, 365.3, 426.0, 0.0); (365261.4, 3776781.8, 365.9, 426.0, 0.0);
(365241.3, 3776673.4, 365.7, 426.0, 0.0); (365205.2, 3776528.9, 364.9, 364.9, 0.0);
(365153.1, 3776456.7, 365.0, 365.0, 0.0); (365116.9, 3776332.3, 365.0, 365.0, 0.0);
(365121.0, 3776232.0, 364.9, 364.9, 0.0); (365137.0, 3776115.6, 364.2, 364.2, 0.0);
(365116.9, 3775999.2, 364.0, 364.0, 0.0); (365104.9, 3775898.9, 364.0, 364.0, 0.0);
(365133.0, 3775754.4, 364.0, 364.0, 0.0); (365317.6, 3777247.3, 387.8, 426.0, 0.0);
(365273.5, 3777203.2, 389.2, 426.0, 0.0); (365100.9, 3777094.8, 393.0, 426.0, 0.0);
(366493.5, 3776063.4, 337.3, 365.0, 0.0); (366465.4, 3776183.8, 356.2, 365.0, 0.0);
(366453.3, 3776308.2, 363.7, 363.7, 0.0); (366449.3, 3776416.6, 364.6, 364.6, 0.0);
(366397.2, 3776561.0, 365.0, 365.0, 0.0); (366369.1, 3776685.5, 365.0, 365.0, 0.0);
(366369.1, 3776838.0, 365.0, 365.0, 0.0); (366409.2, 3776962.4, 365.0, 365.0, 0.0);
(366457.4, 3777078.8, 365.0, 365.0, 0.0); (366441.3, 3777195.1, 365.0, 365.0, 0.0);
(365594.5, 3777500.1, 365.0, 426.0, 0.0); (365534.3, 3777544.3, 364.7, 426.0, 0.0);
(365646.7, 3777439.9, 365.0, 426.0, 0.0); (365702.9, 3777419.9, 364.5, 426.0, 0.0);
(365385.8, 3777435.9, 378.8, 426.0, 0.0); (365329.6, 3777520.2, 381.6, 426.0, 0.0);
(366272.8, 3775373.1, 283.1, 365.0, 0.0); (366373.1, 3775401.2, 276.5, 365.0, 0.0);
(366573.8, 3775473.5, 273.9, 365.0, 0.0); (366124.3, 3777528.2, 365.0, 365.0, 0.0);
(364354.8, 3777168.8, 414.7, 426.0, 0.0); (364481.6, 3777294.0, 425.4, 425.4, 0.0);
(365124.1, 3777445.5, 425.6, 425.6, 0.0); (365081.2, 3777422.5, 426.0, 426.0, 0.0);
(365048.3, 3777399.4, 425.2, 425.2, 0.0); (365008.8, 3777419.2, 421.9, 421.9, 0.0);
(364850.6, 3777346.7, 420.2, 420.2, 0.0); (364794.6, 3777356.6, 416.0, 416.0, 0.0);
(364751.8, 3777323.6, 415.4, 415.4, 0.0); (364722.1, 3777238.0, 417.5, 417.5, 0.0);
(364761.7, 3777241.3, 417.4, 417.4, 0.0); (364797.9, 3777251.2, 419.3, 419.3, 0.0);
(364672.7, 3777343.4, 414.3, 426.0, 0.0); (364666.1, 3777264.3, 420.8, 420.8, 0.0);
(364633.2, 3777274.2, 422.7, 422.7, 0.0); (364590.3, 3777389.5, 411.5, 426.0, 0.0);
(365311.9, 3777458.7, 392.0, 426.0, 0.0); (365272.3, 3777475.2, 397.8, 426.0, 0.0);
(364455.3, 3777435.7, 415.6, 426.0, 0.0); (364346.5, 3777109.5, 417.2, 417.2, 0.0);
(364326.8, 3777053.5, 419.9, 419.9, 0.0); (364310.3, 3776994.2, 424.5, 424.5, 0.0);
(364290.5, 3776934.9, 425.8, 425.8, 0.0); (364900.0, 3777185.3, 425.4, 425.4, 0.0);
(364628.4, 3777199.4, 420.5, 420.5, 0.0);

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**MODELOPTs: RegDFAULT CONC ELEV
NODRYDPLT NOWETDPLT

*** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***
(1=YES; 0=NO)

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
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1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

NOTE: METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.

*** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
(METERS/SEC)

1.54, 3.09, 5.14, 8.23, 10.80,

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**MODELOPTs: RegDFAULT CONC ELEV
NODRYDPLT NOWETDPLT

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.SFC Met Version: 06341
Profile file: L:\Library & Reference\Wind Data\South Coast Air Basin\AERMOD Met Data\wsla.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 0 Upper air station no.: 3190
Name: UNKNOWN Name: UNKNOWN
Year: 2005 Year: 2005

First 24 hours of scalar data

YR	MO	DY	JDY	HR	H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O LEN	Z0	BOWEN	ALBEDO	REF WS	WD	HT	REF TA	HT
05	01	01	1	01	-0.9	0.033	-9.000	-9.000	-999.	14.	3.7	0.45	1.00	1.00	0.50	321.	9.1	281.1	5.5
05	01	01	1	02	-0.9	0.033	-9.000	-9.000	-999.	14.	3.8	0.45	1.00	1.00	0.50	320.	9.1	280.8	5.5
05	01	01	1	03	-0.9	0.033	-9.000	-9.000	-999.	14.	3.7	0.45	1.00	1.00	0.50	323.	9.1	280.9	5.5
05	01	01	1	04	-1.3	0.040	-9.000	-9.000	-999.	18.	4.4	0.45	1.00	1.00	0.60	316.	9.1	280.8	5.5
05	01	01	1	05	-1.3	0.040	-9.000	-9.000	-999.	18.	4.4	0.45	1.00	1.00	0.60	322.	9.1	280.4	5.5
05	01	01	1	06	-0.3	0.020	-9.000	-9.000	-999.	6.	2.3	0.45	1.00	1.00	0.30	352.	9.1	279.9	5.5
05	01	01	1	07	-2.3	0.053	-9.000	-9.000	-999.	28.	5.8	0.45	1.00	1.00	0.80	324.	9.1	279.6	5.5
05	01	01	1	08	-1.2	0.040	-9.000	-9.000	-999.	18.	4.8	0.45	1.00	0.55	0.60	336.	9.1	280.5	5.5
05	01	01	1	09	43.0	0.243	0.490	0.005	99.	276.	-30.3	0.45	1.00	0.32	1.50	44.	9.1	283.4	5.5
05	01	01	1	10	110.6	0.339	1.374	0.005	849.	453.	-31.7	0.45	1.00	0.24	2.10	74.	9.1	285.1	5.5
05	01	01	1	11	135.3	0.321	1.653	0.010	1209.	419.	-22.2	0.45	1.00	0.21	1.90	84.	9.1	286.4	5.5
05	01	01	1	12	14.3	0.223	0.783	0.010	1212.	246.	-70.3	0.45	1.00	0.20	1.50	137.	9.1	286.8	5.5
05	01	01	1	13	27.1	0.187	0.971	0.010	1218.	186.	-21.7	0.45	1.00	0.20	1.10	111.	9.1	286.9	5.5
05	01	01	1	14	17.1	0.179	0.834	0.009	1222.	174.	-30.0	0.45	1.00	0.21	1.10	186.	9.1	286.9	5.5
05	01	01	1	15	3.7	0.172	0.499	0.009	1223.	164.	-124.8	0.45	1.00	0.24	1.20	195.	9.1	286.1	5.5
05	01	01	1	16	0.1	0.147	0.150	0.009	1223.	130.	-2871.4	0.45	1.00	0.33	1.10	182.	9.1	285.9	5.5
05	01	01	1	17	-1.7	0.047	-9.000	-9.000	-999.	31.	5.5	0.45	1.00	0.59	0.70	159.	9.1	285.5	5.5
05	01	01	1	18	-0.2	0.019	-9.000	-9.000	-999.	6.	2.9	0.45	1.00	1.00	0.28	170.	9.1	285.1	5.5
05	01	01	1	19	-0.2	0.019	-9.000	-9.000	-999.	6.	2.9	0.45	1.00	1.00	0.28	186.	9.1	284.4	5.5
05	01	01	1	20	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.45	1.00	1.00	0.00	0.	9.1	284.0	5.5
05	01	01	1	21	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.45	1.00	1.00	0.00	0.	9.1	283.9	5.5
05	01	01	1	22	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.45	1.00	1.00	0.00	0.	9.1	283.4	5.5
05	01	01	1	23	-0.2	0.019	-9.000	-9.000	-999.	6.	2.9	0.45	1.00	1.00	0.28	313.	9.1	283.4	5.5

05 01 01 1 24 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0 0.45 1.00 1.00 0.00 0. 9.1 283.4 5.5

First hour of profile data

YR MO DY HR	HEIGHT	F	WDIR	WSPD	AMB_TMP	sigmaA	sigmaW	sigmaV
05 01 01 01	5.5	0	-999.	-99.00	281.2	99.0	-99.00	-99.00
05 01 01 01	9.1	1	321.	0.50	-999.0	99.0	-99.00	-99.00

F indicates top of profile (=1) or below (=0)

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**MODELOPTs: RegDFAULT CONC ELEV
NODRYDPLT NOWETDPLT

*** THE 1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: SRCGP1 ***
INCLUDING SOURCE(S): VOL1 , L0000979, L0000980, L0000981, L0000982, L0000983, L0000984,
L0000985, L0000986, L0000987, L0000988, L0000989, L0000990, L0000991, L0000992, L0000993, L0000994, L0000995, L0000996,
L0000997, L0000998, L0000999, L0001000, L0001001, L0001002, L0001003, L0001004, L0001005, L0001006, L0001007, . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM.25 IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
365205.23	3776966.38	1.63596	(05070924)	365273.46	3776942.30	1.74086	(05070924)
365297.54	3776837.96	2.03566	(05070924)	365261.42	3776781.78	2.17823	(05102424)
365241.35	3776673.42	2.12847	(05122624)	365205.23	3776528.94	2.03529	(05020624)
365153.06	3776456.70	2.48843	(05020624)	365116.94	3776332.29	1.92478	(05020624)
365120.95	3776231.96	1.40530c	(06090124)	365137.01	3776115.58	1.24912c	(05121824)
365116.94	3775999.19	1.23770c	(05090224)	365104.90	3775898.86	1.27685c	(07031224)
365132.99	3775754.39	1.21603c	(05121824)	365317.60	3777247.31	1.30440c	(06070124)
365273.46	3777203.17	1.38171c	(06070124)	365100.89	3777094.81	1.24491	(06061424)
366493.48	3776063.40	4.02400	(06011924)	366465.39	3776183.80	3.55904	(06011924)
366453.35	3776308.21	3.04897	(05112724)	366449.34	3776416.57	2.53859	(07122724)
366397.17	3776561.05	2.89718c	(05101724)	366369.07	3776685.46	2.75933c	(05081024)
366369.07	3776837.96	2.83455	(05072624)	366409.21	3776962.37	2.44316	(05080724)
366457.36	3777078.76	2.12383c	(06080324)	366441.31	3777195.14	2.04641c	(05102224)
365594.52	3777500.15	1.71067c	(06082424)	365534.32	3777544.29	1.59872c	(06082424)
365646.69	3777439.95	1.75234c	(06082424)	365702.87	3777419.88	1.60633c	(07050924)
365385.83	3777435.93	1.65123	(07050124)	365329.64	3777520.21	1.49088	(07050124)
366272.76	3775373.13	1.19219	(05120824)	366373.09	3775401.22	1.30807	(06041824)
366573.75	3775473.46	1.46620	(06030424)	366124.27	3777528.24	1.21708	(07080224)
364354.78	3777168.81	0.69734	(05102424)	364481.63	3777294.00	0.78992	(07043024)
365124.08	3777445.55	0.91471c	(06070124)	365081.25	3777422.49	0.93206c	(06070124)
365048.30	3777399.43	1.01786c	(06042624)	365008.77	3777419.20	1.01207c	(06042624)
364850.63	3777346.72	0.90766	(06061424)	364794.62	3777356.60	0.86111	(06061424)
364751.79	3777323.65	0.77555	(06061424)	364722.13	3777237.99	0.95993	(07043024)
364761.67	3777241.29	0.96023	(07043024)	364797.91	3777251.17	0.91744	(07043024)
364672.72	3777343.42	0.80477	(07043024)	364666.13	3777264.35	0.93185	(07043024)
364633.18	3777274.23	0.91414	(07043024)	364590.35	3777389.55	0.77238	(07043024)
365311.87	3777458.73	1.40002	(07050124)	365272.34	3777475.21	1.20380	(07050124)
364455.27	3777435.67	0.77515	(07043024)	364346.55	3777109.50	0.71243c	(06082824)
364326.78	3777053.49	0.69917c	(06082824)	364310.31	3776994.19	0.57854c	(06082824)
364290.54	3776934.89	0.73723c	(06082224)	364900.04	3777185.28	0.98125	(07043024)
364628.44	3777199.41	0.82354	(07043024)				

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**MODELOPTs: RegDFAULT CONC ELEV
NODRYDPLT NOWETDPLT

*** THE 1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): VOL1 , L0000979, L0000980, L0000981, L0000982, L0000983, L0000984,
L0000985, L0000986, L0000987, L0000988, L0000989, L0000990, L0000991, L0000992, L0000993, L0000994, L0000995, L0000996,
L0000997, L0000998, L0000999, L0001000, L0001001, L0001002, L0001003, L0001004, L0001005, L0001006, L0001007, . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM.25 IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
365205.23	3776966.38	1.63596	(05070924)	365273.46	3776942.30	1.74086	(05070924)
365297.54	3776837.96	2.03566	(05070924)	365261.42	3776781.78	2.17823	(05102424)
365241.35	3776673.42	2.12847	(05122624)	365205.23	3776528.94	2.03529	(05020624)
365153.06	3776456.70	2.48843	(05020624)	365116.94	3776332.29	1.92478	(05020624)
365120.95	3776231.96	1.40530c	(06090124)	365137.01	3776115.58	1.24912c	(05121824)
365116.94	3775999.19	1.23770c	(05090224)	365104.90	3775898.86	1.27685c	(07031224)
365132.99	3775754.39	1.21603c	(05121824)	365317.60	3777247.31	1.30440c	(06070124)
365273.46	3777203.17	1.38171c	(06070124)	365100.89	3777094.81	1.24491	(06061424)
366493.48	3776063.40	4.02400	(06011924)	366465.39	3776183.80	3.55904	(06011924)
366453.35	3776308.21	3.04897	(05112724)	366449.34	3776416.57	2.53859	(07122724)
366397.17	3776561.05	2.89718c	(05101724)	366369.07	3776685.46	2.75933c	(05081024)
366369.07	3776837.96	2.83455	(05072624)	366409.21	3776962.37	2.44316	(05080724)
366457.36	3777078.76	2.12383c	(06080324)	366441.31	3777195.14	2.04641c	(05102224)
365594.52	3777500.15	1.71067c	(06082424)	365534.32	3777544.29	1.59872c	(06082424)
365646.69	3777439.95	1.75234c	(06082424)	365702.87	3777419.88	1.60633c	(07050924)
365385.83	3777435.93	1.65123	(07050124)	365329.64	3777520.21	1.49088	(07050124)
366272.76	3775373.13	1.19219	(05120824)	366373.09	3775401.22	1.30807	(06041824)
366573.75	3775473.46	1.46620	(06030424)	366124.27	3777528.24	1.21708	(07080224)
364354.78	3777168.81	0.69734	(05102424)	364481.63	3777294.00	0.78992	(07043024)
365124.08	3777445.55	0.91471c	(06070124)	365081.25	3777422.49	0.93206c	(06070124)
365048.30	3777399.43	1.01786c	(06042624)	365008.77	3777419.20	1.01207c	(06042624)
364850.63	3777346.72	0.90766	(06061424)	364794.62	3777356.60	0.86111	(06061424)
364751.79	3777323.65	0.77555	(06061424)	364722.13	3777237.99	0.95993	(07043024)
364761.67	3777241.29	0.96023	(07043024)	364797.91	3777251.17	0.91744	(07043024)
364672.72	3777343.42	0.80477	(07043024)	364666.13	3777264.35	0.93185	(07043024)
364633.18	3777274.23	0.91414	(07043024)	364590.35	3777389.55	0.77238	(07043024)
365311.87	3777458.73	1.40002	(07050124)	365272.34	3777475.21	1.20380	(07050124)
364455.27	3777435.67	0.77515	(07043024)	364346.55	3777109.50	0.71243c	(06082824)
364326.78	3777053.49	0.69917c	(06082824)	364310.31	3776994.19	0.57854c	(06082824)
364290.54	3776934.89	0.73723c	(06082224)	364900.04	3777185.28	0.98125	(07043024)
364628.44	3777199.41	0.82354	(07043024)				

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**MODELOPTs: RegDFAULT CONC ELEV
NODRYDPLT NOWETDPLT

*** THE SUMMARY OF HIGHEST 24-HR RESULTS ***

```
                                 ** CONC OF PM.25    IN MICROGRAMS/M**3                         **

                                                     DATE                                                                  NETWORK
GROUP ID                          AVERAGE CONC     (YYMMDDHH)             RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG)    OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

SRCGP1   HIGH  1ST HIGH VALUE IS       4.02400  ON 06011924: AT (  366493.48,  3776063.40,   337.33,   365.00,    0.00)  DC

ALL      HIGH  1ST HIGH VALUE IS       4.02400  ON 06011924: AT (  366493.48,  3776063.40,   337.33,   365.00,    0.00)  DC


 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
 *** AERMOD - VERSION 09292 ***    *** Stone Canyon Reservoir                                                 ***        01/26/11
                                   *** PM25                                                                   ***        09:52:29
                                                                                                                         PAGE  16
 **MODELOPTs:  RegDFAULT CONC                                              ELEV
                                                                 NODRYDPLT NOWETDPLT

 *** Message Summary : AERMOD Model Execution ***

  --------- Summary of Total Messages --------

 A Total of           0 Fatal Error Message(s)
 A Total of           0 Warning Message(s)
 A Total of        1753 Informational Message(s)

 A Total of       26280 Hours Were Processed

 A Total of        1181 Calm Hours Identified

 A Total of         572 Missing Hours Identified (  2.18 Percent)


    ******** FATAL ERROR MESSAGES ********
               ***  NONE  ***


    ********   WARNING MESSAGES   ********
               ***  NONE  ***


    ************************************
    *** AERMOD Finishes Successfully ***
    ************************************
```

BURIED CONCRETE COVER HEALTH RISK ASSESSMENT	
Project Alternative	
PROJECT:	Upper Stone Canyon
PROJECT NO:	2008-057

Annual Average Receptor Concentration	
Pollutant	**micrograms/cubic meter**
Diesel Particular Matter (DPM)	3.76

EXCESS CANCER RISK CALCULATION	
Lifetime Exposure Adjustment (LEA)	
Receptor:	Sensitive Receptors
hours per day	8
days per week	5
weeks per year	48
years	4.00
LEA	0.01255887

Unit Risk Factor (URF) for DPM	0.0003

FINDINGS	
Receptor:	Sensitive Receptors
Excess Cancer Risk	
Excess Cancer Risk (Per 1 Million Persons)	14.1664
SCAQMD Threshold	>= 10 in 1 million
Exceed Threshold?	**Yes**

Formulas:
Cancer Risk = DPM Conc x DPM URF x LEA

DPM = Diesel Particulate Matter
URF = Unit Risk Factor
LEA = Lifetime Exposure Adjustment

Source: SCAQMD *Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Idle Emissions for CEQA Air Quality Analysis* , August 2003; California Air Resources Board, Consolidated Table of OEHHA/ARB Approved Risk Assessment Health Values, April 25, 2005

FLOATING COVER HEALTH RISK ASSESSMENT	
Project Alternative	
PROJECT:	Upper Stone Canyon
PROJECT NO:	2008-057

Annual Average Receptor Concentration	
Pollutant	**micrograms/cubic meter**
Diesel Particular Matter (DPM)	2.23

EXCESS CANCER RISK CALCULATION	
Lifetime Exposure Adjustment (LEA)	
Receptor:	Sensitive Receptors
hours per day	8
days per week	5
weeks per year	48
years	1.42
LEA	0.004458399

Unit Risk Factor (URF) for DPM	0.0003

FINDINGS	
Receptor:	Sensitive Receptors
Excess Cancer Risk	
Excess Cancer Risk (Per 1 Million Persons)	2.9827
SCAQMD Threshold	>= 10 in 1 million
Exceed Threshold?	**No**

Formulas:
Cancer Risk = DPM Conc x DPM URF x LEA

DPM = Diesel Particulate Matter
URF = Unit Risk Factor
LEA = Lifetime Exposure Adjustment

Source: SCAQMD *Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Idle Emissions for CEQA Air Quality Analysis* , August 2003; California Air Resources Board, Consolidated Table of OEHHA/ARB Approved Risk Assessment Health Values, April 25, 2005

ALUMINUM COVER HEALTH RISK ASSESSMENT	
Project Alternative	
PROJECT:	Upper Stone Canyon
PROJECT NO:	2008-057

Annual Average Receptor Concentration	
Pollutant	**micrograms/cubic meter**
Diesel Particular Matter (DPM)	4.83

EXCESS CANCER RISK CALCULATION	
Lifetime Exposure Adjustment (LEA)	
Receptor:	Sensitive Receptors
hours per day	8
days per week	5
weeks per year	48
years	3.83
LEA	0.012025118

Unit Risk Factor (URF) for DPM	0.0003

FINDINGS	
Receptor:	Sensitive Receptors
Excess Cancer Risk	
Excess Cancer Risk (Per 1 Million Persons)	17.4244
SCAQMD Threshold	>= 10 in 1 million
Exceed Threshold?	**Yes**

Formulas:
Cancer Risk = DPM Conc x DPM URF x LEA

DPM = Diesel Particulate Matter
URF = Unit Risk Factor
LEA = Lifetime Exposure Adjustment

Source: SCAQMD *Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Idle Emissions for CEQA Air Quality Analysis* , August 2003; California Air Resources Board, Consolidated Table of OEHHA/ARB Approved Risk Assessment Health Values, April 25, 2005

ROSCOMARE ROAD ELEMENTARY BURIED CONCRETE COVER HEALTH	
Project Alternative	
PROJECT:	Upper Stone Canyon
PROJECT NO:	2008-057

Annual Average Receptor Concentration	
Pollutant	**micrograms/cubic meter**
Diesel Particular Matter (DPM)	1.42

EXCESS CANCER RISK CALCULATION	
Lifetime Exposure Adjustment (LEA)	
Receptor:	Sensitive Receptors
hours per day	8
days per week	5
weeks per year	48
years	4.00
LEA	0.01255887

Unit Risk Factor (URF) for DPM	0.0003

FINDINGS	
Receptor:	Sensitive Receptors
Excess Cancer Risk	
Excess Cancer Risk (Per 1 Million Persons)	5.3501
SCAQMD Threshold	>= 10 in 1 million
Exceed Threshold?	**No**

Formulas:
Cancer Risk = DPM Conc x DPM URF x LEA

DPM = Diesel Particulate Matter
URF = Unit Risk Factor
LEA = Lifetime Exposure Adjustment

Source: SCAQMD *Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Idle Emissions for CEQA Air Quality Analysis* , August 2003; California Air Resources Board, Consolidated Table of OEHHA/ARB Approved Risk Assessment Health Values, April 25, 2005

ROSCOMARE ROAD ELEMENTARY FLOATING COVER HEALTH RISK	
Project Alternative	
PROJECT:	Upper Stone Canyon
PROJECT NO:	2008-057

Annual Average Receptor Concentration	
Pollutant	**micrograms/cubic meter**
Diesel Particular Matter (DPM)	0.83

EXCESS CANCER RISK CALCULATION	
Lifetime Exposure Adjustment (LEA)	
Receptor:	Sensitive Receptors
hours per day	8
days per week	5
weeks per year	48
years	1.42
LEA	0.004458399

Unit Risk Factor (URF) for DPM	0.0003

FINDINGS	
Receptor:	Sensitive Receptors
Excess Cancer Risk	
Excess Cancer Risk (Per 1 Million Persons)	1.1101
SCAQMD Threshold	>= 10 in 1 million
Exceed Threshold?	**No**

Formulas:
Cancer Risk = DPM Conc x DPM URF x LEA

DPM = Diesel Particulate Matter
URF = Unit Risk Factor
LEA = Lifetime Exposure Adjustment

Source: SCAQMD *Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Idle Emissions for CEQA Air Quality Analysis* , August 2003; California Air Resources Board, Consolidated Table of OEHHA/ARB Approved Risk Assessment Health Values, April 25, 2005

ROSCOMARE ROAD ELEMENTARY ALUMINUM COVER HEALTH RISK	
Project Alternative	
PROJECT:	Upper Stone Canyon
PROJECT NO:	2008-057

Annual Average Receptor Concentration	
Pollutant	**micrograms/cubic meter**
Diesel Particular Matter (DPM)	1.81

EXCESS CANCER RISK CALCULATION	
Lifetime Exposure Adjustment (LEA)	
Receptor:	Sensitive Receptors
hours per day	8
days per week	5
weeks per year	48
years	3.83
LEA	0.012025118

Unit Risk Factor (URF) for DPM	0.0003

FINDINGS	
Receptor:	Sensitive Receptors
Excess Cancer Risk	
Excess Cancer Risk (Per 1 Million Persons)	6.5296
SCAQMD Threshold	>= 10 in 1 million
Exceed Threshold?	**No**

Formulas:
Cancer Risk = DPM Conc x DPM URF x LEA

DPM = Diesel Particulate Matter
URF = Unit Risk Factor
LEA = Lifetime Exposure Adjustment

Source: SCAQMD *Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Idle Emissions for CEQA Air Quality Analysis* , August 2003; California Air Resources Board, Consolidated Table of OEHHA/ARB Approved Risk Assessment Health Values, April 25, 2005

AMERICAN JEWISH UNIVERSITY BURIED CONCRETE COVER HEALTH RISK	
Project Alternative	
PROJECT:	Upper Stone Canyon
PROJECT NO:	2008-057

Annual Average Receptor Concentration	
Pollutant	**micrograms/cubic meter**
Diesel Particular Matter (DPM)	0.71

EXCESS CANCER RISK CALCULATION	
Lifetime Exposure Adjustment (LEA)	
Receptor:	Sensitive Receptors
hours per day	8
days per week	5
weeks per year	48
years	4.00
LEA	0.01255887

Unit Risk Factor (URF) for DPM	0.0003

FINDINGS	
Receptor:	Sensitive Receptors
Excess Cancer Risk	
Excess Cancer Risk (Per 1 Million Persons)	2.6750
SCAQMD Threshold	>= 10 in 1 million
Exceed Threshold?	**No**

Formulas:
Cancer Risk = DPM Conc x DPM URF x LEA

DPM = Diesel Particulate Matter
URF = Unit Risk Factor
LEA = Lifetime Exposure Adjustment

Source: SCAQMD *Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Idle Emissions for CEQA Air Quality Analysis* , August 2003; California Air Resources Board, Consolidated Table of OEHHA/ARB Approved Risk Assessment Health Values, April 25, 2005

AMERICAN JEWISH UNIVERSITY FLOATING COVER HEALTH RISK	
Project Alternative	
PROJECT:	Upper Stone Canyon
PROJECT NO:	2008-057

Annual Average Receptor Concentration	
Pollutant	**micrograms/cubic meter**
Diesel Particular Matter (DPM)	0.39

EXCESS CANCER RISK CALCULATION	
Lifetime Exposure Adjustment (LEA)	
Receptor:	Sensitive Receptors
hours per day	8
days per week	5
weeks per year	48
years	1.42
LEA	0.004458399

Unit Risk Factor (URF) for DPM	0.0003

FINDINGS	
Receptor:	Sensitive Receptors
Excess Cancer Risk	
Excess Cancer Risk (Per 1 Million Persons)	0.5216
SCAQMD Threshold	>= 10 in 1 million
Exceed Threshold?	**No**

Formulas:
Cancer Risk = DPM Conc x DPM URF x LEA

DPM = Diesel Particulate Matter
URF = Unit Risk Factor
LEA = Lifetime Exposure Adjustment

Source: SCAQMD *Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Idle Emissions for CEQA Air Quality Analysis* , August 2003; California Air Resources Board, Consolidated Table of OEHHA/ARB Approved Risk Assessment Health Values, April 25, 2005

AMERICAN JEWISH UNIVERSITY ALUMINUM COVER HEALTH RISK	
Project Alternative	
PROJECT:	Upper Stone Canyon
PROJECT NO:	2008-057

Annual Average Receptor Concentration	
Pollutant	**micrograms/cubic meter**
Diesel Particular Matter (DPM)	0.84

EXCESS CANCER RISK CALCULATION	
Lifetime Exposure Adjustment (LEA)	
Receptor:	Sensitive Receptors
hours per day	8
days per week	5
weeks per year	48
years	3.83
LEA	0.012025118

Unit Risk Factor (URF) for DPM	0.0003

FINDINGS	
Receptor:	Sensitive Receptors
Excess Cancer Risk	
Excess Cancer Risk (Per 1 Million Persons)	3.0303
SCAQMD Threshold	>= 10 in 1 million
Exceed Threshold?	**No**

Formulas:
Cancer Risk = DPM Conc x DPM URF x LEA

DPM = Diesel Particulate Matter
URF = Unit Risk Factor
LEA = Lifetime Exposure Adjustment

Source: SCAQMD *Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Idle Emissions for CEQA Air Quality Analysis* , August 2003; California Air Resources Board, Consolidated Table of OEHHA/ARB Approved Risk Assessment Health Values, April 25, 2005

STEPHAN WISE BURIED CONCRETE COVER HEALTH	
Project Alternative	
PROJECT:	Upper Stone Canyon
PROJECT NO:	2008-057

Annual Average Receptor Concentration	
Pollutant	**micrograms/cubic meter**
Diesel Particular Matter (DPM)	0.8

EXCESS CANCER RISK CALCULATION	
Lifetime Exposure Adjustment (LEA)	
Receptor:	Sensitive Receptors
hours per day	8
days per week	5
weeks per year	48
years	4.00
LEA	0.01255887

Unit Risk Factor (URF) for DPM	0.0003

Nitrogen Dioxide	0
Sulfur Dioxide	0
Total Chronic Hazard Index	--
FINDINGS	
Receptor:	Sensitive Receptors
Excess Cancer Risk	
Excess Cancer Risk (Per 1 Million Persons)	3.0141
SCAQMD Threshold	>= 10 in 1 million
Exceed Threshold?	**No**

Formulas:
Cancer Risk = DPM Conc x DPM URF x LEA

DPM = Diesel Particulate Matter
URF = Unit Risk Factor
LEA = Lifetime Exposure Adjustment

Diesel Idle Emissions for CEQA Air Quality Analysis , August 2003; California Air Resources Board,

STEPHAN WISE FLOATING COVER HEALTH RISK	
Project Alternative	
PROJECT:	Upper Stone Canyon
PROJECT NO:	2008-057

Annual Average Receptor Concentration	
Pollutant	**micrograms/cubic meter**
Diesel Particular Matter (DPM)	0.46

EXCESS CANCER RISK CALCULATION	
Lifetime Exposure Adjustment (LEA)	
Receptor:	Sensitive Receptors
hours per day	8
days per week	5
weeks per year	48
years	1.42
LEA	0.004458399

Unit Risk Factor (URF) for DPM	0.0003

Nitrogen Dioxide	0
Sulfur Dioxide	0
Total Chronic Hazard Index	--
FINDINGS	
Receptor:	Sensitive Receptors
Excess Cancer Risk	
Excess Cancer Risk (Per 1 Million Persons)	0.6153
SCAQMD Threshold	>= 10 in 1 million
Exceed Threshold?	**No**

Formulas:

Cancer Risk = DPM Conc x DPM URF x LEA

DPM = Diesel Particulate Matter
URF = Unit Risk Factor
LEA = Lifetime Exposure Adjustment

Diesel Idle Emissions for CEQA Air Quality Analysis , August 2003; California Air Resources Board,

STEPHAN WISE ALUMINUM COVER HEALTH RISK	
Project Alternative	
PROJECT:	Upper Stone Canyon
PROJECT NO:	2008-057

Annual Average Receptor Concentration	
Pollutant	**micrograms/cubic meter**
Diesel Particular Matter (DPM)	0.99

EXCESS CANCER RISK CALCULATION	
Lifetime Exposure Adjustment (LEA)	
Receptor:	Sensitive Receptors
hours per day	8
days per week	5
weeks per year	48
years	3.83
LEA	0.012025118

Unit Risk Factor (URF) for DPM	0.0003

Nitrogen Dioxide	0
Sulfur Dioxide	0
Total Chronic Hazard Index	--
FINDINGS	
Receptor:	Sensitive Receptors
Excess Cancer Risk	
Excess Cancer Risk (Per 1 Million Persons)	3.5715
SCAQMD Threshold	>= 10 in 1 million
Exceed Threshold?	**No**

Formulas:
Cancer Risk = DPM Conc x DPM URF x LEA

DPM = Diesel Particulate Matter
URF = Unit Risk Factor
LEA = Lifetime Exposure Adjustment

Diesel Idle Emissions for CEQA Air Quality Analysis , August 2003; California Air Resources Board,

Appendix F

Regional Operational Emissions

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Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: J:\Projects\LADWP Stone Canyon Reservoir Project 2008-057\Air Quality\Operations\Stone Canyon Weekday.urb924

Project Name: Stone Canyon Weekday

Project Location: South Coast AQMD

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

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	0.05	0.07	0.60	0.00	0.21	0.04	122.85

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	0.05	0.07	0.60	0.00	0.21	0.04	122.85

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Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Weekday	0.05	0.07	0.60	0.00	0.21	0.04	122.85
TOTALS (tons/year, unmitigated)	0.05	0.07	0.60	0.00	0.21	0.04	122.85

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2020 Season: Annual

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
Weekday		75.00	1000 sq ft	1.00	75.00	672.97
					75.00	672.97

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	50.6	0.0	100.0	0.0
Light Truck < 3750 lbs	7.2	0.0	98.6	1.4
Light Truck 3751-5750 lbs	23.3	0.0	100.0	0.0
Med Truck 5751-8500 lbs	11.0	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.7	0.0	82.4	17.6
Lite-Heavy Truck 10,001-14,000 lbs	0.5	0.0	60.0	40.0

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Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Med-Heavy Truck 14,001-33,000 lbs	1.0	0.0	20.0	80.0
Heavy-Heavy Truck 33,001-60,000 lbs	0.6	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	2.9	41.4	58.6	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.9	0.0	88.9	11.1

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)						
Weekday				2.0	1.0	97.0

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Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: J:\Projects\LADWP Stone Canyon Reservoir Project 2008-057\Air Quality\Operations\Stone Canyon Weekend.urb924

Project Name: Stone Canyon Weekend

Project Location: South Coast AQMD

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

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	0.10	0.14	1.20	0.00	0.42	0.08	245.70

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	0.10	0.14	1.20	0.00	0.42	0.08	245.70

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Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Blank (Edit this description)	0.10	0.14	1.20	0.00	0.42	0.08	245.70
TOTALS (tons/year, unmitigated)	0.10	0.14	1.20	0.00	0.42	0.08	245.70

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2020 Season: Annual

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
Blank (Edit this description)		150.00	1000 sq ft	1.00	150.00	1,345.95
					150.00	1,345.95

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	50.6	0.0	100.0	0.0
Light Truck < 3750 lbs	7.2	0.0	98.6	1.4
Light Truck 3751-5750 lbs	23.3	0.0	100.0	0.0
Med Truck 5751-8500 lbs	11.0	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.7	0.0	82.4	17.6
Lite-Heavy Truck 10,001-14,000 lbs	0.5	0.0	60.0	40.0

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Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Med-Heavy Truck 14,001-33,000 lbs	1.0	0.0	20.0	80.0
Heavy-Heavy Truck 33,001-60,000 lbs	0.6	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	2.9	41.4	58.6	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.9	0.0	88.9	11.1

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)						
Blank (Edit this description)				2.0	1.0	97.0

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Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: J:\Projects\LADWP Stone Canyon Reservoir Project 2008-057\Air Quality\Operations\Stone Canyon Weekday.urb924

Project Name: Stone Canyon Weekday

Project Location: South Coast AQMD

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

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	0.26	0.35	3.36	0.01	1.16	0.23	695.40

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	0.26	0.35	3.36	0.01	1.16	0.23	695.40

9/20/2010 2:05:21 PM

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Weekday	0.26	0.35	3.36	0.01	1.16	0.23	695.40
TOTALS (lbs/day, unmitigated)	0.26	0.35	3.36	0.01	1.16	0.23	695.40

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2020 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
Weekday		75.00	1000 sq ft	1.00	75.00	672.97
					75.00	672.97

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	50.6	0.0	100.0	0.0
Light Truck < 3750 lbs	7.2	0.0	98.6	1.4
Light Truck 3751-5750 lbs	23.3	0.0	100.0	0.0
Med Truck 5751-8500 lbs	11.0	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.7	0.0	82.4	17.6
Lite-Heavy Truck 10,001-14,000 lbs	0.5	0.0	60.0	40.0

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Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Med-Heavy Truck 14,001-33,000 lbs	1.0	0.0	20.0	80.0
Heavy-Heavy Truck 33,001-60,000 lbs	0.6	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	2.9	41.4	58.6	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.9	0.0	88.9	11.1

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)						
Weekday				2.0	1.0	97.0

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Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: J:\Projects\LADWP Stone Canyon Reservoir Project 2008-057\Air Quality\Operations\Stone Canyon Weekend.urb924

Project Name: Stone Canyon Weekend

Project Location: South Coast AQMD

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

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	0.52	0.71	6.71	0.01	2.32	0.45	1,390.81

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	0.52	0.71	6.71	0.01	2.32	0.45	1,390.81

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Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Blank (Edit this description)	0.52	0.71	6.71	0.01	2.32	0.45	1,390.81
TOTALS (lbs/day, unmitigated)	0.52	0.71	6.71	0.01	2.32	0.45	1,390.81

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2020 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
Blank (Edit this description)		150.00	1000 sq ft	1.00	150.00	1,345.95
					150.00	1,345.95

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	50.6	0.0	100.0	0.0
Light Truck < 3750 lbs	7.2	0.0	98.6	1.4
Light Truck 3751-5750 lbs	23.3	0.0	100.0	0.0
Med Truck 5751-8500 lbs	11.0	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.7	0.0	82.4	17.6
Lite-Heavy Truck 10,001-14,000 lbs	0.5	0.0	60.0	40.0

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Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Med-Heavy Truck 14,001-33,000 lbs	1.0	0.0	20.0	80.0
Heavy-Heavy Truck 33,001-60,000 lbs	0.6	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	2.9	41.4	58.6	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.9	0.0	88.9	11.1

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)						
Blank (Edit this description)				2.0	1.0	97.0

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Urbemis 2007 Version 9.2.4

Combined Winter Emissions Reports (Pounds/Day)

File Name: J:\Projects\LADWP Stone Canyon Reservoir Project 2008-057\Air Quality\Operations\Stone Canyon Weekday.urb924

Project Name: Stone Canyon Weekday

Project Location: South Coast AQMD

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

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	0.30	0.42	3.17	0.01	1.16	0.23	628.65

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	0.30	0.42	3.17	0.01	1.16	0.23	628.65

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Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Weekday	0.30	0.42	3.17	0.01	1.16	0.23	628.65
TOTALS (lbs/day, unmitigated)	0.30	0.42	3.17	0.01	1.16	0.23	628.65

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2020 Temperature (F): 60 Season: Winter

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
Weekday		75.00	1000 sq ft	1.00	75.00	672.97
					75.00	672.97

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	50.6	0.0	100.0	0.0
Light Truck < 3750 lbs	7.2	0.0	98.6	1.4
Light Truck 3751-5750 lbs	23.3	0.0	100.0	0.0
Med Truck 5751-8500 lbs	11.0	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.7	0.0	82.4	17.6
Lite-Heavy Truck 10,001-14,000 lbs	0.5	0.0	60.0	40.0

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Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Med-Heavy Truck 14,001-33,000 lbs	1.0	0.0	20.0	80.0
Heavy-Heavy Truck 33,001-60,000 lbs	0.6	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	2.9	41.4	58.6	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.9	0.0	88.9	11.1

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)						
Weekday				2.0	1.0	97.0

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Urbemis 2007 Version 9.2.4

Combined Winter Emissions Reports (Pounds/Day)

File Name: J:\Projects\LADWP Stone Canyon Reservoir Project 2008-057\Air Quality\Operations\Stone Canyon Weekend.urb924

Project Name: Stone Canyon Weekend

Project Location: South Coast AQMD

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

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	0.59	0.85	6.35	0.01	2.32	0.45	1,257.29

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	0.59	0.85	6.35	0.01	2.32	0.45	1,257.29

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Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Blank (Edit this description)	0.59	0.85	6.35	0.01	2.32	0.45	1,257.29
TOTALS (lbs/day, unmitigated)	0.59	0.85	6.35	0.01	2.32	0.45	1,257.29

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2020 Temperature (F): 60 Season: Winter

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
Blank (Edit this description)		150.00	1000 sq ft	1.00	150.00	1,345.95
					150.00	1,345.95

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	50.6	0.0	100.0	0.0
Light Truck < 3750 lbs	7.2	0.0	98.6	1.4
Light Truck 3751-5750 lbs	23.3	0.0	100.0	0.0
Med Truck 5751-8500 lbs	11.0	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.7	0.0	82.4	17.6
Lite-Heavy Truck 10,001-14,000 lbs	0.5	0.0	60.0	40.0

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Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Med-Heavy Truck 14,001-33,000 lbs	1.0	0.0	20.0	80.0
Heavy-Heavy Truck 33,001-60,000 lbs	0.6	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	2.9	41.4	58.6	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.9	0.0	88.9	11.1

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)						
Blank (Edit this description)				2.0	1.0	97.0

Appendix G

SCAQMD Rule 403

(Adopted May 7, 1976) (Amended November 6, 1992)
(Amended July 9, 1993) (Amended February 14, 1997)
(Amended December 11, 1998)(Amended April 2, 2004)
(Amended June 3, 2005)

RULE 403. FUGITIVE DUST

(a) Purpose

The purpose of this Rule is to reduce the amount of particulate matter entrained in the ambient air as a result of anthropogenic (man-made) fugitive dust sources by requiring actions to prevent, reduce or mitigate fugitive dust emissions.

(b) Applicability

The provisions of this Rule shall apply to any activity or man-made condition capable of generating fugitive dust.

(c) Definitions

(1) ACTIVE OPERATIONS means any source capable of generating fugitive dust, including, but not limited to, earth-moving activities, construction/demolition activities, disturbed surface area, or heavy- and light-duty vehicular movement.

(2) AGGREGATE-RELATED PLANTS are defined as facilities that produce and / or mix sand and gravel and crushed stone.

(3) AGRICULTURAL HANDBOOK means the region-specific guidance document that has been approved by the Governing Board or hereafter approved by the Executive Officer and the U.S. EPA. For the South Coast Air Basin, the Board-approved region-specific guidance document is the Rule 403 Agricultural Handbook dated December 1998. For the Coachella Valley, the Board-approved region-specific guidance document is the Rule 403 Coachella Valley Agricultural Handbook dated April 2, 2004.

(4) ANEMOMETERS are devices used to measure wind speed and direction in accordance with the performance standards, and maintenance and calibration criteria as contained in the most recent Rule 403 Implementation Handbook.

(5) BEST AVAILABLE CONTROL MEASURES means fugitive dust control actions that are set forth in Table 1 of this Rule.

(6) BULK MATERIAL is sand, gravel, soil, aggregate material less than two inches in length or diameter, and other organic or inorganic particulate matter.

(7) CEMENT MANUFACTURING FACILITY is any facility that has a cement kiln at the facility.

(8) CHEMICAL STABILIZERS are any non-toxic chemical dust suppressant which must not be used if prohibited for use by the Regional Water Quality Control Boards, the California Air Resources Board, the U.S. Environmental Protection Agency (U.S. EPA), or any applicable law, rule or regulation. The chemical stabilizers shall meet any specifications, criteria, or tests required by any federal, state, or local water agency. Unless otherwise indicated, the use of a non-toxic chemical stabilizer shall be of sufficient concentration and application frequency to maintain a stabilized surface.

(9) COMMERCIAL POULTRY RANCH means any building, structure, enclosure, or premises where more than 100 fowl are kept or maintained for the primary purpose of producing eggs or meat for sale or other distribution.

(10) CONFINED ANIMAL FACILITY means a source or group of sources of air pollution at an agricultural source for the raising of 3,360 or more fowl or 50 or more animals, including but not limited to, any structure, building, installation, farm, corral, coop, feed storage area, milking parlor, or system for the collection, storage, or distribution of solid and liquid manure; if domesticated animals, including horses, sheep, goats, swine, beef cattle, rabbits, chickens, turkeys, or ducks are corralled, penned, or otherwise caused to remain in restricted areas for commercial agricultural purposes and feeding is by means other than grazing.

(11) CONSTRUCTION/DEMOLITION ACTIVITIES means any on-site mechanical activities conducted in preparation of, or related to, the building, alteration, rehabilitation, demolition or improvement of property, including, but not limited to the following activities: grading, excavation, loading, crushing, cutting, planing, shaping or ground breaking.

(12) CONTRACTOR means any person who has a contractual arrangement to conduct an active operation for another person.

(13) DAIRY FARM is an operation on a property, or set of properties that are contiguous or separated only by a public right-of-way, that raises cows or

produces milk from cows for the purpose of making a profit or for a livelihood. Heifer and calf farms are dairy farms.

(14) DISTURBED SURFACE AREA means a portion of the earth's surface which has been physically moved, uncovered, destabilized, or otherwise modified from its undisturbed natural soil condition, thereby increasing the potential for emission of fugitive dust. This definition excludes those areas which have:

(A) been restored to a natural state, such that the vegetative ground cover and soil characteristics are similar to adjacent or nearby natural conditions;

(B) been paved or otherwise covered by a permanent structure; or

(C) sustained a vegetative ground cover of at least 70 percent of the native cover for a particular area for at least 30 days.

(15) DUST SUPPRESSANTS are water, hygroscopic materials, or non-toxic chemical stabilizers used as a treatment material to reduce fugitive dust emissions.

(16) EARTH-MOVING ACTIVITIES means the use of any equipment for any activity where soil is being moved or uncovered, and shall include, but not be limited to the following: grading, earth cutting and filling operations, loading or unloading of dirt or bulk materials, adding to or removing from open storage piles of bulk materials, landfill operations, weed abatement through disking, and soil mulching.

(17) DUST CONTROL SUPERVISOR means a person with the authority to expeditiously employ sufficient dust mitigation measures to ensure compliance with all Rule 403 requirements at an active operation.

(18) FUGITIVE DUST means any solid particulate matter that becomes airborne, other than that emitted from an exhaust stack, directly or indirectly as a result of the activities of any person.

(19) HIGH WIND CONDITIONS means that instantaneous wind speeds exceed 25 miles per hour.

(20) INACTIVE DISTURBED SURFACE AREA means any disturbed surface area upon which active operations have not occurred or are not expected to occur for a period of 20 consecutive days.

(21) LARGE OPERATIONS means any active operations on property which contains 50 or more acres of disturbed surface area; or any earth-moving operation with a daily earth-moving or throughput volume of 3,850 cubic

meters (5,000 cubic yards) or more three times during the most recent 365-day period.

(22) OPEN STORAGE PILE is any accumulation of bulk material, which is not fully enclosed, covered or chemically stabilized, and which attains a height of three feet or more and a total surface area of 150 or more square feet.

(23) PARTICULATE MATTER means any material, except uncombined water, which exists in a finely divided form as a liquid or solid at standard conditions.

(24) PAVED ROAD means a public or private improved street, highway, alley, public way, or easement that is covered by typical roadway materials, but excluding access roadways that connect a facility with a public paved roadway and are not open to through traffic. Public paved roads are those open to public access and that are owned by any federal, state, county, municipal or any other governmental or quasi-governmental agencies. Private paved roads are any paved roads not defined as public.

(25) PM_{10} means particulate matter with an aerodynamic diameter smaller than or equal to 10 microns as measured by the applicable State and Federal reference test methods.

(26) PROPERTY LINE means the boundaries of an area in which either a person causing the emission or a person allowing the emission has the legal use or possession of the property. Where such property is divided into one or more sub-tenancies, the property line(s) shall refer to the boundaries dividing the areas of all sub-tenancies.

(27) RULE 403 IMPLEMENTATION HANDBOOK means a guidance document that has been approved by the Governing Board on April 2, 2004 or hereafter approved by the Executive Officer and the U.S. EPA.

(28) SERVICE ROADS are paved or unpaved roads that are used by one or more public agencies for inspection or maintenance of infrastructure and which are not typically used for construction-related activity.

(29) SIMULTANEOUS SAMPLING means the operation of two PM_{10} samplers in such a manner that one sampler is started within five minutes of the other, and each sampler is operated for a consecutive period which must be not less than 290 minutes and not more than 310 minutes.

(30) SOUTH COAST AIR BASIN means the non-desert portions of Los Angeles, Riverside, and San Bernardino counties and all of Orange

County as defined in California Code of Regulations, Title 17, Section 60104. The area is bounded on the west by the Pacific Ocean, on the north and east by the San Gabriel, San Bernardino, and San Jacinto Mountains, and on the south by the San Diego county line.

(31) STABILIZED SURFACE means any previously disturbed surface area or open storage pile which, through the application of dust suppressants, shows visual or other evidence of surface crusting and is resistant to wind-driven fugitive dust and is demonstrated to be stabilized. Stabilization can be demonstrated by one or more of the applicable test methods contained in the Rule 403 Implementation Handbook.

(32) TRACK-OUT means any bulk material that adheres to and agglomerates on the exterior surface of motor vehicles, haul trucks, and equipment (including tires) that have been released onto a paved road and can be removed by a vacuum sweeper or a broom sweeper under normal operating conditions.

(33) TYPICAL ROADWAY MATERIALS means concrete, asphaltic concrete, recycled asphalt, asphalt, or any other material of equivalent performance as determined by the Executive Officer, and the U.S. EPA.

(34) UNPAVED ROADS means any unsealed or unpaved roads, equipment paths, or travel ways that are not covered by typical roadway materials. Public unpaved roads are any unpaved roadway owned by federal, state, county, municipal or other governmental or quasi-governmental agencies. Private unpaved roads are all other unpaved roadways not defined as public.

(35) VISIBLE ROADWAY DUST means any sand, soil, dirt, or other solid particulate matter which is visible upon paved road surfaces and which can be removed by a vacuum sweeper or a broom sweeper under normal operating conditions.

(36) WIND-DRIVEN FUGITIVE DUST means visible emissions from any disturbed surface area which is generated by wind action alone.

(37) WIND GUST is the maximum instantaneous wind speed as measured by an anemometer.

(d) Requirements

(1) No person shall cause or allow the emissions of fugitive dust from any active operation, open storage pile, or disturbed surface area such that:

(A) the dust remains visible in the atmosphere beyond the property line of the emission source; or

(B) the dust emission exceeds 20 percent opacity (as determined by the appropriate test method included in the Rule 403 Implementation Handbook), if the dust emission is the result of movement of a motorized vehicle.

(2) No person shall conduct active operations without utilizing the applicable best available control measures included in Table 1 of this Rule to minimize fugitive dust emissions from each fugitive dust source type within the active operation.

(3) No person shall cause or allow PM_{10} levels to exceed 50 micrograms per cubic meter when determined, by simultaneous sampling, as the difference between upwind and downwind samples collected on high-volume particulate matter samplers or other U.S. EPA-approved equivalent method for PM_{10} monitoring. If sampling is conducted, samplers shall be:

(A) Operated, maintained, and calibrated in accordance with 40 Code of Federal Regulations (CFR), Part 50, Appendix J, or appropriate U.S. EPA-published documents for U.S. EPA-approved equivalent method(s) for PM_{10}.

(B) Reasonably placed upwind and downwind of key activity areas and as close to the property line as feasible, such that other sources of fugitive dust between the sampler and the property line are minimized.

(4) No person shall allow track-out to extend 25 feet or more in cumulative length from the point of origin from an active operation. Notwithstanding the preceding, all track-out from an active operation shall be removed at the conclusion of each workday or evening shift.

(5) No person shall conduct an active operation with a disturbed surface area of five or more acres, or with a daily import or export of 100 cubic yards or more of bulk material without utilizing at least one of the measures listed in subparagraphs (d)(5)(A) through (d)(5)(E) at each vehicle egress from the site to a paved public road.

(A) Install a pad consisting of washed gravel (minimum-size: one inch) maintained in a clean condition to a depth of at least six inches and extending at least 30 feet wide and at least 50 feet long.

(B) Pave the surface extending at least 100 feet and at least 20 feet wide.

(C) Utilize a wheel shaker/wheel spreading device consisting of raised dividers (rails, pipe, or grates) at least 24 feet long and 10 feet wide to remove bulk material from tires and vehicle undercarriages before vehicles exit the site.

(D) Install and utilize a wheel washing system to remove bulk material from tires and vehicle undercarriages before vehicles exit the site.

(E) Any other control measures approved by the Executive Officer and the U.S. EPA as equivalent to the actions specified in subparagraphs (d)(5)(A) through (d)(5)(D).

(6) Beginning January 1, 2006, any person who operates or authorizes the operation of a confined animal facility subject to this Rule shall implement the applicable conservation management practices specified in Table 4 of this Rule.

(e) Additional Requirements for Large Operations

(1) Any person who conducts or authorizes the conducting of a large operation subject to this Rule shall implement the applicable actions specified in Table 2 of this Rule at all times and shall implement the applicable actions specified in Table 3 of this Rule when the applicable performance standards can not be met through use of Table 2 actions; and shall:

(A) submit a fully executed Large Operation Notification (Form 403 N) to the Executive Officer within 7 days of qualifying as a large operation;

(B) include, as part of the notification, the name(s), address(es), and phone number(s) of the person(s) responsible for the submittal, and a description of the operation(s), including a map depicting the location of the site;

(C) maintain daily records to document the specific dust control actions taken, maintain such records for a period of not less than three years; and make such records available to the Executive Officer upon request;

(D) install and maintain project signage with project contact signage that meets the minimum standards of the Rule 403 Implementation Handbook, prior to initiating any earthmoving activities;

(E) identify a dust control supervisor that:

(i) is employed by or contracted with the property owner or developer;

(ii) is on the site or available on-site within 30 minutes during working hours;

(iii) has the authority to expeditiously employ sufficient dust mitigation measures to ensure compliance with all Rule requirements;

(iv) has completed the AQMD Fugitive Dust Control Class and has been issued a valid Certificate of Completion for the class; and

(F) notify the Executive Officer in writing within 30 days after the site no longer qualifies as a large operation as defined by paragraph (c)(18).

(2) Any Large Operation Notification submitted to the Executive Officer or AQMD-approved dust control plan shall be valid for a period of one year from the date of written acceptance by the Executive Officer. Any Large Operation Notification accepted pursuant to paragraph (e)(1), excluding those submitted by aggregate-related plants and cement manufacturing facilities must be resubmitted annually by the person who conducts or authorizes the conducting of a large operation, at least 30 days prior to the expiration date, or the submittal shall no longer be valid as of the expiration date. If all fugitive dust sources and corresponding control measures or special circumstances remain identical to those identified in the previously accepted submittal or in an AQMD-approved dust control plan, the resubmittal may be a simple statement of no-change (Form 403NC).

(f) Compliance Schedule

The newly amended provisions of this Rule shall become effective upon adoption. Pursuant to subdivision (e), any existing site that qualifies as a large operation will have 60 days from the date of Rule adoption to comply with the notification and recordkeeping requirements for large operations. Any Large Operation

Notification or AQMD-approved dust control plan which has been accepted prior to the date of adoption of these amendments shall remain in effect and the Large Operation Notification or AQMD-approved dust control plan annual resubmittal date shall be one year from adoption of this Rule amendment.

(g) Exemptions

(1) The provisions of this Rule shall not apply to:

(A) Dairy farms.

(B) Confined animal facilities provided that the combined disturbed surface area within one continuous property line is one acre or less.

(C) Agricultural vegetative crop operations provided that the combined disturbed surface area within one continuous property line and not separated by a paved public road is 10 acres or less.

(D) Agricultural vegetative crop operations within the South Coast Air Basin, whose combined disturbed surface area includes more than 10 acres provided that the person responsible for such operations:

(i) voluntarily implements the conservation management practices contained in the Rule 403 Agricultural Handbook;

(ii) completes and maintains the self-monitoring form documenting sufficient conservation management practices, as described in the Rule 403 Agricultural Handbook; and

(iii) makes the completed self-monitoring form available to the Executive Officer upon request.

(E) Agricultural vegetative crop operations outside the South Coast Air Basin whose combined disturbed surface area includes more than 10 acres provided that the person responsible for such operations:

(i) voluntarily implements the conservation management practices contained in the Rule 403 Coachella Valley Agricultural Handbook; and

(ii) completes and maintains the self-monitoring form documenting sufficient conservation management practices, as described in the Rule 403 Coachella Valley Agricultural Handbook; and

(iii) makes the completed self-monitoring form available to the Executive Officer upon request.

(F) Active operations conducted during emergency life-threatening situations, or in conjunction with any officially declared disaster or state of emergency.

(G) Active operations conducted by essential service utilities to provide electricity, natural gas, telephone, water and sewer during periods of service outages and emergency disruptions.

(H) Any contractor subsequent to the time the contract ends, provided that such contractor implemented the required control measures during the contractual period.

(I) Any grading contractor, for a phase of active operations, subsequent to the contractual completion of that phase of earth-moving activities, provided that the required control measures have been implemented during the entire phase of earth-moving activities, through and including five days after the final grading inspection.

(J) Weed abatement operations ordered by a county agricultural commissioner or any state, county, or municipal fire department, provided that:

(i) mowing, cutting or other similar process is used which maintains weed stubble at least three inches above the soil; and

(ii) any discing or similar operation which cuts into and disturbs the soil, where watering is used prior to initiation of these activities, and a determination is made by the agency issuing the weed abatement order that, due to fire hazard conditions, rocks, or other physical obstructions, it is not practical to meet the conditions specified in clause (g)(1)(H)(i). The provisions this clause shall not exempt the owner of any property from stabilizing, in accordance with paragraph (d)(2), disturbed surface areas which have been created as a result of the weed abatement actions.

(K) sandblasting operations.

(2) The provisions of paragraphs (d)(1) and (d)(3) shall not apply:

(A) When wind gusts exceed 25 miles per hour, provided that:

(i) The required Table 3 contingency measures in this Rule are implemented for each applicable fugitive dust source type, and;

(ii) records are maintained in accordance with subparagraph (e)(1)(C).

(B) To unpaved roads, provided such roads:

(i) are used solely for the maintenance of wind-generating equipment; or

(ii) are unpaved public alleys as defined in Rule 1186; or

(iii) are service roads that meet all of the following criteria:

(a) are less than 50 feet in width at all points along the road;

(b) are within 25 feet of the property line; and

(c) have a traffic volume less than 20 vehicle-trips per day.

(C) To any active operation, open storage pile, or disturbed surface area for which necessary fugitive dust preventive or mitigative actions are in conflict with the federal Endangered Species Act, as determined in writing by the State or federal agency responsible for making such determinations.

(3) The provisions of (d)(2) shall not apply to any aggregate-related plant or cement manufacturing facility that implements the applicable actions specified in Table 2 of this Rule at all times and shall implement the applicable actions specified in Table 3 of this Rule when the applicable performance standards of paragraphs (d)(1) and (d)(3) can not be met through use of Table 2 actions.

(4) The provisions of paragraphs (d)(1), (d)(2), and (d)(3) shall not apply to:

(A) Blasting operations which have been permitted by the California Division of Industrial Safety; and

(B) Motion picture, television, and video production activities when dust emissions are required for visual effects. In order to obtain this exemption, the Executive Officer must receive notification in writing at least 72 hours in advance of any such activity and no nuisance results from such activity.

(5) The provisions of paragraph (d)(3) shall not apply if the dust control actions, as specified in Table 2, are implemented on a routine basis for

each applicable fugitive dust source type. To qualify for this exemption, a person must maintain records in accordance with subparagraph (e)(1)(C).

(6) The provisions of paragraph (d)(4) shall not apply to earth coverings of public paved roadways where such coverings are approved by a local government agency for the protection of the roadway, and where such coverings are used as roadway crossings for haul vehicles provided that such roadway is closed to through traffic and visible roadway dust is removed within one day following the cessation of activities.

(7) The provisions of subdivision (e) shall not apply to:

(A) officially-designated public parks and recreational areas, including national parks, national monuments, national forests, state parks, state recreational areas, and county regional parks.

(B) any large operation which is required to submit a dust control plan to any city or county government which has adopted a District-approved dust control ordinance.

(C) any large operation subject to Rule 1158, which has an approved dust control plan pursuant to Rule 1158, provided that all sources of fugitive dust are included in the Rule 1158 plan.

(8) The provisions of subparagraph (e)(1)(A) through (e)(1)(C) shall not apply to any large operation with an AQMD-approved fugitive dust control plan provided that there is no change to the sources and controls as identified in the AQMD-approved fugitive dust control plan.

(h) Fees

Any person conducting active operations for which the Executive Officer conducts upwind/downwind monitoring for PM_{10} pursuant to paragraph (d)(3) shall be assessed applicable Ambient Air Analysis Fees pursuant to Rule 304.1. Applicable fees shall be waived for any facility which is exempted from paragraph (d)(3) or meets the requirements of paragraph (d)(3).

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

Source Category	Control Measure	Guidance
Backfilling	01-1 Stabilize backfill material when not actively handling; and 01-2 Stabilize backfill material during handling; and 01-3 Stabilize soil at completion of activity.	✓ Mix backfill soil with water prior to moving ✓ Dedicate water truck or high capacity hose to backfilling equipment ✓ Empty loader bucket slowly so that no dust plumes are generated ✓ Minimize drop height from loader bucket
Clearing and grubbing	02-1 Maintain stability of soil through pre-watering of site prior to clearing and grubbing; and 02-2 Stabilize soil during clearing and grubbing activities; and 02-3 Stabilize soil immediately after clearing and grubbing activities.	✓ Maintain live perennial vegetation where possible ✓ Apply water in sufficient quantity to prevent generation of dust plumes
Clearing forms	03-1 Use water spray to clear forms; or 03-2 Use sweeping and water spray to clear forms; or 03-3 Use vacuum system to clear forms.	✓ Use of high pressure air to clear forms may cause exceedance of Rule requirements
Crushing	04-1 Stabilize surface soils prior to operation of support equipment; and 04-2 Stabilize material after crushing.	✓ Follow permit conditions for crushing equipment ✓ Pre-water material prior to loading into crusher ✓ Monitor crusher emissions opacity ✓ Apply water to crushed material to prevent dust plumes

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

Source Category	Control Measure	Guidance
Cut and fill	05-1 Pre-water soils prior to cut and fill activities; and 05-2 Stabilize soil during and after cut and fill activities.	✓ For large sites, pre-water with sprinklers or water trucks and allow time for penetration ✓ Use water trucks/pulls to water soils to depth of cut prior to subsequent cuts
Demolition – mechanical/manual	06-1 Stabilize wind erodible surfaces to reduce dust; and 06-2 Stabilize surface soil where support equipment and vehicles will operate; and 06-3 Stabilize loose soil and demolition debris; and 06-4 Comply with AQMD Rule 1403.	✓ Apply water in sufficient quantities to prevent the generation of visible dust plumes
Disturbed soil	07-1 Stabilize disturbed soil throughout the construction site; and 07-2 Stabilize disturbed soil between structures	✓ Limit vehicular traffic and disturbances on soils where possible ✓ If interior block walls are planned, install as early as possible ✓ Apply water or a stabilizing agent in sufficient quantities to prevent the generation of visible dust plumes
Earth-moving activities	08-1 Pre-apply water to depth of proposed cuts; and 08-2 Re-apply water as necessary to maintain soils in a damp condition and to ensure that visible emissions do not exceed 100 feet in any direction; and 08-3 Stabilize soils once earth-moving activities are complete.	✓ Grade each project phase separately, timed to coincide with construction phase ✓ Upwind fencing can prevent material movement on site ✓ Apply water or a stabilizing agent in sufficient quantities to prevent the generation of visible dust plumes

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

Source Category	Control Measure	Guidance
Importing/exporting of bulk materials	09-1 Stabilize material while loading to reduce fugitive dust emissions; and 09-2 Maintain at least six inches of freeboard on haul vehicles; and 09-3 Stabilize material while transporting to reduce fugitive dust emissions; and 09-4 Stabilize material while unloading to reduce fugitive dust emissions; and 09-5 Comply with Vehicle Code Section 23114.	✓ Use tarps or other suitable enclosures on haul trucks ✓ Check belly-dump truck seals regularly and remove any trapped rocks to prevent spillage ✓ Comply with track-out prevention/mitigation requirements ✓ Provide water while loading and unloading to reduce visible dust plumes
Landscaping	10-1 Stabilize soils, materials, slopes	✓ Apply water to materials to stabilize ✓ Maintain materials in a crusted condition ✓ Maintain effective cover over materials ✓ Stabilize sloping surfaces using soil binders until vegetation or ground cover can effectively stabilize the slopes ✓ Hydroseed prior to rain season
Road shoulder maintenance	11-1 Apply water to unpaved shoulders prior to clearing; and 11-2 Apply chemical dust suppressants and/or washed gravel to maintain a stabilized surface after completing road shoulder maintenance.	✓ Installation of curbing and/or paving of road shoulders can reduce recurring maintenance costs ✓ Use of chemical dust suppressants can inhibit vegetation growth and reduce future road shoulder maintenance costs

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

Source Category	Control Measure	Guidance
Screening	12-1 Pre-water material prior to screening; and 12-2 Limit fugitive dust emissions to opacity and plume length standards; and 12-3 Stabilize material immediately after screening.	✓ Dedicate water truck or high capacity hose to screening operation ✓ Drop material through the screen slowly and minimize drop height ✓ Install wind barrier with a porosity of no more than 50% upwind of screen to the height of the drop point
Staging areas	13-1 Stabilize staging areas during use; and 13-2 Stabilize staging area soils at project completion.	✓ Limit size of staging area ✓ Limit vehicle speeds to 15 miles per hour ✓ Limit number and size of staging area entrances/exists
Stockpiles/ Bulk Material Handling	14-1 Stabilize stockpiled materials. 14-2 Stockpiles within 100 yards of off-site occupied buildings must not be greater than eight feet in height; or must have a road bladed to the top to allow water truck access or must have an operational water irrigation system that is capable of complete stockpile coverage.	✓ Add or remove material from the downwind portion of the storage pile ✓ Maintain storage piles to avoid steep sides or faces

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

Source Category	Control Measure	Guidance
Traffic areas for construction activities	15-1 Stabilize all off-road traffic and parking areas; and 15-2 Stabilize all haul routes; and 15-3 Direct construction traffic over established haul routes.	✓ Apply gravel/paving to all haul routes as soon as possible to all future roadway areas ✓ Barriers can be used to ensure vehicles are only used on established parking areas/haul routes
Trenching	16-1 Stabilize surface soils where trencher or excavator and support equipment will operate; and 16-2 Stabilize soils at the completion of trenching activities.	✓ Pre-watering of soils prior to trenching is an effective preventive measure. For deep trenching activities, pre-trench to 18 inches soak soils via the pre-trench and resuming trenching ✓ Washing mud and soils from equipment at the conclusion of trenching activities can prevent crusting and drying of soil on equipment
Truck loading	17-1 Pre-water material prior to loading; and 17-2 Ensure that freeboard exceeds six inches (CVC 23114)	✓ Empty loader bucket such that no visible dust plumes are created ✓ Ensure that the loader bucket is close to the truck to minimize drop height while loading
Turf Overseeding	18-1 Apply sufficient water immediately prior to conducting turf vacuuming activities to meet opacity and plume length standards; and 18-2 Cover haul vehicles prior to exiting the site.	✓ Haul waste material immediately off-site

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

Source Category	Control Measure	Guidance
Unpaved roads/parking lots	19-1 Stabilize soils to meet the applicable performance standards; and 19-2 Limit vehicular travel to established unpaved roads (haul routes) and unpaved parking lots.	✓ Restricting vehicular access to established unpaved travel paths and parking lots can reduce stabilization requirements
Vacant land	20-1 In instances where vacant lots are 0.10 acre or larger and have a cumulative area of 500 square feet or more that are driven over and/or used by motor vehicles and/or off-road vehicles, prevent motor vehicle and/or off-road vehicle trespassing, parking and/or access by installing barriers, curbs, fences, gates, posts, signs, shrubs, trees or other effective control measures.	

Table 2
DUST CONTROL MEASURES FOR LARGE OPERATIONS

FUGITIVE DUST SOURCE CATEGORY		CONTROL ACTIONS
Earth-moving (except construction cutting and filling areas, and mining operations)	(1a)	Maintain soil moisture content at a minimum of 12 percent, as determined by ASTM method D-2216, or other equivalent method approved by the Executive Officer, the California Air Resources Board, and the U.S. EPA. Two soil moisture evaluations must be conducted during the first three hours of active operations during a calendar day, and two such evaluations each subsequent four-hour period of active operations; OR
	(1a-1)	For any earth-moving which is more than 100 feet from all property lines, conduct watering as necessary to prevent visible dust emissions from exceeding 100 feet in length in any direction.
Earth-moving: Construction fill areas:	(1b)	Maintain soil moisture content at a minimum of 12 percent, as determined by ASTM method D-2216, or other equivalent method approved by the Executive Officer, the California Air Resources Board, and the U.S. EPA. For areas which have an optimum moisture content for compaction of less than 12 percent, as determined by ASTM Method 1557 or other equivalent method approved by the Executive Officer and the California Air Resources Board and the U.S. EPA, complete the compaction process as expeditiously as possible after achieving at least 70 percent of the optimum soil moisture content. Two soil moisture evaluations must be conducted during the first three hours of active operations during a calendar day, and two such evaluations during each subsequent four-hour period of active operations.

Table 2 (Continued)

FUGITIVE DUST SOURCE CATEGORY		**CONTROL ACTIONS**
Earth-moving: Construction cut areas and mining operations:	(1c)	Conduct watering as necessary to prevent visible emissions from extending more than 100 feet beyond the active cut or mining area unless the area is inaccessible to watering vehicles due to slope conditions or other safety factors.
Disturbed surface areas (except completed grading areas)	(2a/b)	Apply dust suppression in sufficient quantity and frequency to maintain a stabilized surface. Any areas which cannot be stabilized, as evidenced by wind driven fugitive dust must have an application of water at least twice per day to at least 80 percent of the unstabilized area.
Disturbed surface areas: Completed grading areas	(2c)	Apply chemical stabilizers within five working days of grading completion; OR
	(2d)	Take actions (3a) or (3c) specified for inactive disturbed surface areas.
Inactive disturbed surface areas	(3a)	Apply water to at least 80 percent of all inactive disturbed surface areas on a daily basis when there is evidence of wind driven fugitive dust, excluding any areas which are inaccessible to watering vehicles due to excessive slope or other safety conditions; OR
	(3b)	Apply dust suppressants in sufficient quantity and frequency to maintain a stabilized surface; OR
	(3c)	Establish a vegetative ground cover within 21 days after active operations have ceased. Ground cover must be of sufficient density to expose less than 30 percent of unstabilized ground within 90 days of planting, and at all times thereafter; OR
	(3d)	Utilize any combination of control actions (3a), (3b), and (3c) such that, in total, these actions apply to all inactive disturbed surface areas.

Table 2 (Continued)

FUGITIVE DUST SOURCE CATEGORY		CONTROL ACTIONS
Unpaved Roads	(4a)	Water all roads used for any vehicular traffic at least once per every two hours of active operations [3 times per normal 8 hour work day]; OR
	(4b)	Water all roads used for any vehicular traffic once daily and restrict vehicle speeds to 15 miles per hour; OR
	(4c)	Apply a chemical stabilizer to all unpaved road surfaces in sufficient quantity and frequency to maintain a stabilized surface.
Open storage piles	(5a)	Apply chemical stabilizers; OR
	(5b)	Apply water to at least 80 percent of the surface area of all open storage piles on a daily basis when there is evidence of wind driven fugitive dust; OR
	(5c)	Install temporary coverings; OR
	(5d)	Install a three-sided enclosure with walls with no more than 50 percent porosity which extend, at a minimum, to the top of the pile. This option may only be used at aggregate-related plants or at cement manufacturing facilities.
All Categories	(6a)	Any other control measures approved by the Executive Officer and the U.S. EPA as equivalent to the methods specified in Table 2 may be used.

TABLE 3
CONTINGENCY CONTROL MEASURES FOR LARGE OPERATIONS

FUGITIVE DUST SOURCE CATEGORY		CONTROL MEASURES
Earth-moving	(1A)	Cease all active operations; OR
	(2A)	Apply water to soil not more than 15 minutes prior to moving such soil.
Disturbed surface areas	(0B)	On the last day of active operations prior to a weekend, holiday, or any other period when active operations will not occur for not more than four consecutive days: apply water with a mixture of chemical stabilizer diluted to not less than 1/20 of the concentration required to maintain a stabilized surface for a period of six months; OR
	(1B)	Apply chemical stabilizers prior to wind event; OR
	(2B)	Apply water to all unstabilized disturbed areas 3 times per day. If there is any evidence of wind driven fugitive dust, watering frequency is increased to a minimum of four times per day; OR
	(3B)	Take the actions specified in Table 2, Item (3c); OR
	(4B)	Utilize any combination of control actions (1B), (2B), and (3B) such that, in total, these actions apply to all disturbed surface areas.
Unpaved roads	(1C)	Apply chemical stabilizers prior to wind event; OR
	(2C)	Apply water twice per hour during active operation; OR
	(3C)	Stop all vehicular traffic.
Open storage piles	(1D)	Apply water twice per hour; OR
	(2D)	Install temporary coverings.
Paved road track-out	(1E)	Cover all haul vehicles; OR
	(2E)	Comply with the vehicle freeboard requirements of Section 23114 of the California Vehicle Code for both public and private roads.
All Categories	(1F)	Any other control measures approved by the Executive Officer and the U.S. EPA as equivalent to the methods specified in Table 3 may be used.

Table 4
(Conservation Management Practices for Confined Animal Facilities)

SOURCE CATEGORY	CONSERVATION MANAGEMENT PRACTICES
Manure Handling **(Only applicable to Commercial Poultry Ranches)**	(1a) Cover manure prior to removing material off-site; AND (1b) Spread the manure before 11:00 AM and when wind conditions are less than 25 miles per hour; AND (1c) Utilize coning and drying manure management by removing manure at laying hen houses at least twice per year and maintain a base of no less than 6 inches of dry manure after clean out; or in lieu of complying with conservation management practice (1c), comply with conservation management practice (1d). (1d) Utilize frequent manure removal by removing the manure from laying hen houses at least every seven days and immediately thin bed dry the material.
Feedstock Handling	(2a) Utilize a sock or boot on the feed truck auger when filling feed storage bins.
Disturbed Surfaces	(3a) Maintain at least 70 percent vegetative cover on vacant portions of the facility; OR (3b) Utilize conservation tillage practices to manage the amount, orientation and distribution of crop and other plant residues on the soil surface year-round, while growing crops (if applicable) in narrow slots or tilled strips; OR (3c) Apply dust suppressants in sufficient concentrations and frequencies to maintain a stabilized surface.
Unpaved Roads	(4a) Restrict access to private unpaved roads either through signage or physical access restrictions and control vehicular speeds to no more than 15 miles per hour through worker notifications, signage, or any other necessary means; OR (4b) Cover frequently traveled unpaved roads with low silt content material (i.e., asphalt, concrete, recycled road base, or gravel to a minimum depth of four inches); OR (4c) Treat unpaved roads with water, mulch, chemical dust suppressants or other cover to maintain a stabilized surface.
Equipment Parking Areas	(5a) Apply dust suppressants in sufficient quantity and frequency to maintain a stabilized surface; OR (5b) Apply material with low silt content (i.e., asphalt, concrete, recycled road base, or gravel to a depth of four inches).

Appendix H

Noise Calculations

Construction Noise

MITIGATED

Reference Noise Distance	50
Reference Noise Level	89

Sensitive Receptor	Distance (feet)	Mitigation Factors	Attenuation Factors	Maximum Construction Noise Level (dBA)	Existing Ambient (dBA, Leq)	New Ambient (dBA, Leq)	Increase
Housing to the West	1,800		7.5	50.4	53.7	55.4	1.7
Housing to the East	1,400		7.5	52.6	53.7	56.2	2.5
Housing to the North	2,500		7.5	47.5	61.1	61.3	0.2
Roscomare Elementary School	2,300		7.5	48.2	57.7	58.2	0.5
Housing to the Southwest	2,150		7.5	48.8	53.7	54.9	1.2
Mulholland And Antelo View	3,900		7.5	43.7	61.1	61.2	0.1
American Jewish University	5,000		7.5	41.5	61.3	61.3	0.0
Housing to the West on Antelo	650		7.5	59.2	47.0	59.5	12.5

Construction Mobile Noise Levels - Based on AM Peak Hour

Existing

ROAD SEGMENT	from:	to:	TOT. # VEH.	D1	D2	Eq. Dis.	Auto %	Auto	MT %	MT	HT %	HT	Auto	k/h	MT	k/h	HT	k/h	Noise Level Auto (dBA)	Noise Level MT (dBA)	Noise Level HT (dBA)	50 ft ROW CNEL (dBA)	75 ft ROW CNEL (dBA)	100 ft ROW CNEL (dBA)
Mulholland	Roscomare	Casiano	1747	13	27	19	91	1590	6	105	3	52.4	30	48	30	48	30	48	64.4	63.2	67.8	69.0	67.6	66.6
Mulholland	Casiano	Skirball Center Drive	2023	19	44	29	91	1841	6	121	3	60.7	30	48	30	48	30	48	65.0	63.8	68.5	69.0	67.8	66.9

Column groups: EQUIVALENT LANE DISTANCE (D1, D2, Eq. Dis.); VEHICLE TYPE % (Auto, MT, HT); VEHICLE SPEED (Auto, MT, HT, k/h); NOISE LEVEL (dBA) (Auto, MT, HT).

Existing with Haul Trucks

ROAD SEGMENT	from:	to:	TOT. # VEH.	D1	D2	Eq. Dis.	Auto %	Auto	MT %	MT	HT %	HT	Auto	k/h	MT	k/h	HT	k/h	Noise Level Auto (dBA)	Noise Level MT (dBA)	Noise Level HT (dBA)	50 ft ROW CNEL (dBA)	75 ft ROW CNEL (dBA)	100 ft ROW CNEL (dBA)
Mulholland	Roscomare	Casiano	1788	13	27	19	89	1591	5.8	104	5.2	93	30	48	30	48	30	48	64.4	63.1	70.3	70.5	69.2	68.2
Mulholland	Casiano	Skirball Center Drive	2064	19	44	29	89.2	1841	5.8	120	5	103	30	48	30	48	30	48	65.0	63.8	70.8	70.4	69.2	68.3

Column groups: EQUIVALENT LANE DISTANCE (D1, D2, Eq. Dis.); VEHICLE TYPE % (Auto, MT, HT); VEHICLE SPEED (Auto, MT, HT, k/h); NOISE LEVEL (dBA) (Auto, MT, HT).

Construction Mobile Noise Levels - Based on PM Peak Hour

Existing

ROAD SEGMENT	from:	to:	TOT. # VEH.	EQUIVALENT LANE DISTANCE D1	D2	Eq. Dis.	VEHICLE TYPE % Auto %	Auto	MT %	MT	HT %	HT	VEHICLE SPEED Auto	k/h	MT	k/h	HT	k/h	NOISE LEVEL (dBA) Auto	MT	HT	50 ft ROW CNEL (dBA)	75 ft ROW CNEL (dBA)	100 ft ROW CNEL (dBA)
Mulholland	Roscomare	Casiano	1393	13	27	19	91	1267	6	83.6	3	41.8	30	48	30	48	30	48	63.4	62.2	66.8	68.0	66.6	65.6
Mulholland	Casiano	Skirball Center Drive	1540	19	44	29	91	1401	6	92.4	3	46.2	30	48	30	48	30	48	63.8	62.6	67.3	67.8	66.6	65.7

Existing with Haul Trucks

ROAD SEGMENT	from:	to:	TOT. # VEH.	EQUIVALENT LANE DISTANCE D1	D2	Eq. Dis.	VEHICLE TYPE % Auto %	Auto	MT %	MT	HT %	HT	VEHICLE SPEED Auto	k/h	MT	k/h	HT	k/h	NOISE LEVEL (dBA) Auto	MT	HT	50 ft ROW CNEL (dBA)	75 ft ROW CNEL (dBA)	100 ft ROW CNEL (dBA)
Mulholland	Roscomare	Casiano	1434	13	27	19	88.4	1267	5.8	83.1	5.8	83.1	30	48	30	48	30	48	63.4	62.2	69.8	69.9	68.6	67.5
Mulholland	Casiano	Skirball Center Drive	1581	19	44	29	88.7	1402	5.8	91.7	5.5	86.9	30	48	30	48	30	48	63.8	62.6	70.0	69.6	68.4	67.4

Operations Mobile Noise - Based on AM Peak Hour

Existing 2010

ROAD SEGMENT	from:	to:	TOT. # VEH.	EQUIVALENT LANE DISTANCE D1	D2	Eq. Dis.	VEHICLE TYPE % Auto %	Auto	MT %	MT	HT %	HT	VEHICLE SPEED Auto	k/h	MT	k/h	HT	k/h	NOISE LEVEL (dBA) Auto	MT	HT	50 ft ROW CNEL (dBA)	75 ft ROW CNEL (dBA)	100 ft ROW CNEL (dBA)
Mulholland Drive	Roscomare Road	Stone Canyon Road	1383	12	28	18	91	1258.53	6	83	3	41.5	30	48	30	48	30	48	63.4	62.2	64.8	67.0	65.6	64.6
Mulholland Drive	Stone Canyon Road	Nicada Drive	1383	8	24	14	91	1258.53	6	83	3	41.5	30	48	30	48	30	48	63.4	62.2	64.8	67.3	65.9	64.8

Future Without Project 2020

ROAD SEGMENT	from:	to:	TOT. # VEH.	EQUIVALENT LANE DISTANCE D1	D2	Eq. Dis.	VEHICLE TYPE % Auto %	Auto	MT %	MT	HT %	HT	VEHICLE SPEED Auto	k/h	MT	k/h	HT	k/h	NOISE LEVEL (dBA) Auto	MT	HT	50 ft ROW CNEL (dBA)	75 ft ROW CNEL (dBA)	100 ft ROW CNEL (dBA)
Mulholland Drive	Roscomare Road	Stone Canyon Road	1557	12	28	18	91	1416.87	6	93.4	3	46.7	30	48	30	48	30	48	63.9	62.7	65.3	67.5	66.2	65.1
Mulholland Drive	Stone Canyon Road	Nicada Drive	1557	8	24	14	91	1416.87	6	93.4	3	46.7	30	48	30	48	30	48	63.9	62.7	65.3	67.8	66.4	65.3

Future With Project 2020

ROAD SEGMENT	from:	to:	TOT. # VEH.	EQUIVALENT LANE DISTANCE D1	D2	Eq. Dis.	VEHICLE TYPE % Auto %	Auto	MT %	MT	HT %	HT	VEHICLE SPEED Auto	k/h	MT	k/h	HT	k/h	NOISE LEVEL (dBA) Auto	MT	HT	50 ft ROW CNEL (dBA)	75 ft ROW CNEL (dBA)	100 ft ROW CNEL (dBA)
Mulholland Drive	Roscomare Road	Stone Canyon Road	1597	12	28	18	91	1453.27	6	95.8	3	47.9	30	48	30	48	30	48	64.0	62.8	65.4	67.6	66.3	65.2
Mulholland Drive	Stone Canyon Road	Nicada Drive	1567	8	24	14	91	1425.97	6	94	3	47	30	48	30	48	30	48	63.9	62.7	65.4	67.8	66.4	65.3

Operations Mobile Noise - Based on PM Peak Hour

Existing 2010

ROAD SEGMENT	from:	to:	TOT. # VEH.	EQUIVALENT LANE DISTANCE D1	D2	Eq. Dis.	VEHICLE TYPE % Auto %	Auto	MT %	MT	HT %	HT	VEHICLE SPEED Auto	k/h	MT	k/h	HT	k/h	NOISE LEVEL (dBA) Auto	MT	HT	50 ft ROW CNEL (dBA)	75 ft ROW CNEL (dBA)	100 ft ROW CNEL (dBA)
Mulholland Drive	Roscomare Road	Stone Canyon Road	1095	2	9	4	91	996	6	65.7	3	32.9	30	48	30	48	30	48	62.4	61.2	63.8	67.0	65.3	64.1
Mulholland Drive	Stone Canyon Road	Nicada Drive	1095	3	11	6	91	996	6	65.7	3	32.9	30	48	30	48	30	48	62.4	61.2	63.8	66.9	65.3	64.1

Future Without Project 2020

ROAD SEGMENT	from:	to:	TOT. # VEH.	EQUIVALENT LANE DISTANCE D1	D2	Eq. Dis.	VEHICLE TYPE % Auto %	Auto	MT %	MT	HT %	HT	VEHICLE SPEED Auto	k/h	MT	k/h	HT	k/h	NOISE LEVEL (dBA) Auto	MT	HT	50 ft ROW CNEL (dBA)	75 ft ROW CNEL (dBA)	100 ft ROW CNEL (dBA)
Mulholland Drive	Roscomare Road	Stone Canyon Road	1268	2	9	4	91	1154	6	76.1	3	38	30	48	30	48	30	48	63.0	61.8	64.4	67.6	66.0	64.8
Mulholland Drive	Stone Canyon Road	Nicada Drive	1268	3	11	6	91	1154	6	76.1	3	38	30	48	30	48	30	48	63.0	61.8	64.4	67.5	65.9	64.7

Future With Project 2020

ROAD SEGMENT	from:	to:	TOT. # VEH.	EQUIVALENT LANE DISTANCE D1	D2	Eq. Dis.	VEHICLE TYPE % Auto %	Auto	MT %	MT	HT %	HT	VEHICLE SPEED Auto	k/h	MT	k/h	HT	k/h	NOISE LEVEL (dBA) Auto	MT	HT	50 ft ROW CNEL (dBA)	75 ft ROW CNEL (dBA)	100 ft ROW CNEL (dBA)
Mulholland Drive	Roscomare Road	Stone Canyon Road	1308	2	9	4	91	1190	6	78.5	3	39.2	30	48	30	48	30	48	63.1	61.9	64.6	67.8	66.1	64.9
Mulholland Drive	Stone Canyon Road	Nicada Drive	1278	3	11	6	91	1163	6	76.7	3	38.3	30	48	30	48	30	48	63.0	61.8	64.5	67.5	65.9	64.8

APPENDIX E

BIOLOGICAL TECHNICAL REPORTS

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Memorandum

Date:	September 3, 2010
To:	Nadia Parker – Environmental Assessment, LADWP
From:	Jeanette Duffels – AECOM, Biologist
	Donna Germann – AECOM, Biologist
Subject:	Biological Reconnaissance Survey Report
	Upper Stone Canyon Reservoir Water Quality Improvement Project

Distribution: Melissa Hatcher – AECOM, Senior Project Manager

INTRODUCTION

To help ensure the quality, reliability, and stability of the City of Los Angeles drinking water supply and to ensure compliance with updated United States Environmental Protection Agency (EPA) water quality standards, LADWP proposes to construct a concrete cover over the uncovered Upper Stone Canyon Reservoir (Upper Stone Reservoir). A new reinforced concrete liner, concrete perimeter retaining wall, and a system of interior concrete shear walls and columns would be required to support the roof. This would necessitate the demolition of the existing reservoir bottom, sides, inlet structure, and outlet tower. However the reservoir would be reconstructed in essentially its existing location and configuration, although with a slightly reduced footprint. A maximum of 3 feet of soil cover would be placed over the concrete roof of the reservoir, and shallow-rooting plant species typical of the canyon environment and surrounding area would be installed. After completion of project construction, public access for passive recreation activities would be provided to the Stone Canyon Reservoir Complex (SCRC) property. The recreation functions would be operated and maintained by the Los Angeles Department of Recreation and Parks (LADRP) and/or the Santa Monica Mountains Conservancy. Ownership and general maintenance of the SCRC would remain under LADWP.

This report is intended to describe the existing biological resources of the project site and provide recommendations for further action. The results of this study are based upon review of relevant literature as well as biological reconnaissance surveys conducted by EDAW in spring of 2009.

In addition to current literature, previously prepared reports relating to the Upper Stone Canyon Reservoir were reviewed, including the *Los Angeles Department of Water and Power Upper Stone Canyon and Lower Stone Canyon Reservoirs Baseline Environmental Conditions Report* (LADWP 1993) and *Results of Biological Surveys for the Los Angeles Department of Water and Power Upper Stone Canyon Reservoir Project Los Angeles County* (Garcia 2008).

PROJECT LOCATION

Upper Stone Canyon Reservoir is located in the Santa Monica Mountains, approximately 0.5 miles south of Mulholland Drive between Roscomare Road and Beverly Glen Boulevard in the City of Los Angeles. The SCRC property is owned and maintained by LADWP. Upper Stone Canyon Reservoir itself is accessed from Mulholland Drive via a non-publicly accessible road, approximately 1.5 miles east of the San Diego Freeway (Interstate [I] 405).

GENERAL SITE DESCRIPTION

The existing Upper Stone Canyon Reservoir has a total storage volume of 138 million gallons. The reservoir has a maximum depth of 49 feet, a high water elevation of 929 feet, and a surface area of approximately 14 acres at the high water elevation. The reservoir is approximately 1,600 feet long and approximately 500 feet wide at the maximum width, near the outlet tower at the southern end, tapering to approximately 250 feet wide, near the inlet at the northern end. The bottom and sides of the reservoir are paved with asphaltic concrete. A 7-foot tall chain link fence encloses the entire reservoir. An approximately 20- to 25-foot-wide paved road is located around the perimeter of the reservoir.

In addition to the bypass line constructed as part of the Lower Stone Canyon Reservoir project, facilities recently constructed at Stone Canyon include a new chlorination station, located adjacent to the west side of the Upper Reservoir, and a filtration plant, located south of the Lower Reservoir dam. Other than the reservoirs and appurtenant facilities, the SCRC property remains essentially undeveloped.

The Upper Reservoir is primarily surrounded by slopes containing a dense mosaic of mature, high quality native habitats, sectioned by firebreaks radiating from the reservoir outward. The firebreaks containing cover of non-native, ruderal habitat that is presumably mowed at regular intervals. Descriptions of these habitats and their dominant species are provided in the Plant Communities and Other Cover Types section below. There are some trails and access roads to the north and east of the Upper Reservoir. There are three areas that have been cleared and planted with a variety of trees and shrubs: one north of the Upper Reservoir, one northeast, and one just surrounding the new chlorination station, west of the Upper Reservoir. The plantings are immature and are supported by temporary irrigation systems.

LITERATURE REVIEW

Soils

The Natural Resources Conservation Service (N.D.) identifies the great majority of the soils in within the study area (undisturbed soils on the slopes surrounding the reservoir) as Topanga-Mipolomol-Sapwi association, 30 to 75 percent slopes. This map unit is described as 40 percent Topanga and similar soils, 30 percent Mipolomol and similar soils, 15 percent Spawi and similar soils, and 15 percent of minor components. The typical profile for Topanga is Gravelly loam from 0 to 15 inches, gravelly clay loam from 15 to 18 inches, and weathered bedrock from 18 to 27 inches. The typical profile for Mipolomol is channery loam from 0 to 12 inches and weathered bedrock from 12 to 22 inches. The typical profile for Sapwi is slightly decomposed plant material from 0 to 1 inch, loam from 1 to 4 inches, stony clay loam from 4 to 24 inches, very stony clay loam from 28 to 48 inches, and unweathered bedrock from 38 to 48 inches.

An ecological site is an area where climate, soil, and relieve are sufficiently uniform to produce a distinct natural plant community. An ecological site is the product of all the environmental factors responsible for its development. It is typified by an association of species that differ from those on other ecological sites in kind and/or proportion of species or in total production. The Topanga and Mipolomol soils are described by the Natural Resources Conservation Service as having dry chaparral ecological sites. Sawpi soils are described as having a *Quercus agrifolia-Julgans californica/Artemisia californica-Ceanothus spinosus/Leymus condensatus* ecological site.

Sensitive Species

Sensitive plants include those listed as threatened or endangered, proposed for listing, or candidates for listing by the U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Game (CDFG) (2008c) or those listed by the CNPS (2009). Sensitive wildlife species are those listed as threatened or endangered, proposed for listing, or candidates for listing by the USFWS and CDFG (2008d), or considered sensitive by CDFG (2008a).

A literature review was conducted to determine sensitive plant species, animal species, and vegetation communities with the potential to occur in the project site based upon its geographic proximity to reported occurrences. The California Natural Diversity DataBase (CNDDB) RareFind 3 program (2009) and the California Native Plant Society (CNPS) *Inventory of Rare and Endangered Plants* (2009) were reviewed for any information on known occurrences of sensitive species and communities within the Beverly Hills USGS topographic quadrangle where the project site occurs, as well as the adjacent Topanga, Canoga Park, Van Nuys, Burbank, and Hollywood quadrangles.

Sensitive Plants

The literature review identified 30 sensitive plant species as having the potential to occur in the vicinity of the project based on its geographic proximity to known occurrences: marsh sandwort (*Arenaria paludicola*), Braunton's milk-vetch (*Astragalus brauntonii*), Ventura Marsh milk-vetch (*Astragalus pycnostachyus* var. *lanosissimus*), coastal dunes milk-vetch (*Astragalus tener* var. *titi*), Parish's brittlescale (*Atriplex parishii*), Davidson's saltscale (*Atriplex serenana* var. *davidsonii*), Nevin's barberry (*Berberis nevinii*), round-leaved filaree (*California macrophylla*), slender mariposa-lily (*Calochortus clavatus* var. *gracilis*), Plummer's mariposa-lily (*Calochortus plummerae*), Santa Barbara morning-glory (*Calystegia sepium* ssp. *binghamiae*), southern tarplant (*Centromadia parryi* ssp. *australis*), San Fernando Valley spineflower (*Chorizanthe parryi* var. *fernandina*), salt marsh bird's-beak (*Cordylanthus maritimus* ssp. *maritimus*), Santa Susana tarplant (*Deinandra minthornii*), beach spectaclepod (*Dithyrea maritima*), slender-horned spineflower (*Dodecahema leptoceras*), Blochman's dudleya (*Dudleya blochmaniae* ssp. *blochmaniae*), Santa Monica dudleya (*Dudleya cymosa* ssp. *ovatifolia*), many-stemmed dudleya (*Dudleya multicaulis*), Los Angeles sunflower (*Helianthus nuttallii* ssp. *parishii*), mesa horkelia (*Horkelia cuneata* ssp. *puberula*), Davidson's bush-mallow (*Malacothamnus davidsonii*), mud nama (*Nama stenocarpum*), Gambel's water cress (*Nasturtium gambelii*), prostrate vernal pool navarretia (*Navarretia prostrata*), white rabbit-tobacco (*Pseudognaphalium leucocephalum*), Salt Spring checkerbloom (*Sidalcea neomexicana*), San Bernardino aster (*Symphyotrichum defoliatum*), and Greata's aster (*Symphyotrichum greatae*).

Sensitivity status and general habitat requirements for the species identified during the literature review are provided in Attachment A.

Focused surveys for Lyon's pentachaeta (*Pentachaeta lyonii*), many-stemmed dudleya, and Braunton's milk-vetch were conducted at the Upper and Lower Stone Reservoirs in the spring of 1992. The surveys determined with an acceptable level of confidence that these species do not occur within the area of potential impact. Directed surveys for Nevin's barberry during the same season concluded that no suitable habitat for this species occurs at the Stone Canyon Reservoirs property (LADWP 1993).

In spring of 2008, focused surveys for Braunton's milk-vetch, Nevin's barberry and San Fernando Valley spineflower were conducted in potentially suitable habitat of some potential excavation areas at Upper Stone Reservoir (Garcia 2008). No special status species were detected during these surveys. These surveys also determined that there was no suitable micro habitat within those potential excavation sites for Santa Monica dudleya, Plummer's mariposa lily, mesa horkelia, or Davidson's bush-mallow.

California walnut woodland was reported in the study area in 1990 (LADWP). Southern California black walnut (*Juglans californica*), the major component of California walnut woodland, is on CNPS List 4.2, indicating that it is of limited distribution and fairly threatened in California. The CNPS strongly recommends that List 4 plants be evaluated for consideration during preparation of environmental documents related to the California Environmental Quality Act (CEQA), but it is not mandatory. Southern California walnut is considered a protected tree, however, by Los Angeles City Ordinance. Southern California walnut is the only sensitive plant known to occur in the study area.

Sensitive Wildlife

The literature review identified 28 sensitive wildlife species as having the potential to occur in the vicinity of the project based on its geographic proximity to known occurrences: Santa Monica shieldback katydid *(Aglaothorax longipennis),* Busck's gallmoth *(Carolella busckana),*sandy beach tiger beetle *(Cicindela hirticollis gravid),* globose dune beetle *(Coelus globosus),*monarch butterfly *(Danaus plexippus),* Gertsch's socalchemmis spider *(Socalchemmis gertschi),* southern steelhead – southern California ESU *(Oncorhynchus mykiss irideus),*arroyo toad *(Anaxyrus californicus),* southwestern pond turtle *(Emys marmorata),* coastal western whiptail *(Aspidoscelis tigris stejnegeri),* San Bernardino ringneck snake *(Diadophis punctatus modestus),* coast (San Diego) horned lizard *(Phrynosoma coronatum (blainvillii population)),* tricolored blackbird *(Agelaius tricolor),* burrowing owl *(Athene cunicularia),*southwestern willow flycatcher *(Empidonax traillii extimus),* coastal California gnatcatcher *(Polioptila californica californica),* least Bell's vireo *(Vireo bellii pusillus),* pallid bat *(Antrozous pallidus),* western mastiff bat *(Eumops perotis californicus),* silver-haired bat *(Lasionycteris noctivagans)* hoary bat *(Lasiurus cinereus),* western yellow bat *(Lasiurus xanthinus),* south coast marsh vole *(Microtus californicus stephensi),* San Diego desert woodrat *(Neotoma lepida intermedia),* big free-tailed bat *(Nyctinomops macrotis),* southern grasshopper mouse *(Onychomys torridus Ramona),* Los Angeles pocket mouse *(Perognathus longimembris brevinasus),* and American badger *(Taxidea taxus).*

Sensitivity status and general habitat requirements for the species identified during the literature review are provided in Attachment A.

Focused surveys were conducted 1992 for coast horned lizard, coastal western whiptail, and coast patch-nosed snake (*Salvadora hexalepis virguitea*). Surveys conducted in 1992 detected one adult coastal western whiptail within chaparral habitat within the LADWP property, northwest of Upper Stone Reservoir (LADWP 1993). Although suitable habitat occurs in the project area, coast horned lizard and coast patch-nosed snake were not detected during 1992 surveys.

In spring of 2008, surveys detected several monarch butterflies within Site One. They were observed along a bladed fire line amongst milkweed (*Asclepias longifolia*), a foodplant, within ruderal habitat (Garcia 2008). The monarch butterfly is a CDFG Species of Concern. Although this species was detected, no roosting habitat was observed.

Surveys conducted in 2008 determined that Site One contains suitable habitat for coast horned lizard and coastal western whiptail; Site Two contains suitable habitat for coastal western whiptail. Neither species were detected during these surveys.

Sensitive Plant Communities

Sensitive habitats are those that are regulated by USFWS, U.S. Army Corps of Engineers and/or those considered sensitive by the CDFG.

Five sensitive plant communities were identified by the CNDDB as occurring in the vicinity of the project: California walnut woodland, Riversidian alluvial fan sage scrub, southern coast live oak riparian forest, southern cottonwood willow riparian forest, and southern sycamore alder riparian woodland (CNDDB 2010). California walnut woodland was reported in the study area in 1990 (LADWP).

FIELD SURVEYS

Field surveys were conducted by AECOM in 2009 and 2010 to update existing reports, document common plant and animal species, and characterize the plant communities. The project site was evaluated for habitat suitable to support the sensitive species identified in the literature review. Observed plants and animals were recorded, however, focused surveys for particular plants and animals were not conducted at this time. Plant communities were mapped on an aerial photograph of the project site.

Field reconnaissance surveys of the project site were conducted by AECOM; on March 18, 2009 by AECOM biologists Jim Prine, Jeanette Duffels, Donna Germann; April 13, 2009 by Ms. Duffels and Ms. Germann; and on June 7 2010 by Ms. Duffels and Sheryll Del Rosario. Weather conditions during all surveys were clear skies and calm winds, on March 18 temperatures ranged from 67º to 82º F; April 13, 2009 temperatures ranged from 60º to 74º F; and on June 7, 2010 temperatures ranged from 62º to 75º F.

The reconnaissance surveys concentrated on those areas potentially affected by the project; primarily potential excavation Sites One, Two, and Three, the stock pile area, and landslide area, all in the hillsides surrounding the Upper Reservoir. The surveys did not include aquatic surveys of the Upper reservoir.

Plant Communities and other Cover Types

A total of 8 plant communities and undeveloped cover types were identified within the survey area: coastal sage scrub, chaparral, coast live oak woodland, California walnut woodland, riparian, non-native grassland, ruderal, and planted.

Coastal Sage Scrub (CSS)

Coastal sage scrub occurs on relatively dry, often steep, gravelly or rocky slopes below 3,000 feet. Major plant species found in this community are shrubs ranging one to six feet tall, and may also include small trees. Sage species such as black sage, (*Salvia mellifera*), and purple sage (*Salvia leucophylla*), and other plants including California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), and coyote brush (*Baccharis pilularis*) are characteristic of coastal sage scrub (Ornduff 2003). Because of its function as valuable wildlife habitat for both common and special-status plant and animal species, and because of its declining quantity in the state, coastal sage scrub is generally considered to be of special status by CDFG.

Coastal sage scrub in the project site is characterized by California sagebrush (*Artemisia californica*), black sage (*Salvia mellifera*), California encelia (*Encelia californica*), blue elderberry (*Sambucus mexicana*), laurel sumac (*Malosma laurina*). Other plant species observed in coastal sage scrub habitat on site include sticky monkeyflower (*Mimulus aurantiacus*), wild cucumber (*Marah macrocarpus*), poison oak (*Toxicodendron diversilobum*), sugar bush (*Rhus ovata*), chaparral currant (*Ribes malvaceum*), California peony (*Paeonia californica*), mule fat (*Baccharis salicifolia*), coyote brush (*Baccharis pilularis*), and ripgut grass (*Bromus diandrus*). Coastal sage scrub and disturbed phases of coastal sage scrub (**DCSS**) are found throughout the project site, intergrading with other plant communities.

Chaparral (CH)

Chaparral is typically shrub-dominated vegetation which grows at low elevations away from the immediate coast. Canopy cover of a single-layer of evergreen shrubs tends to be 100 percent (Barbour et. al. 1993). With a dense, often impenetrable canopy, the ground underneath or among chaparral shrubs is often deficient in herbaceous plant species. Manzanita (*Arctostaphylos* spp.), California-lilac (*Ceanothus* spp.), oak (*Quercus* spp.), and chamise (*Adenostoma fasciculatum*) are some characteristic chaparral plants (Ornduff 2003). Holland (1986) describes numerous types of chaparral vegetation in California based on geography and species composition.

Previous reports describe the chaparral habitat in the project site as chamise chaparral (LADWP 1993). Chaparral in the project site is characterized by dense cover of chamise (*Adenostoma fasciculatum*), sugar bush (*Rhus ovata*), poison oak (*Toxicodendron diversilobum*), and laurel sumac (*Malosma laurina*). Other plant species observed in chaparral habitat on site include sticky monkeyflower (*Mimulus aurantiacus*), blue elderberry (*Sambucus mexicana*), California sagebrush (*Artemisia californica*), and wild cucumber (*Marah macrocarpus*). At the project site, chaparral is found north of reservoir, and east of reservoir on west-facing slopes.

Coast Live Oak Woodland (OW)

Coast live woodland is a community with only one dominant tree, coast live oak (*Quercus agrifolia*), and a poorly developed shrub layer that may include toyon (*Heteromeles arbutifolia*), gooseberries and/or currants (*Ribes* spp.), laurel sumac (*Malosma laurina*), or blue elderberry (*Sambucus mexicana*) (Holland 1986). The herbaceous layer is described as continuous and dominated by ripgut grass (*Bromus diandrus*) and other introduced species.

Coast live oak woodland in the project site dominated by mature coast live oak (*Quercus agrifolia*), with laurel sumac (*Malosma laurina*), California sagebrush (*Artemisia californica*), and poison oak (*Toxicodendron diversilobum*). Coast live oak woodland occurs on slopes both east and west of the Upper Stone Reservoir, where it intergrades with California walnut woodland.

California Walnut Woodland (WW)

California walnut woodland is typically dominated by southern California black walnut (*Juglans californica* var. *californica*) and coast live oak (*Quercus agrifolia*). The relatively open tree canopy cover allows for the development of a grassy understory with introduced winter-active annuals that complete most of their growth cycle before the deciduous walnuts leaf out in spring (Holland 1986). California walnut woodlands occur from the south side of the San Gabriel Mountains Santa Ana Mountains, generally ranging in elevation from 500 to 3,000 feet. California walnut woodlands typically intergrade with chaparral, coastal sage scrub, and oak woodland communities. Because of its high biological value and declining nature in California, this community is considered of special status by CDFG.

California walnut woodland in the survey area is dominated by California walnut (*Juglans californica*) and coast live oak (*Quercus agrifolia*) with laurel sumac (*Malosma laurina*), poison oak (*Toxicodendron diversilobum*), blue elderberry (*Sambucus mexicana*), California encelia (*Encelia californica*). California walnut woodland occurs throughout the slopes surrounding Upper Stone Reservoir.

Riparian (RIP)

To the northwest of the reservoir there is a narrow drainage feature containing various vegetation including that which is typically found in riparian areas (see Figure 1). At its southern end, the drainage contains plants such as mule fat, willow (*Salix* sp.), mugwort (*Artemisia douglasiana*), poison hemlock (*Conium maculatum*), and cattail (*Typha* sp.). Water was not present at the time of the survey.

Non-Native Grassland (NNG)

Non-native grassland is characterized by dense to sparse cover of annual grasses (Holland 1986). It can be associated with native wildflowers, especially in years of favorable rainfall. Plants in this community are usually dead and persisting as seeds through the summer-fall dry season.

Non-native grassland in the survey area is characterized by dominant cover of non-native annuals such as ripgut grass (*Bromus diandrus*), soft brome (*Bromus hordeaceus*), cheatgrass (*Bromus tectorum*), slender wild oat (*Avena barbata*), tocalote (*Centaurea melitensis*), filaree (*Erodium cicutarium*), and sourclover (*Melilotus indicus*). Non-native grassland within the survey area occurs in areas that have been cleared and for firebreaks and fire roads; they may be periodically disked.

Ruderal (RUD)

Ruderal habitat is similar to non-native grassland in that it is dominated by non-native species; in these areas the soils were either recently or historically disturbed. Ruderal habitat contains sparse to dense cover of plants such as ripgut grass (*Bromus diandrus*), black mustard (*Brassica nigra*), tocalote (*Centaurea melitensis*), horehound (*Marrubium vulgare*), poison hemlock (*Conium maculatum*), castor bean (*Ricinus communis*), filaree (*Erodium cicutarium*), sourclover (*Melilotus indicus*), and onionweed (*Asphodelus fistulosus*). In some areas, ruderal habitat is intermixed with non-native grassland.

At least one area of the project site has an infestation of carnation spurge (*Euphorbia terracina*), a perennial or biennial found on California's south coast. Carnation spurge forms dense patches in a variety of habitats. Carnation spurge was recently introduced to California and is not yet widely distributed however it has the potential to spread rapidly. Like many other members of the spurge family, it is reported to produce toxic sap, and has allelopathic properties that reduce germination of native plants. The California Invasive Plant Council (Cal-IPC) gives this plant a moderate rating and has placed an alert for it (Cal-IPC 2009).

Planted

There are three areas in the vicinity of Upper Stone Reservoir that have been previously disturbed and are currently planted with native species: one just north of the reservoir, another northeast of the first planting area, and one southwest of the reservoir. The north and northeast planting areas have overhead spray irrigation systems. Typical vegetation in the planted areas include western sycamore (*Platanus racemosa*), coast live oak (*Quercus agrifolia*), toyon (*Heteromeles arbutifolia*), California lilac (*Ceanothus* sp.), purple needlgrass (*Nasella pulchra*), and deergrass (*Muhlenbergia rigens*).

General Wildlife

Fifteen species of wildlife were observed in the vicinity of the proposed project site: California towhee (*Pipilo crissalis*), northern rough-winged swallow (*Stelgidopteryx serripennis*), turkey vulture (*Cathartes aura*), mourning dove (*Zenaida macroura),* northern mocking bird (*Mimus polyglottos*), western scrub jay (*Aphelocoma californica*), bushtit (*Psaltriparus minimus*), lesser goldfinch (*Carduelis psaltria*), house finch (*Carpodacus mexicanus*), American crow (*Corvus brachyrhynchos*), red-tailed hawk (*Buteo jamaicensis*), Anna's hummingbird *(Calypte anna)*, black phoebe (*Sayornis nigricans*), and western diamondback rattlesnake (*Crotalus atrox*). Mallards (*Anas platyrhynchos*) were observed swimming in the reservoir.

Plant and animal observations were incidental; complete floral and faunal inventories were not performed as part of the reconnaissance surveys.

Potential for Sensitive Plants

The reconnaissance surveys confirmed that the project site does not contain plant communities associated with the following sensitive plant species identified during the literature review: marsh sandwort, Ventura Marsh milk-vetch, coastal dunes milk-vetch, Parish's brittlescale, Davidson's saltscale, round-leaved filaree, slender mariposa-lily, salt marsh bird's-beak, slender-horned spineflower, Los Angeles sunflower, mud nama, Gambel's water cress, prostrate vernal pool navarretia, San Bernardino aster, and Greata's aster.

Focused surveys for Lyon's pentachaeta, many-stemmed dudleya, and Braunton's milk-vetch were conducted at the Upper and Lower Stone Reservoirs in the spring of 1992. The surveys determined with an acceptable level of confidence that these species do not occur within the area of potential impact. Directed surveys for Nevin's barberry during the same season concluded that no suitable habitat for this species occurs at the Stone Canyon Reservoirs property (LADWP 1993).

In spring of 2008, focused surveys for Braunton's milk-vetch, Nevin's barberry and San Fernando Valley spineflower were conducted in potentially suitable habitat areas of the potential excavation sites at Upper Stone Reservoir (Garcia 2008). No special status species were detected during these surveys. These surveys also determined that there is no suitable micro habitat within the potential excavation sites for Santa Monica dudleya, Plummer's mariposa lily, mesa horkelia, or Davidson's bush-mallow.

Southern California black walnut (CNPS List 4.2) was confirmed to occur in the study area. Southern California walnut is the only sensitive plant known to occur in the study area.

The potential for the survey area to provide suitable habitat for each of the species identified during the literature review is described in Attachment B.

Potential for Sensitive Animals

The reconnaissance surveys confirmed that the project site does not contain suitable habitat for the following sensitive wildlife species identified during the literature review: Busck's gallmoth, sandy beach tiger beetle, globose dune beetle, monarch butterfly, Gertsch's socalchemmis spider, southern steelhead – southern California ESU,arroyo toad, southwestern pond turtle, San Bernardino ringneck snake, tricolored blackbird, Santa Monica shieldback katydid, burrowing owl, southwestern willow flycatcher, coastal California gnatcatcher, least Bell's vireo, and silver-haired bat.

Ten species identified in the literature review have a low potential for occurrence, based on suitable habitat and known recent occurrences of these species in the vicinity of the survey area: pallid bat, western mastiff bat, hoary bat, western yellow bat, south coast marsh vole, San Diego desert woodrat, big free-tailed bat, southern grasshopper mouse, Los Angeles pocket mouse, and American badger.

Two species have a moderate to high potential to occur within the survey area: coast (San Diego) horned lizard *and* coastal western whiptail. Suitable habitat occurs onsite for the coastal western whiptail and coast horned lizard. Coastal western whiptail was detected within chaparral habitat wthin the LADWP property, northwest of Upper Stone Reservoir, during focused surveys were conducted in 1992 (LADWP 1993). Coast horned lizard was not detected during these surveys. Neither species was detectd during surveys in 2008.

The potential for the project site to provide suitable habitat for each of the species identified during the literature review is described in Attachment A.

RECOMMENDATIONS

Sensitive Plants

The project site contains several natural habitats suitable for some sensitive plants. Should the proposed project impact suitable habitat areas, focused surveys for these sensitive species are recommended prior to construction activities. Of particular concern are those species whose total absence from the project site has not been determined through previous surveys: slender mariposa-lily, Plummer's mariposa-lily, San Fernando Valley spineflower, Santa Monica dudleya, mesa horkelia, Davidson's bush-mallow, and white rabbit-tobacco. Focused surveys should take place when the species are known to bloom. The detection of sensitive plant species within the project site may require permitting from CDFG and mitigation prior to construction.

Sensitive Wildlife

Coastal western whiptail was detected in chaparral habitat northwest of Upper Stone Reservoir in 1992. The project site contains coastal sage scrub, chaparral, sparse open areas, and woodland/riparian habitat suitable for coastal western whiptail and coast horned lizard. Should the proposed project impact suitable habitat areas, focused surveys for these sensitive species are recommended prior to construction activities. If coastal western whiptail and/or coast horned lizard are detected, appropriate permitting from CDFG and mitigation will be required prior to construction.

Sensitive Plant Communities

Much of the area surrounding the reservoir contains cover of California walnut woodland, a plant community considered to be sensitive by the CDFG. Holland (1986) describes this community as having an open canopy with an understory of introduced winter-active annuals. Because of its high biological value and declining nature in California, this community is considered to have special status. Impacts to this plant community may require permitting from CDFG and mitigation.

Wetlands

The Clean Water Act governs pollution control and water quality of waterways throughout the U.S. Its intent, in part, is to restore and maintain the biological integrity of the nation's waters. The goals and standards of the Clean Water Act are enforced through permit provisions. Sections 401 and 404 of the Clean Water Act pertain directly to the proposed project. Section 401 requires certification from the Regional Water Quality Control Board that the proposed project is in compliance with established water quality standards. Section 404 of the Clean Water Act requires an individual or general permit from the U.S. Army Corps of Engineers for discharge into "waters of the U.S."

California Fish and Game Codes regulate the taking or possession of birds, mammals, fish, amphibians, and reptiles, as well as natural resources such as wetlands and waters of the state. It includes the California Endangered Species Act (Sections 2050-2115) and Streambed Alteration Agreement regulations (Sections 1600-1616), as well as provisions for legal hunting and fishing, and tribal agreements for activities involving take of native wildlife. Any proposed impact to state-listed species or state jurisdictional waters within or adjacent to the proposed project site would require a permit under the California Endangered Species Act and a Streambed Alteration Agreement from CDFG, respectively.

Under Sections 1600-1617 of the California Department of Fish and Game Code, CDFG regulates activities that would alter the flow, bed, channel, or bank of streams and lakes. The limits of CDFG jurisdiction are defined in the code as the "bed, channel or bank of any river, stream or lake designated by the department in which there is at any time an existing fish or wildlife resource or from which these resources derive benefit." The California Code of Regulations (14 CCR 1.72) defines a stream as:

> "[A] stream is a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having a surface or subsurface flow that supports or has supported riparian vegetation."

In practice, CDFG usually extends its jurisdictional limit to the top of a stream or lake bank, or outer edge of the riparian vegetation, whichever is wider. Riparian habitats do not always have identifiable hydric soils, or clear evidence of wetland hydrology as defined by the U.S. Army Corps of Engineers. Therefore, CDFG wetland boundaries often extend beyond U.S. Army Corps of Engineers wetland boundaries, which sometimes include only portions of the riparian habitat adjacent to a river, stream, or lake. Jurisdictional boundaries under Sections 1600-1607 may encompass an area that is greater than that under the jurisdiction of Section 404 (Cylinder et al. 1995).

A jurisdictional delineation of the project area was not conducted as part of the biological reconnaissance survey. The project area, however, does contain at least one drainage northwest of the reservoir (see Figure 1) that exhibits typical indicators of potential wetlands, such as channelization and riparian vegetation. The drainage may be under jurisdiction of the U.S. Army Corps of Engineers, CDFG, or both. Should it be determined that the project may impact this drainage, a formal jurisdictional delineation to determine permitting and mitigation requirements is recommended in advance of construction activities.

Best Management Practices should be employed during construction, regardless of the impact area, to assure that no discharge of debris, soil, sand, construction waste, cement or concrete washings, asphalt, paint, oil, or other harmful substances occurs in any potential nearby drainages. None of these materials should be placed where they may runoff into potential jurisdictional areas. Clean-up of all spills should begin immediately. Stationary heavy equipment such as motors, generators, and welders should not be placed in potential jurisdictional areas and should have suitable containment to handle a catastrophic spill or leak.

Migratory Birds

Congress passed the Migratory Bird Treaty Act in 1918 to prohibit the kill or transport of native migratory birds, or any part, nest, or egg of any such bird unless allowed by another regulation adopted in accordance with the Migratory Bird Treaty Act. The prohibition applies to birds included in the respective international conventions between the United States and Great Britain, the United States and Mexico, the United States and Japan, and the United States and Russia. Although no permit is issued under the Migratory Bird Treaty Act, if vegetation removal within the project area occurs during the breeding season for raptors and migratory birds (February 15 through September 15), the U.S. Fish and Wildlife Service requires that surveys be conducted to locate active nests within the construction area. If active raptor or migratory bird nests are detected, project activities may be temporarily curtailed or halted. The project must comply with the Migratory Bird Treaty Act.

The project site and adjacent areas contain mature trees that are suitable for use by migratory birds. Should removal of or commencement of other construction activities in the project site occur during the breeding season for migratory non-game native bird species (February 15 through September 15), weekly bird surveys should be performed to detect any protected native birds in the trees to be removed and other suitable nesting habitat. The surveys would be conducted 30 days prior to the disturbance of suitable nesting habitat by a qualified biologist with experience in conducting nesting bird surveys. The surveys would continue on a weekly basis with the last survey being conducted no more than 3 days prior to the initiation of clearance/construction work. If a protected native bird is found, LADWP must halt all clearance/construction disturbance activities in suitable nesting habitat until August 31 or continue the surveys in order to locate any nests. If an active nest is located, clearing and construction must be postponed until the nest is vacated and juveniles have fledged and when there is no evidence of a second attempt at nesting. Limits of construction to avoid a nest should be established in the field with flagging and stakes or construction fencing as appropriate for the resource to be protected. Construction personnel should be instructed on the sensitivity of the area. Once a flagged nest is determined to be no longer active, the biological monitor would remove all flagging and allow construction activities to proceed.

Wildlife Corridors

In an urban context, a wildlife migration corridor can be defined as a linear landscape feature of sufficient width and buffer to allow animal movement between two comparatively undisturbed habitat fragments, or between a habitat fragment and some vital resources thereby encouraging population growth and diversity. Habitat fragments are isolated patches of habitat separated by otherwise foreign or inhospitable areas, such as urban/suburban tracts, agricultural lands, or highways. Habitat fragments can isolate species populations by limiting migration, foraging, and breeding opportunities. Isolation of populations can have many harmful effects and may contribute significantly to local species extinction.

Two types of wildlife migration corridors seen in urban settings are regional corridors, defined as those linking two or more large areas of natural open space, and local corridors, defined as those allowing resident animals to access critical resources (food, cover, and water) in a smaller area that might otherwise be isolated by urban development. Wildlife migration corridors are essential in geographically diverse settings, and especially in urban settings, for the sustenance of healthy and genetically diverse animal communities. At a minimum, they promote colonization of habitat and genetic variability by connecting fragments of like habitat and help sustain individual species distributed in and among habitat fragments. They are also important features for dispersal, seasonal migration, foraging, and breeding.

A viable wildlife migration corridor consists of more than a path between fragmented habitats. A wildlife migration corridor must also include adequate vegetative cover and food sources for transient species as well as resident populations of less mobile animals to survive. They must be extensive enough to allow for large animals to pass relatively undetected, be free of obstacles, and lack any other distraction that may hinder wildlife passage such as lights or noise.

The project site provides suitable nesting habitat for migratory and resident bird populations, but does not act as part of a major contiguous linkage between two or more large areas of open space, and thus does not serve as a regional wildlife corridor. However, the project site acts as a potential local wildlife migration corridor as an undeveloped open space area within the Santa Monica Mountains.

The LADWP (1993) notes that the Upper and Lower Stone Reservoirs "provide open water habitat for numerous migrating and breeding waterfowl. Though not originally intended to function as waterfowl stops, reservoirs present much of the remaining open water habitat left in Los Angeles basin. The reservoirs may not be crucial to the survival of waterfowl, but loss of migration stops and overwintering grounds adds to the steady decline of these species within the Pacific flyway."

Protected Trees

The project site contains many trees under the protection of the City of Los Angeles, including coast live oak and southern California black walnut. Additional tree surveys in support of permits or an exemption from the Los Angeles Board of Public Works for relocation or removal of any protected trees are required.

Section 17.02 of the Los Angeles Municipal Code protects the following southern California native tree species, which measures four inches or more in cumulative diameter, four and one-half feet above the ground level at the base of the tree:

(a) Oak trees including Valley Oak (*Quercus lobata*) and California Live Oak (*Quercus agrifolia*), or any other tree of the oak genus indigenous to California but excluding the Scrub Oak (*Quercus dumosa*).
(b) Southern California Black Walnut (*Juglans californica* var. *californica*)
(c) Western Sycamore (*Platanus racemosa*)
(d) California Bay (*Umbellularia californica*)

Relocation or removal of any protected trees is prohibited without a permit or exemption from the Los Angeles Board of Public Works or its designated officer or employee.

The project site contains numerous coast live oak and California walnut trees under the protection of the City of Los Angeles). Should the project impact areas containing protected trees, extensive tree assessments, conducted by a certified arborist, will be necessary to determine the number, size, health, and other characteristics obligatory for the obtainment of permitting and mitigation for their removal. A report of these characteristics must be approved before a permit to remove protected trees is granted.

An oak tree survey was completed by Sanders Barnett in 1992 for 45 oak trees within the study area; however, this report covered a limited area and did not include other protected trees therefore, the 1992 report alone would not be sufficient to complete reporting requirements should the project impact areas containing protected trees (LADWP 1993).

Habitat Conservation Plans

The proposed project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. There are no adopted habitat conversation plans in Granada Hills-Knollwood area due to its highly urbanized nature, nor is the project site located in or near a Natural

Communities Conservation Plan area or Significant Ecological Area. The project site is not within any Significant Ecological Areas or designated Critical Habitat. No regional habitat conservation plans or Natural Community Conservation Plans have been adopted that would affect the project site. No action is necessary, therefore, with regard to Habitat Conservation Plans.

Weed Abatement and Prevention

Activities associated with the proposed project, such as the mobilization of construction vehicles and equipment, may facilitate the spread of invasive and/or noxious weeds by inadvertently transporting the seeds or loose plant remnants on tires or the underside of equipment. In order to minimize the spread of invasive and/or noxious weeds, the preparation of a Weed Control Plan is recommended. The Weed Control Plan would have a complete list of construction and restoration techniques and measures to be implemented in order to reduce the spread of noxious and invasive weeds. These measures would include, but are not limited to: the locations of existing weed populations; measures to control introduction and spread of noxious weeds in the Upper Stone Reservoir property; worker training; inspection procedures for construction materials and equipment; post-construction monitoring for noxious weeds; and eradication and control methods.

Habitat Restoration, Mitigation and Monitoring Plan

Should habitat removal be required for the project, it is recommended that a Habitat Restoration, Mitigation, and Monitoring Plan (Mitigation Plan) be prepared as part of mitigation for the proposed project. The Mitigation Plan would incorporate all the terms and conditions set forth in the various permits, certifications, and agreements issued by the appropriate jurisdictional agencies and should be prepared by a qualified habitat restoration biologist. The Mitigation Plan would include, at minimum, a planting palette, planting plans, monitoring requirements, and success criteria.

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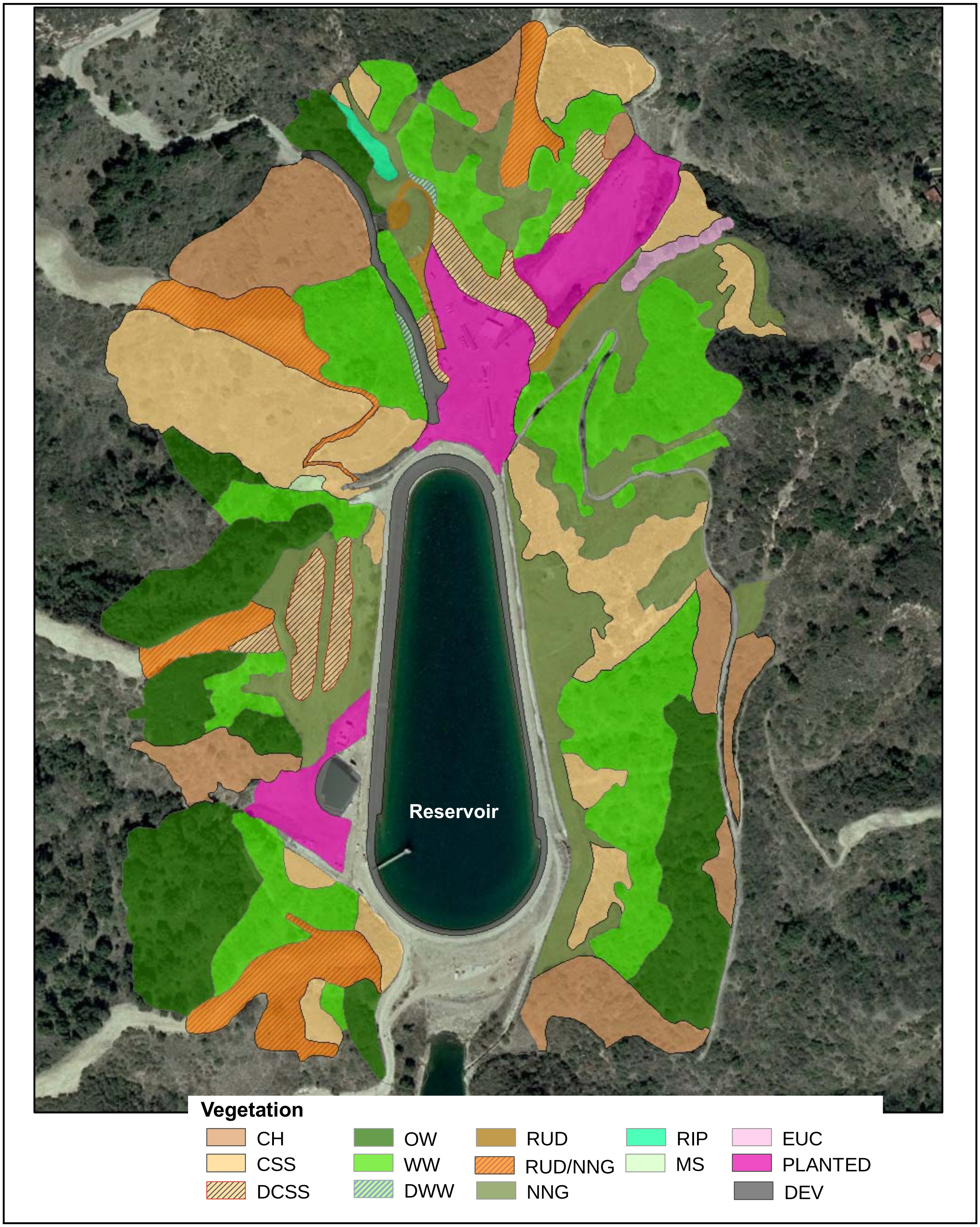

Source: ESRI 2010

Figure 1
Upper Stone Reservoir
Vegetation and Cover Types

AECOM

ATTACHMENT A.
SENSITIVE PLANTS AND ANIMALS KNOWN TO OCCUR IN THE VICINITY OF THE PROJECT

SENSITIVE PLANTS AND ANIMALS KNOWN TO OCCUR IN THE VICINITY OF THE PROJECT			
Common Name ***Scientific Name***	**Sensitivity Status[1]**	**General Habitat Requirements**	**Probability of Occurrence**
Plants			
marsh sandwort *Arenaria paludicola*	USFWS: Endangered CDFG: Endangered CNPS: 1B.1	Associated with freshwater marsh and swamps; grows up through dense mats of *Typha, Juncus, Scirpus*, etc. Elevation 10-170 m (3-560 ft.). Blooms May-August.	Not expected. No suitable habitat occurs within the survey area.
Braunton's milk-vetch *Astragalus brauntonii*	USFWS: Endangered CDFG: None CNPS: 1B.1	Associated with closed-cone coniferous forest, chaparral, coastal scrub, valley and foothill grasslands. Known from recent burns or disturbed areas with stiff gravelly clay soils overlying granite or limestone. Elevation 4-640 m (12-2,110 ft.). Blooms January-August.	Not expected. Potentially suitable habitat occurs within the survey area however, directed surveys for this species conducted in 1992 and 2008 determined its absence from most of the study area.
Ventura marsh milk-vetch *Astragalus pycnostachyus* var. *lanosissimus*	USFWS: Endangered CDFG: Endangered CNPS: 1B.1	Associated with coastal salt marsh. Known to occur within reach of high tide or protected by barrier beaches, more rarely near seeps on sandy bluffs. Elevation 1-35 m (3-115 ft.). Blooms June-October.	Not expected. No suitable habitat occurs within the survey area.
coastal dunes milk-vetch *Astragalus tener* var. *titi*	USFWS: Endangered CDFG: Endangered CNPS: 1B.2	Associated with coastal bluff scrub, coastal dunes. Known from moist, sandy depressions of bluffs or dunes along and near the Pacific Ocean; one site on a clay terrace. Elevation 1-50 m (3-164 ft.). Blooms March-May.	Not expected. No suitable habitat occurs within the survey area.
Parish's brittlescale *Atriplex parishii*	USFWS: None CDFG: None CNPS: 1B.1	Associated with alkali meadows, vernal pools, chenopod scrub, playas. Known to occur on drying alkali flats with fine soils. Elevation 4-140 m (13-460 ft.). Blooms June-October.	Not expected. No suitable habitat occurs within the survey area.
Davidson's saltscale *Atriplex serenana* var. *davidsonii*	USFWS: None CDFG: None CNPS: 1B.2	Associated with coastal bluff scrub, coastal scrub. Occurs in alkaline soils. Elevation 3-250 m (10-820 ft.). Blooms April-October.	Not expected. No suitable microhabitat occurs within the survey area.

Nevin's barberry *Berberis nevinii*	USFWS: Endangered CDFG: Endangered CNPS: 1B.1	Associated with chaparral, cismontane woodland, coastal scrub, riparian scrub. Occurs on steep, north-facing slopes or low grade sandy washes. Elevation 290-1,575 m (950-5,200 ft.). Blooms March-June.	Not expected. Directed surveys for this species conducted in 1992 and 2008 determined its absence and the absence of suitable microhabitat from the survey area.
round-leaved filaree *California macrophylla*	USFWS: None CDFG: None CNPS: 1B.1	Associated with cismontane woodland, valley and foothill grassland. Occurs in clay soils. Elevation 15-1,200 m (50-3,960 ft.). Blooms March-May.	Not expected. The only known occurrence in the vicinity to the survey area was in an unknown location in Hollywood in 1900 and is possibly extirpated.
slender mariposa-lily *Calochortus clavatus* var. *gracilis*	USFWS: None CDFG: None CNPS: 1B.2	Associated with chaparral, coastal scrub. Known to occur in shaded foothill canyons, often on grassy slopes within other habitat. Elevation 420-760 m (1,380-2,500 ft.). Blooms March-June.	Low. Potentially suitable habitat occurs within the survey area, however, the only known nearby occurrence is from a collection in 2001 in the Burbank quadrangle, along a fire road between La Tuna and Brace Canyons. The survey area is also below the known elevation range of this species.
Plummer's mariposa-lily *Calochortus plummerae*	USFWS: None CDFG: None CNPS: 1B.2	Associated with coastal scrub, chaparral, valley and foothill grassland, cismontane woodland, lower montane coniferous forest. Occurs on rocky and sandy sites, usually of granitic or alluvial material, and can be very common after a fire. Elevation 90-1,610 m (295-5,280 ft.). Blooms May-July.	Low. Potentially suitable habitat occurs within the survey area however, directed surveys for this species conducted in 2008 determined its absence from much of the survey area.
Santa Barbara morning-glory *Calystegia sepium* ssp. *binghamiae*	USFWS: None CDFG: None CNPS: 1A	Associated with coastal marshes. Elevation 0-30 m (0-98ft.). Blooms April-May.	Not expected. No suitable habitat occurs within the survey area.

southern tarplant *Centromadia parryi* ssp. *australis*	USFWS: None CDFG: None CNPS: 1B.1	Associated with marshes and swamps (margins), valley and foothill grassland. Occurs often in disturbed sites near the coast at marsh edges; also in alkaline soils sometimes with saltgrass. Elevation 0-427 m (0-1,400 ft.). Blooms May-November.	Not expected. No suitable habitat occurs within the survey area.
San Fernando Valley spineflower *Chorizanthe parryi* var. *fernandina*	USFWS: Candidate CDFG: Endangered CNPS: 1B.1	Associated with coastal scrub. Occurs in sandy soils. Elevation 3-1,035 m (9-3,375 ft.). Blooms April-July.	Low. Potentially suitable habitat occurs within the survey area however, directed surveys for this species conducted in and 2008 determined its absence from much of the survey area.
salt marsh bird's-beak *Cordylanthus maritimus* ssp. *maritimus*	USFWS: Endangered CDFG: Endangered CNPS: 1B.2	Associated with coastal salt marsh, coastal dune. Limited to the higher zones of the salt marsh habitat. Elevation 0-30 m (0-98ft.). Blooms May-October.	Not expected. No suitable habitat occurs within the survey area.
Santa Susana tarplant *Deinandra minthornii*	USFWS: None CDFG: Rare CNPS: 1B.2	Associated with chaparral, coastal scrub. Known to occur on sandstone outcrops and crevices in shrubland. Elevation 280-760 m (924-2,500 ft.). Blooms July-November.	Not expected. No suitable microhabitat occurs within the survey area.
beach spectaclepod *Dithyrea maritima*	USFWS: None CDFG: Threatened CNPS: 1B.1	Associated with coastal dunes, coastal scrub (formerly more widespread in coastal habitats in southern California). Known from sea shores, on sand dunes, and sandy places near the shore. Elevations 3-50 m (10-165 ft.). Blooms March-May.	Not expected. No suitable habitat occurs within the survey area.
slender-horned spineflower *Dodecahema leptoceras*	USFWS: Endangered CDFG: Endangered CNPS: 1B.2	Associated with chaparral, coastal scrub, alluvial fan sage scrub. Occurs in flood deposited terraces and washes; associations include *Encelia*, *Dalea*, *Lepidospartum*, etc. Elevation 200-760 m (660-2,500 ft.). Blooms April-June.	Not expected. No suitable microhabitat occurs within the survey area.

Blochman's dudleya *Dudleya blochmaniae* ssp. *blochmaniae*	USFWS: None CDFG: None CNPS: 1B.1	Associated with coastal scrub, coastal bluff scrub, valley and foothill grassland. Occurs in open, rocky slopes; often in shallow clays over serpentine or in rocky areas with little soil. Elevation 5-450 m (16-1,485 ft.). Blooms April-June.	Not expected. No suitable microhabitat occurs within the survey area.
Santa Monica dudleya *Dudleya cymosa* ssp. *ovatifolia*	USFWS: Threatened CDFG: None CNPS: 1B.2	Associated with chaparral, coastal scrub. Occurs in canyons on sedimentary conglomerates; primarily north-facing slopes. Elevation 210-500 m (693-1,650 ft.). Blooms March-June.	Low. Potentially suitable habitat occurs within the survey area however, directed surveys for this species conducted in 2008 determined its absence from much of the survey area.
many-stemmed dudleya *Dudleya multicaulis*	USFWS: None CDFG: None CNPS: 1B.2	Associated with chaparral, coastal scrub, valley and foothill grassland. Occurs in heavy, often clayey soils or grassy slopes. Elevation 0-790 m (0-2,610 ft.). Blooms April-July.	Not expected. Directed surveys for this spcies conducted in 1992 determined its absence from the survey area.
Los Angeles sunflower *Helianthus nuttallii* ssp. *parishii*	USFWS: None CDFG: None CNPS: 1A	Associated with marshes and swamps (coastal salt and freshwater). Historical from southern California. Elevation 5-1675 m (16-5,530 ft.). Blooms August-October.	Not expected. No suitable habitat occurs within the survey area.
mesa horkelia *Horkelia cuneata* ssp. *puberula*	USFWS: None CDFG: None CNPS: 1B.1	Associated with chaparral, cismontane woodland, coastal scrub. Occurs in sandy or gravelly sites. Elevation 70-810 m (230-2,675 ft.). Blooms February-July (September).	Low. Potentially suitable habitat occurs within the survey area however, directed surveys for this species conducted in 2008 determined its absence from much of the survey area.

Davidson's bush-mallow *Malacothamnus davidsonii*	USFWS: None CDFG: None CNPS: 1B.2	Associated with coastal scrub, riparian woodland, chaparral. Occurs in sandy washes. Elevation 180-855 m (590-2,825 ft.). Blooms June-January.	Low. Potentially suitable habitat occurs within the survey area however, directed surveys for this species conducted in 2008 determined its absence from much of the survey area.
mud nama *Nama stenocarpum*	USFWS: None CDFG: None CNPS: 2.2	Associated with marshes and swamps. Known to occur in lake shores, river banks, intermittently wet areas. Elevation 5-500 m (16-1640 ft.). Blooms June-July.	Not expected. No suitable habitat occurs within the survey area.
Gambel's water cress *Nasturtium gambelii*	USFWS: Endangered CDFG: Threatened CNPS: 1B.1	Associated with marshes and swamps. Occurs in freshwater and brackish marshes at the margins of lakes and along streams, in or just above the water level; Elevation 5-1305 m (16-4,310 ft.). Blooms April-October.	Not expected. No suitable habitat occurs within the survey area.
prostrate vernal pool navarretia *Navarretia prostrata*	USFWS: None CDFG: None CNPS: 1B.1	Associated with coastal scrub, valley and foothill grassland, vernal pools. Occurs in alkaline soils in grassland, or in vernal pools; mesic, alkaline sites. Elevation 15-700 m (50-2296 ft.). Blooms April-July.	Not expected. No suitable habitat occurs within the survey area.
white rabbit-tobacco *Pseudognaphalium leucocephalum*	USFWS: None CDFG: None CNPS: 2.2	Associated with riparian woodland, cismontane woodland, coastal scrub, chaparral. Occurs in sandy gravelly sites. Elevation 0-2,100 m (0-6,930 ft.). Blooms (July) August-November (December).	Low. Potentially suitable habitat occurs within the survey area however, the only known nearby occurrences are from collections in 1907 and 1932 in the vicinity of Hollywood and in La Tuna Canyon, respectively.
salt spring checkerbloom *Sidalcea neomexicana*	USFWS: None CDFG: None CNPS: 2.2	Associated with alkali playas, brackish marshes, chaparral, coastal scrub, lower montane coniferous forest, mojavean desert scrub; alkali springs and marshes. Elevation 0-1500 m (0-500ft.). Blooms March-June.	Not expected. No suitable habitat occurs within the survey area.

San Bernardino aster *Symphyotrichum defoliatum*	USFWS: None CDFG: None CNPS: 1B.2	Associated with meadows and seeps, marshes and swamps, coastal scrub, cismontane woodland, lower montane coniferous forest, and grassland. Known from vernally mesic grassland or near ditches, streams, and springs; disturbed areas. Elevation 2-2,040 m (6.5-6,700ft.). Blooms July-November.	Not expected. Potentially suitable habitat occurs within the survey area however, the only known occurrence in the vicinity to the survey area was in an unknown location in "Cienega" in 1902 and is possibly extirpated.
Greata's aster *Symphyotrichum greatae*	USFWS: None CDFG: None CNPS: 1B.3	Associated with chaparral and cismontane woodland; known from mesic canyons. Elevation 800-1,500 m (2,600-4,900 ft.). Blooms June-October.	Not expected. Potentiallysuitable habitat occurs within the survey area however, the only known occurrence in the vicinity to the survey area was in an unknown location in the Elysian Park area in 1932 and is possibly extirpated.
Invertebrates			
Santa Monica shieldback katydid *Aglaothorax longipennis*	USFWS: None CDFG: CNDDB	Known from the Santa Monica mountains of southern California. Occurs nocturnally in chaparral, introduced ice plant, and canyon stream bottom vegetation.	Low: Chaparral is present within the survey area, however this species is only known from one occurrence in Topanga area in 1975.
Busck's gallmoth *Carolella busckana*	USFWS: None CDFG: CNDDB	Known from one occurrence in 1929 in Beverly Terrace.	Not Expected: Known from one occurrence in 1929 in Beverly Terrace. Presumed extirpated from that location.
sandy beach tiger beetle *Cicindela hirticollis gravid*	USFWS: None CDFG: CNDDB	Clean, dry, light-colored sand in the upper zone adjacent to non-brackish water along the coast of California from San Francisco Bay to northern Mexico. Subterranean larvae prefer moist sand not affected by wave action.	Not Expected: Suitable habitat does not occur within the survey area.

globose dune beetle *Coelus globosus*	USFWS: None CDFG: CNDDB	Burrows beneath sand surface and vegetation in foredunes and sand hummocks within coastal sand dune habitat, from Bodega Head in Sonoma County south to Ensenada, Mexico.	Not Expected: Suitable habitat does not occur within the survey area.
monarch butterfly *Danaus plexippus*	USFWS: None CDFG: CNDDB	Roosts in wind-protected tree groves (eucalyptus, Monterey pine, cypress), with nectar and water sources nearby. Winter roost sites located along the coast from northern Mendocino to Baja California, Mexico.	Not Expected: Suitable roosting habitat does not occur within the survey area.
Gertsch's socalchemmis spider *Socalchemmis gertschi*	USFWS: None CDFG: CNDDB	Known only from two localities: Brentwood and Topanga Canyon.	Not expected. Known only from two localities: Brentwood and Topanga Canyon.
Fish			
southern steelhead – southern California ESU *Oncorhynchus mykiss irideus*	USFWS: Endangered CDFG: Species of Special Concern	Federal listing refers to populations from Santa Maria River south to southern extent of range at San Mateo Creek in San Diego County	Not Expected: Suitable habitat does not occur within the survey area.
Amphibians			
arroyo toad *Anaxyrus californicus*	USFWS: Endangered CDFG: Species of Special Concern	Semi-arid regions near washes or intermittent streams, including valley-foothill and desert riparian, desert wash, etc.; rivers with sandy banks, willows, cottonwoods, and sycamores; loose gravelly areas of streams in drier riparian parts of range	Not Expected: Suitable habitat does not occur within the survey area.
Reptiles			
southwestern pond turtle *Emys marmorata*	USFWS: None CDFG: Species of Special Concern	Inhabits permanent or nearly permanent bodies of water in many habitat types; Below 6000 feet elevation; Require basking sites such as partially submerged logs, vegetation Mats, or open mud banks; need suitable nesting sites.	Not Expected: Suitable habitat is surrounded by a fence.
coastal western whiptail *Aspidoscelis tigris stejnegeri*	USFWS: None CDFG: CNDDB	Found in deserts and semiarid areas with sparse vegetation and open areas; also found in woodland and riparian areas; ground may be firm soil, sandy or rocky	Moderate: Observed during focused surveys in 1992, but not observed during 2008 surveys.
San Bernardino ringneck snake *Diadophis punctatus modestus*	USFWS: None CDFG: CNDDB	Most common in open, relatively rocky areas, often in somewhat moist microhabitats near intermittent streams. Restricts movements to areas of surface litter or herbaceous vegetation and avoids moving through open or barren areas.	Not Expected: Suitable habitat does not occur within the survey area.

coast (San Diego) horned lizard *Phrynosoma coronatum (blainvillii population)*	USFWS: None CDFG: Species of Special Concern	Inhabits coastal sage scrub and chaparral in arid and semi-arid climate conditions; prefers friable, rocky or shallow sandy soils	Moderate potential to occur within coastal sage scrub and chaparral habitat onsite. Was not detected during focused surveys in 1992.
Birds			
tricolored blackbird *Agelaius tricolor*	USFWS: None CDFG: Species of Special Concern	Highly colonial species, most numberous in Central Valley and vicinity. Largely endemic to California; Requires open water, protected nesting substrate and foraging area with insect prey within a few km of the colony	Not Expected: Suitable habitat does not occur within the survey area.
burrowing owl *Athene cunicularia*	USFWS: None CDFG: Species of Special Concern	Open, dry annual or perennial grasslands, deserts and scrublands characterized by low-growing vegetation; subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel.	Not Expected: Suitable habitat does not occur within the survey area.
southwestern willow flycatcher *Empidonax traillii extimus*	USFWS: Endangered CDFG: Endangered	Riparian woodlands in southern California	Not Expected: Suitable habitat does not occur within the survey area.
coastal California gnatcatcher *Polioptila californica californica*	USFWS: Threatened CDFG: Species of Special Concern	Obligate, permanent resident of coastal sage scrub below 2500 feet in southern California; low, coastal sage scrub in arid washes, on mesas and slopes; not all areas classified as CSS are occupied	Low: suitable coastal sage scrub habitat occurs within the survey area; this species is obligate, was not observed within the survey area, and the closest known occurrences are from 9 miles south east and 11 miles northeast in 1989 and 1991, respectively.
least Bell's vireo *Vireo bellii pusillus*	USFWS: Endangered CDFG: Endangered	Summer resident of southern California in low riparian in vicinity of water or in dry river bottoms below 2000 ft; nests placed along margins of bushes or on twigs projecting into pathways; usually willow, baccharis, mesquite	Not Expected: Suitable habitat does not occur within the survey area.

Mammals			
pallid bat *Antrozous pallidus*	CDFG: Species of Special Concern IUCN: LC WBWG: H	Deserts, grasslands, shrublands, woodlands and forests; most common in open, dry habitats with rocky areas for roosting; roosts must protect bats from high temperatures; very sensitive to disturbance of roosting sites	Low: Suitable roosting habitat does not occur within the survey area although individuals may utilize the reservoir for drinking and foraging.
western mastiff bat *Eumops perotis californicus*	USFWS: None CDFG: Species of Special Concern IUCN: LC WBWG: H	Many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, chaparral etc; roosts in crevices in cliff faces, high buildings, trees and tunnels	Low: Suitable roosting habitat does not occur within the survey area although individuals may utilize the reservoir for drinking and foraging.
silver-haired bat *Lasionycteris noctivagans*	USFWS: None CDFG: None IUCN: LC WBWG: M	Primarily a coastal and montane forest dweller feeding over streams, ponds and open brushy areas; roosts in hollow trees, beneath exfoliating bark, abandoned woodpecker holes and rarely under rocks; needs drinking water	Not expected: Suitable habitat does not occur within the survey area.
hoary bat *Lasiurus cinereus*	USFWS: None CDFG: None IUCN: LC WBWG: M	Prefers open habitats or habitat mosaics, with access to trees for cover and open areas or habitat edges for feeding; roosts in dense foliage of medium to large trees; feeds primarily on moths and requires water	Low: Suitable roosting habitat does not occur within the survey area although individuals may utilize the reservoir for drinking and foraging.
western yellow bat *Lasiurus xanthinus*	USFWS: None CDFG: None IUCN: LC WBWG: H	Found in valley foothill riparian, desert riparian, desert wash, and palm oasis habitats; roosts in trees, particularly palms; forages over water and among trees	Low: Suitable roosting habitat does not occur within the survey area although individuals may utilize the reservoir for drinking and foraging.
south coast marsh vole *Microtus californicus stephensi*	USFWS: None CDFG: Species of Special Concern	Tidal marshes in Los Angeles, Orange and southern Ventura counties	Not Expected: Suitable habitat does not occur within the survey area.
San Diego desert woodrat *Neotoma lepida intermedia*	USFWS: None CDFG: Species of Special Concern	Coastal scrub of southern California from San Diego county to San Luis Obispo county; moderate to dense canopies preferred. They are particularly abundant in rock outcrops and rocky cliffs and slopes	Not Expected: Middens or suitable rocky outcrops and cliffs were not observed within the survey area.
big free-tailed bat *Nyctinomops macrotis*	USFWS: None CDFG: Species of Special Concern IUCN: LC WBWG: MH	Low-lying arid areas in southern California; need high cliffs or rocky outcrops for roosting sites; feeds principally on large moths	Not expected: Suitable habitat does not occur within the survey area.

southern grasshopper mouse *Onychomys torridus Ramona*	USFWS: None CDFG: Species of Special Concern	Desert areas, especially scrub habitats with friable soils for digging. Prefers low to moderate shrub cover; feeds almost exclusively on arthropods, especially scorpions and orthopteran insects	Low. Suitable moderate shrub cover within coastal sage scrub habitat occurs within the survey area. Some soils are friable. Last known occurrence was from the vicinity of Sunland, 7 miles northeast of the survey area, in 1904.
Los Angeles pocket mouse *Perognathus longimembris brevinasus*	USFWS: None CDFG: Species of Special Concern	Lower elevation grasslands and coastal sage communities in and around the Los Angeles Basin; open ground with fine sandy soils; may not dig extensive burrows, instead may be found hiding under weeds and dead leaves	Low: Most recent occurrence from 1903, approximately 5 miles northeast of the survey area.
American badger *Taxidea taxus*	USFWS: None CDFG: Species of Special Concern	Most abundant in drier open stages of most shrub, forest and herbaceous habitats, with friable soils; need sufficient food, friable soils and open, uncultivated ground; prey on burrowing rodents; dig burrows	Low: No burrows were observed within the survey area.

[1]**Sensitivity Status Codes**

Federal U.S. Fish and Wildlife Service (USFWS)
State California Department of Fish and Game (CDFG)
Other California Native Plant Society (CNPS)
1A: Presumed extinct in California
1B: Plants rare, threatened, or endangered in California and elsewhere
2: Plants rare, threatened, or endangered in California, but more common elsewhere
3: Plants more information is needed for
4: Plants of limited distribution – a watch list
Threat Ranks
0.1- Seriously threatened in California (high degree/immediacy of threat)
0.2- Fairly threatened in California (moderate degree/immediacy of threat)
0.3- Not very threatened in California (low degree/immediacy of threats or no current threats known)
Western Bat Working Group (WBWG)
-H: High Priority
- M: Medium Priority
-MH: Medium-High Priority
The World Conservation Union (IUCN)
-DD: Data Deficient
-LC: Least Concern
-NT: Near Threatened

AECOM

ATTACHMENT B. FLORA OBSERVED IN THE SURVEY AREAS DURING 2009-2010 RECONNAISSANCE SURVEYS

SCIENTIFIC NAME	COMMON NAME
Anacardiaceae	**sumac or cashew family**
Malosma laurina	laurel sumac
Rhus ovata	sugar bush
Toxicodendron diversilobum	poison oak
Apiaceae	**carrot family**
*Conium maculatum**	poison hemlock
*Foeniculum vulgare**	fennel
Asteraceae	**sunflower family**
Artemisia californica	California sagebrush
Artemisia douglasiana	mugwort
Baccharis salicifolia	mule fat
Baccharis pilularis	coyote brush
Brickellia californica	California brickellbush
*Centaurea melitensis**	tocalote
*Cichorium inybus**	chicory
Corethrogyne filaginifolia	California-aster
Encelia californica	California encelia
Heterotheca grandiflora	telegraph weed
Isocoma menziesii	goldenbush
*Picris echioides**	bristly ox-tongue
*Silybum marianum**	milk thistle
Boraginaceae	**borage family**
Amsinckia menziesii var. *intermedia*	common fiddleneck
Cryptantha sp.	cryptantha
Brassicaceae	**mustard family**
*Brassica nigra**	black mustard
Rorippa nasturtium-aquaticum	water cress
Chenopodiaceae	**goosefoot family**
Atriplex semibaccata	Australian saltbush
Caprifoliaceae	**honeysuckle family**
Sambucus mexicana	blue elderberry
Convolvulaceae	**morning-glory family**
Calystegia macrostegia	morning glory
Crassulaceae	**stonecrop family**

Crassula connata	pygmy weed
Cucurbitaceae	**gourd family**
Marah macrocarpus	wild cucumber
Convolvulaceae	**morning-glory family**
Cuscuta californica	dodder
Euphorbiaceae	**spurge family**
Croton californicus	California croton
*Euphorbia esula**	leafy spurge
*Ricinus communis**	castor bean
Fabaceae	**legume family**
Lotus scoparius	deerweed
Lupinus bicolor	miniature lupine
Lupinus longifolius	longleaf bush lupine
Lupinus sp.	lupine (yellow)
*Melilotus indicus**	sourclover
Fagaceae	**oak family**
Quercus agrifolia	coast live oak
Quercus berberidifolia	scrub oak
Geraniaceae	**geranium family**
*Erodium cicutarium**	filaree
Grossulariaceae	**gooseberry family**
Ribes malvaceum	chaparral currant
Ribes speciosum	fuchsia-flowered gooseberry
Juglandaceae	**walnut family**
Juglans californica	California black walnut
Lamiaceae	**mint family**
*Marrubium vulgare**	horehound
Salvia mellifera	black sage
Malvaceae	**malva family**
Malacothamnus sp.	bush mallow
*Malva parviflora**	cheeseweed
Onagraceae	**evening primrose family**
Camissonia bistorta	California sun cup
Paeoniaceae	**peony family**
Paeonia californica	California peony

Phrymaceae	**lopseed family**
Mimulus aurantiacus	sticky monkeyflower
Polygonaceae	**buckwheat family**
Eriogonum fasciculatum	California buckwheat
Plantaginaceae	**plantain family**
*Plantago lanceolata**	English plantain
Rhamnaceae	**buckthorn family**
Ceanothus sp.[1]	California-lilac
Rhamnus ilicifolia	hollyleaf redberry
Rosaceae	**rose family**
Adenostoma fasciculatum	chamise
Heteromeles arbutifolia	toyon
Rubiaceae	**madder family**
*Galium aparine**	goose grass
Salicaceae	**willow family**
Salix sp.	willow
Scrophulariaceae	**figwort family**
Scrophularia californica	California figwort
Solanaceae	**nightshade family**
*Nicotiana glauca**	tree tobacco
Solanum douglasii	Douglas' nightshade
Verbanaceae	**vervain family**
Verbena lasiostachys	common verbena
Asphodelaceae	**asphodelus family**
*Asphodelus fistulosus**	onionweed
Poaceae	**grass family**
*Avena fatua**	wild oat
*Bromus diandrus**	ripgut grass
*Bromus hordeaceus**	soft chess
Bromus madritensis ssp. *rubens**	foxtail chess
Bromus tectorum	cheatgrass
Cortaderia sp.*	pampas grass
Hordeum sp.*	barley
Leymus condensatus	giant ryegrass
Lolium sp.*	ryegrass
Muhlenbergia rigens[1]	deergrass
Nasella pulchra.[1]	purple needlegrass

*Piptatherum miliaceum**	smilo grass
*Polypogon sp.**	beard grass
Typhaceae	**cattail family**
Typha sp.	cattail

* indicates a non-native species

[1] this species was only observed in planted areas

RESULTS OF BIOLOGICAL SURVEYS

FOR THE

LOS ANGELES DEPARTMENT OF WATER AND POWER

UPPER STONE CANYON RESERVOIR PROJECT

LOS ANGELES COUNTY

August 2008

PREPARED FOR:

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August 2008

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1.0 PROJECT BACKGROUND

As part of a proposed upgrade project for the Stone Canyon Reservoir complex, the Los Angeles Department of Water and Power (LADWP) is considering the option of using soil from one of four locations as a source of fill for the upper reservoir. The project will entail removing vegetation, cutting into one of the four areas, and removing soil material. LADWP site maps provided to Garcia and Associates (GANDA) indicate that the amount of fill proposed for removal would total from 3,230,000 to 3,530,000 cubic yards.

The project area lies within the LADWP's Stone Canyon Reservoir complex (Figure 1). This complex is in the eastern Santa Monica Mountains of Los Angeles County. The community of Sherman Oaks lies on the northern edge of the reservoir area and Bel Air abuts the southern, eastern, and western sides. Downtown Los Angeles is 13 miles to the southeast.

The Stone Canyon Reservoir complex consists of two reservoirs: upper and lower. The four project sites are adjacent to Upper Stone Canyon Reservoir. Upper Stone Canyon Reservoir lies at approximately 918 feet in elevation. The water holding capacity is 138 million gallons. The reservoir is contained within a concrete structure, with the exposed sides sloping down to the water. A metal chain link fence surrounds the structure. A spillway connects the upper reservoir to the much larger (3.38 billion gallon capacity) Lower Stone Canyon Reservoir to the south. This reservoir is not contained in concrete, and has vegetation and rock outcrops along the shoreline.

The four proposed work sites are located on hillsides varying from approximately 9.5 to 20 acres in size (Figure 2). The sites partially encircle Upper Stone Canyon Reservoir, with Site One's boundary beginning approximately two hundred feet north of the reservoir. Sites Two, Three and Four border the reservoir's western edge, with the boundaries located across a dirt access road running along the western shore.

2.0 METHODS

On April 24 and 25, and August 5, 2008, GANDA botanist Eliza Shepard and GANDA wildlife biologists Vicki Trabold and Jacqueline Finck visited the four proposed work sites. Approximate boundaries for each site were determined in the field using the contoured project maps supplied, which contained rough, hand-drawn boundaries. The biologists conducted a daytime walking survey of all four sites. The areas surveyed had not burned in many years: some areas of dense vegetation and steep slopes were inaccessible, and therefore, surveyed to the extent possible, including visual observations with binoculars.

2.1 Botanical Resources

GANDA botanist Eliza Shepard surveyed the sites on April 24 and 25, and August 5, 2008. The purpose of this botanical survey was to assess the likelihood of habitat within the project area to support special-status plant species and map vegetation habitats. Presence/absence of special status plant species was also determined for species that could be identified at the time of surveys.

Prior to the field survey, a list of potential special status vascular plant species for the project area was determined by searching the California Natural Diversity Database (CNDDB) (CDFG 2008a), the Biogeographic Data Branch for significant sensitive areas (CDFG 2008b), and the California Native Plant Society Online Inventory (CNPS 2008). The search area for this background research included a nine-quadrangle search area centered on the US Geological Survey (USGS) 7.5 minute quadrangle of Beverly Hills (which contains the Stone Canyon Reservoir Complex) and the surrounding quadrangles of Canoga Park, Van Nuys, Burbank, Topanga, Hollywood, Venice, Inglewood, and Southgate (Figure 3).

Potential special status plant species include taxa that are designated as follows:

- Federally threatened, endangered, or a candidate for listing,
- Threatened or endangered by the State of California, or
- CNPS List 1 and 2 species.

2.2 Wildlife Resources

GANDA wildlife biologists surveyed the Upper Stone Canyon Reservoir sites during daylight hours; Vicki Trabold surveyed on April 24 and 25, 2008, and Jacqueline Finck surveyed on August 5, 2008. The purpose of the wildlife survey was to assess the project site for the occurrence of special status wildlife or suitable habitat to support these species. Walking surveys were conducted in all habitats to document animal observations, search for nests and other animal sign (e.g., tracks and/or scat), and investigate potential habitat for special status species.

Prior to the wildlife survey, background research of known occurrences of special-status species from the project area were identified by searching both the CNDDB (CDFG 2008a), the Biogeographic Data Branch for significant sensitive areas (CDFG 2008b), and the U.S. Fish and Wildlife Service (USFWS 2008) website. As with the botanical survey, the search area for this background research included the same nine U.S. Geological Survey quadrangles, which include the project site and surrounding quadrangles (Figure 3).

Special-status animal species include the following:

- Federally threatened, endangered, or a candidate for listing,
- Threatened or endangered by the State of California, or
- Species of Concern by CDFG.

3.0 PROJECT SETTING

3.1 General Setting

The project area is accessed from the entrance station off Mulholland Drive. Gravel and dirt roads lead to the reservoir areas. The site contains several structures including a chlorine chlorination station and filter plant.

3.2 Habitats

3.2.1 Natural Communities

The plant composition is similar at all four sites (Figure 2). The vegetation is dominated by coastal sage scrub. Coastal sage scrub is similar to chamise chaparral because of the characteristic species are similar in both communities. The difference being chamise chaparral usually has 100 percent vegetation cover of chamise. Coastal sage scrub has more diversity in the vegetation coverage. So these areas were classified as coastal sage scrub. Walnut and oak woodlands occur in the valleys and hill slopes. Areas on each site contain a bladed fire line dominated by ruderal vegetation that leads into non-native annual grasses. This ruderal vegetation is also found as an understory in some of the oak and walnut woodlands.

Portions of the north and west facing slopes and drainages on all four sites are dominated by live oak *(Quercus agrifolia)* and California black walnut *(Juglans californica)*. Other species found in these areas include Mexican elderberry *(Sambucus mexicana)*, lemonadeberry (*Rhus integrifolia*), coyote brush (*Baccharis pilularis*), and laurel sumac (*Malosma laurina*).

Oak woodlands are found on Sites Three and Four (Figure 2), and contain mature stands of trees. California walnut woodland is found on Sites One and Two, containing stands of trees ranging from immature to mature.

Coastal sage scrub is the dominant vegetation type throughout the four sites. Species including: black sage *(Salvia mellifera)*, California sagebrush *(Artemesia californica)*, chamise *(Adenostoma fasciculatum*), California buckwheat *(Eriogonum fasciculatum)*, California encelia *(Encelia californica)*, laurel sumac, coyote brush, and lemonadeberry.

Ruderal vegetation is dominated by black mustard *(Brassica nigra)* and some bull thistle *(Cirsium vulgare)*. This vegetation was found on all four sites surrounding the non-native annual grassland. It is also present on some hill slopes, primarily on Site One between the walnut trees.

The hilltops and some portions of the hillsides had been previously cleared or disked for fire lines. These disturbed areas are covered in nonnative annual grasses such as slender wild oats (*Avena barbata*), ripgut brome *(Bromus diandrus)*, soft brome *(Bromus hordeaceus)*, and cheatgrass *(Bromus tectorum)*.

There were no Waters of the U.S. or other wetland present on any of the four sites.

3.2.2 Critical and Special Status Habitats

No designated critical habitat was identified within five miles of the project site. Oak woodlands on Sites Three and Four contain mature stands of trees, but these areas are not part of a designated Significant Ecological Area (SEA). The nearest SEA is found on the west of Interstate 405 approximately three miles west of the project site. CNDDB lists Southern Coast Live Oak Riparian Forest as a sensitive habitat approximately two miles from the project site (CDFG 2008b).

California walnut woodland is found on Sites One and Two, containing stands of trees ranging from immature to mature. These areas are also not part of a designated SEA. CNDDB has an occurrence of walnut woodland sensitive habitat mapped approximately three miles from the project site (CDFG 2008b).

3.3 Special-status Species

A review of existing information identified 15 special-status plant species and 27 special-status animal species from the general project area. These taxa and their habitats are listed in Tables 1 and 2.

3.3.1 Special Status Plant Species

Background research identified a list of 15 special status vascular plant species previously known from the nine-quadrangle background search area. These taxa and their habitat requirements are described in Table 1. No special status plant species were located during the surveys.

Eight special status species identified in the nine quadrangle search are federally and/or state listed, or candidates for listing. Suitable habitat is present on the project site for three of these: Braunton's milk-vetch (*Astragalus brauntonii*), Nevin's barberry (*Berberis nevinii*), and San Fernando Valley spineflower (*Chorizanthe parryi* var. *fernandina*). The April surveys focused on potentially suitable habitat for these three plants.

Seven other special status species listed by CNPS were identified in the nine quadrangle search. Of these seven, four species occur in coastal sage scrub, chaparral, or other habitats that occur in the project area: Plummer’s mariposa-lily (*Calochortus plummerae*), Mesa horkelia (*Horkelia cuneata ssp. puberula*), Santa Monica dudleya (*Dudleya cymosa* ssp. *ovatifolia*), and Davidson’s bush-mallow (*Malacothamnus davidsonii*). However, these species have specialized micro-habitats (such as granitic soils, sedimentary conglomerates, rocky outcrops, or other specific requirements) that are not found on any of the sites, and therefore are not expected to occur. Surveys also focused on these plants, and none were found.

Three of the potential special status plant species require consistently mesic habitats such as wet meadows or marshes, Ventura marsh milk-vetch (*Astragalus pychnostachyus* var. *lanosissimus*), Parish's brittlescale (*Atriplex parishii*), and southern tarplant (*Centromadia parryi* ssp. *australis*), and are not expected to occur on the project site. Two other potential special status plant species, coastal dunes milk-vetch (*Astragalus tener* var. *titi*) and beach spectacle pod (*Dithyria maritima*), require coastal habitats such as coastal dunes or coastal bluff scrub. They are also not expected to be found on the project site.

The seven species with the potential to occur are described below.

Braunton's milk-vetch. Braunton's milk-vetch is a federally endangered species. This species is a perennial herb that typically flowers January through August. Braunton's milk-vetch is known to occur in Topanga Canyon and in the foothills near Sherman Oaks and Brentwood. Braunton's milk-vetch is usually found in recently burned areas, with gravelly clay soils overlaying granite or limestone. The four sites each contain a small amount of suitable habitat for this species. Braunton's milk-vetch was not located during focused surveys, although the lack of fire activity in many years may also affect its occurrence.

Nevin's barberry. Nevin's barberry is a federally and state endangered species. This species is an evergreen shrub that typically blooms March through June. CNDDB has the nearest location in the San Fernando Wash (Pacoima Wash) in Van Nuys; as well as other locations in Los Angeles, Riverside, and San Bernardino counties. Nevin's barberry is found on steep north-facing slopes in low grade sandy washes. There is a small amount of suitable habitat for Nevin's barberry on the project site, but focused surveys did not locate this species and it is unlikely to occur on the project site.

San Fernando spineflower. San Fernando Valley spineflower is a federal candidate for listing and a state endangered species. This species is an annual herb that typically blooms April through July. San Fernando Valley spineflower occurs in sandy coastal chaparral, and is only known to occur in a very few locations. CNDDB contained one historic record from Toluca (now Hollywood Hills). San Fernando Valley spineflower was not found during the survey effort.

Santa Monica dudleya. Santa Monica dudleya is on CNPS list 1B.2. Santa Monica dudleya is a perennial herb that typically blooms March through June. This species occurs on sedimentary conglomerates, primarily on north facing slopes, within chaparral and coastal sage scrub. This micro habitat is not present on any of the four sites, and this species is not expected to occur.

Plummer's mariposa-lily. Plummer's mariposa-lily is on CNPS list 1B.2. Plummer's mariposa-lily is a perennial bulbiferous herb that typically blooms May through July. This species is found in coastal sage scrub, chaparral, valley and foothill grassland, cismontane woodland, and lower montane coniferous forest on rocky and sandy sites, usually of granitic or alluvial material. This micro habitat is not present on any of the four sites. In addition, the density of the coastal scrub and chaparral on site are not conducive to Plummer's mariposa-lily. This species is not expected to occur.

Mesa horkelia. Mesa horkelia is on CNPS list 1B.1. Mesa horkelia is a perennial herb that typically blooms February through July and prefers sandy or gravelly sites within chaparral, cismontane woodland, and coastal scrub. These conditions are not found on any of the four sites, and this species is not expected to occur.

Davidson's bush-mallow. Davidson's bush-mallow is on CNPS list1B.2. Davidson's bush-mallow is a deciduous shrub that typically blooms June through January. Davidson's bush-mallow occurs in sandy washes within coastal scrub, chaparral, and riparian woodlands. This habitat does not occur within the project sites, and this species is not expected to occur.

3.3.2 Special Status Wildlife

A review of existing information identified 44 special status wildlife species which have the potential to occur in the project area, including 12 federal- and/or state-listed species and 32 CDFG Species of Concern. A summary of the natural history and potential for occurrence of these 44 taxa in the project area is described in Table 2.

The project site does not contain suitable habitat for the 12 federal- and/or state-listed species, which occur along water features such as marine shoreline, salt marshes, and sand dunes. In addition, the project site is located outside of the known range for 10 of these listed species. None of the listed species were observed during the surveys, and none are expected to occur.

Potentially suitable habitat was observed on the project site for 12 of the 32 Species of Concern. The project area is outside the known range of 17 Species of Concern, and no suitable nesting or foraging habitat was observed for three additional Species of Concern. Potentially suitable habitat was observed on the project site for 12 Species of Concern, primarily coastal sage scrub. One Species of Concern was observed during the surveys: the monarch butterfly (*Danaus plexippus*).

Based on suitable habitat observed on the project site, a brief discussion of the 12 species is included below.

Santa Monica shieldback katydid. The four project sites are surrounded by suitable habitat constituents for the katydid. A nocturnal species, this invertebrate was not observed during daylight surveys. No known occurrence has been recorded within five miles of the project site. This species may likely occur on or near the project site.

Monarch butterfly. Several monarch butterflies were observed amongst the milkweed plant (*Asclepias longifolia*) on Site One along a bladed fire line amongst ruderal vegetation (UTM: NAD83, Zone 11, 3777169N 365865E). Site Four had *A. longifolia* present, but no monarchs were observed, nor were they observed at Sites Two and Three. A known winter roost occurrence was recorded in 1991 within five miles of the project site.

California mountain kingsnake. No suitable habitat was observed within the four project sites. However, Site Four is adjacent to potentially suitable habitat along the Lower Stone Canyon Reservoir. The area between Sites Two, Three, and Four contains low quality habitat. No known occurrence has been recorded within five miles of the project area.

Coastal western whiptail. Suitable habitat constituents were found throughout all four sites, including sparse scrub and chaparral vegetation with appropriate soils. A known occurrence was near the project area, approximately 1,000 feet from Sites One and Two (BES 1992).

Coast horned lizard. Site One contains suitable habitat; chaparral and sage scrub with soft sandstone soil. Soils on Sites Two, Three, and Four were firm. A known historical occurrence was recorded in 1916 one mile east of the project area.

Burrowing owl. Little quality habitat is available for burrowing owls. Construction of fire breaks has only recently provided habitat for owls in small portions of non-native grassland by scarifying the land. Site Three has the largest area available for burrowing owls; however, no burrows or sign were observed in the area. None of the other sites contain suitable habitat. No known occurrence has been recorded within five miles of the project site.

Southern grasshopper mouse. Potential habitat for the southern grasshopper mouse (coastal sage scrub, mixed chaparral, and grasslands) is found throughout all four sites. Primarily a nocturnal species, this mammal was not observed during daylight surveys. Known to select microhabitats with gopher mounds and other rodent burrows (Stapp 1997), no rodents or rodent burrows were observed. No known grasshopper mouse occurrence has been recorded within five miles of the project site.

American badger. Little quality habitat is available for badgers. Construction of fire breaks has only recently provided habitat for badgers in small portions of non-native grassland by scarifying the land. Site Three has the largest area available for badgers; however, no burrows were observed in the area. None of the other sites contain suitable habitat. No known occurrence has been recorded within five miles of the project site.

Pallid bat, hoary bat, silver-haired bat, and western mastiff bat. Suitable habitat constituents are present in and near the four project sites for these four bat species. Habitat consists of access to trees, buildings, and nearby water sources. Site One has the least amount of trees and is farthest from a viable water source, while Site Four has the most amount of trees and occurs closest to a viable water source. Known occurrences within a five mile radius have been recorded for pallid bat in 1932, hoary bat in 1957, and silver-haired bat in 1985.

4.0 RESULTS AND RECOMMENDATIONS

The surveys identified four areas of potential constraints for the project: 1) special-status plant species; 2) special-status animal species; 3) nesting birds; and 4) protected trees. Each of these constraints is discussed below.

4.1 Special-status Plant Species

Although small amounts of suitable habitat are present on all four sites for three special status plant species, none were located during the surveys and they are unlikely to occur. All four sites do contain oak and walnut trees that will need to be taken into consideration. These trees are primarily found in the valleys between sites, although there are some occurrences on the hillsides. Proposed activities should avoid these trees to the greatest extent possible. The City of Los Angeles Tree Protection Ordinance, Article 6, Preservation of Protected Trees (Amendment number 177,404, Section 46) would require a permit for when removing or impacting any native oak or walnut, excluding Scrub oak *(Quercus dumosa)*.

Of the four sites, Site One is the most currently disturbed and would result in the least impacts to vegetation. This site also contains the fewest trees. Use of Site Four would result in the most disturbance to natural habitat. Removal of vegetation at any of the sites will likely result in increased weed populations, as has occurred in the areas recently disturbed by the construction of fire brakes.

4.2 Special-status Animal Species

No state or federally listed animal species are known to occur, or have the potential to occur, on the project site. Potentially suitable habitat was observed within the project area for twelve CDFG Species of Concern. One Species of Concern, the Monarch butterfly, was observed during the surveys on Site One.

Site Three has been previously disturbed by the creation of fire breaks, and contains the least amount of potential habitat for the twelve species described above. Habitat for badger and burrowing owl is of poor quality, and the likelihood of owl and badger presence is very low. No winter roosting habitat was observed for butterflies.

Although trees are largely absent from Site One compared to the other sites, an abundance of birds were utilizing the sage scrub and chaparral vegetation. Monarch butterflies were observed utilizing the foodplant *A. longifolia*. Site One also contains suitable habitat for coast horned lizard and coastal western whiptail. Species-specific surveys are recommended for coast horned lizard and coastal western whiptail due to nearby occurrences and presence of suitable habitat.

Disturbance to Site Two would likely result in fewer impacts to wildlife species than Sites One and Four. The south facing slope contains oak and walnut groves, habitat for nesting birds and bats. Site Two contains suitable habitat for coastal western whiptail, as well as signs of wildlife usage (scat was present from coyote and mule deer).

Use of Site Four would require the most amount of vegetation disturbance. The south facing slope contains oak and walnut groves, habitat for nesting birds and bats. The monarch butterfly foodplant, *A. longifolia*, was present at Site Four, although no monarchs were observed. A drainage on the south side of Site Four, located between Sites Three and Four, contains a moderately sized group of oak trees with a grassy understory. Wildlife signs (scat) were also observed in Site Four including coyote (*Canis latrans*) and mule deer (*Odocoileus hemionus*). In addition, Site Four may provide upland habitat for wildlife species utilizing Lower Stone Canyon Reservoir.

A biological monitor is recommended during ground-disturbing activities at the selected site to assure protection of sensitive ground burrowing species, nesting birds, and roosting bats. Ground-disturbing construction activity should be avoided during winter, when most special status species would be overwintering in trees or hibernating in burrows. A pre-construction survey for nesting birds and roosting bats is recommended.

4.3 Migratory Birds

No nesting birds or raptors were observed during surveys. The nests of migratory birds and raptors are protected species from disturbance while actively nesting under the Migratory Bird Treaty Act and California Fish and Game Code. Bird nesting season is typically April 15 to August 15, with a few exceptions. Habitat for nesting birds was observed in woody vegetation such as oak and walnut woodland. Marginal habitat for nesting raptors was observed. Non-native grasslands may also provide habitat for ground nesting birds. Pre-construction surveys for nesting birds and raptors are recommended where suitable nesting vegetation occurs within 50 feet of construction activity. Construction can occur in the vicinity of active nest sites if the nest site is protected by a buffer zone. Buffer zones vary according to species and circumstance.

4.4 Tree Trimming or Removal

The proposed project could require tree removal, trimming, or pruning of trees. The City of Los Angeles Tree Protection Ordinance, Article 6, Preservation of Protected Trees (Amendment number 177,404, Section 46) would require a permit for when removing or impacting any native oak or walnut, excluding Scrub oak, that is four inches or more in diameter four and one-half feet above mean natural grade. Activities such as cutting, destroying, removal, relocating, inflicting damage, or encroaching into the protected zone of any above stated trees must first obtain a permit. A permit is also required for construction work encroaching within five feet of the drip line or 15 feet from the trunk, whichever is greater. A pre-construction survey for nesting birds and roosting bats is recommended before tree trimming or removal.

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Table 1. Special Status Plants Potentially Occurring at Upper Stone Canyon Reservoir.

Common Name *Scientific Name*	**Federal/ State/ CNPS**	**Habitats and Elevation Range (Meters)**	**Blooming Time**	**Probability for occurrence onsite**
Braunton's milk-vetch *Astragalus brauntonii*	FE/1B.1	Closed-cone coniferous forest, Chaparral, Coastal Scrub, Valley and Foothill Grassland 4-640 m	Jan-Aug	Low to moderate. Small amount of suitable habitat onsite within the costal sage scrub.
Ventura Marsh milk-vetch *Astragalus pycnostachyus var. lanosissimus*	FE/SE/1B.!	Coastal Salt Marsh 1-35M	Jun-Oct	None. No suitable habitat within project area.
coastal dunes milk-vetch *Astragalus tener var. titi*	FE/SE/1B.1	Coastal bluff scrub, Coastal Dunes	March-May	None. No suitable habitat within project area.
Parish's brittlescale *Atriplex parishii*	1B.1	Alkali Meadows, Vernal Pools, Chenopod Scrub, Playas	Jun-Oct	None. No suitable habitat within project area.
Nevin's barberry *Berberis nevinii*	FE/SE/1B.1	Chaparral, Cismontane Woodland, Coastal Scrub, Riparian Scrub 290-1575M	March-Jun	Very low. No known occurrences on Beverly Hills quad. Suitable habitat onsite within the costal sage scrub. Not observed on site.
Plummer's mariposa-lily *Calochortus plummerae*	1B.2	Coastal Scrub, Valley and Foothill Grassland, Cismontane Woodland, Lower Montane Coniferous Forest 90-1610M Micro Habitat: Rocky and sandy sites, usually of granitic or alluvial material.	May-July	Very low. Small amount of suitable habitat onsite. Micro habitat was not present
southern tarplant *Centromadia parryi ssp. australis*	1B.1	Marches and Swamps (Margins), Valley and Foothill Grassland	May-Nov	None. No suitable habitat within project area

Common Name *Scientific Name*	**Federal/ State/ CNPS**	**Habitats and Elevation Range (Meters)**	**Blooming Time**	**Probability for occurrence onsite**
San Fernando Valley spineflower *Chorizanthe parryi var. fernandina*	FC/SE/1B.1	Coastal Scrub 3-1035M	April-July	Very low. Few known occurrences, small amount of suitable habitat onsite within costal sage scrub. Not observed on site.
salt marsh bird's-beak *Cordylanthus maritimus ssp. maritimus*	FE/SE/1B.2	Coastal Salt Marsh, Coastal Dunes 0-30M	May-Oct	None. No suitable habitat within project area
beach spectaclepod *Dithyrea maritima*	ST/1B.1	Coastal Dunes, Coastal Scrub 3-50M	March-May	None. No suitable habitat within project area
Santa Monica dudleya *Dudleya cymosa ssp. ovatifolia*	FT/1B.2	Chaparral, Coastal Scrub 210-500M Micro habitat: Canyons on sedimentary conglomerates; primarily north facing slopes.	May-Jun	Very low. No known occurrences in vicinity. Small amount of marginally suitable habitat onsite within coastal sage scrub. Micro habitat is not present
mud nama *Nama stenocarpum*	2.2	Marshes and Swamps 5-500M	Jan-July	None. No suitable habitat within project area
mesa horkelia *Horkelia cuneata ssp. puberula*	1B.1	Chaparral, Cismontane Woodland, Coastal Scrub 70-810M Micro Habitat: Sandy and gravelly sites.	Feb-Jul	Very low. Small amount of marginally suitable habitat onsite within costal sage scrub. Micro habitat not present
Davidson's bush-mallow *Malacothamnus davidsonii*	1B.2	Coastal Scrub, Riparian Woodland, Chaparral 480-855M Micro Habitat: Sandy washes.	Jun-Jan	Very low. No occurrences on Beverly Hills quad. Small amount of marginally suitable habitat onsite with in coastal sage scrub. No micro habitat present.

Common Name *Scientific Name*	**Federal/ State/ CNPS**	**Habitats and Elevation Range (Meters)**	**Blooming Time**	**Probability for occurrence onsite**
Salt Spring checkerbloom *Sidalcea neomexicana*	2.2	Alkali Playas, Brackish marsh, Chaparral, Coastal Scrub, Lower Montane Coniferous Forest, Mojavean Desert Scrub 0-1500M	March-Jun	Very low. Small amount of marginally suitable habitat onsite within the coastal sage scrub.

Federal and State

* Candidate for listing as either Threatened or Endangered under the federal Endangered Species Act

CNPS Lists

List 1B Plants rare, threatened, or endangered in California and elsewhere
List 2 Plants rare, threatened, or endangered in California, but more common elsewhere

CNPS Extension codes

.1 Seriously endangered in California
.2 Fairly endangered in California
.3 Not very endangered in California

Table 2. Special-status Animal Species Occurring in the Project Region

Common Name ***Scientific Name***	**Federal/ State Status**	**Habitat**	**Potential Presence in the Project Area**
Invertebrates			
El Segundo blue butterfly *Euphilotes battoides allyni*	FE/--	Restricted to coastal dunes with host plant Seacliff Buckwheat *(Eriogonum parviflorum).*	The project area is outside the known range of this species. No suitable habitat onsite.
Belkin's dune tabanid fly *Brennania belkini*	--/SC	Inhabits coastal sand dunes of southern California.	The project area is outside the known range of this species. No suitable habitat onsite.
Santa Monica shieldback katydid *Aglaothorax longipennis*	--/SC	Occur nocturnally in chaparral and canyon stream bottom vegetation in the Santa Monica mountains. Inhabits iceplant and native chaparral plants.	Suitable habitat was observed throughout the project site where chaparral plants were present. Likely to occur on or near project site.

Common Name ***Scientific Name***	**Federal/ State Status**	**Habitat**	**Potential Presence in the Project Area**
Busck's gallmoth *Carolella busckana*	--/SC	El Segundo dunes.	The project area is outside the known range of this species. No suitable habitat onsite.
sandy beach tiger beetle *Cincindela hirticollis gravida*	--/SC	Inhabits areas adjacent to non-brackish water along the coast of California. Uses clean, dry, light-colored sand in the upper zone. Larvae prefer moist sand not affect by wave action.	The project area is outside the known range of this species. No suitable habitat onsite.
tiger beetle *Cicindela senilis frosti*	--/SC	Inhabits marine shoreline, salt marshes, and also found at Lake Elsinore. Inhabits dark-colored mud in the lower zone and dried salt pans in the upper zone.	No suitable habitat was observed in the project area.
Globose dune beetle *Coleus globosus*	--/SC	Inhabits coastal sand dunes. Most common beneath dune vegetation.	The project area is outside the known range of this species. No suitable habitat onsite.
monarch butterfly *Danaus plexippus*	--/SC	Winter roost sites extend along the coast from northern Mendocino to Baja California in Mexico. Roosts located in wind-protected tree groves (e.g., Eucalyptus, Monterey pine, or cypress) with nearby water and nectar sources.	Present at Site 1; utilizing *Asclepias longifolia* along bladed fire line amongst ruderal vegetation. Suitable habitat was observed on Sites 1 and 4.
Henne's eucosman moth *Eucosma hennei*	--/SC	Endemic to the El Segundo Dunes. Larval food plant is *Phacelia ramosissima* var *austrolitoralis*.	The project area is outside the known range of this species. No suitable habitat onsite.
Lange's El Segundo weevil *Onychobaris langei*	--/SC	Known from El Segundo dunes.	The project area is outside the known range of this species. No suitable habitat onsite.
Wandering saltmarsh skipper *Panoquina errans*	--/SC	Inhabits southern coastal salt marshes. Requires moist saltgrass for larval development.	The project area is outside the known range of this species. No suitable habitat onsite.

Common Name ***Scientific Name***	**Federal/ State Status**	**Habitat**	**Potential Presence in the Project Area**
Gertsch's socalchemmis spider *Socalchemmis gertschi*	--/SC	Known from only two localities in Los Angeles County: Brentwood and Topanga Canyon.	The project area is outside the known range of this species. No suitable habitat onsite. Note: nearest occurrence is 4 miles south from the project site.
Dorothy's El Segundo weevil *Trigonoscuta dorothea dorothea*	--/SC	Inhabits coastal sand dunes in Los Angeles County.	The project area is outside the known range of this species. No suitable habitat onsite.
California brackishwater snail *Tryonia imitator*	--/SC	Inhabits coastal lagoons, estuaries and salt marshes. Found only in permanently submerged areas in a variety of sediment types.	The project area is outside the known range of this species. No suitable habitat onsite.
Fishes			
Southern steelhead *Oncorhynchus mykiss irideus*	FE/SC	Santa Maria river south to southern San Mateo Creek in San Diego County	The project area is outside the known range of this species. No suitable habitat onsite.
Amphibians			
arroyo toad *Bufo californicus*	FE/SC	Rivers with sandy banks, semi-arid regions near washes or intermittent streams.	The project area is outside the known range of this species. No suitable habitat onsite.
Reptiles			
California mountain kingsnake (San Diego population) *Lampropeltis zonata pulchra*	--/SC	Diverse habitats including riparian woodlands associated with chaparral and sage scrub.	Low probability; suitable habitat was observed between project sites.
Southwestern pond turtle *Actinemys marmorata pallida*	--/SC	Associated with permanent or nearly permanent water with abundant vegetation and basking sites in a wide variety of habitats.	No suitable habitat was observed in the project area.
Coastal western whiptail *Aspidoscelis tigris stejnegeri*	--/SC	Found in deserts and semi-arid areas with sparse vegetation and open areas. Also found in woodland and riparian areas. Ground may be firm soil, sandy, or rocky.	Suitable habitat was observed in the project area. Known occurrence within project area.

Common Name ***Scientific Name***	**Federal/ State Status**	**Habitat**	**Potential Presence in the Project Area**
Coast (San Diego) horned lizard *Phrynosoma coronatum blainvillii*	--/SC	Diverse habitat types including chaparral and sage scrub. Seems to prefer soils of fine alluvial sands near the ocean, prefers friable, rocky, or shallow sandy soils.	Suitable habitat was observed on Site 1.
Birds			
western snowy plover *Charadrius alexandrinus nivosus*	FT/SC	Nests on sandy beaches, salt pond levees and shores of large alkali lakes.	No suitable habitat was observed in the project area.
California least tern *Sternula antillarum browni*	FE/SE	Nests on bare or sparsely vegetated, flat substrates: sand beaches, alkali flats, land fills, or paved areas.	The project area is outside the known range of this species. No suitable habitat onsite.
California black rail *Laterallus jamaicensis coturniculus*	--/ST	Inhabits freshwater marshes, wet meadows and shallow margins of saltwater marshes bordering larger bays.	The project area is outside the known range of this species. No suitable habitat onsite.
California brown pelican *Pelecanus occidentalis californicus*	FE/SE	Colonial nester on coastal islands just outside the surf line. Nests on coastal islands of small to moderate size which afford immunity from attack by ground-dwelling predators.	No suitable habitat was observed in the project area.
burrowing owl *Athene cunicularia*	--/SC	Occurs in open, dry annual or perennial grasslands and scrublands characterized by low-growing vegetation; often associated with ground squirrels.	Low probability; marginal habitat available on Site 3.
least Bell's vireo *Vireo bellii pusillus*	FE/SE	Summer resident of southern California in low riparian in vicinity of water or in dry river bottoms; below 2,000 feet. Nests placed along margins of bushes or on twigs projecting into pathways, usually willow, baccharis, and mesquite.	The project area is outside the known range of this species. No suitable habitat onsite. Note: nearest occurrence is 4 miles northwest from project site.
southwestern willow flycatcher *Empidonax traillii extimus*	FE/SE	Breeds in riparian habitat dominated by dense willows, cottonwoods, or alders.	The project area is outside the known range of this species. No suitable habitat onsite.

Common Name ***Scientific Name***	**Federal/ State Status**	**Habitat**	**Potential Presence in the Project Area**
Belding's savannah sparrow *Passerculus sandwichensis beldingi*	--/SE	Nests in coastal salt marshes.	The project area is outside the known range of this species. No suitable habitat onsite.
tricolored blackbird *Agelaius tricolor*	--/SC	Highly colonial species that nests in freshwater emergent vegetation, blackberry thickets, and thistles; usually near water.	No suitable habitat was observed in the project area.
California coastal gnatcatcher *Polioptila californica californica*	FT/SC	Permanent resident of coastal sage scrub below 2,500 feet in southern California.	The project area is outside the known range of this species.
Mammals			
Southern grasshopper mouse *Onychomys torridus ramona*	--/SC	Grasslands and low to moderate sparse coastal sage scrub or mixed chaparral.	Suitable habitat was observed on all four Sites.
Los Angeles pocket mouse *Perognathus longimembris brevinasus*	--/SC	Inhabits dry areas with loose soils, including coastal sage.	The project area is outside the known range of this species. Note: nearest occurrence is 4 miles northeast from the project site.
San Diego desert woodrat *Neotoma lepida intermedia*	--/SC	Inhabits coastal scrub of southern California. Moderate to dense canopies preferred. They are particularly abundant in rock outcrops and rocky cliffs and slopes.	The project area is outside the known range of this species. No suitable habitat onsite.
American badger *Taxidea taxus*	--/SC	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats with friable soils and burrowing rodent prey.	Low probability; marginal habitat available on Site 3.
Pacific pocket mouse *Perognathus longimembris pacificus*	FE/SC	Restricted to coastal sites with fine alluvial sands.	The project area is outside the known range of this species. No suitable habitat onsite.
southern California saltmarsh shrew *Sorex ornatus salicornicus*	--/SC	Inhabits coastal salt marshes. Requires dense vegetation and woody debris for cover.	The project area is outside the known range of this species. No suitable habitat onsite.

Common Name ***Scientific Name***	**Federal/ State Status**	**Habitat**	**Potential Presence in the Project Area**
south coast marsh vole *Microtus californicus stephensi*	--/SC	Restricted to tidal marshes in Los Angeles, Orange, and southern Ventura Counties.	The project area is outside the known range of this species. No suitable habitat onsite.
big free-tailed bat *Nyctinomops macrotis*	--/SC	Roosts mainly in cliff rocks and crevices, also caves, hollow trees, buildings.	The project area is outside the known range of this species. No suitable habitat onsite.
pocketed free-tailed bat *Nyctinomops femorosaccus*	--/SC	Roosts in cliff crevices or rock outcrops in a variety of arid areas in southern California; pine-juniper woodlands, desert scrub, plam oasis, desert wash, desert riparian.	The project area is outside the known range of this species. No suitable habitat onsite.
pallid bat *Antrozous pallidus*	--/SC	Most abundant in oak woodland, savannah, and riparian habitats. Roosts in crevices and hollows in trees, rocks, cliffs, bridges, and buildings.	Suitable habitat was observed on all four Sites.
hoary bat *Lasiurus cinereus*	--/SC	Prefers open habitats or habitat mosaics, with access to trees for cover, and open areas or habitat edges for feeding. Roosts in dense foliage of medium to large trees. Feeds primarily on moths. Requires water.	Suitable habitat was observed on all four Sites.
silver-haired bat *Lasionycteris noctivagans*	--/SC	Primarily a coastal and montane dweller feeding over streams, ponds, and open brushy areas. Roosts in hollow trees beneath exfoliating bark, abandoned woodpecker holes, and rarely under rocks.	Suitable habitat was observed on all four Sites.
western yellow bat *Lasiurus xanthinus*	--/SC	Found in valley foothill riparian, desert riparian, desert riparian, desert wash, and palm oasis habitats. Roosts in trees, particularly palms. Forages over water and among trees.	The project area is outside the known range of this species. No suitable habitat onsite.
western mastiff bat *Eumops perotis californicus*	--/SC	Roosts on cliffs, large boulders or buildings.	Suitable habitat was observed between the project Sites, but not within any Site itself.

Federal

FE = listed as endangered under the federal Endangered Species Act
FT = listed as threatened under the federal Endangered Species Act

State

SE = listed as endangered under the California Endangered Species Act
ST = listed as threatened under the California Endangered Species Act
SC = California Species of Special Concern

Figure 1. Project Location.

GANDA

Project Location

Kilometers 0 2.5 5

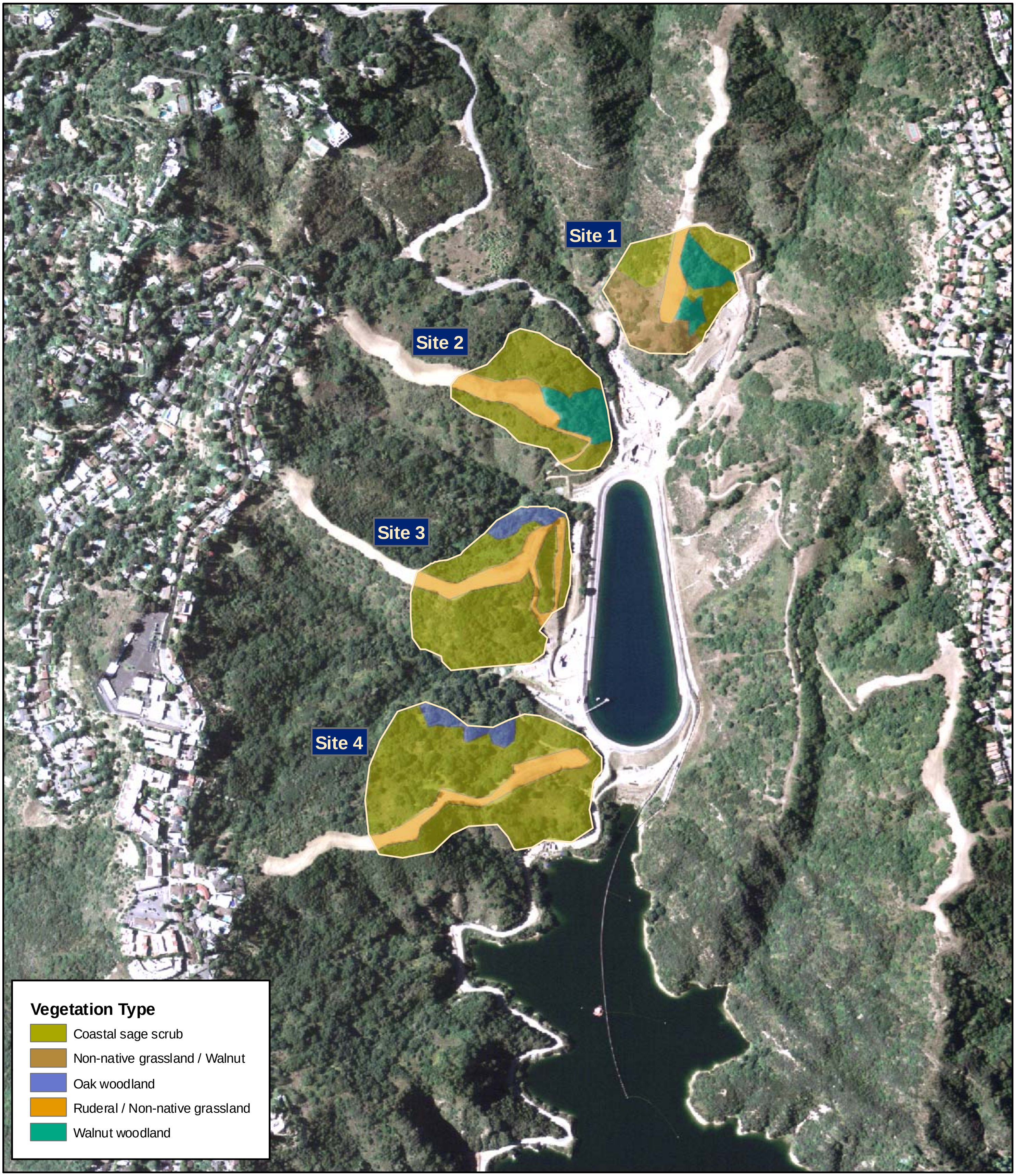
Miles 0 2.5 5

N

Figure 1 Project Location
Upper Stone Canyon Reservoir

Los Angeles County, CA
August 2008

Figure 2. Vegetation Mapping for the Project Site.



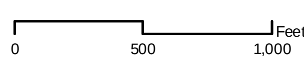


Figure 2 Vegetation Mapping
Upper Stone Canyon Reservoir

Los Angeles County, CA
August 2008

Figure 3. CNDDB Occurrences within Five Miles of the Stone Canyon Project Site.

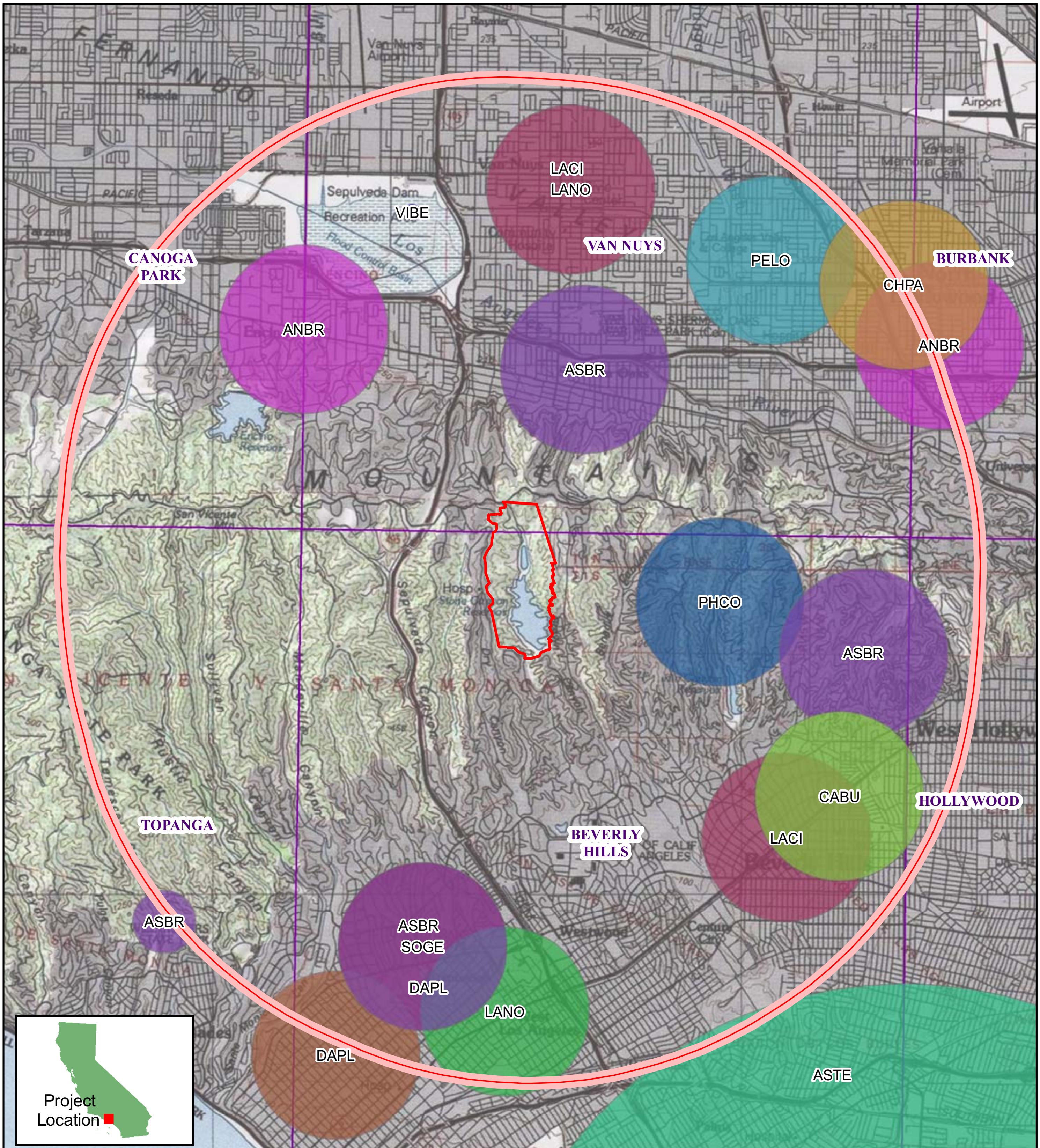


Figure 3 Project Location and CNDDB Occurrences Within Five Miles of the Stone Canyon Site

Los Angeles County, CA
August 2008

1:100,000

0 1 2 Miles

0 1 2 Kilometers

N

GANDA

Stone Canyon Site Boundary

5 Mile Site Buffer

Quads

CNDDB Federal and State Listed

Wildlife

Gertsch's socalchemmis spider (SOGE)

Los Angeles pocket mouse (PELO)

Coast (San Diego) horned lizard (PHCO)

Hoary bat (LACI)

Least Bell's vireo (VIBE)

Monarch butterfly (DAPL)

Pallid bat (ANBR)

Silver-haired bat (LANO)

Plants

Braunton's milk-vetch (ASBR)

Busck's gallmoth (CABU)

San Fernando Valley spineflower (CHPA)

Coastal dunes milk-vetch (ASTE)

APPENDIX F

CULTURAL RESOURCES TECHNICAL REPORT

PHASE I CULTURAL RESOURCES ASSESSMENT FOR THE UPPER STONE CANYON RESERVOIR WATER QUALITY IMPROVEMENT PROJECT CITY OF LOS ANGELES, CALIFORNIA

Prepared for:
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With Contributions by:
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October 2010

Acres: Approximately 55 U.S.G.S. Quadrangles: Beverly Hills

Keywords: Upper Stone Canyon Reservoir, Stone Canyon Reservoir Complex, Santa Monica Mountains, Water Conveyance

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LIST OF ACRONYMS AND ABBREVIATIONS

ARMR	Archaeological Resource Management Reports
B.P.	before present
CEQA	California Environmental Quality Act
CRHR	California Register of Historical Resources
CY	cubic yards
DPR	Department of Parks and Recreation
DWP	Department of Water and Power
AECOM	AECOM
EPA	United States Environmental Protection Agency
I-405	Interstate 405
LAAFP	Los Angeles Aqueduct Filtration Plant
LADWP	City of Los Angeles Department of Water and Power
LAPL	Los Angeles Public Library
LAT	Los Angeles Times
MG	million gallons
msl	mean sea level
PRC	Public Resources Code
Project	Upper Stone Canyon Reservoir Water Quality Improvement Project
SCRC	Stone Canyon Reservoir Complex
SLF	sacred lands file

EXECUTIVE SUMMARY

The City of Los Angeles Department of Water and Power (LADWP) proposes to replace the uncovered Upper Stone Canyon Reservoir a new buried concrete-covered reservoir, which would be sited essentially within the confines of the existing reservoir footprint. The Project is being proposed by LADWP in order to ensure compliance with updated United States Environmental Protection Agency water quality standards. This report documents a Phase I cultural resources assessment to identify potential impacts to cultural resources in compliance with provisions of the California Environmental Quality Act.

A records search in connection with this Project was conducted at the South Central Coastal Information Center (SCCIC) housed at California State University, Fullerton. The records search revealed that approximately 60 percent of the proposed Project area had been subject to previous cultural resources study and had not resulted in the identification of any cultural resources. Additionally, a Sacred Lands File search conducted for this Project by the Native American Heritage Commission (NAHC) did not result in the identification of any documented sacred lands in the vicinity of the Project.

Field surveys were conducted as part of this assessment to identify the presence of any cultural resources in the proposed Project area. The field survey included both archaeological resources and historic architectural resources components. No surface evidence of archaeological resources was encountered during the survey. A single historic-era resource, designated Upper Stone Canyon Reservoir, was identified. Upper Stone Canyon Reservoir was evaluated for its eligibility to the California Register of Historical Resources (CRHR) and was found not to be eligible under any of the CRHR criteria. The resource was documented on Department of Parks and Recreation (DPR) 523 forms to be placed on file with the SCCIC. No additional assessment or treatment of this resource is recommended.

Based on the results of this cultural resources assessment, the following recommendations are made to reduce impacts to unanticipated archaeological resources. It is possible that subsurface prehistoric and/or historic archaeological resources may be present in the Project area. In the event archaeological materials including but not limited to stone tools, shell, bone, glass shards, ceramics, or any other materials older than 50 years in age are encountered during ground-disturbing activities, work in the immediate vicinity of the resource shall cease until a qualified archaeologist has assessed the discovery and appropriate treatment pursuant to California Code of Regulations (CCR) Section 15064.5 is determined. In the event human remains are encountered, the Los Angeles County Coroner shall be contacted. If the remains are deemed Native American in origin, the NAHC will be contacted to request consultation with an NAHC-appointed MLD pursuant to Public Resources Code Section 5097.98 and CCR Section 15064.5. It is further recommended that a qualified archaeological consultant conduct a worker training program to provide information on the types of resources that might be encountered during ground-disturbing activities and that the archaeological consultant be retained prior to the start of construction to respond to the site on an as-needed basis when discoveries are made.

INTRODUCTION

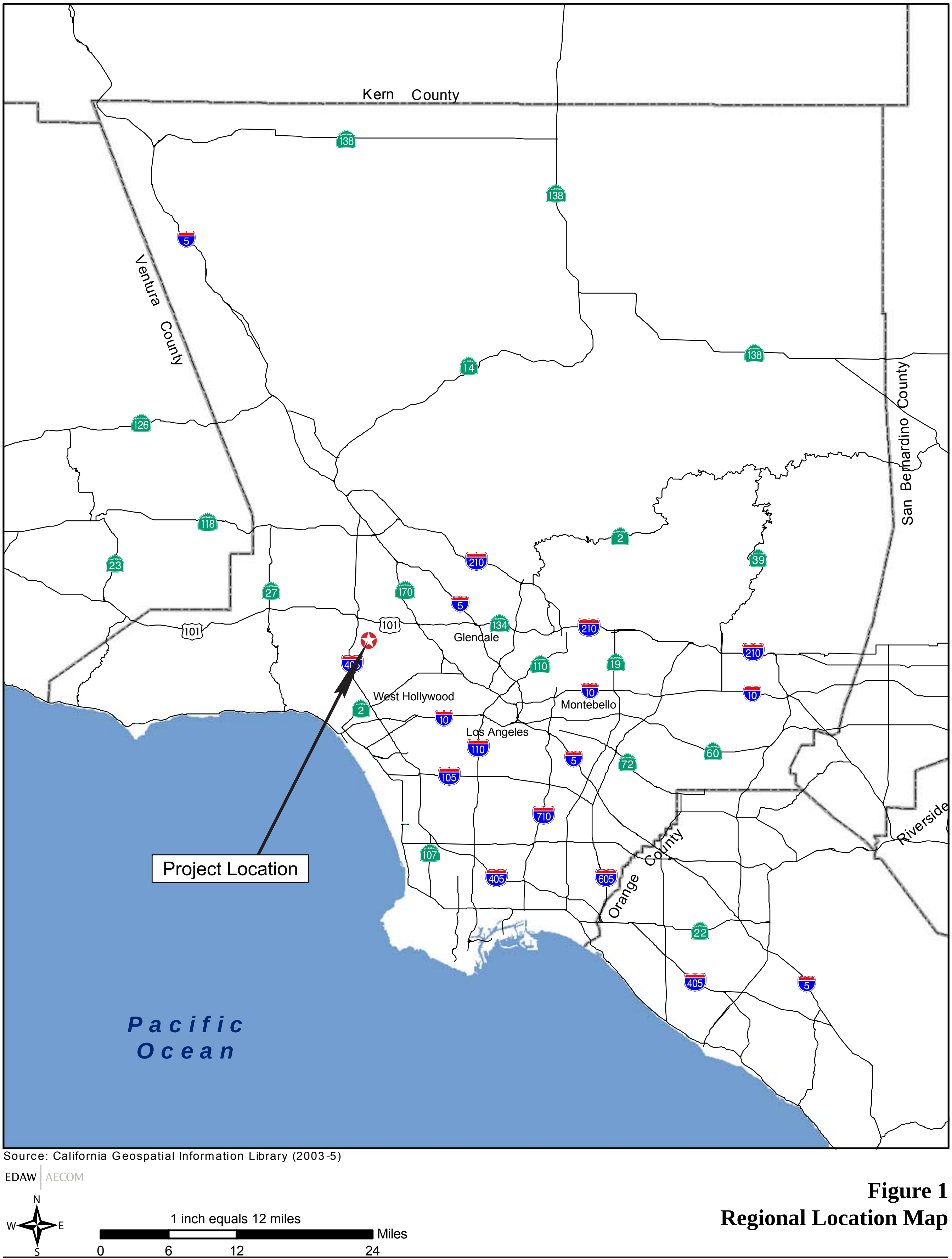
This document reports a Phase I cultural resources assessment conducted in connection with the Upper Stone Canyon Reservoir Water Quality Improvement Project (Project). The City of Los Angeles Department of Water and Power (LADWP) proposes to replace the uncovered Upper Stone Canyon Reservoir with a new buried concrete-covered reservoir, which would be sited essentially within the confines of the existing reservoir footprint. The Project is located within the community of Bel Air in the City of Los Angeles, approximately 1.5 miles east of the San Diego Freeway (Interstate [I] 405) (Figure 1). The Project is being proposed by LADWP in order to ensure compliance with updated United States Environmental Protection Agency (EPA) water quality standards. This Phase I cultural resources assessment is prepared in support of compliance with the California Environmental Quality Act (CEQA).

PROJECT PERSONNEL

AECOM personnel involved in the cultural resources assessment are as follows: Sara Dietler, B.A., report author and project manager; Angel Tomes, M.A., architectural historian and report author; Frank Humphries, B.A., archaeological surveyor; and Tim Harris, B.A., archaeological surveyor, graphics and GIS specialist. Resumes of key personnel are included in Appendix A.

REPORT ORGANIZATION

This report is organized following the *Archaeological Resource Management Reports (ARMR): Recommended Contents and Format* guidelines, Department of Parks and Recreation, Office of Historic Preservation, State of California, 1990. These guidelines provide a standardized format and suggested report content, scaled to the size of the Project. First, a Project description including Project location and setting, proposed Project work, and construction phasing is provided. Next, the environmental and cultural settings are presented along with a detailed historical context of the Project area. A description of the archival and field survey research methods and results follows. The final section summarizes the results of the cultural resources assessment and provides recommendations for resource eligibility and further work.



Source: California Geospatial Information Library (2003-5)

EDAW AECOM

Figure 1
Regional Location Map

PROJECT DESCRIPTION

PROJECT LOCATION AND SETTING

Upper Stone Canyon Reservoir is located in the northern portion of the 756-acre Stone Canyon Reservoir Complex (SCRC). The SCRC is situated between approximately 900 and 1,000 feet above mean sea level (msl) in Stone Canyon, a deep north-south-trending canyon in the Santa Monica Mountain Range. The reservoir is located in the community of Bel Air in the City of Los Angeles, California, approximately 1.5-mile east of I-405, approximately 0.5-mile south of Mulholland Drive, and between Roscomare Road in the west and Beverly Glen Boulevard in the east (Figure 2). Upper Stone Canyon Reservoir is owned and maintained by LADWP. The Project area for the purposes of this cultural resources assessment includes the 14-acre Upper Stone Canyon Reservoir footprint, the road circumscribing the reservoir, and approximately 40 acres of undeveloped surrounding hillside to the north, east, and south of the reservoir (Figure 3).

Treated drinking water is supplied to Upper Stone Canyon Reservoir by pipelines originating at the Los Angeles Aqueduct Filtration Plant (LAAFP) located in Granada Hills in the northern San Fernando Valley. Upper Stone Canyon Reservoir provides water to approximately 450,000 people in a service area that includes Beverly Glen, West Los Angeles, Pacific Palisades, Marina Del Rey, and the Los Angeles International Airport vicinity.

PROPOSED PROJECT WORK

To accomplish the objectives of the proposed Project, a new buried concrete-covered reservoir (buried reservoir) would be constructed in place of the existing uncovered Upper Stone Canyon Reservoir. The new buried reservoir would consist of a reinforced concrete liner, concrete perimeter retaining walls, an extensive system of interior concrete shear walls and columns, and a concrete roof. The new buried reservoir would be constructed in essentially the same location as the existing reservoir, although with a slightly reduced footprint. This would necessitate the demolition of the existing reservoir bottom, sides, inlet structure, and outlet tower. A maximum depth of 3 feet of topsoil would be placed over the buried reservoir, and shallow-rooting plant species typical of the canyon environment and surrounding area would be installed. After completion of project construction, public access for passive recreation activities would be provided to the Stone Canyon Reservoir Complex (SCRC) property. The recreation functions would be operated and maintained by the Los Angeles Department of Recreation and Parks (LADRP) and/or the Santa Monica Mountains Conservancy. Ownership and general maintenance of the SCRC would remain under LADWP.

The buried reservoir analyzed as the proposed project in this EIR differs in several respects from the proposed project that was contained in the June 20, 2008, Notice of Preparation (NOP) and the associated Initial Study for the Upper Stone Canyon Reservoir Water Quality Improvement Project. In the NOP and during the EIR scoping meeting (July 2008) and a subsequent meeting (December 2008) held in the Stone Canyon community to provide project information and elicit public comment regarding potential environmental impacts and other project concerns, the proposed project was described as a series of three separate underground cylindrical concrete tanks that would be constructed within the basic footprint of the existing reservoir. While the underground tanks option would achieve the objectives of the proposed project, it was preliminarily determined that it may also result in several potentially significant environmental impacts related to air quality, traffic, noise, and biological and visual resources, largely associated with extensive earthwork operations required to construct and fully bury the concrete tanks. It was preliminarily estimated that these operations would entail the movement of over 2 million cubic yards (CY) of earth material on site and would involve the disturbance of relatively large areas in Stone Canyon (up to 40 acres) that lie outside the general footprint of the existing reservoir and that would be used as material borrow and stockpile sites. Consistent with the intent of CEQA to utilize the public disclosure and participation process as an influence on project definition and to prevent or reduce, where possible, environmental damage associated with project implementation, LADWP, in response to community input and based on detailed investigations related to feasibility (including the reservoir dam integrity and safety), has developed the current buried reservoir concept as the proposed means to provide a water storage facility at Upper Stone Canyon. The buried reservoir would meet the primary and secondary objectives of the proposed project and would significantly lessen, although not necessarily eliminate, the potential environmental impacts associated with the previously proposed underground concrete tanks option, primarily by reducing the quantity of earthwork required and by confining most, but not all, construction activities to the reservoir itself and immediately adjacent areas.

As discussed above, to accomplish the objectives of the proposed project, the open-surface Upper Stone Reservoir would be replaced with a new buried concrete-covered reservoir. Figure 3 indicates the general limits of construction activity related to the project. Other than manholes, hatches providing access to the interior of the buried reservoir, aboveground vent structures, and aboveground electrical cabinets, water storage and transmission facilities would be essentially concealed underground after completion of construction. However, a paved road would still be required around the perimeter of the buried reservoir to provide vehicular access for maintenance and operations.

The proposed concrete reservoir would be covered with a maximum of 3 feet of topsoil and planted with native species typical of the canyon environment and surrounding area. This would help fulfill the secondary objective of the project to restore the natural character of those portions of the canyon involved in the improvements required to meet the primary water quality and water storage objectives of the project.

To provide for recreation use at the SCRC, pedestrian trails would be designated in the lower elevations of the canyon. This may include some new pedestrian pathways above the buried reservoir itself, but it would primarily make use of existing or proposed maintenance access roads within the SCRC, limiting access to the area surrounding and including the proposed project site and along the west side of Lower Stone Reservoir. To support recreation uses, a building containing restrooms, offices, informational displays, and maintenance storage would also be constructed north of the Upper Stone Reservoir site. Public access to the SCRC would be provided from the existing Mulholland gate at the north end of the property. Parking would be provided for approximately 80 vehicles, which would include 50 spaces in a consolidated lot and 30 overflow spaces distributed in smaller satellite parking areas. All parking would be located north of Upper Stone Reservoir. This number of parking spaces is based on input provided by the Santa Monica Mountains Conservancy based on empirical data from the nearby Franklin Canyon Park, which is similar in size to the SCRC property and provides 110 parking spaces to support up to 250 daily visitors on weekends; however, a certain portion of these visitors, and the parking required to support them, are related to visits to a formal nature center facility, which would not be provided at Stone Canyon.

CONSTRUCTION PHASES

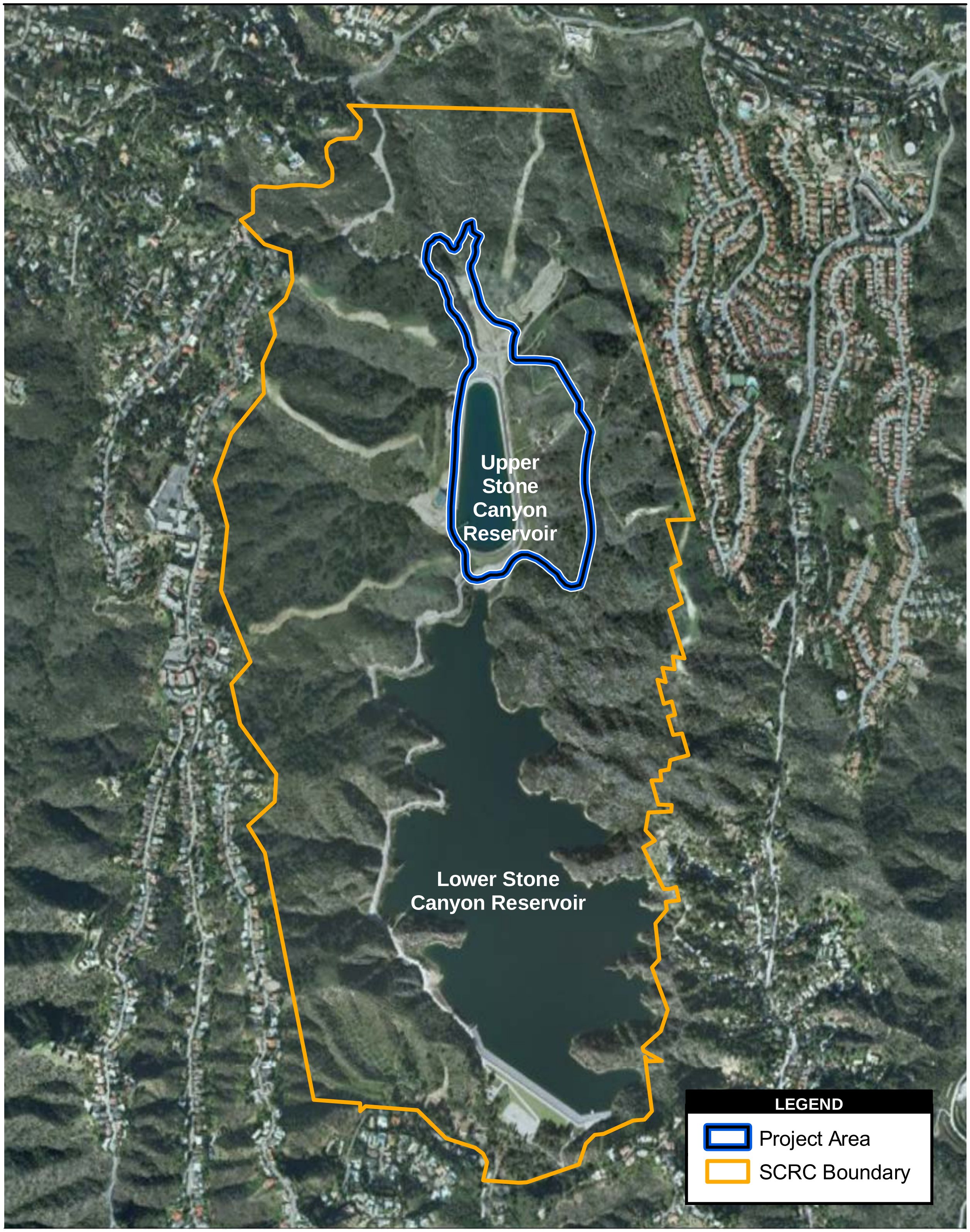
Construction of the proposed project, as described below, would take approximately 4.5 years to complete, and the analysis contained in the Draft EIR related to potential environmental impacts caused by construction activity is based on this assumption. However, given the magnitude and the complex nature of project construction, and therefore the potential for unforeseen delays, the actual construction period may continue for up to 5.5 years. It is anticipated that construction activities would start in late 2015 and, assuming no major delays, would be completed in mid 2020. For the purposes of estimating the calendar duration of the project and the monthly levels of activity related to personnel, truck deliveries, equipment operations, and earthwork, it has been assumed that, on average, 20 workdays would be available each month. This would generally account for holidays and rain days that would fall on weekdays and during which no construction activity would occur. Other than the delivery of materials and supplies to the site and the hauling of debris and excess soil from the site, all construction activities, including supplies laydown, soil excavation and stockpiling, equipment storage, and worker parking, would be confined within the SCRC boundaries (see Figure 3).

Construction of the buried reservoir would consist of several tasks, including mobilization, demolition, landslide stabilization, excavation and reshaping of the reservoir sides and bottom, construction of the reservoir perimeter retaining walls and interior shear walls, installation of the concrete reservoir liner, construction of the roof columns and concrete roof, backfilling around and above the reservoir, and landscaping above the new structure. Each of these tasks would require truck deliveries and/or haul trips and the operation of heavy equipment, including cranes, excavators, loaders, graders, dozers, and various types of trucks. Although the construction for the buried reservoir is continuous, for descriptive purposes, tasks can be grouped together in phases based on the general timing of their occurrence and similarities in the type of work conducted. While the tasks and phases are

Source: USGS Topographic Quadrangle Beverley Hillls, CA 1981, Van Nuys, CA 1972

Figure 2
Project Location Map

Path: H:\GIS\Layout\Figureworking.mxd, 09/15/10, SorensenJ



Source: Aerial Exchange 2009; ESRI 2010

0.25 0.125 0 0.25 Miles

Scale: 1 = 15,840; 1 inch = 0.25 mile(s)

Figure 3
Map of Project Area

Path: H:\GIS\Layout\Figure3_Area.mxd, 09/15/10, SorensenJ generally sequential in that some must precede others at a given location, a certain amount of overlap would likely occur in different locations within the project site as construction proceeds.

Phase 1: Reservoir Draining, Mobilization, Reservoir Demolition, and Landslide Stabilization, (4 months)

The first phase of construction would consist of draining Upper Stone Reservoir, mobilizing for construction, demolishing the existing reservoir and appurtenant facilities, and initiating the stabilization of potential landslide areas east of the reservoir. This phase would require approximately 4 months to complete.

Prior to initiating construction, Upper Stone Reservoir would need to be drained. This would initially be accomplished by normal consumption through the drinking water distribution system until the water level reached the lower limit of the normal operating range of the reservoir. Below this elevation, the water would be gravity drained to Lower Stone Reservoir. To maintain the stability of the earth dam located at the southern end of the reservoir, the rate at which the water level would be lowered would be carefully controlled. At the controlled rate, the existing storm water facilities are adequately sized to accommodate the reservoir draining. After the water reaches the lower limit of the normal operating range, it would take approximately 3 weeks to drain the remaining water from the reservoir and an additional 2 to 3 weeks for the reservoir to dry out. This task would involve minor numbers of equipment and personnel.

Mobilization would entail widening and stabilizing existing on-site roads as necessary for truck access during construction, preparing construction materials laydown areas and vehicle and equipment parking areas, erecting temporary offices and other support facilities, and establishing temporary electrical power connections. The laydown, office, and parking area would be located in previously disturbed areas north of the reservoir, where similar functions were located during the Lower Stone Reservoir project construction. This task would take approximately 1 month and would occur concurrently with draining the reservoir.

Demolition of the existing reservoir would include the removal of the reservoir's existing asphalt lining; the inlet line; the outlet tower and line; and the surrounding curb and fence. Demolition would generate about 9,000 cubic yards (CY) of debris, which would be hauled off site, requiring about 1,800 truck trips. The demolition task would take approximately 3 months to complete.

The preferred method to reduce the landslide risk in the potentially unstable area east of the reservoir is to excavate and grade the slopes to establish stability. However, the surface area of the grading necessary to achieve stability often extends considerably beyond the boundaries of the slide zone itself. The limits of this grading can be reasonably determined for only one of the three identified slide zones. In this case, approximately 3.5 acres would be graded, resulting in the excavation of approximately 46,500 CY of earth, which would include approximately 2,300 CY of topsoil (± 6 inches in depth) that would be removed from the site, stockpiled, and returned after excavation activities are complete to provide an appropriate medium for replanting the area. The balance of the excavated material (44,200 CY) would be hauled off site and recycled or disposed with the demolition debris. This would require about 6,400 truck trips over a 5-month period.

Since the extent of grading required to achieve stability at the two remaining slide zones cannot be adequately determined at this time, soil nails would instead be employed to avoid excavation that may need to extend well above the uphill boundary of the slide zones, creating a considerably larger area of disturbance. Soil nails are steel rods that, when driven into the ground, reinforce and strengthen the slope, reducing the potential of collapse. Nails ranging in length from 15 to 75 feet would be driven into the slope at a spacing of approximately 5 feet on center. The nails would be grouted in place and would include a small steel plate at the surface to provide additional support. Approximately 20 rows of nails would be required across the combined 17 acres of the two slide zones. In order to install the nails, several temporary parallel roads across the slope would be necessary to provide access for heavy equipment. The area around each nail would also need to be cleared of vegetation. Excavation and grading in limited areas may also be necessary within these two slide zones to provide stability. Approximately 2,400 CY of topsoil would be temporarily removed from the site and stockpiled, to be returned after stabilization activities are complete to provide an appropriate medium for replanting in disturbed areas. The landslide stabilization task would take a total of approximately 5 months to complete, the first 3 months of which would take place concurrently with the reservoir demolition task during Phase 1.

Phase 2: Landslide Stabilization, Reservoir Rough Shaping, Retaining Wall Excavation, and Sub-Grade Excavation and Preparation (12 months)

The second phase of reservoir construction would involve completing the landslide stabilization task and excavating and preparing the sub-grade below the reservoir to adequately support the load of the concrete roof system and the soil cover. A new inlet line to the reservoir and outlet line from the reservoir would also be constructed during this phase. The entire phase would require approximately 12 months to complete. The landslide stabilization task would continue for the initial 2 months of Phase 2 until complete. It would involve the same type of activity as described for the task under Phase 1.

In order for the sub-drain system installed beneath the reservoir to function properly, the bottom of the reservoir could not exceed a slope of one vertical unit to every five horizontal units (5h:1v). This would require reshaping the outer portions of the existing reservoir bottom, which currently slope at approximately 2.5h:1v (twice the maximum slope required for the sub-drain system to function properly). The reshaping of the reservoir bottom would create approximately 118,500 CY of excavated material. Approximately 32,500 CY of material would also be excavated to allow space for the construction of the reservoir perimeter retaining walls during Phase 3 of construction. This excavated material would be stockpiled on site until during later phases of reservoir construction. The temporary stockpile area would be an approximately 3-acre site located north of the reservoir site. This stockpile area would need to be cleared and properly engineered to stabilize slopes and provide for appropriate drainage. The stockpile would be protected throughout project construction by stabilizing exposed areas and providing barriers to minimize runoff, erosion, and sedimentation.

Portions of Upper Stone Reservoir rest directly on bedrock material capable of supporting the proposed buried reservoir, while other portions rest on soil layers above bedrock, which are incapable of adequately supporting the proposed reservoir. Preparation of the sub-grade would include excavating these soil layers, mixing the excavated soil with cement, and placing the soil-cement mixture in the previously excavated areas to provide a structurally sound base for the new reservoir. This task would require approximately 5 months and would entail excavating, mixing, and returning approximately 212,000 CY of soil. This activity would occur entirely within the existing reservoir footprint, except for approximately 10,500 CY of unusable material, which would be placed in the stockpile area. In addition, approximately 46,500 CY of the excavated material previously placed in the stockpile area during rough shaping would be returned to the site to build up the reservoir bottom at the south end, where a new retaining wall would be functionally integrated with the existing earth dam. This fill material would also be mixed with cement to provide a solid base for the buried reservoir. This method of reinforcing the sub-grade eliminates the requirement to construct an extensive foundation system of drilled caissons to support the proposed concrete roof and soil cover.

Phase 3: Concrete Reservoir and Sub-Drain System Construction (27 months)

The third phase of the project would involve the construction of the new concrete reservoir, including the perimeter retaining walls and interior shear walls, liner and sub-drain system, and column and roof assembly. The entire phase would require approximately 27 months to complete. Because the elevation of the outer portions of the bottom of the reservoir would be reshaped during Phase 2 to allow for proper operation of the sub-drain system, a new concrete retaining wall approximately 23.5 feet in height would be required around the entire perimeter of the reservoir to retain the water. To provide adequate access along both sides to construct the retaining wall, the wall would generally be located slightly inward from the upper edge of the existing reservoir. However, at the southern end of the reservoir, where the retaining wall would be functionally integrated with the existing earth dam, it would be located inward of the toe of the slope of the dam, approximately 125 feet inward from the upper edge (top of dam) of the existing reservoir based on preliminary plans. (The area between the retaining wall and the existing dam would be backfilled with soil during Phase 4 of construction.) Although this configuration of the retaining walls would reduce the overall footprint of the reservoir, the storage volume of the new structure would actually increase by about 6 MG to a total of 144 MG. This is because the reservoir sides and bottom would have been reshaped during Phase 2 to permit the sub-drain system to function properly. This configuration would allow for a greater balancing of cut and fill material on site than would be possible if the wall were located closer to the top of the existing dam.

In addition to the perimeter retaining walls, a series of shear walls would be constructed in the interior of the reservoir to help support the load of the concrete roof and soil cover and to resist inertial loads that may be created by seismic events. To adequately provide the structural support for the buried reservoir, the retaining and shear walls would be a minimum of 24-inch thick reinforced concrete.

In addition to the perimeter and shear walls, an extensive system of columns would be required to support the reservoir roof and soil cover. The columns would be set in a grid pattern at 25 feet on-center within the reservoir. They would be cylindrical 2-foot diameter reinforced concrete, with a spread footing integrated into the reservoir liner and a concrete cap to support the reservoir roof. The roof would be 12-inch thick reinforced concrete constructed in 25-foot by 25-foot sections, centered over individual columns and with all joints between sections sealed with water-stop elements.

During Phase 3, excavated material that would be unsuitable for use as compacted fill related to various purposes in the reservoir construction would be hauled off site. It is estimated that approximately 5 percent of all the material excavated during the various construction tasks would be unusable rock rubble.

Phase 4: Backfilling and Landscaping (2 months)

The fourth phase consists of backfilling behind the retaining walls, including the area between the wall at the south end of the reservoir and the existing earth dam. This phase would also include covering the reservoir with topsoil and site landscaping. It would require 2 months to complete.

A portion of the soil placed in the on-site stockpile (approximately 46,500 CY) would have been previously used during Phase 2 to build up the reservoir bottom below the south end retaining wall and another portion (approximately 18,000 CY) would have been hauled off site during Phase 3 as material unusable for compacted fill. The balance of the on-site stockpile material (approximately 86,500 CY) would be used to backfill behind the retaining walls of the new reservoir, including the area between the new concrete retaining wall at the south end of the reservoir and the earth dam of the existing Upper Stone Reservoir. After completion of the backfilling, the reservoir would take approximately 1 month to refill.

Approximately 64,000 CY of imported topsoil would be required to provide a maximum of 3-feet of appropriate planting medium for the area above the reservoir. In addition to planting the area above the reservoir with native plant species indigenous to the SCRC property or surroundings, Phase 4 would include planting other areas on site that were exposed during construction. This would involve approximately 16 acres above the reservoir itself, 20 acres for the landslide stabilization area east of the reservoir, and 3 acres for the area utilized for material stockpiling. The landscaping would include a combination of seeding and individual specimens, both shrubs and trees. However, to avoid potential structural damage, planting in the area above and immediately surrounding the reservoir would be limited to grasses, herbaceous species, and shallow-rooting shrub species. Maintaining soil cover on restored areas may require netting or other temporary physical measures to anchor the soil and protective mulch until plants become established. Quickly-germinating “nurse crops” may also be used to provide temporary erosion control while permanent plant species can establish. A temporary irrigation system would be installed to ensure successful establishment of new plant material.

Phase 5: Recreation Improvements (6 months)

The construction of the recreation improvements at the SCRC would involve clearing, grading, and stabilizing trails; rough grading the pads for the parking areas and support building; constructing the support building; and installing fencing, gates, and signs. This phase of work would take approximately 6 months to complete.

PROJECT SETTING

ENVIRONMENTAL SETTING

The Project is located within the Santa Monica Mountain Range, which is the southernmost in a series of mountain ranges that together comprise the east-west trending Transverse Range Province of Southern California. The Santa Monica Mountains extend approximately 46 miles from the Hollywood Hills, Los Angeles County in the southeast to Point Mugu, Ventura County in the northwest. The mountain range averages 7.5-miles in width with landforms that include coastal, valley, and mountainous elements. Elevations generally vary from sea level at the coast to between 1800 and 2800 feet in the interior. The highest point within the Santa Monica Mountains is Sandstone Peak which lies at an elevation of 3,111 feet above msl. The SCRC is located approximately eight miles northeast of the coast. The Project area is located on the Beverly Hills, 7.5 minute Topographic Series, USGS Quadrangle (see Figure 2).

Southern California is characterized generally by a semi-arid Mediterranean climate with warm, dry summers and mild winters. Annual rainfall in the Los Angeles area averages 15 inches and predominant vegetation comprises of grass and coastal sagebrush in valley bottoms and chaparral in higher elevations (McCawley 1996).

CULTURAL SETTING

As a framework for discussing the types of cultural resources that might be encountered during this cultural resources assessment, the following section summarizes our current understanding of major prehistoric and historic developments in and around Los Angeles. This is followed by a more focused discussion of the history of the Project area itself.

PREHISTORIC PERIOD

The earliest evidence of occupation in the Los Angeles area dates to at least 9,000 years before present (B.P.) and is associated with a period known as the Millingstone Cultural Horizon (Wallace 1955; Warren 1968). Departing from the subsistence strategies of their nomadic big-game hunting predecessors, Millingstone populations established more permanent settlements. These settlements were located primarily on the coast and in the vicinity of estuaries, lagoons, lakes, streams and marshes where a variety of resources including seeds, fish, shellfish, small mammals, and birds were exploited. Early Millingstone occupations are typically identified by the presence of handstones (manos) and millingstones (metates), while those Millingstone occupations dating later than 5,000 years B.P. contain a mortar and pestle complex as well, signifying the exploitation of acorns in the region.

Although many aspects of Millingstone culture persisted, by 3,500 years B.P. a number of socioeconomic changes occurred (Erlandson 1994; Wallace 1955; Warren 1968). These changes are associated with the period known as the Intermediate Horizon (Wallace 1955). Increased populations in the region necessitated the intensification of existing terrestrial and marine resources (Erlandson 1994). This was accomplished in part through the use of the circular shell fishhook on the coast and more abundant and diverse hunting equipment. Evidence for shifts in settlement patterns has been noted at a variety of locations at this time and is seen by many researchers as reflecting increasingly territorial and sedentary populations. The Intermediate Horizon marks a period in which specialization in labor emerged, trading networks became an increasingly important means by which both utilitarian and non-utilitarian materials were acquired, and travel routes were extended. Archaeological evidence suggests that the margins of rivers, marshes, and swamps and lower reaches of canyons served as ideal locations for prehistoric settlement during this period. These well-watered areas contained a rich collection of resources and are likely to have been among the more heavily trafficked travel routes.

The Late Prehistoric period, spanning from approximately 1,500 years B.P. to the mission era, is the period associated with the florescence of the contemporary Native American group known as the *Gabrielino* (Wallace 1955). Coming ashore near Malibu Lagoon or Mugu Lagoon located at the southern edge of the Santa Monica Mountain Range in present-day Malibu in October of 1542, *Juan Rodriguez Cabrillo* was the first European to make contact with the *Gabrielino* Indians. Occupying the southern Channel Islands and adjacent mainland areas of Los Angeles and Orange counties, the *Gabrielino* are reported to have been second only to their Chumash neighbors in terms of population size, regional influence, and degree of sedentism (Bean and Smith 1978). The *Gabrielino* are estimated to have numbered around 5,000 in the pre-contact period (Kroeber 1925). Maps produced by early explorers indicate that at least twenty-six *Gabrielino* villages were within close proximity to known Los Angeles River courses, while an additional eighteen villages were within reasonably close proximity to the river (Gumprecht 1999). Subsistence consisted of hunting, fishing, and gathering. Small terrestrial game were hunted with deadfalls, rabbit drives, and by burning undergrowth, while larger game such as deer were hunted using bows and arrows. Fish were taken by hook and line, nets, traps, spears, and poison (Bean and Smith 1978; Reid 1939 [1852]). The primary plant resources used by the *Gabrielino* include chia and other sages, various grasses, and islay or holly leafed-cherry (Reid 1939 [1852]).

SPANISH PERIOD

The *Gabrielino* were virtually ignored between the time of *Cabrillo's* visit and the Spanish Period which began in 1769 when *Gaspar de Portola* and a small Spanish contingent began their exploratory journey along the California coast from San Diego to Monterey. *Gabrielino* villages are reported to have been the most abundant in the San Fernando Valley, located north of the Project area, the Glendale Narrows area north of downtown, and around the Los Angeles River's coastal outlets (Gumprecht 1999). At least ten *Gabrielino* villages were located in the San Fernando Valley, most situated in what could be described as the foothill/prairie transition zone around the borders of the basin (McCawley 1996:35). At least two of these villages are believed to have been located along the course of the Los Angeles River at the valley's southern edge: 1) *Siutcanga*, in the vicinity of the spring at present-day Encino (approximately 3 miles northwest of the project are), and 2) *Kawengna*. "located downstream on the south side of the river at the northern end of Cahuenga Pass" (approximately 5 miles northeast of the Project area) (Gumprecht 1999). *Siutcanga* was first reported by the members of the *Portola* expedition in 1769 (McCawley 1996). In 1985, archaeological investigations in the city of Encino near Ventura and Balboa Boulevards revealed a large village and cemetery which may have been *Siutcanga* (McCawley 1996.)

Missions were established in the years that followed the *Portola* expedition, the fourth being the *Mission San Gabriel Arcangel* founded in 1771 near the present-day city of Montebello. By the early 1800s, the majority of the surviving *Gabrielino* population had entered the mission system. The *Gabrielino* inhabiting Los Angeles County were under the jurisdiction of either *Mission San Gabriel* or *Mission San Fernando*. Mission life offered the Indians security in a time when their traditional trade and political alliances were failing and epidemics and subsistence instabilities were increasing (Jackson 1999).

On September 4, 1781, twelve years after *Crespi's* initial visit, the *El Pueblo de la Reina de los Angeles* was established not far from the site where *Portola* and his men camped. Watered by the river's ample flow and the areas rich soils, the original pueblo occupied 28 square miles and consisted of a central square, surrounded by twelve houses, and a series of 36 agricultural fields occupying 250 acres, plotted to the east between the town and the river (Gumprecht 1999).

An irrigation system that would carry water from the river to the fields and the pueblo was the communities' first priority and was constructed almost immediately. The main irrigation ditch, or *Zanja Madre*, was completed by the end of October 1781. It was constructed in the area of present-day Elysian Park, and carried water south (roughly parallel to what is presently Spring Street) to the agricultural lands situated just east of the pueblo (Gumprecht 1999).

By 1786, the flourishing pueblo attained self-sufficiency and funding by the Spanish government ceased (Gumprecht 1999). Fed by a steady supply of water and an expanding irrigation system, agriculture and ranching grew, and by the early 1800s the pueblo produced 47 cultigens. Among the most popular were grapes used for the production of wine (Gumprect 1999). Vineyards blanketed the landscape between present-day San Pedro Street and the river. By 1830 an estimated 100,000 vines were being cultivated at 26 Los Angeles vineyards. Over 8,300 acres of land were being irrigated by the *zanjas* during the 1880s (Gumprecht 1999).

AMERICAN PERIOD

When the Southern Pacific Railroad extended its line from San Francisco to Los Angeles in 1876, newcomers poured into Los Angeles and the population nearly doubled between 1870 and 1880. The completion of the second transcontinental line, the Santa Fe, took place in 1886 causing a fare war which drove fares to an unprecedented low. More settlers continued to head west and the demand for real estate skyrocketed. As real estate prices soared, land that had been farmed for decades outlived its agricultural value and was sold to become residential communities. The subdivision of the large ranchos took place during this time. The city's population rose from 11,000 in 1880 to 50,000 by 1890 (Meyer 1981).

As a result of growing population and the increasing diversion of water, the once plentiful water supply provided by the Los Angeles River began to dwindle. The once extensive flood plain dried up, the abundant lushly forested landscape was cleared for construction materials and fuel, and the tens of thousands of head of cattle, horses, and sheep owned by ranchers had decimated the local grasses (Gumprecht 1999). By the mid-nineteenth century, city officials established a system of water use, including fees and rules, to govern the *zanjas*. They created the official city position of *zanjero*, the highest paid of any public official in Los Angeles. The duties of the *zanjero* included the issuance of permits for water usages, maintenance of the ditches, maintenance of the city dam, and even the early coordination of flood control work on the Los Angeles River (Gumprecht 1999).

While the *zanjas* worked well for irrigation, the water was frequently unsuitable for domestic purposes. The city had no sewer system or other outlet for its liquid waste, and the *zanjas* were being used for laundry and bathing, as well as trash and sewage disposal. Several efforts to pipe domestic water directly to homes were tried as early as 1864. To keep up with demand, the city allowed several private companies to be formed in order to provide domestic supplies of water. The city continued to oversee the irrigation system, eventually enclosing several of the *zanjas* or creating ornamental *zanjas* in several areas (Gumprect 1999).

A number of waterworks projects were underway during the second half of the 19^{th} century in an effort to increase water flow and water retention. Projects included the construction of the Buena Vista Reservoir (within present-day Elysian Park), the Silverlake Reservoir, and the further expansion of the *zanja* irrigation ditches.

As Southern California grew, the Los Angeles River proved an inadequate water supply for the residential and industrial development that gradually overtook the farmland. With the population boom resulting from the arrival of the Southern Pacific railroad in 1876, the demand became so great that the Los Angeles City Water Company (1868–1898) and later the city of Los Angeles (post 1898) tapped the river's water supply before it even reached the surface (Gumprecht 1999). By the late 1880s, water supply reservoirs began to be utilized and the *zanja* system was dismantled ditch by ditch (Gumprect 1999).

HISTORY OF THE PROJECT AREA

Upper Stone Canyon Reservoir is located in a portion of the Santa Monica Mountains that was previously part of the *Rancho San Vicente y Santa Monica*, a 30,260-acre land grant, granted to Francisco Sepulveda in 1828 (Scott 2004). In 1873, Colonel Robert S. Baker acquired all 30,260 acres for $55,000 from the Sepulveda heirs, who at the time were strapped for cash (Scott 2004). A historic topographic quadrangle dating to 1902 shows no development in the Project area or surrounding vicinity at that time (USACE 1902).

As part of on-going city-wide water storage improvements during the early part of the 20th century, a dam and reservoir were built in Stone Canyon. Construction of the original Stone Canyon Dam, and its resulting reservoir (present-day Lower Stone Canyon Reservoir), began in August 1920. Stone Canyon Reservoir was placed into service in 1921 and provided much-needed water required for development on Los Angeles' west side (Los Angeles Public Library (LAPL) Department of Water and Power (DWP) Photo Collection 1004924) (Plate 1).

Plate 1. Stone Canyon Reservoir (present-day Lower Stone Canyon Reservoir) (LAPL Padilla Collection 1000770)

> "Completion of Stone Canyon Reservoir in the Santa Monica Mountains, back of the Los Angeles Country Club, as the basis of water supply to the western seaward sections of Los Angeles, from Beverly Hills to the ocean, has entirely changed the development atmosphere of the Santa Monica region. It is another illustration of the immediate response of every district of Southern California to the bestowal of the water gift" (Los Angeles Times (LAT) 1922).

A historic topographic quadrangle encompassing the Project area depicts that by 1926 water retention was occurring in Stone Canyon and approximately 16 buildings were located in the vicinity of the present-day southern end of Lower Stone Canyon Reservoir (USGS 1926). It is unknown whether these buildings were residential or related to reservoir staff housing and/or maintenance. The map also indicates that by this time sparse residential development had extended into Brown Canyon (present-day community of Beverly Glen) to the east of the Project area.

Although the original reservoir provided storage for approximately 3.4 billion gallons of drinking water, by the end of World War II development in the area necessitated an increase in service capacity. This need was answered with the construction of additional reservoirs in Los Angeles County, such as the Santa Fe Reservoir (1947–1949) and the Whittier Narrows Reservoir (1957). Additional water needs during the 1950s set into motion plans for the construction of a reservoir to the north of Lower Stone Canyon Reservoir (Crofts 1954). The new reservoir would be known as Upper Stone Canyon Reservoir and would be constructed in part to provide increased water-pressure to the communities of Brentwood and Pacific Palisades (LAPL DWP Photo Collection 1004919).

The construction of the $2,600,000 Upper Stone Canyon Reservoir, then referred to as “Project 371” began with the Chief Engineer’s Authorization dated September 10, 1951 (Plate 2). This authorization initiated the design and construction of the reservoir by the Field Engineering Division of the Water Department under R.R. Proctor. Rented equipment was used and paving was done by sub-contract. Norman M. Imbertson was engineer of construction and Loring E. Tabor supervised inspection, superintendent of construction was Hugh Mulholland, and resident engineers were Robert L. Brady and Fraser M. Crofts (LAPL DWP Photo Collection 1004923). The first phase of construction began December 6, 1951 and included building a bypass line around the reservoir to supply water to the area usually served by the original dam, and excavation for tunnel number 1 (Hayward 1956).

Plate 2. Construction of Upper Stone Canyon Reservoir, circa 1953 (LAPL DWP Photo Collection 1004923)

Phase II of construction began in October 1952. This phase included the excavation of the main canyon, reservoir side cut excavation below the crest road, excavation of the slough material, placing the rolled fills for the north dam, main dam, and reservoir bottom, and completing the side canyon fills. Excavation for the outlet tower base began in May 1953 (Plate 3). The outlet tower bridge abutment construction commenced October 1953. This abutment, a hollow reinforced concrete shell with integral column bridge supports, was built with concrete hand rails in the approach section. The outlet tower bridge itself is a thin plate girder type. The bridge was constructed by Gerstenberger and Pierson, the prime contractor. The bridge was completed, inspected, and accepted by the Water Division Section on December 28, 1953. The reservoir was placed in service on January 27, 1954 (Crofts 1954) (Plate 4).

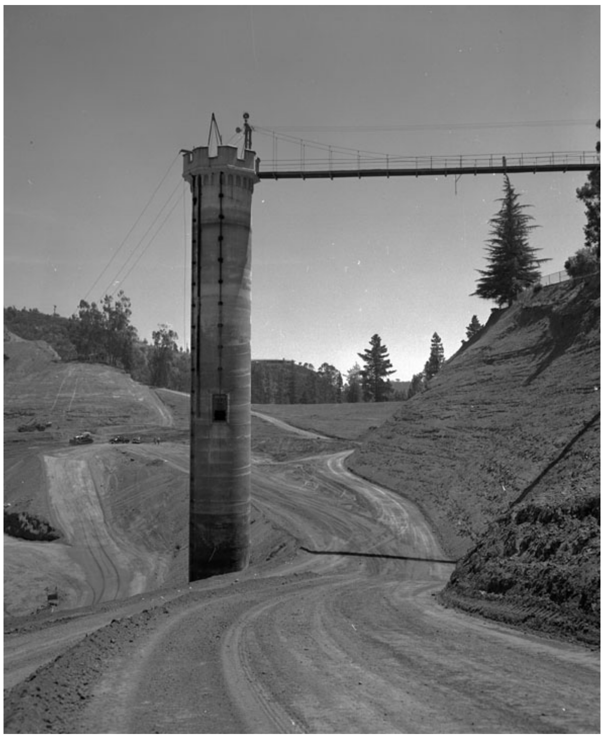


Plate 3. Outlet Tower and Foot Bridge, circa. 1953 (LAPL DWP Photo Collection 1004919)

Plate 4. First Water Entering Upper Stone Canyon Reservoir (January 27, 1954) (Hayward 1956)

Table 1 highlights dates associated with key Upper Stone Canyon Reservoir construction activities.

Table 1
Timeline of Events for the Upper Stone Canyon Reservoir

Event	Date
Design of reservoir initiated	September 10, 1951
Construction initiated	December 6, 1951
Earthwork for Mulholland Drive entrance road	January 28, 1952
Excavation to grade west side cuts	March 10, 1952
Excavation for main canyon and reservoir bottom	October 1952
60-inch inlet line to reservoir constructed	September–October 1952
Inlet structure construction initiated	October 19, 1953
Outlet tower bridge abutment excavation	October 5, 1953
Reservoir paving initiated	October 19, 1953
Inlet structure completed	November 1953
Outlet tower bridge completed	December 28, 1953
Outlet tower completed	January 14, 1954
Placed in service	January 27, 1954
Main storm channel reconstructed	1956–1957
New chlorination station built	2008–2009
Source: Crofts 1954; Hayward 1956	

RESEARCH METHODS

The cultural resources assessment conducted for this Project included archival research including a records search, sacred lands file (SLF) search, and background research at local repositories, as well as a cultural resources field survey.

ARCHIVAL RESEARCH

RECORDS SEARCH

A records search for the Project was conducted on July 9, 2008 and August 25, 2008 at the SCCIC housed at California State University, Fullerton. The records search focused on the identification of previously recorded cultural resources within a 1-mile radius of the Project area. The records search involved the review of archaeological site records, historic maps and historic site and building inventories.

The records search revealed that a total of 22 cultural resources investigations were previously conducted within a 1-mile radius of the Project (Table 2). The previous investigations include record search studies and the preparation of survey and assessment reports. Four of the 22 previous investigations included portions of the present Project area and one of the 22 covered the entirety of the Project area. None of the previous investigations identified cultural resources within the Project area.

Table 2
Previous Cultural Resources Investigations Conducted within 1-Mile of the Project Area

Author	Report # (LA-)	Description	Date
Bissell, Ronald M.	2888*	Cultural Resources Reconnaissance for Improvements to Stone Canyon Reservoir Access Road, Los Angeles County, California	1993
Bonner, Wayne H.	7780	Records Search Results and Site Visit for Cingular Telecommunications Facility LA-706-02 (405 Freeway & Mulholland Dr), 15459-1/2 Mulholland Drive, Los Angeles, Los Angeles County, California	2003
Bonner, Wayne H.	7808	Records Search and Site Visit Results for Sprint Telecommunications Facility Candidate LA34XC744A (Pole #20435SPR), 14480-1/2 Mulholland Drive, Los Angeles, Los Angeles County, California	2003
Brechbiel, Brant A.	4161	Cultural Resources Records Search and Literature Review Report for a Pacific Bell Mobile Services Telecommunications Facility: LA 459-01 in the City of Sherman Oaks, California	1998
Brown, Joan C.	2099*	Cultural Resources Reconnaissance of Nine Reservoirs for the City of Los Angeles, Los Angeles County, California	1990
Christy, Juliet L.	6129	Survey of Archaeological Resources Along Benedict Canyon Drive Between Mulholland and Hutton, Los Angeles, California	2001
Clewlow, William C. Jr.	1034	Archaeological and Paleontological Resource Assessment of Tentative Tract 41784, Bel Air Crest Estates, City of Los Angeles, Los Angeles County	1981

Table 2
Previous Cultural Resources Investigations Conducted within 1-Mile of the Project Area

Author	Report # (LA-)	Description	Date
Colby, Susan M.	1450	An Archaeological Resource Survey and Impact Assessment of a Vacant Parcel on the Northeast Corner of Beverly Glen Blvd., Between Tiffany and Beverly Glen Circle, City of Los Angeles	1985
Davis, Lois M.	857	An Archaeological Investigation of Briarwood Park in the Beverly Glen area, Los Angeles County	1980
Dillon, Brian D.	930	An Archaeological Resource Survey and Impact Assessment of Lot 1, Tract No. 14524, at 14545 Mulholland Drive, City of Los Angeles, California	1981
Dillon, Brian D.	949	An Archaeological Resource Survey and Impact Assessment of Three Telecommunications Tower Sites for the Southern California Rapid Transit District In Los Angeles County, California	1981
Dillon, Brian D.	3733*	Archaeological Survey of the Stone Canyon Vegetation Management Plan (Prescribed Burn) Los Angeles County, California	1977
Duke, Curt	6128	Cultural Resource Assessment Cingular Wireless Facility No. SM 014-01 Los Angeles County, California	2001
Feldman, J., Hope, A.	7430	Caltrans Historic Bridges Inventory Update: Concrete Box Girder Bridges	2004
Hector, Susan M.	428	An Archaeological Resource Survey and Impact Assessment of Tract No. 32026, Los Angeles County	1978
Lapin, Philippe	5602	Cultural Resource Assessment for Pacific Bell Wireless Facility LA 706-02, County of Los Angeles, California	2000
Maxon, Patrick O.	4736*	Prehistoric Cultural Resources Reconnaissance for the Stone Canyon Water Quality Improvement Project, Los Angeles, California	1999
McKenna, Jeanette A.	6526*	Cultural Resource Assessment/Evaluation for Nextel Communications Site CA-6826, 1630 Stone Canyon Road, Los Angeles, Los Angeles County, California	2002
Russell, Glenn S.	574	An Archaeological Resource Survey and Impact Assessment of A Division of Lot 10, Tract 12395, City of Los Angeles, Los Angeles, California	1979
Singer, Clay A.	1195	Cultural Resource Survey and Impact Assessment for Tentative Tract No. 23377 in the Sherman Oaks Area of the San Fernando Valley, Los Angeles County	1982
Wallock, Nicole	4849	Cultural Resource Assessment Cingular Wireless Facility No. VY 021-01, Los Angeles County, California	2001
Wlodarski, Robert J.	1010	An Evaluation of the Impact Upon Cultural Resources by the Proposed Development of 200 Acres Near the Intersection of Beverly Glen Boulevard and Mulholland Drive, Santa Monica	1981

*Indicates study overlapping with Project area

The records search indicated that one historic isolated artifact was previously recorded within the 1-mile records search study area (Table 3). This isolated artifact (P-19-100029), a historic-era sun-colored amethyst glass shard, was recorded in a location approximately a ½-mile north of the Project area (Bissell 1993). No cultural resources have been previously recorded within the Project area itself.

Table 3 Previously-Recorded Archaeological Resources within 1-Mile of the Project Area				
Permanent Trinomial (CA-LAN-)	P-Number (P-19-)	Other Number	Description	Date Recorded
	100029		Isolated sun colored amethyst shard of glass	06/16/1993

SACRED LANDS FILE SEARCH

A letter requesting a SLF search was prepared and sent to the NAHC on July 21, 2008. The response from the NAHC, dated July 25, 2008, indicated the SLF search results were negative for previously-documented sacred lands in the vicinity of the Project. The letter suggests, however, that the NAHC is not in possession of a comprehensive list of all sacred lands and that therefore the results of the search should not be considered exhaustive.

ADDITIONAL HISTORICAL RESEARCH

Additional archival research was conducted at local repositories to reconstruct a historical context for the Project area. Research was conducted at the Los Angeles Public Library and the City of Los Angeles Bureau of Engineering Vault. Documentation including plans, photos and historical narratives were provided by the LADWP. In general, research was focused on the history of Lower and Upper Stone Canyon Reservoirs and water conveyance in Los Angeles.

CULTURAL RESOURCES SURVEY

Cultural resources field surveys of the Project area were conducted by Sara Dietler, B.A., Frank Humphries, B.A. and Timothy Harris, B.A. on September 11, 2008 and January 30, 2009. The field surveys included an archaeological investigation and a survey of the built environment to assess the presence of cultural resources associated with the Project area. As described in the Project Description section of this report, changes have been made to the footprint of the Project area itself. It was determined that additional survey was not required as a result of these changes as the area encompassed by the current Project area was either surveyed during the 2008 and 2009 surveys or is inaccessible due to steep terrain and vegetation.

ARCHAEOLOGICAL SURVEY

The archaeological survey focused on the identification of any surface evidence of archaeological materials in the Project area. The survey encompassed the entirety of the area proposed for disturbance by the Project, where access was possible (Plate 5). Access was limited in areas with steep terrain and dense vegetation, particularly in some areas east of the reservoir.

Plate 5. Upper Stone Canyon Reservoir, Overview to Southwest.

The survey was carried out with surveyors walking in transects spaced at intervals of approximately 10 to 20 meters apart. Ground visibility ranged between 20 and 25 percent in most of the Project area, with the exception of an area of greater ground visibility (approximately 90 percent) to the east of reservoir where a burn episode had recently occurred. Disturbances, such as large graded areas, were also noted particularly to the north and west of the reservoir (Plate 6). The edge of the roadway running along the perimeter of the reservoir was investigated but resulted in as little as 5 to 10 percent ground visibility.

Plate 6. Graded Portion of Project Area North Reservoir, View to South.

Soils throughout the Project area are light grayish brown sandy silts. No surface evidence of archaeological resources was encountered as a result of the archaeological resources component of the field survey.

HISTORIC ARCHITECTURAL RESOURCES SURVEY

As part of the cultural resources field investigation of the Project area, historic-era built environment features were surveyed and documented. All of the historic-era features encountered during the survey are related to Upper Stone Canyon Reservoir. Upper Stone Canyon Reservoir was constructed over 50 years ago, between 1951 and 1954, and therefore requires evaluation to determine its potential significance as a historical resource under CEQA. Upper Stone Canyon Reservoir was documented as a historic-era cultural resource on Department of Parks and Recreation (DPR) 523 forms (Appendix B) and is described in the section that follows.

UPPER STONE CANYON RESERVOIR

The historic-era resource identified as Upper Stone Canyon Reservoir consists of the reservoir (Plate 7), outlet tower (Plate 8), foot bridge (Plate 9), storm channel (Plate 10), pumping mechanisms (Plate 11), perimeter roadway (Plate 12), chain link fence (Plate 12), spring channels (Plate 13), abandoned drainage pipes (Plate 14), and a spillway channel (Plate 15). The reservoir itself is an uncovered, above-ground, compacted earth-fill structure approximately 1,600 feet in length and 500 feet in width, at its maximum. The reservoir has a maximum depth of 49 feet, a high water elevation of 929 feet, and a surface area of approximately 14 acres at the high water elevation. The bottom and sides of the reservoir are paved with asphaltic concrete. The reservoir's outlet tower is constructed of reinforced concrete and measures approximately 82-feet high from the bottom of the base to the top of the parapet wall. The tower is accessed by a plate girder foot bridge. A curvilinear concrete storm (drainage) channel with earthen embankments is located at the northern end of the reservoir. Pumping mechanisms are attached to a concrete pad also near the northern end of the reservoir. An approximately 18-foot wide perimeter roadway crests the reservoir and grades away from the inside reservoir slope. A chain link fence encloses the entire structure. Concrete-lined spring channels with concrete block wall abutments are located adjacent to the reservoir. A number of dilapidated abandoned stand pipes (drainage pipes) were noted lying amongst vegetation around the reservoir. The stand pipes are constructed of metal featuring vertical linear perforations and convex triangular caps. A spillway channel described as a rectangular reinforced concrete flume several hundred feet long, and approximately ten feet wide was also documented on the east side of the reservoir.

Plate 7 **Upper Stone Canyon Reservoir**
Plate 8 **Outlet Tower**
Plate 9 **Foot Bridge**
Plate 10 **Storm Channel**
Plate 11 **Pumping Mechanism**
Plate 12 **Perimeter Roadway and Chain Link Fence**
Plate 13 **Spring Channels**
Plate 14 **Abandoned Drainage Pipes**
Plate 15 **Spillway Channel**

SIGNIFICANCE ASSESSMENT

RESULTS

A single resource was identified as part of this cultural resources assessment. The resource identified as Upper Stone Canyon Reservoir (including the reservoir itself and related reservoir features) was evaluated to determine its historical significance. The reservoir was originally constructed between 1951 and 1953. Between 1956 and 1957, the main storm channel was reconstructed. No major alterations have been made since the 1950s, and the reservoir continues to function as originally intended, providing water storage and service for surrounding neighborhoods.

REGULATORY SETTING

Cultural resources in California are protected by a number of federal, state, and local regulations, statues, and ordinances. The determination of California Register of Historical Resources (CRHR) significance of a cultural resource is guided by specific legal context outlined in Sections 15064.5 (b), 21083.2, and 21084.1 of the Public Resources Code (PRC), and the CEQA Guidelines (California Code of Regulations Title 14, Section 15064.5). A cultural resource may be eligible for listing on the CRHR if it:

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.

A cultural resource determined to meet one or more of the above criteria is considered a historical resource under CEQA. In addition to meeting one or more of the above criteria, historical resources eligible for listing in the CRHR must retain enough of their historic character or appearance to be able to convey the reasons for their significance. Such integrity is evaluated with regard to the retention of location, design, setting, materials, workmanship, feeling, and association.

RESOURCE EVALUATION

This cultural resources assessment of the resource identified as Upper Stone Canyon Reservoir is based on the results of archival research and a cultural resources field survey, as described in the previous chapter of this report. This resources assessment is limited by the scope of the proposed Project and included an evaluation of Upper Stone Canyon Reservoir only. Although Upper Stone Canyon Reservoir is a component of the SCRC, no assessment of the SCRC was conducted nor was Upper Stone Canyon Reservoir evaluated as a contributor to any relevant historical resources districts.

APPLICATION OF THE CRHR CRITERIA

Historic water-related systems may be found eligible to the CRHR under any of the previously outlined significance criteria, although some criteria are more commonly relevant than others. Potential significance is evaluated in direct relation to the contextual themes identified as being relevant to a particular region.

CRITERION 1

Like other types of public works facilities, water-related systems are inherently important to the communities they serve, providing infrastructure essential for community development. For a water system to be considered eligible under Criterion 1, it must be found to be associated with specific important events or patterns of events. The significance of the documented association must be an important association in and of itself, not mere coexistence.

Research has shown that the Los Angeles area has had a long history in water storage/water-related projects. By the early to mid decades of the 20th century, several reservoirs and associated features (e.g., dams, etc.) had been constructed and were in use throughout the Los Angeles area, including, but not limited to, the Santa Fe Reservoir and Whittier Narrows Reservoir. Upper Stone Canyon Reservoir is but one of many such structures built during the mid-20th century. Research did not indicate that this reservoir was significantly associated with events considered important in local or state-wide history. This structure does not appear to meet the eligibility criteria for listing on the CRHR under Criterion 1.

CRITERION 2

For eligibility under Criterion 2, the resource must be associated with an important person's productive life, and must be the resource most closely associated with that person. Water-related systems are rarely found eligible under Criterion 2, however, a water system could be found eligible under this criterion if the person's association with the system is strong, and no other properties closely associated with that person remain.

Upper Stone Canyon Reservoir is not known to be associated with individuals considered important in local or state-wide history. The reservoir was designed and constructed by the Field Engineering Division. Research did not indicate association of the reservoir to noted engineers or architects. This structure, therefore, does not appear eligible for CRHR listing under Criterion 2.

CRITERION 3

Water-related systems can be determined eligible under Criterion 3 for their engineering or design values. Resources eligible under this criterion may have unique features, or they may be good examples of a type of property.

Although Upper Stone Canyon Reservoir maintains relatively good integrity (the only known modifications consist of the main storm channel reconstruction in 1956–57, and new chlorination station and filtration plant), it is an example of a common reservoir type (earth-fill) and does not represent unique or intrepid designs. Most of the reservoirs built contemporaneously, as well as earlier structures, utilized this type of construction. Upper Stone Canyon Reservoir does not appear eligible for listing on the CRHR for architectural distinction or as the work of a master.

CRITERION 4

Eligibility under Criterion 4 is contingent on the resource's ability, as contained in artifacts and objects, to further address issues of scientific importance to the period of significance. These data are primarily derived from archaeological sites, and rarely buildings and structures themselves. Archaeological features or deposits may provide new information not available elsewhere regarding kinds of documented or undocumented activities in the area. While buildings and structures can sometimes provide important information regarding historic construction techniques, most of these techniques are well documented in both written and visual sources, and generally, would not yield new primary information.

Information on the construction and history of Upper Stone Canyon Reservoir has been documented in several sources; therefore the structure does not appear to possess the potential to answer important scientific questions, or yield previously unknown information. The resource's research value has been realized. This structure, therefore, does not appear to be eligible for listing under CRHR Criterion 4.

RECOMMENDATIONS

Upper Stone Canyon Reservoir was not found to be eligible under any of the four CRHR criteria. DPR 523 forms for Upper Stone Canyon Reservoir have been prepared and satisfy the minimum level of documentation required for cultural resources. Unless the scope of the proposed Project is modified, no additional work in connection with historic-era buildings or structures is recommended.

Although no surface evidence of archaeological resources was encountered during the cultural resources survey, it is possible that subsurface archaeological materials may be encountered during ground-disturbing activities associated with the Project. Archaeological materials may manifest in the form of either prehistoric or historic artifacts and ecofacts. During prehistoric times, the Project area was occupied by the *Gabrielino* Indians. Archaeological materials associated with the prehistoric period may include food remains such as marine and freshwater shells, animal bones, and seeds. The soils surrounding food remains are distinguished from native soils typically by a dark grey or black ashy appearance. Other types of items that may be found are food processing equipment, such as manos and metates, and stone tools, such as projectile points, hammerstones, and scrapers. Historic period archaeological materials are items over 50 years in age, including but not limited to glass bottles, ceramics, buried infrastructure, military and construction debris, metal, etc.

The following recommendations are made to avoid impacts to unknown archaeological resources as a result of the proposed Project. A pre-construction briefing is recommended to inform construction personnel of the nature of archaeological resources and the types of items that may be encountered. Should these archaeological materials encountered during ground-disturbing activities, they should be left in place as to not disturb the discovery context and work in the immediate vicinity shall be suspended until the discovery is assessed by a qualified archaeologist. It is recommended that a qualified archaeological consultant be retained prior to the start of construction to respond on an as-needed basis in the event discoveries occur.

If human remains are discovered, work in the immediate vicinity of the discovery shall be suspended and the Los Angeles County Coroner contacted. If the remains are deemed Native American in origin, the NAHC shall be contacted to request consultation with an NAHC-appointed MLD pursuant to Public Resources Code Section 5097.98 and California Code of Regulations Section 15064.5. Work may be resumed at the landowner's discretion but shall only commence once consultation and treatment have been concluded. Work may continue on other parts of the Project area while consultation and treatment are conducted.

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APPENDIX A

RESUMES OF KEY PERSONNEL

Sara Dietler
Project Archaeologist

Education
BA, Anthropology, San Diego State University, 1998
Minor, American Indian Studies, San Diego State University, 1998

Affiliations
Society for American Archaeology
Society for California Archaeology

Publications and Professional Papers

Dietler, S. 2000. Protohistoric Burial Practices of the Gabrielino as Evidenced by the Comparison of Funerary Objects from Three Southern California Sites. In Proceedings of the Society for California Archaeology, Volume 13. Judyth Reed, Greg Greenway, and Kevin McCormick eds. Society for California Archaeology. Fresno.

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Dietler, S. 2008. Digging Deep: Archival Research into the History of Los Angeles' City Cemetery. Oral Presentation at the Society for California Archaeology Meeting, Burbank, California, April.

Strauss, M., S. Dietler, and C. Ehringer. 2008. Death Lends a Hand: Archaeological Excavations of Los Angeles's City Cemetery. Oral paper presentation at the Society for Historical Archaeology Annual Meeting, Albuquerque, NM.

Ehringer, C., L. Kry, S. Dietler, and M. Strauss, 2008. After the Bones Have Gone: The Role of Personal Effects in Identifying Unmarked Historic Burials. Poster presentation at the Society for Historical Archaeology Annual Meeting, Albuquerque, NM.

Presentations and Lectures

2005. Guest lecturer at Santa Monica Community College regarding career opportunities in cultural resources management, Santa Monica, CA.

2006. Guest lecturer at Santa Monica Community College regarding early Los Angeles history and cemetery research and excavation, Santa Monica, CA.

Sara Dietler is a project archaeologist with fourteen years of experience in cultural resource management and is also a cross-trained paleontological monitor. She has worked for more than nine years in the Los Angeles area and participated in both historic and prehistoric research throughout the county. Since joining AECOM's Los Angeles office, she has specialized in the development history of downtown Los Angeles and co-authored technical reports on numerous projects relating to this subject.

As lead archaeologist for the Los Angeles office, Sara directs prehistoric and historic field and research projects for many clients in the Los Angeles area including public agencies and private developers. She manages a staff of cultural resources specialists who conduct various types of cultural resources compliance including phase I surveys, construction monitoring, Native American consultation, archaeological testing and treatment, historic resource significance evaluations, and large-scale data recovery programs. Sara prepares technical documents in support of CEQA and Section 106 compliance as well as cultural resources components for General and Specific Plans.

Project Experience

Central Los Angeles High School #9, Los Angeles, CA
Conducted on-site monitoring and investigation of archaeological sites exposed as a result of construction activities. During data recovery phase in connection with a 19th century cemetery located on-site, participated in locating of features, feature excavation,

mapping and client coordination. Organized background research on cemetery including; genealogical, local libraries, city and county archives, other local cemetery records, internet and local fraternal organizations. Advised in lab methodology and set up, and served as project manager, contributing author and editor for the in-progress technical report.

Main Street Archaeological/Paleontological Monitoring and Assessment, Los Angeles, CA
Directed the archaeological and paleontological monitoring of a police parking facility in downtown Los Angeles. Coordinated with the client and construction personnel throughout the project. Archaeological monitoring resulted in the identification of nineteen archaeological features. Completed the analysis of artifacts recovered and is currently producing a technical report.

Lakeside Recreational Complex, Sylmar, CA
AECOM conducted a Phase I cultural resources evaluation of the historic-era Lakeside Debris Basin property including a California Register eligibility assessment for the facility itself and archaeological features identified as a result of the survey, and prepared a Cultural Resources Technical Report with findings and recommendations for further work, pursuant to CEQA requirements. Project Archaeologist.

Temple Street Widening Project, Los Angeles, CA
AECOM conducted archaeological monitoring during the widening of Temple Street in downtown Los Angeles. Extensive coordination with general contractors was involved, as well as response to discoveries including and segment of the zanja irrigation ditch and a large historic refuse deposit to determine appropriate treatment and develop recommendations. At the completion of the monitoring phase, AECOM archaeologists analyzed the artifacts and features documented during excavation and prepared and archaeological resource assessment.

Topanga Library Project, Topanga Canyon, CA
AECOM conducted archaeological monitoring during construction of the Topanga Library. Construction included the installation waterlines along the roadway outside of the main project area. Monitoring resulted in the discovery of materials associated with the recorded archaeological site CA-LAN-8. Directed cultural resource specialists in conducting archaeological testing of this site and worked closely with the LADPW to assist them in mitigating the effects of the project as well as coordinating with several agencies with oversight on the project. Resources were identified and evaluated for eligibility to the National Register of Historic Places. Assistant Project Archaeologist.

Metro Universal, North Hollywood, CA
Assisted in compiling a compendium of over seventy years of archaeological excavation and construction monitoring in and around the Campo historic site. Drafted appropriate mitigation for the archaeological resources within the scope of the proposed development. At the request of the client a Vision Plan for the Universal City property to the east of the project area was peer reviewed for consistency and appropriate mitigation to historical resources on that property and affects to the historical resources on the Metro Universal Project location.

Glassell Park Early Education Center and Affordable Housing Project, Los Angeles, CA
Conducted a Phase I study for the Glassell Park Early Education Center (EEC) and Affordable Housing Project adjacent to the existing Glassell Park Elementary School. Prepared a cultural resources study with findings and recommendations for further work, pursuant to CEQA requirements.

Belmont Primary Care #11, Los Angeles, CA
Conducted on-site monitoring and investigation

of a historic trash deposit exposed during grading. Assisted in completing and presenting background research on the property in order to contextualize the artifact findings. Conducted historic map research, as well as visiting local libraries, and city and county archives.

Olive View Medical Center Emergency Services Expansion, Los Angeles, CA
Participated in a Phase I cultural resources evaluation of a portion of the Olive View Medical Center campus in Sylmar. Assisted in research to support a California Register eligibility assessment of the MacClay Highline, an underground spur of the Los Angeles Aqueduct.

Olive View Medical Center Building 403 Cultural Evaluation
Los Angeles, CA
Completed the historic architectural survey and assisted the architectural historian in evaluating a historic ward building on the property of the Olive View Medical Center campus in Sylmar that was slated for demolition.

Chevron Station 31 Connection Project Fellows, CA
Directed a Phase I cultural resources evaluation of an undeveloped property in Kern County. Conducted an assessment of resources discovered during survey and prepared a Cultural Resources Technical Report with findings and recommendations for further work, pursuant to CEQA requirements.

Lang Ranch, El Monte, CA
Participated in the Phase I archaeological survey of the 46-acre project area. Project work involved the archaeological testing at two artifact isolate locations to determine presence of sub-surface deposits. Assisted in the preparation of an Archaeological Resources Technical Report and EIR section with findings and recommendations for further work, pursuant to CEQA requirements.

Woodland Duck Farm Project, El Monte, CA
Completed the Phase I investigation, including a historic structure and archaeological survey of the site of the former historic Woodland Duck Farm. Researched the history and background of the farm itself, assisted the Architectural Historian in the analysis of structures related to the duck farm and co-authored the technical report.

Santa Anita Reservoir, Los Angeles County, CA
Completed the Phase I investigation, including a historic structure and archaeological survey of the site of the Santa Anita Dam, Reservoir and Complex. Researched the history and background of the farm itself, assisted the Architectural Historian in the analysis of structures related to the dam complex and co-authored the technical report.

Western Bypass Bridge, Temecula, CA
Oversaw Phase I investigation including a record search and survey of the project area. Completed all documentation required for MND document.

Hellman Ranch Monitoring, Orange County, CA
Served as Lab Director for the final monitoring phase of the project, cataloging and analyzing artifacts recovered from salvage monitoring and test units placed in relation to recovered intact burials. Conducted microscopic analysis of small items such as bone tools and shell and stone beads. Directed lab assistants and oversaw special studies including the photo-documentation of the entire collection. Completed a section reporting on the results of the bead and ornament analysis in the final report, which was published as part of the AECOM technical series.

Home Depot Monitoring – Lake Elsinore, Riverside County, CA
Participated in archaeological monitoring of

Caltrans road-widening in vicinity of historic cemetery. Assisted in preparing negative report of findings. Coordinated with Caltrans.

Public Safety Facilities Master Plan, Los Angeles County, CA
Assisted in research and survey of a Phase I archaeological resources evaluation of an approximately five-square block area in downtown Los Angeles. Completed a record search at the South Central Coastal Information Center in addition to research on specific historic attributes present on the properties and general site history within the APE.

The Grove at Farmers Market Monitoring Project, Los Angeles, CA
Served as Lab Director for the analysis of a historic collection recovered from the area surrounding the historic Farmers Market and the nearby Gilmore Adobe. The project included cataloging and analysis of all recovered artifacts, reconstruction of items, photo-documentation and preparation for display and curation of the entire collection. Co-authored the resulting technical report for the project, which detailed the results of monitoring. The report included an analysis of features and artifacts recovered and a detailed history of the property.

San Diego Ballpark Project
Served as archaeological monitor for the construction of underground utility line installation for San Diego, California's downtown ballpark. Recovered historic artifacts and kept detailed records. Handled public relations and dealt with a variety of public officials and construction crews effectively, despite the controversial and complicated nature of this multimillion dollar project.

SANDAG Regional Beach Restoration Project
Acted as lead archaeological monitor in the inspection and analysis of offshore sediments along a large portion of coastal of San Diego County. The monitoring represented an effort to identify inundated archaeological sites in sediments representing former coastline. Collected samples of sediment, shellfish, and marine mammal remains from dredging spoils, and identified and described samples. Served as a vital member of a multidisciplinary team in materials evaluation. Job required familiarity with construction methods, and an ability to deal with a high level of media and public interest.

Barona Reservation Cultural Center ProjectSan Diego County, CA
Completed an inventory of the recently purchased core collection for a new archaeological museum. Identified, inventoried, cleaned, and restored the artifacts, including extensive lithic and ceramic assemblages. Transformed the old and poorly packaged collection into one professionally sorted, documented, and labeled, and curated to Federal standards.

All American Pipeline Conversion Survey
Led a field crew as a part of a 170-mile long archaeological survey for the conversion of a high-pressure gas pipeline in the Mojave Desert between the towns of Daggett and Blythe, California. The survey located and updated previously unrecorded resources, including 93 archaeological sites and 22 isolated artifacts.

Level Three Long Haul Construction Monitoring.
Coauthored a technical report concerning the salvage excavation of a Chumash multiple human burial exposed during the project, researching and analyzing the unique assemblage of stone beads associated with the human remains. Monitored the directional drilling, trenching, and clean-up relating to the installation of fiber optic cable along the coast of Santa Barbara and Ventura Counties, California. Worked closely with Chumash monitors in the

identification, boundary and significance testing, and protection of prehistoric archaeological sites.

Model Marsh Data Recovery. Excavated and water screened as part of a archaeological data recovery project for a buried Late Prehistoric period shell midden site (CA-SDI-15,598) in southern coastal San Diego, California. Following the excavation of 41 archaeological test units and 23 shovel test pits, sorted, catalogued, and speciated over 77,000 grams of shellfish and other cultural materials. Wrote the Invertebrate Faunal Analysis chapter of the resulting technical report.

MILCON Monitoring and Data Recovery. Served as field crew for the emergency salvage treatment of eleven flexed human burials on northern MCAS Camp Pendleton, San Diego County, California. Data recovery included the identification of burial features during monitoring, exposing, documenting, and identifying visible remains, and then pedestalling and removing them in blocks.

ARCO Burial Ground Salvage Excavation. Assisted in cataloguing and analyzing artifacts following the salvage excavation of site CA-LAN-2682, a Protohistoric period Gabrielino habitation site and burial ground. Identified, sorted, and catalogued archaeological material including artifacts, large numbers of invertebrate and vertebrate faunal remains, as well as human remains. Conducted extensive research on several similar sites, culminating in an analytical paper presented at the 1999 Society for California Archaeology Meetings and published the following year in the group’s proceedings.

Selected Reports

Central Los Angeles High School #9 Archaeological Excavation Report (in progress) (contributing author). Prepared for Los Angeles Unified School District. AECOM. (anticipated 2011).

Piecing Together the Prehistory of Landing Hill: A Place Remembered (contributing author). EDAW Cultural Publications. No. 3. (2007).

Archaeological Resources Assessment for the Alameda Street Improvement Project (in progress). Prepared for City of Los Angeles, Department of Public Works. AECOM. (2010)

Archaeological Resources Assessment for the MTA Universal Project. Prepared for Thomas Properties Group. EDAW, Inc. (2008).

Archaeological Evaluation Proposal (Phase II) of the Admiralty Site (CA-LAN047) for the State Route 90 Connector Road and the Admiralty Way Widening Projects, Marina del Rey, County of Los Angeles, CA. Prepared for Caltrans District 7. EDAW, Inc. (2007).

Cultural Resources Assessment for the Woodland Duck Farm Project, Avocado Heights, Los Angeles County, CA (with A. Tomes). Prepared for San Gabriel River & Lower Los Angeles Rivers and Mountains Conservancy (2007).

APPENDIX B

DPR FORMS

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code

Other Listings
Review Code
Reviewe Date

***Resource Name or #:** Upper Stone Canyon Reservoir

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☒ **Unrestricted** ***a. County:** Los Angeles
and (P2b and P2c or P2d. Attach a Location Map as necessary.)

***b. USGS 7.5' Quad:** Beverly Hills **Date:** 1995
T 1S; **R** 16W ; **¼ of ¼ of Sec** S ; **SBB.M.**

c. Address: 14796 Mulholland Drive City: Los Angeles Z ip: 90077

d. UTM: Zone 11; 36578.20 mE/ 3776562.76 mN

e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate)
In Stone Canyon, approximately 0.5 miles south of Mulholland Drive between Roscomare Road and Beverly Glen. From Mulholland Drivem south on Stone Canyon Rd.

***P3a. Description:** (Describe resource and major elements. Include design, materials, condition, alte rations, size, setting, and boundaries) T he historic-era resource identified as *Upper Stone Canyon Reservoir* consists of the reservoir, outlet tower, foot bridge, storm channel, pumping mechanisms, perimeter roadw ay, chain link fence, spring channels, abandoned drainage pipe, and a spillway channel. (See Continuation Sheet)

***P3b. Resource Attributes:** (List attributes and codes)
HP11 - Reservoir

***P4. Resources Present:** ☐ Building ☒ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (Isolates, etc.)

P5b. Description of Photo:
(View, date, accession #)
Stone EIR/Survey/Photo 020

***P6. Date Constructed/Age and Sources:** ☒ Historic ☐ Prehistoric ☐ Both
1954

***P7. Owner and Address:**
Los Angeles Department of Water and Power
111 North Hope Street
Los Angeles, CA 90012

***P8. Recorded by:**
Tomes, A. and S. Dietler
EDAW, Inc.
515 S. Flower St., 9th Fl
Los Angeles, CA 90071

***P9. Date Recorded:**
3/2009

***P10. Survey Type:** (Describe)
Reconnaissance

*P11. Report Citation: **(Cite survey report and other sources, or enter "none".)** Dietler, S, A.Tomes, M.Strauss, 2009 PHASE I CULTURAL RESOURCES ASSESSMENT FOR THE UPPER STONE CANYON RESERVOIR WATER QUALITY IMPROVEMENT PROJECT, CITY OF LOS ANGELES, CALIFORNIA

***Attachments:** ☐ NONE ☒ Location Map ☒ Sketch Map ☒ Continuation Sheet ☒ Building, Structure/Object Record ☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record ☐ Photograph Record ☐ Other (List):

***Resource Name or #:** Upper Stone Canyon Reservoir

B1. Historic Name: Upper Stone Canyon Reservoir

B2. Common Name: Upper Stone Canyon Reservoir

B3. Original Use: Reservoir

B4. Present Use: Reservoir

***B5. Architectural Style:**
Compacted earth-fill

***B6. Construction History:** (Construction date, alterations, and date of alterations)
Construced 1954

***B7. Moved?** ☒**No** ☐**Yes** ☐**Unknown** **Date:** **Original Location:**

***B8. Related Features:**
See P3a.

B9a. Architect: Los Angeles Water Department

B9b. Builder: Los Angeles Water Department

*B10. **Significance:** **Theme** Water System **Area** Los Angeles Area, Santa Monica Mountains
Period of Significance 1951 – 1954 **Property Type** Reservoir **Applicable Criteria** n/a
(Discuss importance in terms of historical or architectural context as defined by theme, period and geographic scope. Also address integrity.)

Historical Context:
As part of on-going city -wide water storage improvements during the early part of the twentieth century, a dam and reservoir were built in Stone Canyon. Construction of the original Stone Canyon Dam, and its resulting reservoir (present-day Lower Stone Canyon Reservoir) began in August 1920. Stone Canyon Reservoir was initially placed into service in 1921 and provided much-needed water required for development on Los Angeles' west side (Los Angeles Public Library (LAPL) Department of Water and Power (DWP) Photo Collection 1004924). "Completion of Stone Canyon Reservoir in the Santa Monica Mountains, back of the Los Angeles Country Club, as the basis of water supply to the western seaward sections of Los Angeles, from Beverly Hills to the ocean, has entirely changed the development atmosphere of the Santa Monica region. It is another illustration of the immediate response of every district of Southern California to the bestowal of the water gift" (Los Angeles Times (LAT) 1922). (See Continuation Sheet)

B11. Additional Resource Attributes: (List attributes and codes)

***B12. References:**
See Continuation Sheet

B13. Remarks:

***B14. Evaluator:**
Tomes, A. and S. Dietler

***Date of Evaluation:**
3/2009

(Sketch Map with north arrow required.)
See Sketch Map

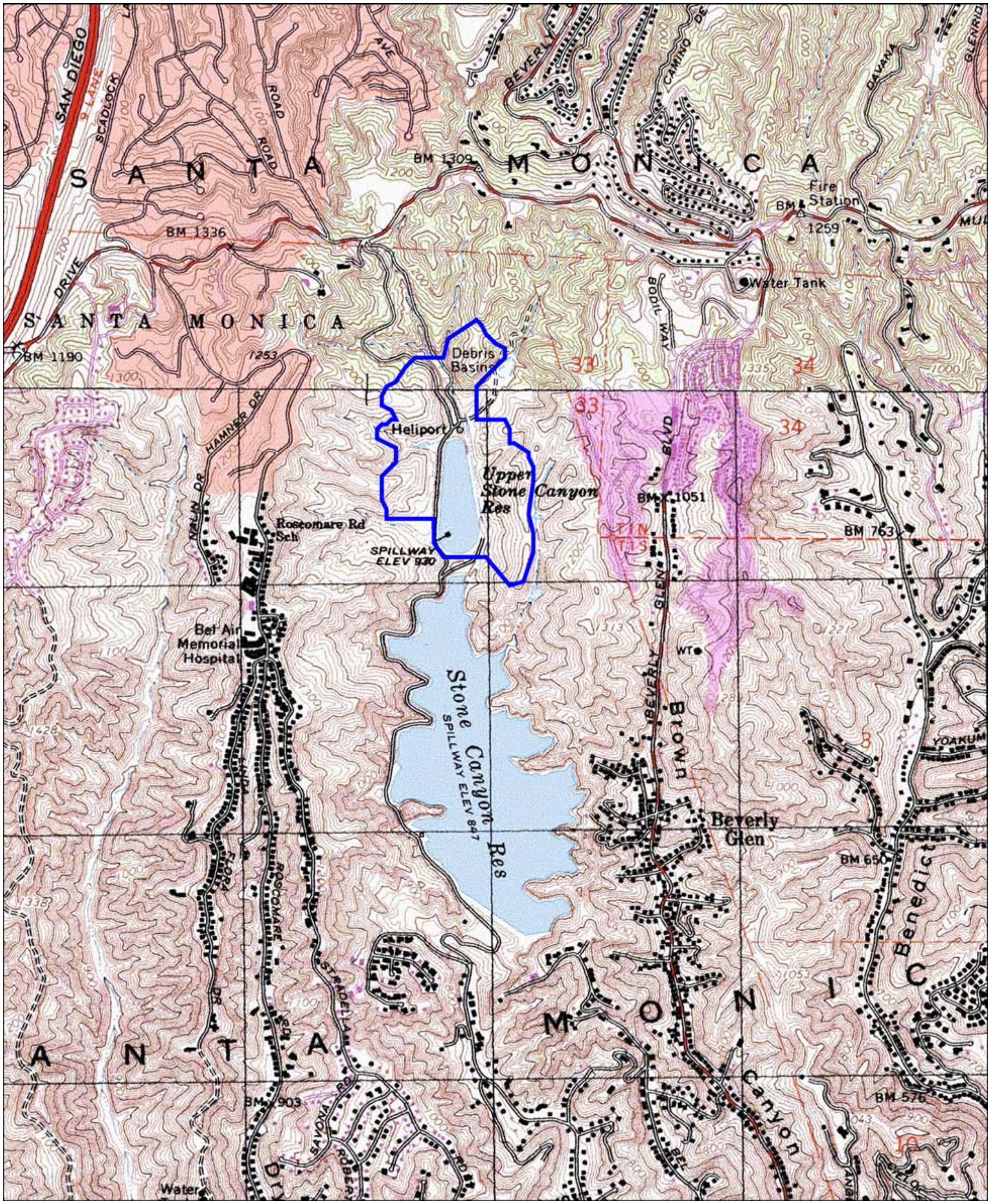
State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary #
HRI#
Trinomial

Page 3 **of** 7 ***Resource Name or #:** Upper Stone Canyon Reservoir

***Map Name:** Beverly Hills ***Scale: 1:24,000** ***Date of Map:** 1995



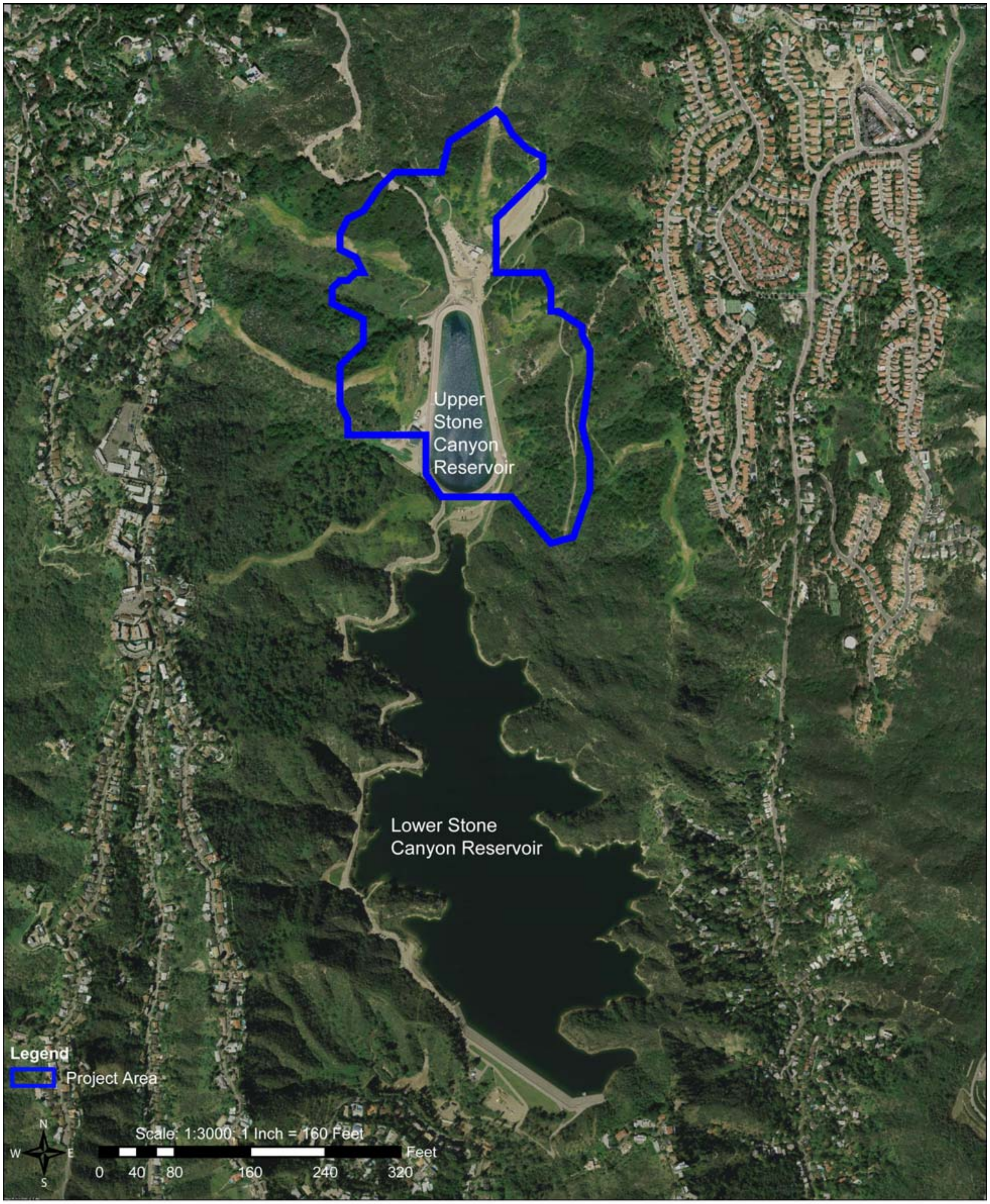
DPR 523J (1/95) ***Required information**

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
SKETCH MAP

Primary #
HRI#
Trinomial

Page 4 **of** 7 ***Resource Name or #** Upper Stone Canyon Reservoir

***Drawn By:** Timothy Harris ***Date:** 2009



DPR 523K (1/95) *Required information

***Recorded by:** Tomes, A. and S. Dietler ***Date:** ☒ Continuation ☐ Update

Affiliation: EDAW, 515 S. Flower Street, 9th Fl. Los Angeles, CA 90071

P3a (Description) continued:

The reservoir itself is an uncovered, above-ground, compacted earth-fill structure approximately 1,600 feet in length and 500 feet in width, at its maximum. The reservoir has a maximum depth of 49 feet, a high water elevation of 929 feet, and a surface area of approximately 14 acres at the high water elevation. The bottom and sides of the reservoir are paved with asphaltic concrete. The reservoir's outlet tower is constructed of reinforced concrete, and measures approximately 82-feet high from the bottom of the base to the top of the parapet wall. The tower is accessed by a plate girder foot bridge. A curvilinear concrete storm (drainage) channel with earthen embankments is located at the northern end of the reservoir. Pumping mechanisms are attached to a concrete pad also near the northern end of the reservoir. An approximately 18-foot wide perimeter roadway crests the reservoir and grades away from the inside reservoir slope. A chain link fence encloses the entire structure. Concrete-lined spring channels with concrete block wall abutments are located adjacent to the reservoir. A number of dilapidated abandoned stand pipes (drainage pipes) were noted lying amongst vegetation around the reservoir. The stand pipes are metal featuring vertical linear perforations and convex triangular caps. A spillway channel described as a rectangular reinforced concrete flume several hundred feet long, and approximately ten feet wide was also documented on the east side of the reservoir.

B10 (Significance) continued:

Historical Context cont.
Although the original reservoir provided storage for approximately 3.4 billion gallons of drinking water, by the end of World War II, postwar development in the area necessitated an increase in service capacity. This was answered with the construction of additional reservoirs in Los Angeles County such as the Santa Fe Reservoir (1947–1949) and the Whittier Narrows Reservoir (1957). Additional water needs during the 1950s set into motion plans for the construction of a reservoir to the north of Lower Stone Canyon Reservoir (Crofts 1954). The new reservoir would be known as Upper Stone Canyon Reservoir and would be constructed in part to provide increased water pressure to the communities of Brentwood and Pacific Palisades (LAPL DWP Photo Collection 1004919).

The construction of the $2,600,000 Upper Stone Canyon Reservoir, then referred to as "Project 371", began with the Chief Engineer's Authorization dated September 10, 1951. This authorization initiated the design and construction of the reservoir by the Field Engineering Division of the Water Department under R.R, Proctor. Rented equipment was used and paving was done by sub-contract. Norman M. Imbertson was engineer of construction and Loring E. Tabor supervised inspection; superintendent of construction was Hugh Mulholland; and resident engineers were Robert L. Brady and Fraser M. Crofts (LAPL DWP Photo Collection 1004923). The first phase of construction began December 6, 1951 and included building a bypass line around the reservoir to supply water to the area usually served by the original dam, and excavation for tunnel number 1 (Hayward 1956).

Phase II of construction began in October 1952. This phase included the excavation of the main canyon, reservoir side cut excavation below the crest road, excavation of the slough material, placing the rolled fills for the north dam, main dam, and reservoir bottom, and completing the side canyon fills. Excavation for the outlet tower base began in May 1953. The outlet tower bridge abutment construction commenced October 1953. This abutment, a hollow reinforced concrete shell with integral column bridge supports, was built with concrete hand rails in the approach section. The outlet tower bridge itself is a thin plate girder type. The bridge was constructed by Gerstenberger and Pierson, the prime contractor. The bridge was completed, inspected, and accepted by the Water Division Section on December 28, 1953.

Upper Stone Canyon Reservoir and its associated structures were designed to meet seismic stresses of mass times 0.10 gravity. At the time, design allowances for stresses in concrete and reinforced steel conformed to the Department standards and the Los Angeles Building Code. The reservoir was placed in service on January 27, 1954 (Crofts 1954).

Primary # ______
HRI # ______
Trinomial ______

***Resource Name or #** Upper Stone Canyon Reservoir

***Recorded by:** Tomes, A., and S. Dietler

***Date:** ☒ Continuation ☐ Update

Affiliation: EDAW, 515 S. Flower Street, 9th Fl., Los Angeles, CA 90071

B10 (Significance) continued:

Significance Assessment

Historic water-related systems may be found eligible to the CRHR under any of the previously outlined significance criteria, although some criteria are more commonly relevant than others. Potential significance is evaluated in direct relation to the contextual themes identified as being relevant to a particular region.

CRITERION 1

Like other types of public works facilities, water-related systems are inherently important to the communities they serve, providing infrastructure essential for community development. For a water system to be considered eligible under Criterion 1, it must be found to be associated with specific important events or patterns of events. The significance of the documented association must be an important association in and of itself, not mere coexistence.

Research has shown that the Los Angeles area has had a long history in water storage/water-related projects. By the early to mid decades of the twentieth century, several reservoirs and associated features (e.g., dams, etc.) had been constructed and were in use throughout the Los Angeles area, including, but not limited to, the Santa Fe Reservoir and Whittier Narrows Reservoir. Upper Stone Canyon Reservoir is but one of many such structures built during the mid twentieth century. Research did not indicate that this reservoir was significantly associated with events considered important in local or state-wide history. This structure does not appear to meet the eligibility criteria for listing on the CRHR under Criterion 1.

CRITERION 2

For eligibility under Criterion 2, the resource must be associated with an important person's productive life, and must be the a resources most closely associated with that person. Water-related systems are rarely found eligible under Criterion 2, however, a water system could be found eligible under this criterion if the person's association with the system is strong, and no other properties closely associated with that person remain.

Upper Stone Canyon Reservoir is not known to be associated with individuals considered important in local or state-wide history. The reservoir was designed and constructed by the Field Engineering Division. Research did not indicate association of the reservoir to noted engineers or architects. This structure, therefore, does not appear eligible for CRHR listing under Criterion 2.

CRITERION 3

Water-related systems can be determined eligible under Criterion 3 for their engineering or design values. Resources eligible under this criterion may have unique features, or they may be good examples of a type of property.

Although Upper Stone Canyon Reservoir maintains relatively good integrity (the only known modifications consist of the main storm channel reconstruction in 1956–57 and new chlorination station and filtration plant), it is an example of a common reservoir type (earth-fill) and does not represent unique or intrepid designs. Most of the reservoirs built contemporaneously, as well as earlier structures, utilized this type of construction. Upper Stone Canyon Reservoir does not appear eligible for listing on the CRHR for architectural distinction or as the work of a master.

CRITERION 4

Eligibility under Criterion 4 hinges is contingent on the resource's ability, as contained in artifacts and objects, to further address issues of scientific importance to the period of significance. These data are primarily derived from archaeological sites, and rarely buildings and structures themselves. Archaeological features or deposits may provide new information not available elsewhere regarding kinds of documented or undocumented activities in the area. While buildings and structures can sometimes provide important information regarding historic construction techniques, most of these techniques are well documented in both written and visual sources, and generally, would not yield new primary information.

Information on the construction and history of Upper Stone Canyon Reservoir has been documented in several sources; therefore the structure does not appear to possess the potential to answer important scientific questions, or yield previously unknown information. The resource's research value has been realized. This structure, therefore, does not appear to be eligible for listing under CRHR Criterion 4.

State of California C The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET

Primary # ______
HRI # ______
Trinomial ______

 ***Resource Name or #** Upper Stone Canyon Reservoir

***Recorded by:** Tomes, A. and S. Dietler ***Date:** ☒ Continuation ☐ Update

Affiliation: EDAW, 515 S. Flower Street, 9th Fl., Los Angeles, CA 90071

B12 (References) Continuation:

Crofts, F. M.
1954 *City Of Los Angeles Department of Water and Power Water System, Final Report of Construction Upper Stone Canyon Reservoir and Stone Canyon Bypass Line and Tunnels 1951–1954.* Unpublished Document on File: Los Angeles Department of Water and Power.

Heyward, Glen R.
1956 *City Of Los Angeles Department of Water and Power Water System, Stone Canyon Reservoir Final Construction Report.* Unpublished Document on File: Los Angeles Department of Water and Power.

Los Angeles Public Library (LAPL)
n.d. *DWP Photo Collection*. Lower Stone Canyon reservoir, Bar Code 1004924.
n.d. *DWP Photo Collection*. Upper Stone Canyon reservoir construction, Bar Code 1004919.
n.d. *DWP Photo Collection*. Upper Stone Canyon reservoir, Bar Code 1004923.

Los Angeles Times (LAT)
1922 Santa Monica Vivified By Mountain Water. *Los Angeles Times*, March 19, 1922, Pg. V5.

APPENDIX G

TRAFFIC STUDY

Traffic Study for the Upper Stone Canyon Reservoir Water Quality Improvement Project Los Angeles, California

May 3, 2011

Prepared for:

AECOM

515 South Flower Street, 9th Floor
Los Angeles, California 90071
(213) 593-7700

Prepared by:

KOA CORPORATION
PLANNING & ENGINEERING

1100 Corporate Center Drive, Suite 201
Monterey Park, California 91754
(323) 260-4703

JA81142

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1. Introduction

This report documents the traffic analysis prepared by KOA Corporation to assess the traffic impact of the proposed Upper Stone Canyon Reservoir Water Quality Improvement Project in Los Angeles, California. The project has been proposed for implementation by the City of Los Angeles Department of Water and Power (LADWP).

This traffic study assesses the potential traffic impact of the construction of the proposed project, as well as the construction of three alternatives (including a no-build alternative) to the proposed project. KOA produced this study for AECOM. A traffic study Memorandum of Understanding (included in Appendix L to this report) was provided to LADOT for review and approval at the start of the study effort.

1.1 Project Overview

The Upper Stone Reservoir is a component of the larger Stone Canyon Reservoir Complex (SCRC), which consists of approximately 750 acres of property owned and maintained by LADWP. To help ensure the quality, reliability, and stability of the City of Los Angeles drinking water supply and to ensure compliance with updated United States Environmental Protection Agency (EPA) water quality standards, LADWP proposes to construct a concrete roof over the uncovered Upper Stone Canyon Reservoir.

A new covered reservoir would be constructed under the proposed project, necessitating the demolition of the existing reservoir. The new reservoir would have a slightly reduced footprint than the existing reservoir. A soil cover would be placed over the concrete reservoir roof and local plant species would be planted within the soil cover.

After completion of the new reservoir, public access for passive recreation activities would be provided to the Reservoir property. The recreation functions would be maintained and operated by the Los Angeles Department of Recreation and Parks (LADRP) and/or the Santa Monica Mountains Conservancy. The Reservoir would remain under the ownership of LADWP, which would continue to maintain the water storage and transmission-related facilities at the site.

The buried concrete-covered reservoir analyzed as the proposed project in this EIR differs in several respects from the proposed project that was described in the Initial Study for the project. In the NOP and during the EIR scoping meeting (July 2008) and a subsequent meeting (December 2008) held in the local community, the proposed project was described as a series of three separate underground cylindrical concrete tanks. While the underground tanks option would achieve the objectives of the proposed project, it was preliminarily determined by AECOM that it may also result in several potentially significant environmental impacts related to air quality, traffic, noise, and biological and visual resources, largely associated with extensive earthwork operations required to construct and fully bury the concrete tanks.

LADWP, in response to community input and based on detailed investigations related to feasibility, has developed the current concrete-roof reservoir as the proposed means to provide a buried water storage facility. The buried concrete-roof reservoir would meet the primary and secondary objectives of the proposed project and would significantly lessen, although not necessarily eliminate, the potential environmental impacts associated with the underground concrete tanks option, primarily by reducing the quantity of earthwork required and by confining most construction activities to the Reservoir itself and immediately-adjacent areas.

1.2 Project Location

The Upper Stone Canyon Reservoir is located at a distance of approximately one half of a mile south of Mulholland Drive, between Roscomare Road and Beverly Glen Boulevard. The Reservoir property is owned and maintained by LADWP. The Reservoir is accessed from Mulholland Drive via a non-public road that is located approximately 1.2 miles east of the San Diego Freeway (I-405).

The Project access driveway to Mulholland Drive has limited vehicle movements, based on roadway striping. A striped center median at the driveway location has dashed striping on the south side. This prohibits inbound left turns at this driveway. Therefore, project traffic was not assumed to travel east of the project site and this driveway. An additional project element (through regulatory signage) will prohibit outbound left turns from the driveway. Therefore, for the post Project period, the vehicle access pattern at the driveway will be right-in/right-out.

Figure 1 illustrates the area roadway network and the location of the project site.

1.3 Project Objectives

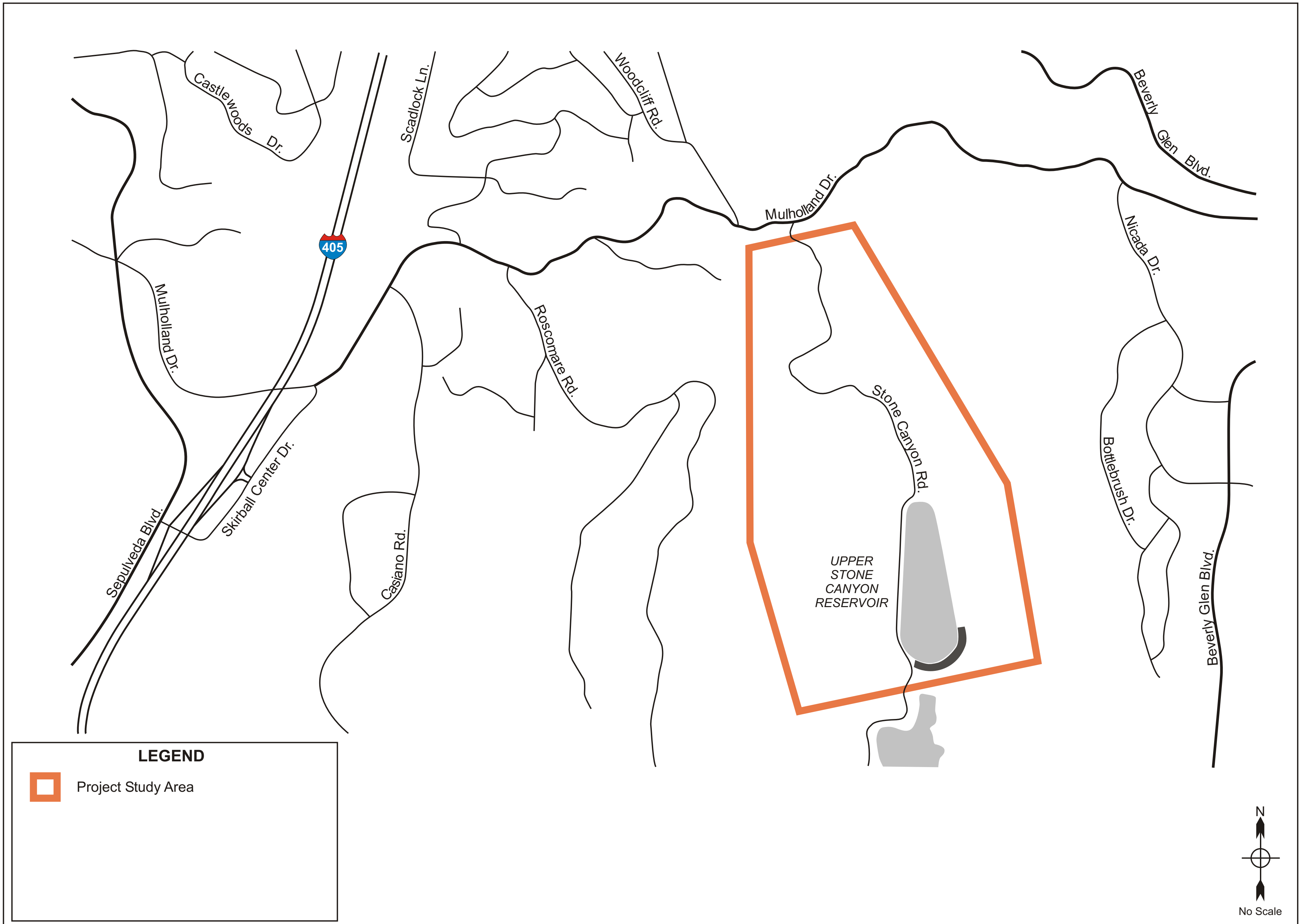
The goal of the project is to maintain and improve the quality, reliability, and stability of the service area drinking water supply in order to continue to meet existing demand, while, consistent with these drinking water related requirements, restoring the natural character in portions of Stone Canyon.

The primary project objectives related to this goal area to:

- Comply with updated water quality standards enacted by the EPA and, by extension, the California Department of Public Health.

- Preserve local water storage capability to maintain reliability and flexibility to meet the service area demand for drinking water including during emergency or planned outages of upstream supplies.

The secondary objectives related to the goal of the proposed project are to help restore the natural character of those portions of the canyon that would be included in the area dedicated to project improvements required to meet the above primary water quality and storage objectives.



KOA CORPORATION
PLANNING & ENGINEERING

Upper Stone Canyon Reservoir Water Quality Improvement Project

Figure 1

Project Location

2. Proposed Project Description and Construction Phasing

2.1 Project Description

The Upper Stone Reservoir is a component of the larger Stone Canyon Reservoir Complex (SCRC), which consists of approximately 750 acres of property owned and maintained by LADWP. Currently, the SCRC is not open to public access. To accomplish the objectives of the proposed project, the open-surface Upper Stone Reservoir would be covered with a concrete roof.

The proposed concrete reservoir would be covered with a maximum of three feet of topsoil and planted with native species. This would help fulfill the secondary objective of the project to restore the natural character of those portions of the canyon involved in the improvements required to meet the primary water quality and water storage objectives of the project.

Under the proposed project, public access would be provided to the SCRC for passive recreation purposes. Public access to Stone Canyon is a component of the proposed project based on the public investment in the buried concrete-roof reservoir, but it is neither a primary nor secondary objective to the project. Furthermore, public access would not be a component of alternative to the proposed project that would not provide some form of buried reservoir facility.

2.2 Construction Staging

Construction of the proposed project would take approximately four and one-half years to complete. It is anticipated that construction activities would start in 2015 and be completed in 2019, and would be conducted in five phases.

The following text describes the overall sequence of construction and the general level of activities related to worker commute trips, truck deliveries, and equipment operations. The peak period of construction has been determined based on the level of truck activities and commute trips in order to define the applied ambient growth rate and analysis year, rather than utilizing the construction completion year.

2.2.1 Phase 1: Reservoir Draining, Mobilization, Reservoir Demolition, and Landslide Stabilization (4 months)

The first phase of construction would consist of draining the existing Upper Stone Reservoir, mobilizing for construction, demolishing the reservoir and appurtenant facilities, and initiating the stabilization of potential landslide areas east of the reservoir. This phase would take approximately four months to complete. Based on a monthly average, the number of on-site workers per day would range from a low of 17 workers during mobilization to a peak of 48 workers during the concurrent stabilization of the landslide areas and the demolition of the reservoir. Based on a monthly average, the number of truck deliveries or haul trips per day would range from a low of three trucks during mobilization to a peak of 79 trucks during the concurrent stabilization of the landslide areas and the demolition of the reservoir.

Prior to initiating construction, Upper Stone Reservoir would need to be drained. This would initially be accomplished by normal consumption through the drinking water distribution system. After the water reaches the lower limit of the normal operating range, the reservoir would take approximately 21 days to drain the remaining water and an additional 10 days to dry out. This task would involve a minor number of equipment and personnel.

During this first phase of construction, mobilization would entail the widening and stabilization of existing on-site roads as necessary for truck access during construction, preparing construction materials, laydown areas, vehicle and equipment parking areas, erecting temporary offices and other support facilities, and establishing temporary electrical power connections. This task would occur concurrently with the draining of the reservoir and would take approximately one month to complete.

In order to install the concrete roof, existing asphalt lining, the inlet line, the outlet tower and line, the surrounding curb and fence would be demolished. This task would take approximately three months to complete.

2.2.2 Phase 2: Landslide Stabilization, Sub-Grade Preparation, and Reservoir Rough Shaping (12 months)

The second phase of project construction would consist of completing the landslide stabilization task, excavating, and preparing the sub-grade below the reservoir to adequately support the concrete roof system and the soil cover. This phase would take approximately 12 months to complete. Based on a monthly average, the number of on-site workers per day would range from a low of 28 to a peak of 67 workers. The number of truck deliveries or haul trips per day would range from a low of four to a peak of 49.

2.2.3 Phase 3: Covered Reservoir and Sub-Drain System Construction (27 months)

The third phase of project construction would consist of the construction of the new concrete-roof reservoir, including the side retaining walls, interior shear walls, concrete liner, and the concrete column and roof system. This phase would take approximately 27 months to complete. Based on a monthly average, the number of on-site workers per day would range from a low of 48 to a peak of 107 workers. Based on a monthly average, the number of truck deliveries or haul trips per day would range from a low of 20 to a peak of 57.

2.2.4 Phase 4: Backfilling and Landscaping (2 months)

The fourth construction phase would consist of backfilling behind the retaining walls, including the areas between the walls at the south end of the reservoir and the existing earthen dam. In addition, the reservoir would be covered with topsoil and site landscaping. This phase would take approximately two months to complete. The number of on-site workers per day would be 47, and the average number of truck deliveries or haul trips per day would be 163.

2.2.5 Phase 5: Recreation Improvement (6 months)

The final construction phase would involve the construction of a new recreation facility at the Reservoir site, but would only occur with construction of the concrete roof. The construction would involve clearing, grading, and stabilizing trails; rough grading the pads for the parking areas and support building; and installing fencing, gates, and signs. This phase would take approximately six months to complete. An average of 12 workers would be on-site throughout the phase. Truck delivery trips to the site would not exceed four truck trips on any day.

2.3 Post-Project Operations

The Upper Stone Reservoir property would remain under the ownership of LADWP, but the recreation function and the property maintenance (other than the water supply and distribution facilities) would be the responsibility of LADRP and/or the Santa Monica Mountains Conservancy.

Recreation functions would be conducted during daylight hours only, and no night lighting other than minimal parking lot and pathway security lighting would be provided. The gate at the Mulholland Drive entrance would be opened in the morning and closed at dusk.

A parking lot for the park use would be constructed to the north of the Upper Stone Reservoir, with a total of 25 spaces. If the concrete cover is not constructed, the park use would not be provided and the Reservoir site would continue to be closed to the public, and would therefore continue to generate a negligible number of daily vehicle trips.

3. Alternatives to the Proposed Project

In accordance with Section 15126.6(a) of the CEQA Guidelines, an EIR must discuss a range of reasonable alternatives to the project "...which would feasibly attain most of the basic objectives of the project...and evaluate the comparative merits of the alternatives." The factors that can determine feasibility are site suitability, other plan or regulatory limitations, and jurisdictional boundaries. An EIR need not consider an alternative that has effects that cannot be reasonably ascertained or when implementation is remote and speculative. The alternatives analysis must also include a comparative evaluation of the No Project Alternative per Section 15126.6(e) of the CEQA Guidelines.

A discussion of each alternative is provided below. The construction truck route for each alternative would be similar to the proposed project, as discussed within Section 2 of this report. Throughout construction, the truck and delivery route and access provisions would be the same as that defined for the proposed project.

An evaluation of the following alternatives, identified by LADWP for the proposed project, is provided in Chapter 5 of this report:

- Alternative 1: No Project
- Alternative 2: Floating Reservoir Cover Alternative
- Alternative 3: Aluminum Cover Alternative

3.1 Alternative 1 – No Project

The Alternative 1 (No Project) analysis, assumes that the Reservoir operations would remain the same as under existing conditions and a negligible number of vehicle trips would continue to be generated on a daily basis.

3.2 Alternative 2 – Floating Cover Alternative

Under project Alternative 2 (Floating Cover Alternative), the Reservoir would be retained in its existing configuration, and LADWP would install a flexible membrane floating cover over the surface of the water. Under this alternative, the Reservoir would remain under the operation of LADWP and recreational facilities would not be constructed.

Construction of this alternative would take approximately one and one-half years to complete. It is anticipated that construction activities would start in 2014 and be completed in 2015. The alternative would be conducted in three basic phases, as described below.

3.2.1 Phase 1: Reservoir Draining, Mobilization, and Reservoir Demolition (4 months)

The first phase of construction for Alternative 1 would consist of the draining of the reservoir, mobilizing for construction, and demolishing the existing reservoir and appurtenant facilities. This phase would take approximately four months to complete. During Phase 1, an average of approximately 17 to 23 daily workers would be on-site. Based on a monthly average, approximately three to 34 daily truck deliveries or haul trips would be generated from the site.

Similar to the proposed project, the existing reservoir would need to be drained. This would initially be accomplished by normal consumption through the drinking water distribution system. After the water reaches the lower limit of the normal operating range, it would take approximately 21 days to drain the remaining water and an additional 10 days for the reservoir to dry out. Mobilization would entail widening and stabilizing existing on-site roads as necessary for truck access during construction, preparing construction materials, laydown areas, vehicle and equipment parking areas, erecting temporary offices and other support facilities, and establishing temporary electrical power connections. This task would occur concurrently with draining the reservoir and would take approximately one month to complete.

3.2.2 Phase 2: Construction of Asphalt Reservoir Liner (7 months)

The second phase of construction would consist of relining the reservoir with asphaltic concrete and installing new concrete equipment vaults. This phase would take approximately seven months to complete. Based on the monthly average, approximately 34 workers would be on-site per day. Approximately 14 truck deliveries per day would occur during this phase.

3.2.3 Phase 3: Installation of Floating Cover (4 months)

The third phase of construction would consist of the installation of the floating cover. This phase of work would take approximately four months to complete. An average of approximately 20 workers would be on-site per day. The average number of truck deliveries per day would be approximately one; however, more than a single delivery per day would occur at times. After the floating cover is installed, the reservoir would take approximately one month to refill.

3.2.4 Post-Project (Floating Cover) Operations

The reconstructed reservoir with the floating cover would not require LADWP personnel to be located permanently on site. LADWP would maintain the reservoir, pipelines, and ancillary elements at a similar level of activity level that occurs under current operations. Minimal maintenance of the floating cover is necessary that includes the occasional washing of the cover to remove dirt and debris. This operation would generate minimal traffic to and from the site. Under this alternative, public access to the SCRC would be prohibited, as it is under current conditions.

3.3 Alternative 3 – Aluminum Cover Alternative

Under project Alternative 3 (Aluminum Cover Alternative), the Reservoir would be retained in its existing configuration, and LADWP would install a lightweight aluminum cover over the entire water surface. Under this alternative, the Reservoir would remain under the operation of LADWP and recreational facilities would not be constructed. Therefore, public access to the SCRC would be prohibited, as it is under current conditions.

Construction of the alternative would take approximately three and a-half years to complete. It is anticipated that construction activities would start in 2015 and be completed in 2018 and would be conducted in four basic phases, as described below.

3.3.1 Phase 1: Reservoir Draining, Mobilization, Reservoir Demolition, and Landslide Stabilization (4 months)

The first phase of construction would be similar to the proposed project, consisting of draining the reservoir, mobilizing for construction, demolishing the existing reservoir and appurtenant facilities, and initiating the stabilization of potential landslide areas to the east of the facility. This phase would take approximately four months to complete. During Phase 1, an average of approximately 17 to 48 daily workers would be on-site during the concurrent stabilization of the landslide areas and the demolition of the reservoir. Based on a monthly average, approximately three to 79 daily truck deliveries or haul trips would be generated from the site.

Similar to the proposed project, the reservoir facility would need to be drained. This would initially be accomplished by normal consumption through the drinking water distribution system. After the water reaches the lower limit of the normal operating range, it would take approximately 21 days to drain the remaining water and an additional 10 days for the reservoir to dry out. Mobilization would entail widening and stabilizing existing on-site roads as necessary for truck access during construction, preparing construction materials, laydown areas, vehicle and equipment parking areas, erecting temporary offices and other support facilities, and establishing temporary electrical power connections. This task would occur concurrently with the draining of the reservoir and would take approximately one month to complete.

In addition, this phase of construction would include stabilization of the landslide area located to the east of the facility. The landslide stabilization task would take a total of approximately five months to complete. The first three months would take place concurrently with the reservoir demolition task.

In order to install the aluminum cover and function properly, the inlet spillway channel, concrete outlet tower, and outlet tower footbridge would be demolished during this phase. In addition, the implementation of the floating cover alternative would represent an opportunity to replace the original 6-inch thick asphalt liner while the reservoir is drained and out of service.

3.3.2 Phase 2: Landslide Stabilization and Construction of Asphalt Reservoir Liner (7 months)

The second phase of construction would consist of completing the landslide stabilization task, relining the reservoir with asphaltic concrete and installing new concrete equipment vaults. This phase would take approximately seven months to complete. Based on the monthly average, approximately 34 to 59 workers would be on-site per day. Approximately 14 to 69 truck deliveries and haul trips would occur on a daily basis.

3.3.3 Phase 3: Aluminum Cover Construction (26 months)

The third phase of construction would consist of installation of the aluminum cover. In addition, Phase 3 would include construction of the caissons, reinforced concrete columns, and concrete perimeter wall, as well as installation of the truss system and aluminum decking. This phase of work would take approximately 26 months to complete. An average of approximately 27 workers would be on-site per day. The average number of truck deliveries per day would be approximately four. After the aluminum cover is installed, refilling the reservoir would take approximately one month and would occur concurrently with Phase 4.

3.3.4 Phase 4: Replanting Landslide Stabilization Area (2 months)

The fourth phase of construction would consist of replanting the approximately 20-acre area east of the reservoir disturbed by the landslide stabilization task. This phase of work would take approximately two months to complete. An average of approximately 11 workers would be on-site per day. The average number of truck deliveries per day would be approximately two.

3.3.5 Aluminum Cover Operations

The reconstructed reservoir with the aluminum cover would not require LADWP personnel to be located permanently on site. LADWP would maintain the reservoir, pipelines, and ancillary elements at a similar level of activity level as that occurring under current operations. Minimal maintenance of the aluminum cover is necessary. This operation would generate a negligible number of trips to and from the site, similar to current levels. As discussed, public access to the SCRC would be prohibited.

3.3.6 Solar Panel Option

Under this Aluminum Cover Alternative, LADWP would consider an option to install solar photovoltaic panels on the aluminum cover. The installation of the solar panels would be an additional phase of construction that would occur after the construction of the aluminum cover. The solar panel option would extend the construction period from approximately three and one-half years to four years.

3.3.7 Phase 5: Solar Panel Installation (7 months)

The fifth phase of construction would consist of installation of the solar panels, including the actual panel installation and wiring, the installation of power inverters and transformers, and the interconnection of the solar power facility to the City distribution system. This phase would take approximately seven months to complete. An approximate total of 25 workers would be required to install the panels and complete the wiring. This task would require less than three truck deliveries per day for the solar panels and about two additional truck deliveries for the other required components.

4. Existing Area Traffic Conditions

This section of the report provides descriptions of roadway characteristics within the study area and a summary of existing traffic conditions.

4.1 Study Intersections and Roadway Segments

For the traffic impact analysis, five locations were defined as study intersections in the project Memorandum of Understanding (MOU) with LADOT, which is provided as Appendix L to this report. Existing intersection traffic volumes were collected on Wednesday, May 26, 2010. The list of study intersections is as follows:

1. Roscomare Road and Mulholland Drive
2. Casiano Road and Mulholland Drive
3. Skirball Center Drive and Mulholland Drive
4. Skirball Center Drive and I-405 Northbound on/off Ramps
5. I-405 Southbound on/off Ramps and Skirball Center Drive

In addition, the following five roadway segments were also included in the study area. The associated daily roadway counts were collected for two consecutive days on Tuesday, May 25, 2010 and on Wednesday, May 26, 2010, and each of the daily totals was averaged for the analysis.

A. Mulholland Drive, between Nicada Drive & Stone Canyon Road
B. Mulholland Drive, between Woodcliff Road & Antelo Place
C. Mulholland Drive, between Roscomare Road & Casiano Road
D. Skirball Center Drive, between Mulholland Drive & I-405 NB on/off Ramps
E. Skirball Center Drive, between curve on Skirball Center Drive & I-405 SB on/off Ramps

Figure 2 illustrates the study intersections and roadway segments. Figure 3 illustrates the intersection lane configuration characteristics. The existing traffic count volumes are provided within Appendix B of this report.

4.2 Local Roadway Characteristics

The following roadways are in the vicinity of the project site:

- Mulholland Drive
- Skirball Center Drive
- Roscomare Road
- Casiano Road

Mulholland Drive is constructed with two to three travel lanes with a divided centerline. Fronting land uses include open space, residential uses and a university is located on the south side of the roadway (at the southwest corner of Casiano Drive and Mulholland Drive). On-street parking is generally prohibited on both sides of the roadway. The posted speed limit ranges from 30 to 40 miles per hour.

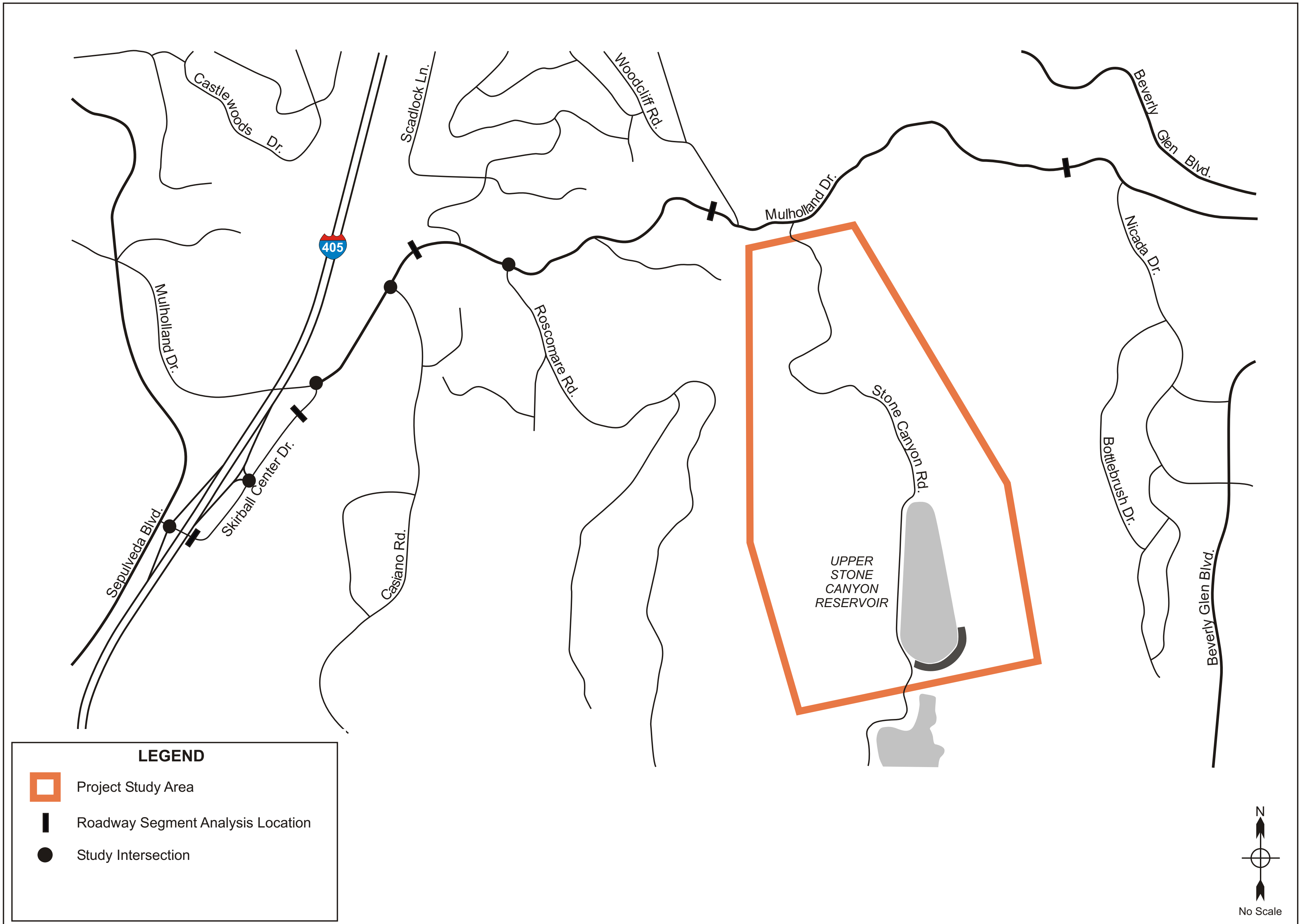


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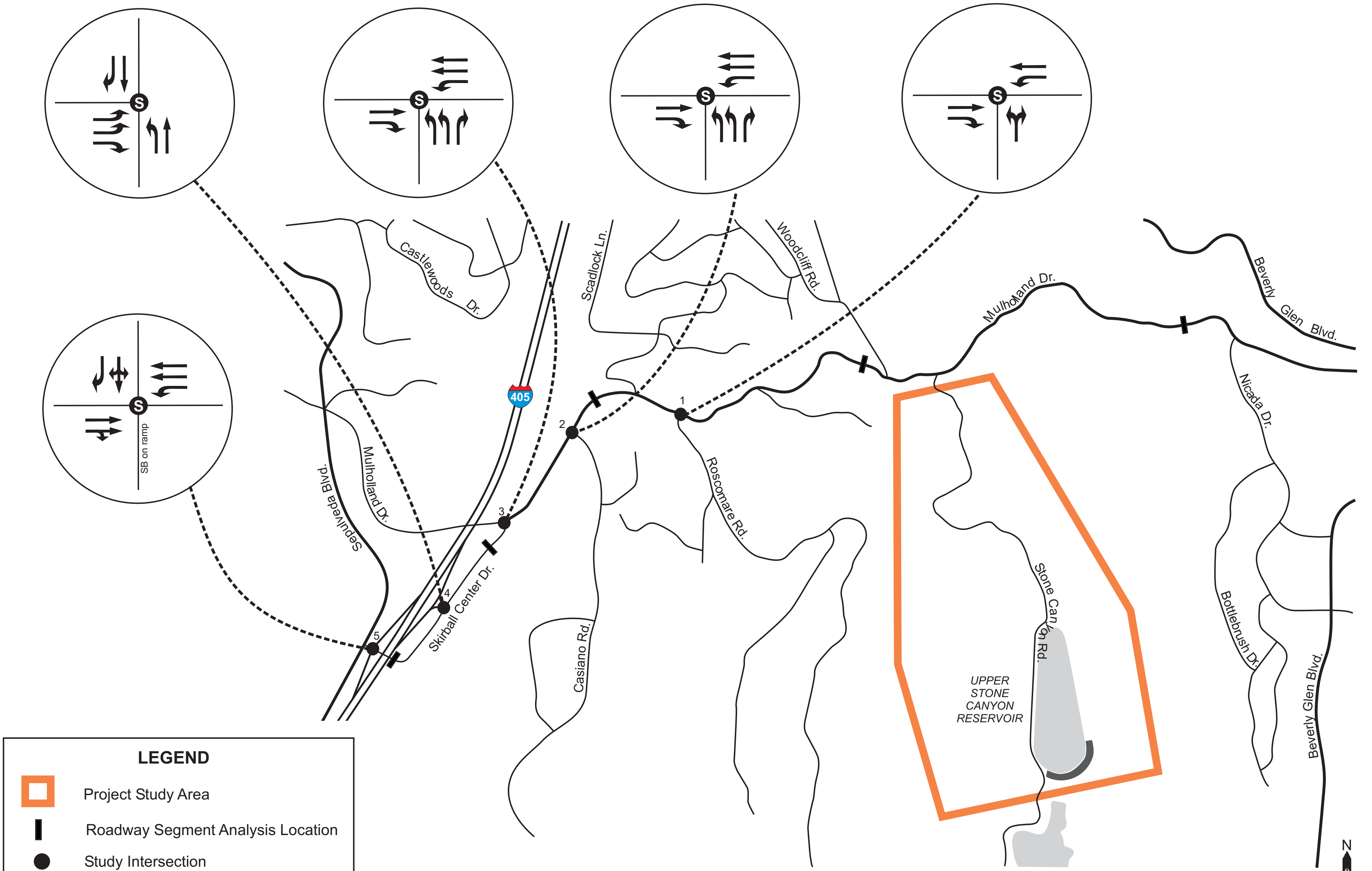
Figure 2

Study Intersections and Roadway Segments



LEGEND

- Project Study Area
- Roadway Segment Analysis Location
- Study Intersection
- Signalized Intersection
- Intersection Lane Geometry

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Upper Stone Canyon Reservoir Water Quality Improvement Project — Figure 3

Intersections Lane Configurations

Skirball Center Drive is a three-lane local roadway with a striped centerline that is parallel to the I-405 freeway. The I-405 on and off ramps have intersections with this roadway. On-street parking is generally prohibited on both direction of the roadway. There are no posted speed limits near the intersection with Mulholland Drive. A small park and ride lot is located south of the intersection with the I-405 northbound on and off ramps.

Roscomare Road is a two-lane collector roadway with a striped centerline. The posted speed limit along the roadway is 25 miles per hour. Residential land uses are adjacent to the roadway. On-street parking is generally permitted on the west side of the roadway.

Casiano Road is a four-lane collector roadway that has a raised median or a striped center line as it transitions between different segments. The land uses adjacent to this roadway are residential, and a university use also fronts the roadway. The posted speed limit is 25 miles per hour. On-street parking is generally prohibited along both sides of the roadway.

Interstate 405 (San Diego Freeway) is a ten-lane north-south Interstate freeway located to the west of the project site. The freeway has a full-access interchange with Mulholland Drive.

4.3 Existing Area Transit Service

The project study area is served by multiple bus transit agencies, listed below. Table 1 illustrates the transit routes within the study area. All the bus routes within Table 1 provide service along Sepulveda Boulevard within the study area. Transit service is not provided along Mulholland Drive or Skirball Center Drive.

Table 1 – Existing Transit Service

Agency	Line	From / To	To / From	Via	Frequency 6:30 AM - 8:30 AM
Metro	761	Van Nuys Blvd	Westwood/UCLA	Sepulveda Blvd	7 - 12 Mins
Antelope Valley Transit Authority	AV786	Palmdale	Century City	Sepulveda Blvd	-
LADOT - Commuter Express	CE573	Mission Hills	Westwood	Sepulveda Blvd	15 - 45 Mins
LADOT - Commuter Express	CE574	El Segundo	Grenada Hills	Sepulveda Blvd	25 Mins
Santa Clarita Transit	SC792	Santa Clarita	Century City	Sepulveda Blvd	30 - 50 Mins
Santa Clarita Transit	SC797	Santa Clarita	Westwood	Sepulveda Blvd	30 Mins

Source:
Los Angeles County Metropolitan Transportation Authority
Antelope Valley Transit Authority
Commuter Express
Santa Clarita Transit

4.4 Existing Intersection Levels of Service

This report section documents the existing weekday a.m. and p.m. peak-hour traffic operations within the study area. Based on the traffic counts conducted at the study intersections, a level of service (LOS) and the corresponding volume-to-capacity (v/c) ratio was determined for each of the five locations.

Table 1 provides the v/c and LOS values for existing (2010) conditions, during the a.m. and p.m. peak hours.

Table 2 – Intersection Level of Service Calculations – Existing (2010) Conditions

Study Intersections	Weekday AM Peak		Weekday PM Peak	
	V/C	LOS	V/C	LOS
1. Roscomare Rd & Mulholland Dr	0.677	B	0.506	A
2. Casiano Rd & Mulholland Dr	0.620	B	0.394	A
3. Skirball Center Dr & Mulholland Dr	0.888	D	0.640	B
4. Skirball Center Dr & I-405 NB on&off Ramps	0.799	C	0.545	A
5. I-405 SB on&off Ramps & Skirball Center Dr	0.621	B	0.503	A

All study intersections are equipped with ATSAC and ATCS capability. Therefore, per LADOT policies, a 0.100 v/c credit has been applied to all calculations.

The data in Table 2 indicates that all of the study intersections are currently operating at LOS D or better during the weekday peak hours.

The existing (2010) peak-hour turn movement volumes at the study intersections are provided on Figure 4 (a.m. peak) and Figure 5 (p.m. peak). The level of service worksheets for the existing conditions scenario are provided in Appendix C of this report (includes all scenarios for the proposed project analysis).

4.6 Existing Roadway Segment Volumes

To provide typical average roadway volumes, the traffic counts on the study area roadway segments were conducted for two consecutive days. Table 3 provides a summary of the average daily traffic (ADT) volumes, based on the May 2010 counts.

Table 3 – Study Roadway Segments – Existing (Year 2010)
Weekday Daily Vehicle Volumes

Street Segments		Weekday Existing Daily Traffic Volumes
A	Mulholland Drive, Between Nicada Drive & Stone Canyon Road	13,801
B	Mulholland Drive, Between Woodcliff Road & Antelo Place	12,006
C	Mulholland Drive, Between Roscomare Road & Casiano Road	14,976
D	Skirball Center Drive, Between Mulholland Drive & NB I-405 on/off Ramps	20,234
E	Skirball Center Drive, Between curve on Skirball Ctr Dr & SB I-405 on/off Ramps	14,309

The data in Table 3 indicates that the highest daily vehicle volume is on Skirball Center Drive, between Mulholland Drive and the I-405 northbound on/off ramps.

The existing (2010) average daily weekday volumes are provided on Figure 4 and Figure 5. The same values are provided on each figure, as daily volumes are not specific to either peak hour.

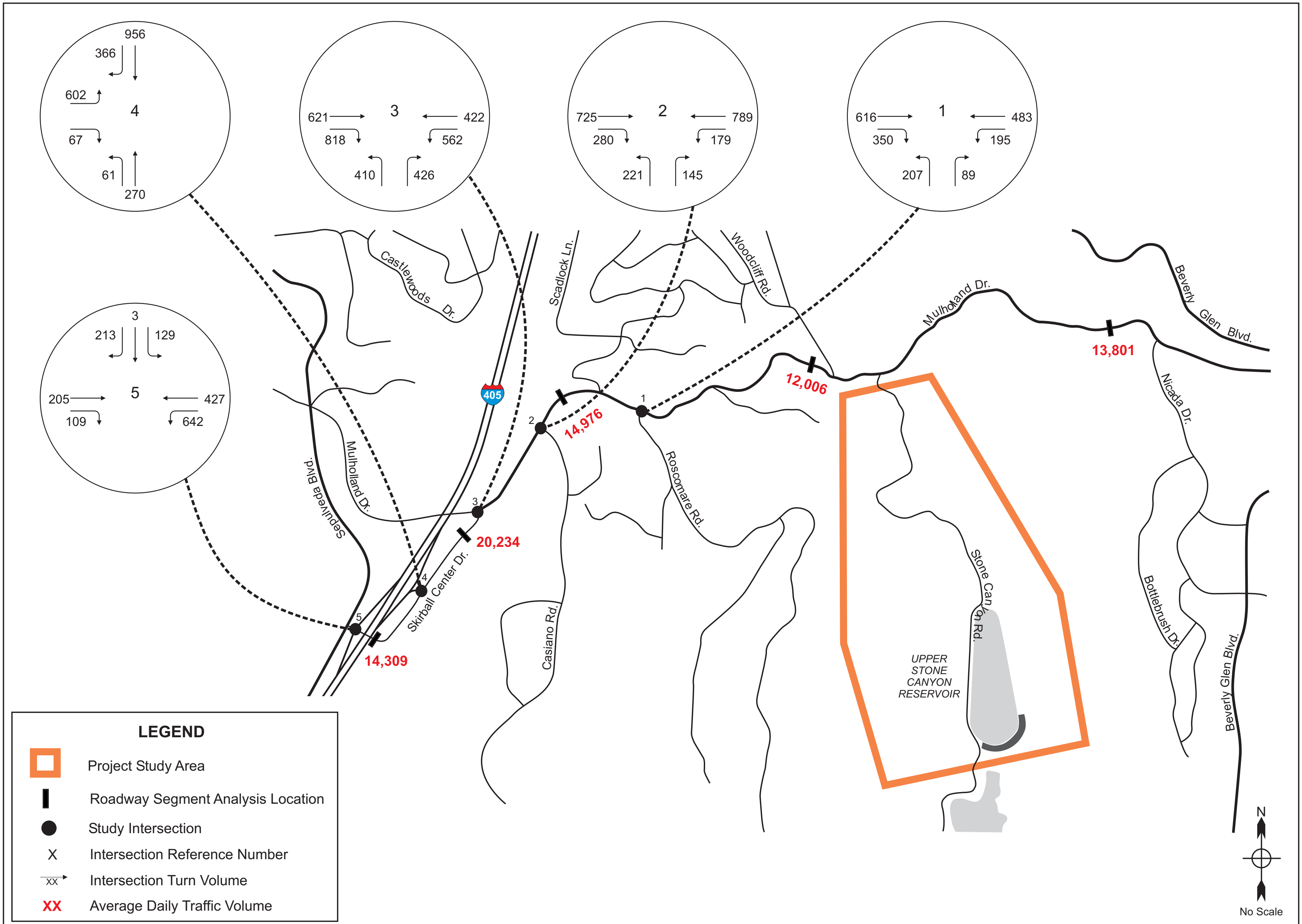

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Figure 4

Existing (2010) AM Peak-Hour Traffic Volumes

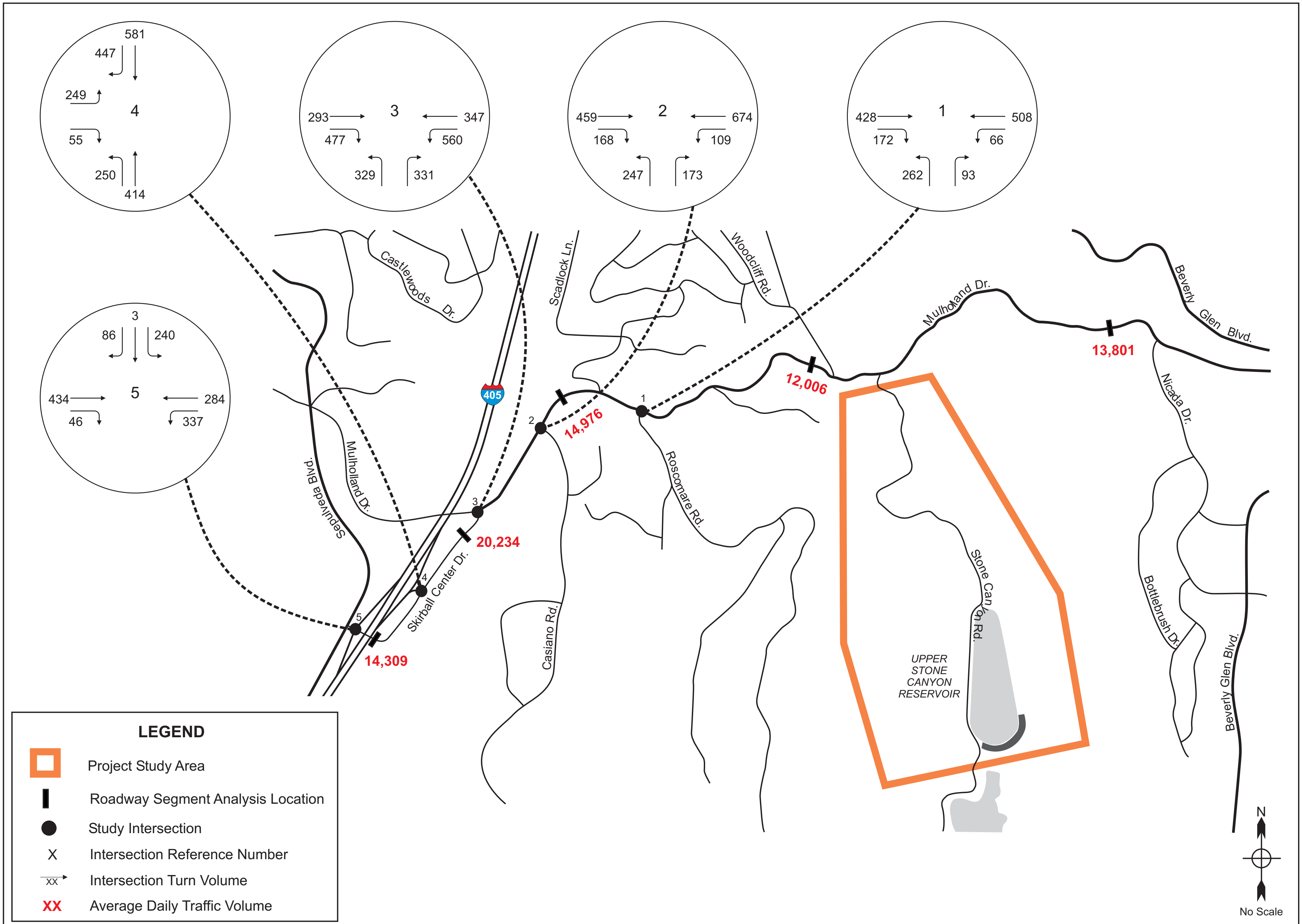

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Figure 5

Existing (2010) PM Peak-Hour Traffic Volumes

5. Future 2019 No-Project Forecast

This section provides the analysis of "No Project" Conditions in the study area with ambient growth and area project trips. Project construction is anticipated to be completed by the end of the year 2019. Although each project alternative has a different peak year of construction, the latest peak would occur in the year 2019 during Phase 4 of construction of the proposed project. For the other project alternatives, the analysis-year volumes were defined through a modified application of the ambient growth rate, and consistent application of area projects volumes to the specific peak periods of the construction alternatives.

Therefore, this report section provides a definition of year-2019 future base volumes used for the proposed project analysis, although the ambient growth was adjusted for alternative project analysis scenarios.

5.1 Ambient Growth

In order to forecast year-2019 baseline traffic volumes, year-2010 peak-hour traffic count volumes from the existing conditions scenario were increased by an ambient growth rate of 1% per year (a compounded factor of 1.0937). This methodology is consistent with sub-regional traffic growth data defined by the County of Los Angeles Congestion Management Program (CMP) document.

5.2 Area Projects

A two-mile radius line from the project site was used to define a capture area for area approved and pending (cumulative) projects. The list of area projects was compiled based on information provided by LADOT staff, via databases maintained by both the West Los Angeles and the Valley Development Review offices. Nine projects were defined within the study area for inclusion in the analysis.

The projects included within the area projects list would potentially contribute measurable traffic volumes to the study area during the future analysis period. The LADOT project database provides area projects total peak-hour trips, compiled from environmental documentation or traffic studies. The in/out trip generation ratios applied to the area projects were based on rates within *Trip Generation (8th Edition)*, published by the Institute of Transportation Engineers.

The area projects included in this study for future period analysis, and the trip generation of each, are provided in Table 4.

Table 4 – Area Projects Trip Generation Forecast

ID #	Project Name	Locations	Intensity	Size	Land Use	Daily Total	AM Peak Hour Total	AM In	AM Out	PM Peak Hour Total	PM In	PM Out
1	Il Villaggia Toscano Mixed-Use	4805 N. Sepulveda Blvd.	465 55.000	d.u. k.s.f.	Apartment Supermarket / Retail	5,844	331	102	229	549	318	231
2	California United Bank	15821 Ventura Blvd.	6.400	k.s.f.	Bank	801	21	10	11	170	85	85
3	Valley Beth Shalom Preschool	15739 Ventura Blvd.	259 23.340	Students k.s.f.	Preschool Synagogue	1,000	135	72	63	101	48	53
4	Tract 62077 Mixed-Used	15222 Ventura Blvd.	52 7.460	d.u. k.s.f.	Condominiums Retail	609	32	9	23	47	27	20
5	Sherman Oaks Square	4454 Van Nuys Blvd.	98 1.090	d.u. k.s.f.	Apartments Retail	792	60	15	45	73	46	27
6	Pavillions Supermarket	14845 Ventura Blvd.	55.000 6.020	k.s.f. k.s.f.	Supermaket Drive-in Bank	7,107	166	98	68	565	286	279
7	Gas Station	14478 Ventura Blvd.	0.392	k.s.f.	Gas Station	-	33	21	12	52	26	26
8	Camino Real Mixed Use Project	14121 Ventura Blvd.	88 6.000 3.500	d.u. k.s.f. k.s.f.	Condominiums Retail Fast-Food Restaurant	2,008	123	57	66	107	61	46
9	Ralphs Supermarket	14049 Ventura Blvd.	27.389	k.s.f.	Supermaket	2,800	89	54	35	286	146	140
	TOTAL					**20,961**	**990**	**438**	**552**	**1,950**	**1,043**	**907**

Table 4 indicates that the area projects are expected to generate approximately 20,961 weekday daily trips, of which 990 trips (438 inbound trips and 552 outbound trips) would occur during the a.m. peak hour and 1,950 trips (1,043 inbound trips and 907 outbound trips) would occur during the p.m. peak hour.

Figure 6 illustrates the locations of the included area projects. The area projects trip assignment is illustrated on Figure 7 (a.m. peak) and Figure 8 (p.m. peak).

5.3 Intersection Levels of Service

To analyze future conditions without the proposed project, intersection turn volumes with ambient growth and trips generated by area projects were processed with the Circular 212 Planning (CMA) methodology.

Level of service calculations based on LADOT spreadsheets were performed to assess forecast future year-2019 no-project peak-hour conditions. Table 5 provides the a.m. and p.m. peak hour results of this analysis. Bold text indicates those intersections that would operate at LOS E or F under this scenario.

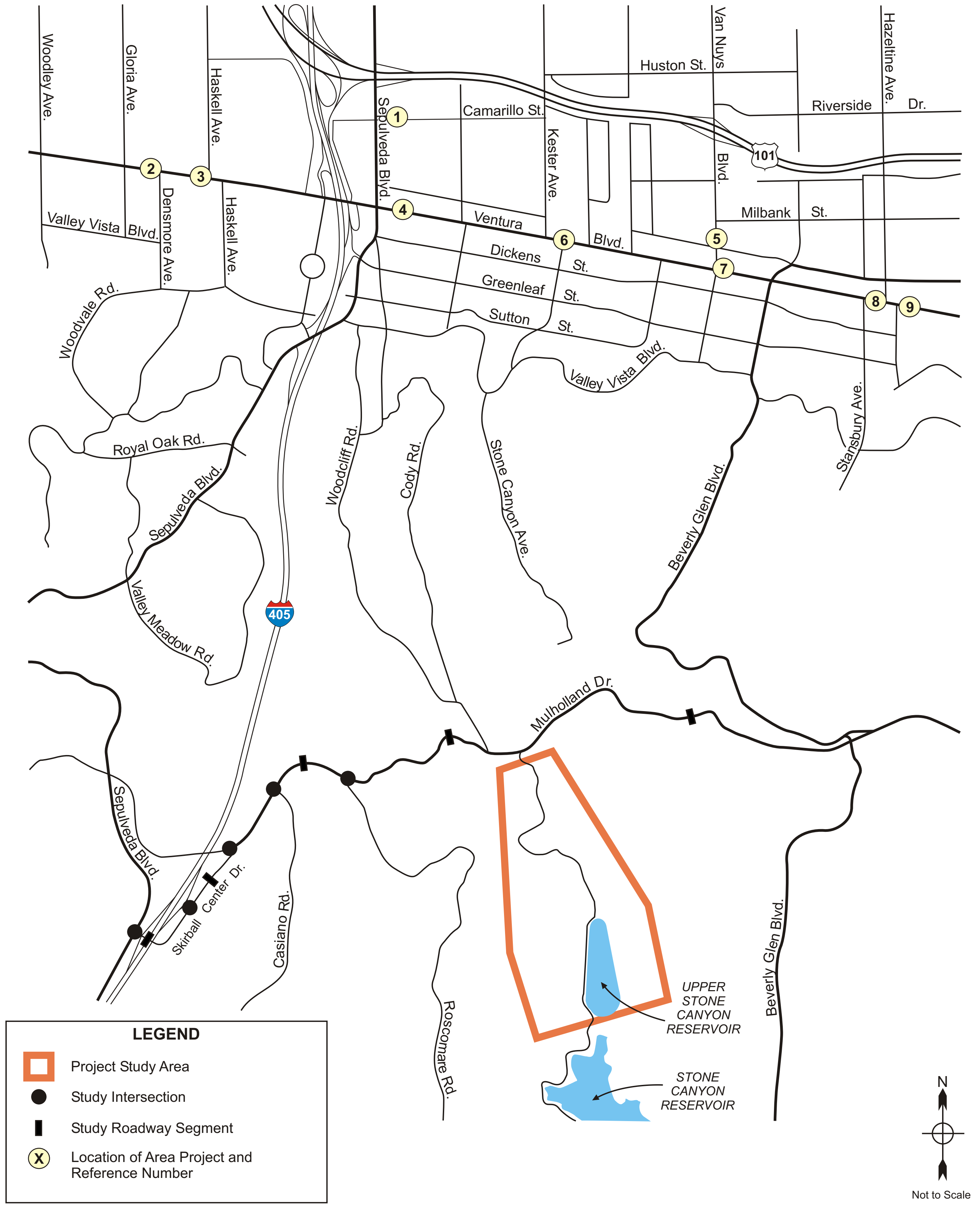

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Figure 6

Location of Area Projects

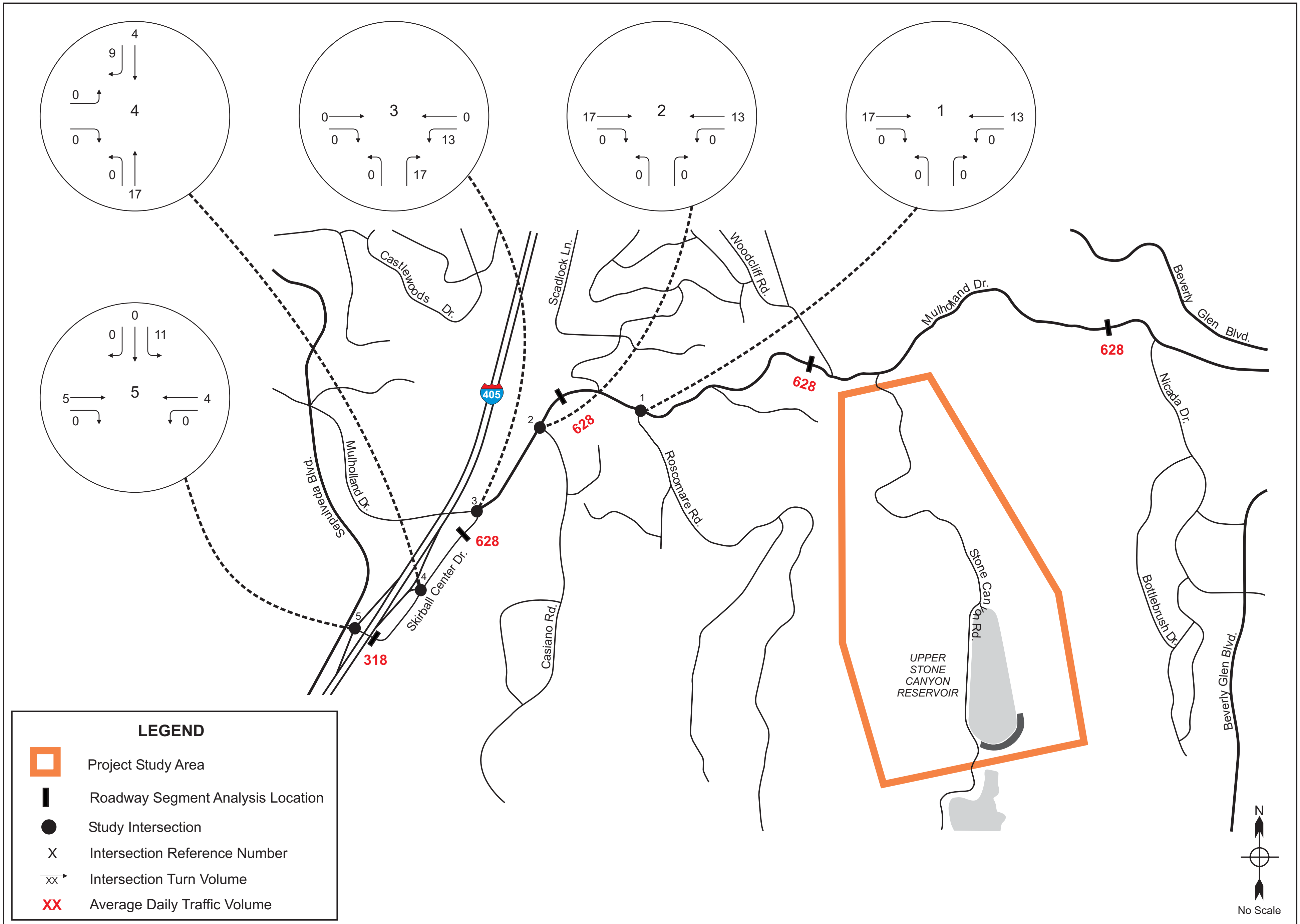

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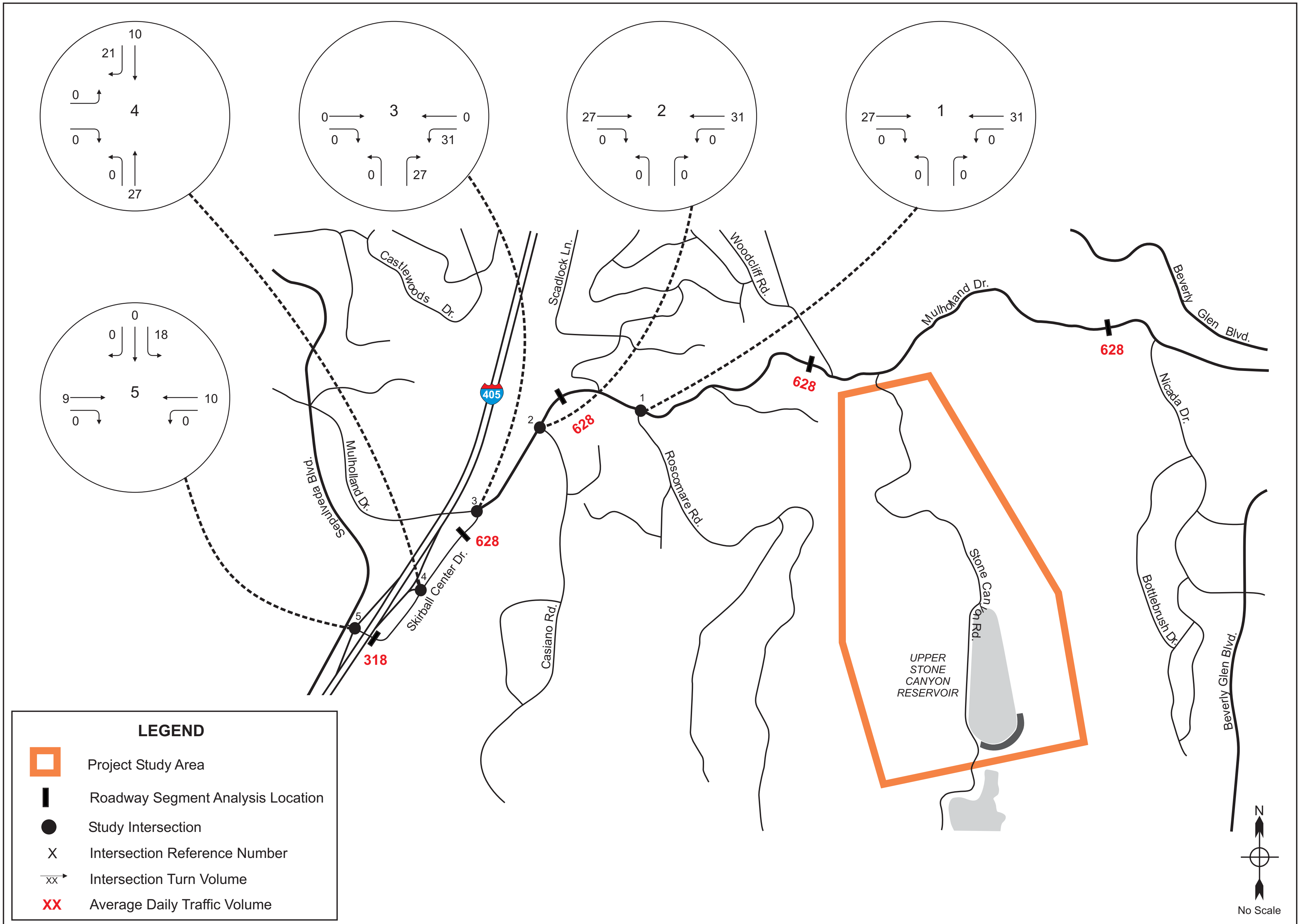
Figure 7

Area Projects Trip Assignment - AM Peak-Hour Vehicle Volumes



LEGEND

- Project Study Area
- Roadway Segment Analysis Location
- Study Intersection
- X Intersection Reference Number
- xx Intersection Turn Volume
- XX Average Daily Traffic Volume

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Area Projects Trip Assignment - PM Peak-Hour Vehicle Volumes

Table 5 – Level of Service Calculations – Future (Year-2019)
No-Project Construction Conditions

Study Intersections	Weekday AM Peak		Weekday PM Peak	
	V/C	LOS	V/C	LOS
1. Roscomare Rd & Mulholland Dr	0.762	C	0.584	A
2. Casiano Rd & Mulholland Dr	0.699	B	0.459	A
3. Skirball Center Dr & Mulholland Dr	0.990	**E**	0.730	C
4. Skirball Center Dr & I-405 NB on&off Ramps	0.886	D	0.612	B
5. I-405 SB on&off Ramps & Skirball Center Dr	0.698	B	0.575	A

All study intersections are equipped with ATSAC and ATCS capability. Therefore, per LADOT policies, a 0.100 v/c credit has been applied to all calculations.

Under this scenario, all but one of the study intersections would operate at LOS D or better during the weekday peak hours. The intersection at Skirball Center Drive and Mulholland Drive would operate at LOS E during the a.m. peak hour.

The future ambient growth and area projects analysis calculation worksheets for the study intersections are provided in Appendix C of this report (provides all scenarios for the proposed project analysis). The analyzed peak-hour traffic volumes at the study intersections for this scenario are provided on Figure 9 (a.m. peak) and Figure 10 (pm. peak).

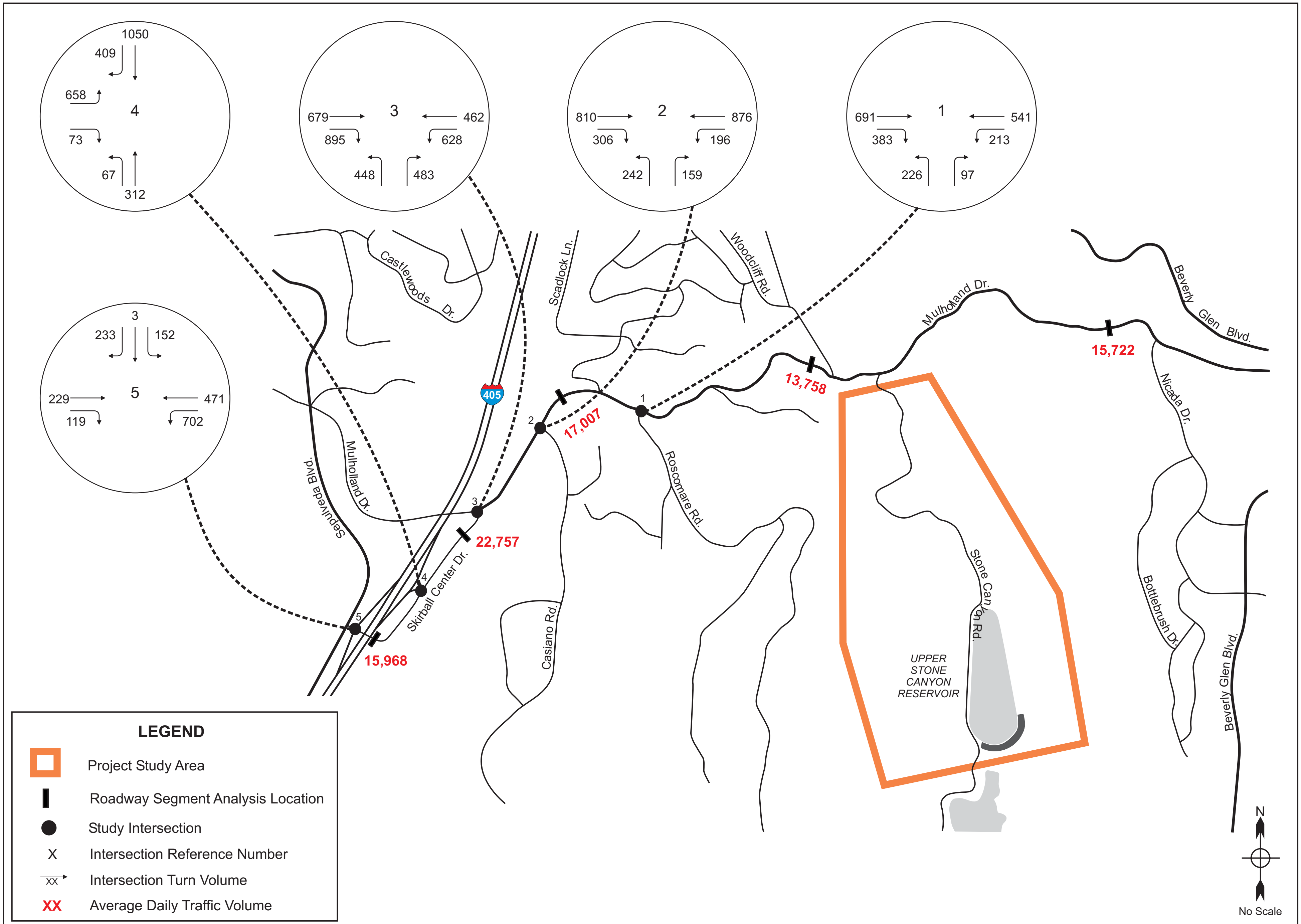

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Figure 9

Future (2019) No Project - AM Peak Hour Intersection Volumes

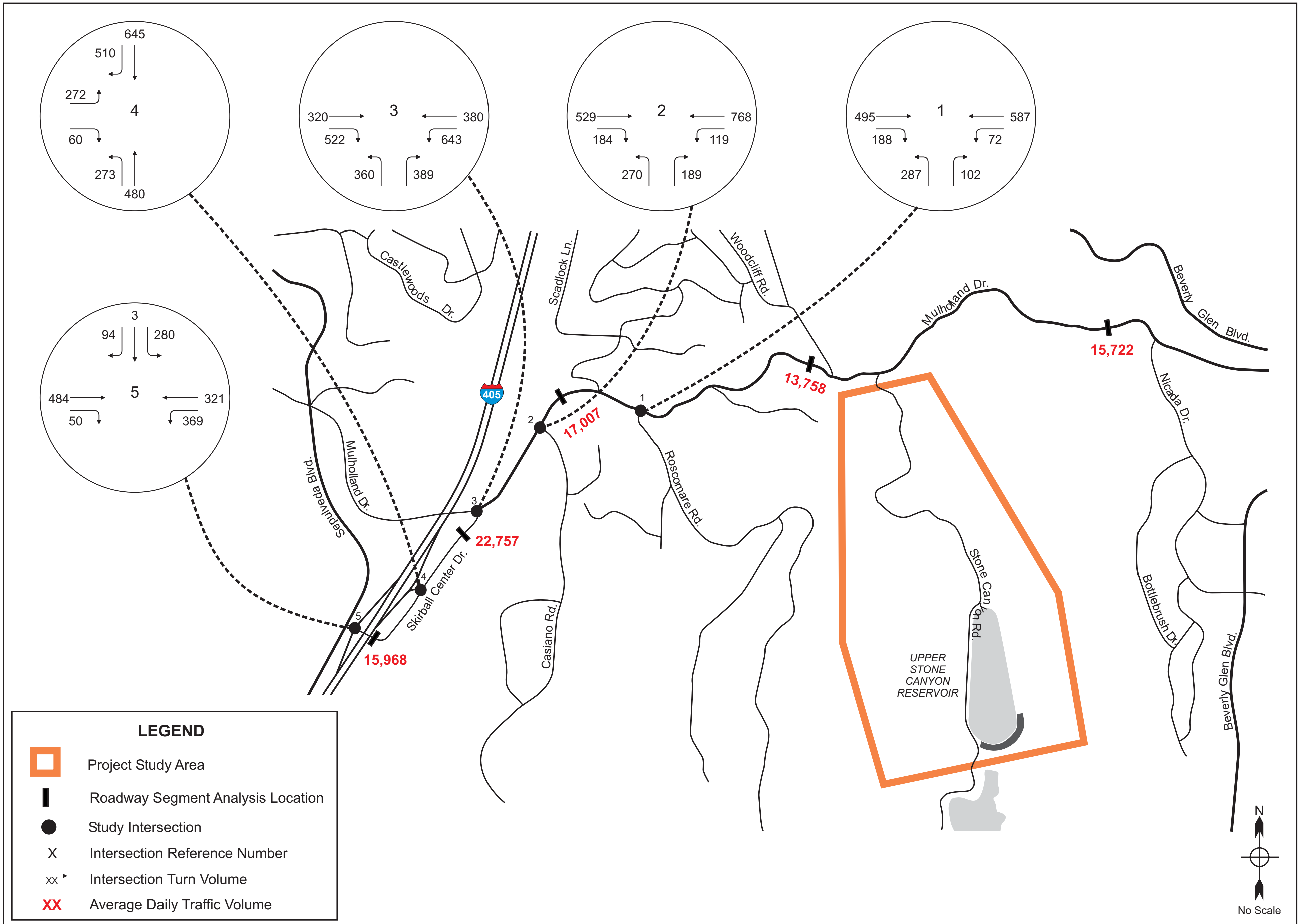

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Figure 10

Future (2019) No Project - PM Peak Hour Intersection Volumes

5.4 Study Roadway Segment Volumes

Table 6 provides the average daily traffic volumes with the ambient growth and the estimated area project daily trips.

Table 6 – Study Roadway Segments – Future (Year 2019) No-Project Daily Vehicle Volumes

Street Segments		Weekday Existing Daily Traffic Volumes	Weekday Future Base Daily Traffic Volumes
A	Mulholland Drive, Between Nicada Drive & Stone Canyon Road	13,801	15,722
B	Mulholland Drive, Between Woodcliff Road & Antelo Place	12,006	13,758
C	Mulholland Drive, Between Roscomare Road & Casiano Road	14,976	17,007
D	Skirball Center Drive, Between Mulholland Drive & NB I-405 on/off Ramps	20,234	22,757
E	Skirball Center Drive, Between curve on Skirball Ctr Dr & SB I-405 on/off Ramps	14,309	15,968

The data within Table 6 indicates that the highest daily vehicle volume for the future base scenario would be on Skirball Center Drive, between Mulholland Drive and I-405 northbound on/off ramps.

The future (2019) average daily volumes are provided on both Figure 9 (a.m. peak) and Figure 10 (p.m. peak), introduced earlier in this report section. Levels of service calculation worksheets for this analysis scenario are provided in Appendix C.

Future no-project volumes for the project alternatives that would not peak in the year 2019 are provided in Appendix G to this report.

6. Project Construction and Post-Project Trip Generation Forecasts

This section provides definitions for construction truck and employee vehicle trip generation during the peak period of project construction for each alternative, including the distribution and assignment of those trips to the study area roadway network.

In converting trucks to passenger car equivalents, a PCE factor of 2.5 was applied. This factor matches typical factors used in area studies that include trips generated by trucking activities. The factor value is based on KOA knowledge of the Southern California Association of Governments (SCAG) Heavy Duty Truck Model.

This is a planning-level analysis of construction activity, used for the purposes of determining traffic impacts during the project construction period. Prior to initiating construction, a detailed construction plan will be developed by the construction manager to identify necessary resources and to define the construction supervisory and technical field organization and staffing levels required for the project. The methods and procedures for sequencing and implementing construction operations will also be detailed in the construction plan. In addition, a project safety program will be developed by the operator, consistent with federal and state requirements. This is a standard LADWP procedural requirement.

6.1 Construction Project Trip Distribution

The distribution of construction truck trips was assumed to be primarily freeway-oriented. For the I-405 freeway to the north of the study area, 60 percent of the truck trips were assigned to that corridor. For the I-405 freeway to the south of the study area, 40 percent of the truck trips were assigned to that corridor. The trip distribution assumption was based truck trips coming from the San Fernando Valley and points northward (60 percent) and the rest of the truck trips coming from the South Bay and San Pedro/Long Beach port industrial areas (40 percent).

The distribution of employee trips assumed that these trips would all arrive from the I-405 freeway, with 50 percent distributed to the north of the study area and 50 percent distributed to the south.

Based on project characteristics and the routes between the site access points and the nearby freeway interchanges, the project trip distribution patterns illustrated on Figure 11 (project truck trips distribution) and in Figure 12 (project construction employee vehicle trips) were developed.

Under the proposed project scenario, the proposed park use would be open to the public after completion of the concrete roof construction period. Figure 13 illustrates the proposed park trip distribution pattern. The two build alternatives, Floating Cover and Aluminum Cover, would not include a public park use in the post-project period. Therefore, new trip generation from a park use would not apply to those two alternatives.

6.2 Proposed Project Construction – Peak Hour Trip Generation

The proposed project would be constructed in five phases over a period of approximately four and a-half years. Trip generation for employees and trucks will vary depending on the peak month activities. To evaluate the worst-case construction activity for this construction scenario, an average from the peak month of activity for peak employees and truck trips was used for each of the peak-hour trip generation estimates.

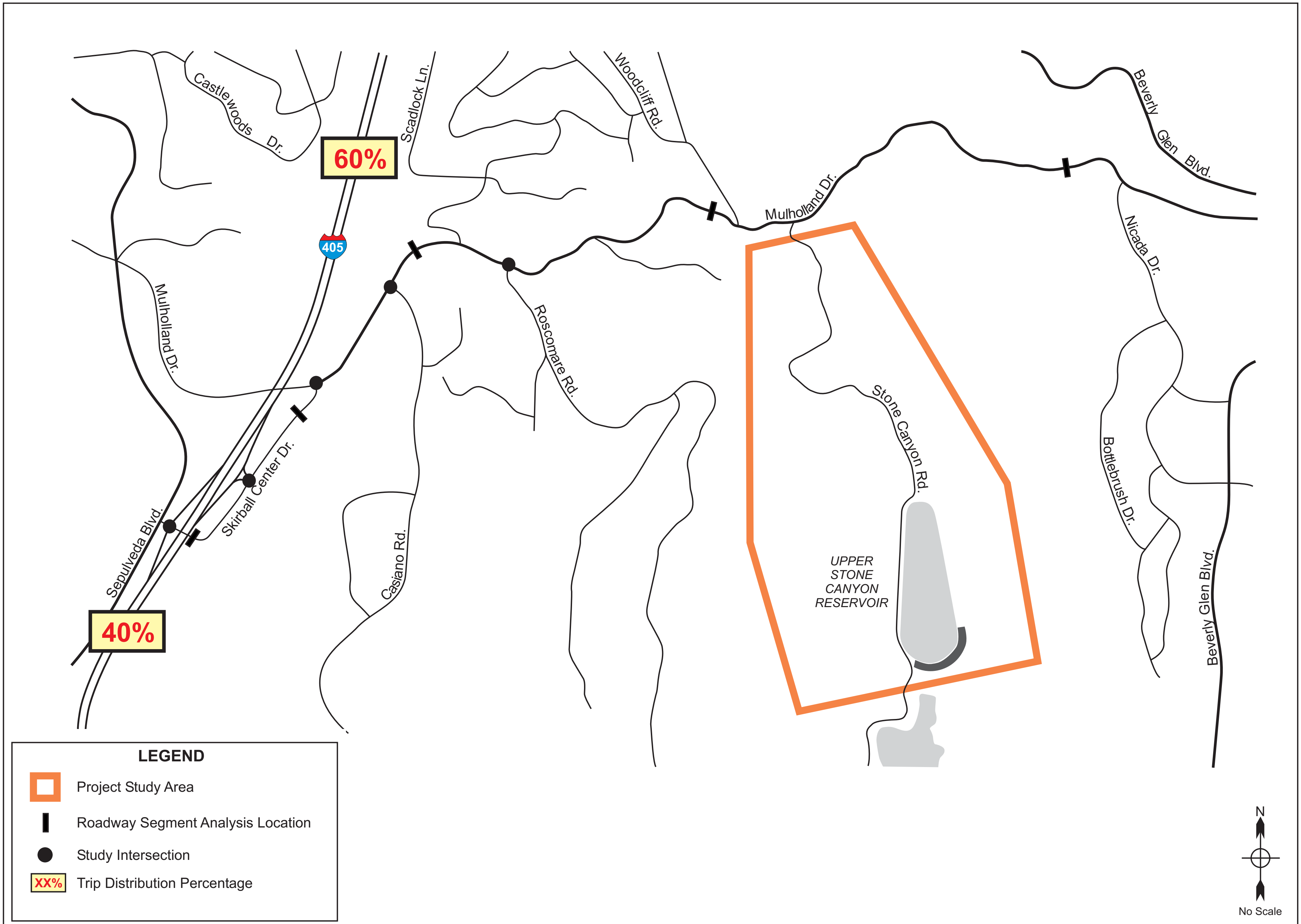

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Figure 11

Project Truck Trip Distribution

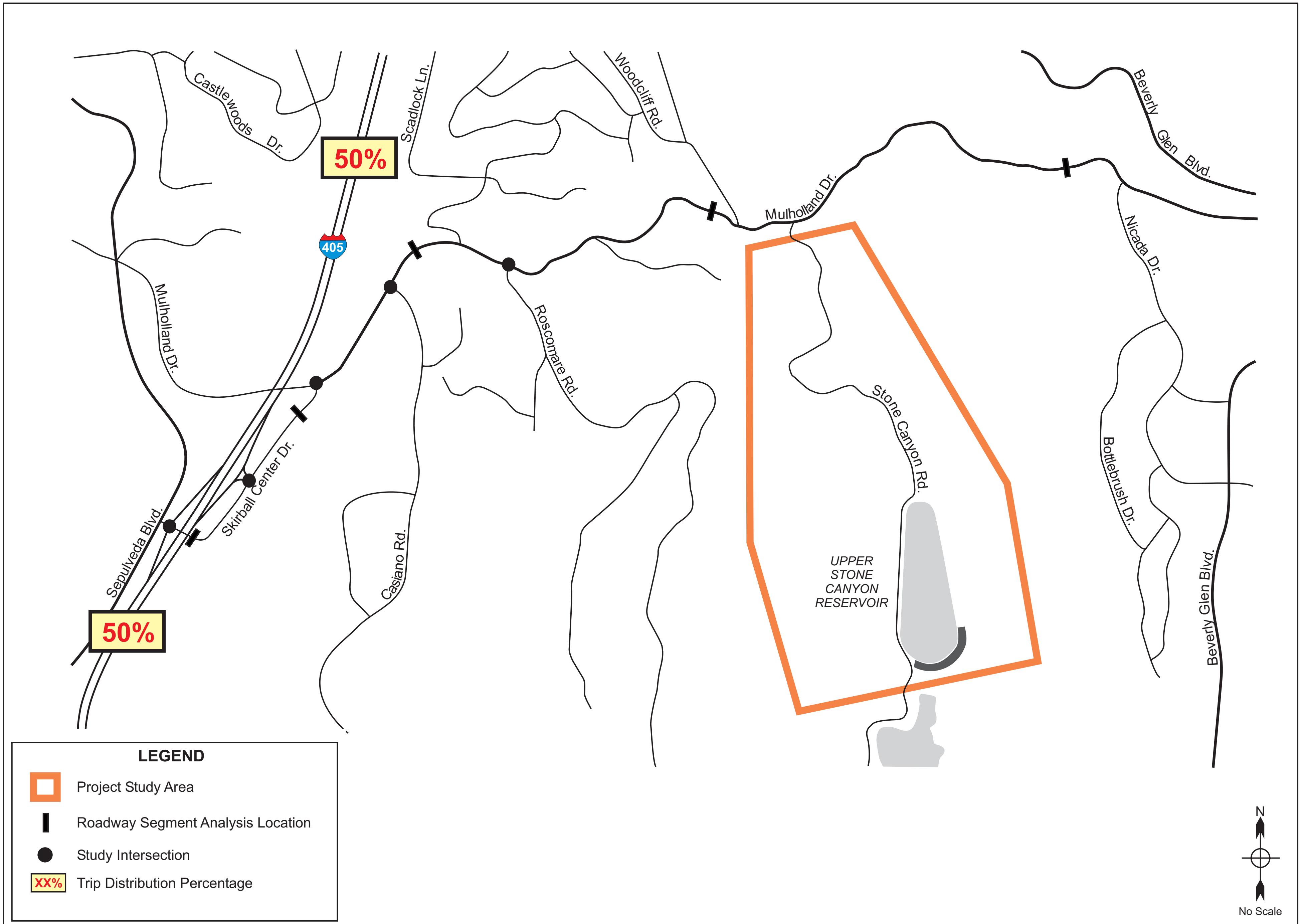

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Figure 12

Project Employee Trip Distribution

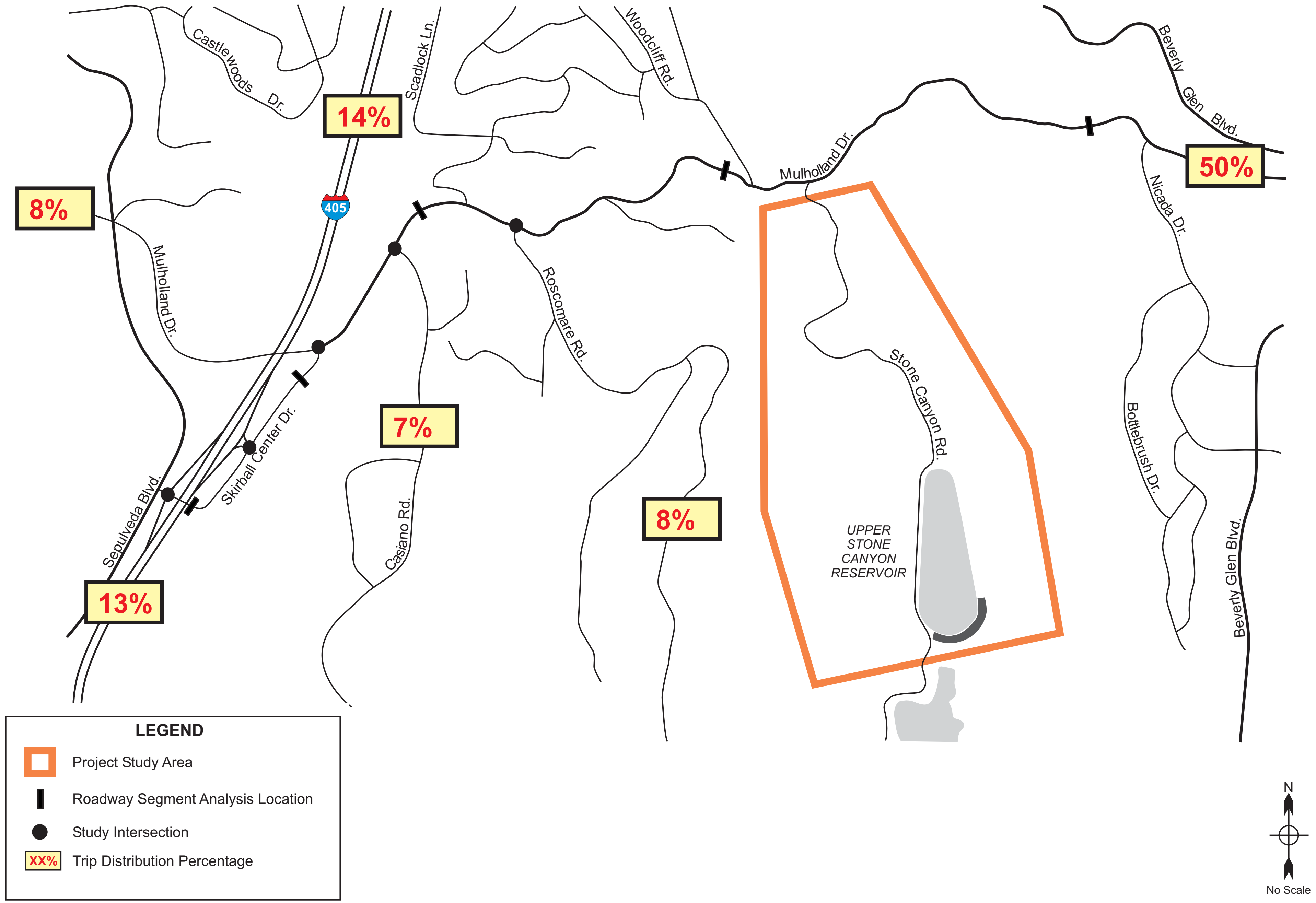

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Figure 13

Project Park Use Trip Distribution

Table 7 provides the peak hour trip generation calculations for this construction scenario, based on the number of on-site employees and number of daily truck trips. Trip generation calculations were not provided for Alternative 1, as that scenario represents a "no-build" project alternative and no new vehicle or truck trips would be generated.

Table 7 – Peak Hour Project Construction Trip Generation – Proposed Project – Concrete Roof

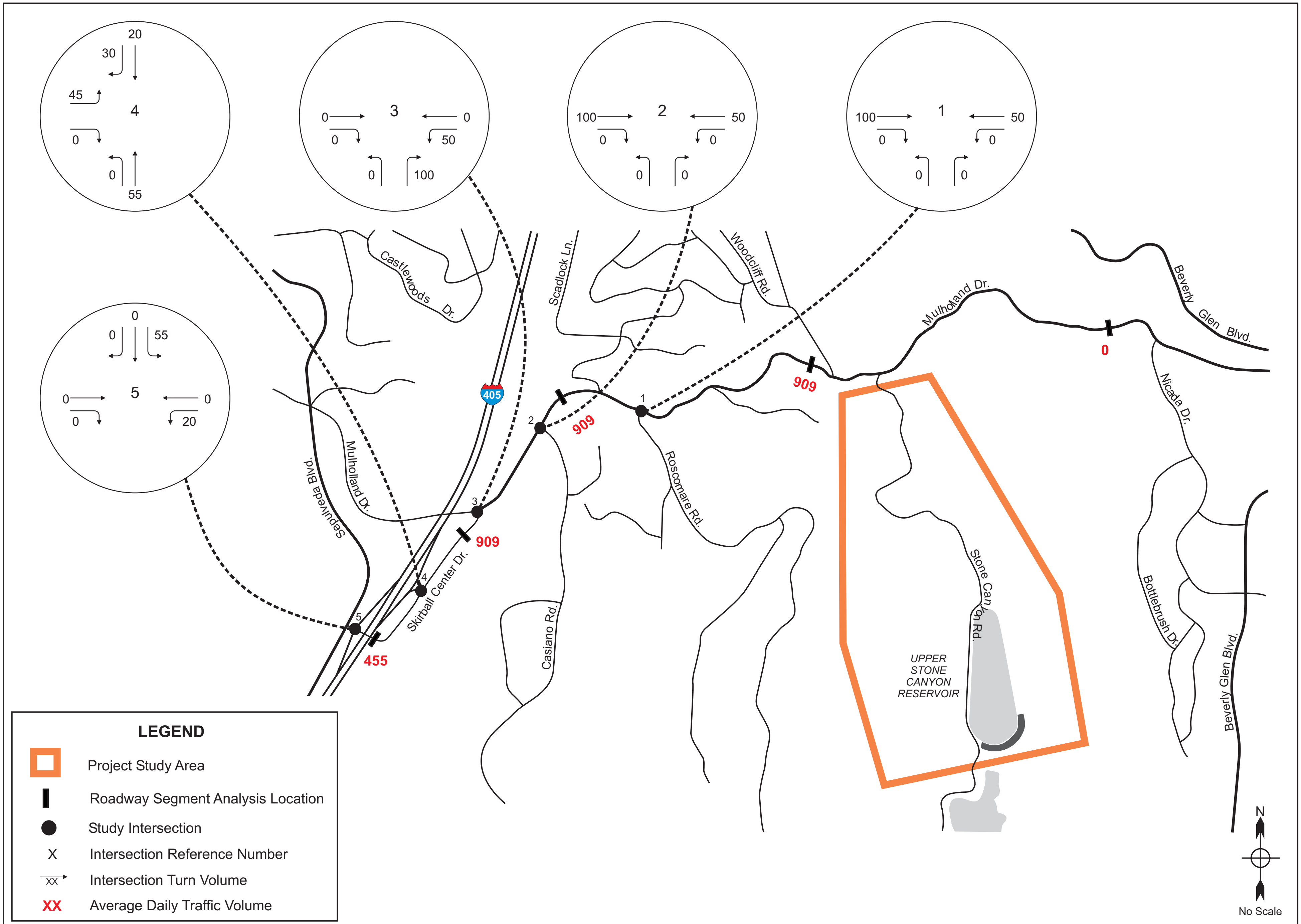
Project Scenario	Generator	Daily	**Weekday AM Total**	Weekday AM IN	Weekday AM OUT	**Weekday PM Total**	Weekday PM IN	Weekday PM OUT
Concrete Roof	Trucks	326	**41**	21	20	**41**	21	20
	Employees [a]	94	**47**	47	0	**47**	0	47
	Trucks, PCE [b]	815	**103**	53	50	**103**	53	50
TOTAL		909	**150**	100	50	**150**	53	97

[a] Employee trips = 1 vehicle/employee

[b] Vehicle trips = 2.5 PCE x truck trips

For this scenario, the number of employee trips was based on the assumption that all 47 employees would arrive within the a.m. peak hour and depart within the p.m. peak hour. The number of truck trips was based on a typical eight-hour shift, with delivery truck trips distributed throughout the day. Based on a daily total of 326 truck trips, 41 truck trips would occur during the a.m. peak hour and 41 truck trips would occur during the p.m. peak hour. With PCE truck trip factoring and employee trips, scenario vehicle trips would total 909 trips on a daily basis, and 150 one-way trips during both the a.m. and p.m. peak hours.

The overall assignment of the project construction trips to the study area for this construction scenario is provided on Figure 14 (a.m. peak) and Figure 15 (pm. peak). The assignment of daily construction trips are also provided on both figures.



LEGEND

- Project Study Area
- Roadway Segment Analysis Location
- Study Intersection
- X Intersection Reference Number
- XX Intersection Turn Volume
- XX Average Daily Traffic Volume

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Figure 14

Project Trip Assignment - Concrete Roof Alternative - AM Peak Hour

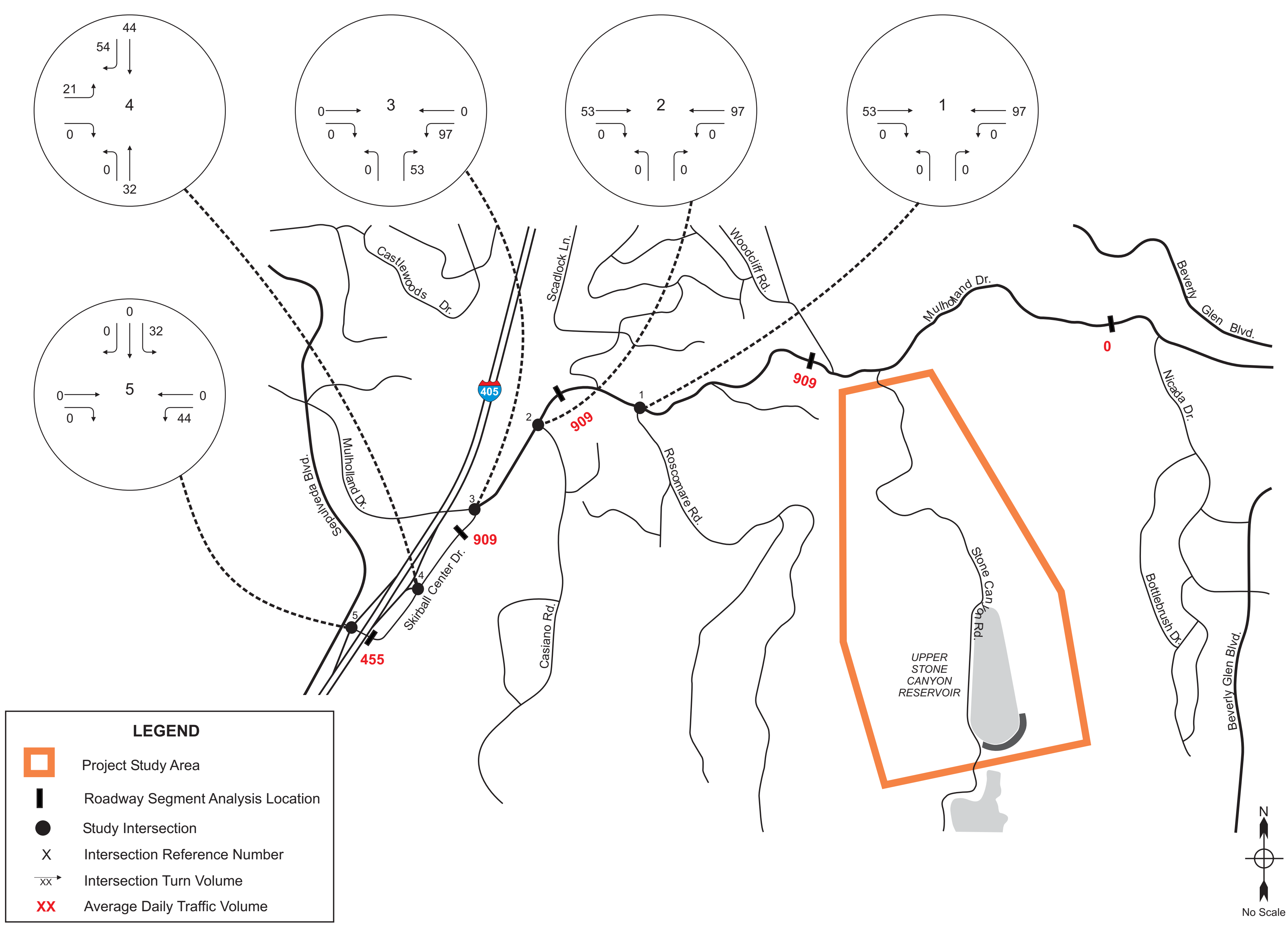

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Figure 15

Project Trip Assignment - Concrete Roof Alternative - PM Peak Hour

6.3 Project Alternative 2 – Floating Cover Construction Trip Generation

The Floating Cover Alternative (Alternative 2) would be constructed in three phases over a period of approximately one and one-half years. Trip generation for employees and trucks will vary depending on the peak month activities. To evaluate the worst-case scenario for the construction trip generation of the Floating Cover Alternative, the highest average monthly peak number of employees and truck trips were used to create the peak-hour trip generation estimate.

Table 8 provides the peak hour trip generation calculations for this construction scenario, based on the number of on-site employees and the number of daily truck trips.

Table 8 – Peak Hour Construction Trip Generation – Floating Cover Alternative

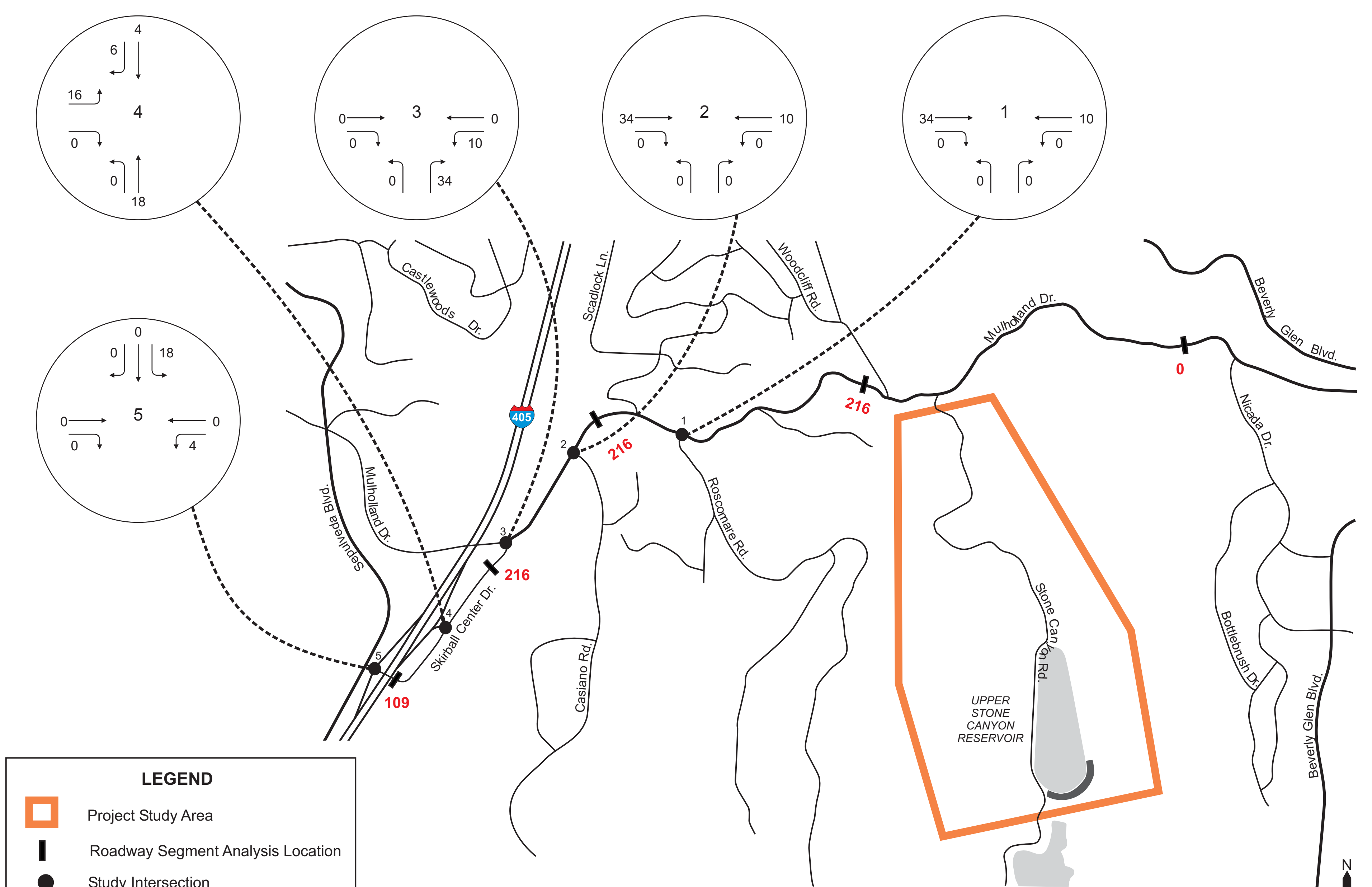
Project Scenario	Generator	Daily	**Weekday AM Total**	Weekday AM IN	Weekday AM OUT	**Weekday PM Total**	Weekday PM IN	Weekday PM OUT
Floating Cover	Trucks	68	**9**	5	4	**9**	5	4
	Employees [a]	46	**23**	23	0	**23**	0	23
	Trucks, PCE [b]	170	**23**	13	10	**23**	13	10
TOTAL		216	**46**	36	10	**46**	13	33

[a] Employee trips = 1 vehicle/employee

[b] Vehicle trips = 2.5 PCE x truck trips

Under this scenario, the number of employee vehicle trips was based on a total number of 23 employees that would arrive within the a.m. peak hour and depart within the p.m. peak hour. The number of truck trips was based on an eight-hour work shift, with delivery truck trips evenly distributed throughout the day. Based on a daily total of 68 truck trips and 46 employee vehicle trips, a total of 9 truck trips would occur during the a.m. peak hour and 9 trips would occur during the p.m. peak hour. With PCE truck trip factoring and employee trips, scenario vehicle trips would total 216 trips on a daily basis, and 46 one-way trips during both the a.m. and p.m. peak hours.

The overall assignment of the project construction trips to the study area are provided on Figure 16 (a.m. peak) and Figure 17 (pm. peak). The daily volumes for this construction scenario are also provided on both figures.



LEGEND

- Project Study Area
- Roadway Segment Analysis Location
- Study Intersection
- X Intersection Reference Number
- XX Intersection Turn Volume
- XX Average Daily Traffic Volume

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Upper Stone Canyon Reservoir Water Quality Improvement Project — Figure 16

Project Trip Assignment - Floating Cover Alternative - AM Peak Hour

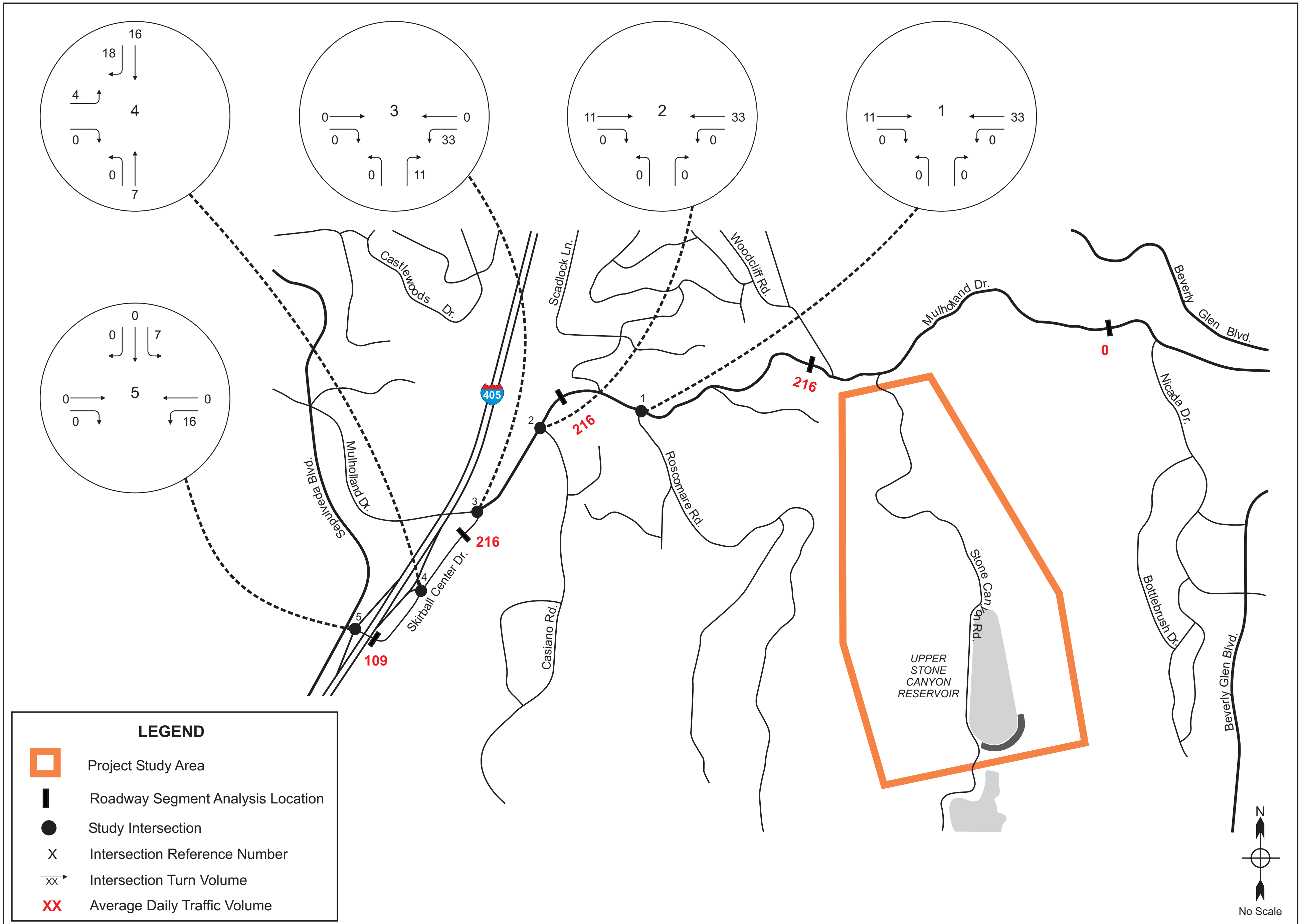

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Figure 17

Project Trip Assignment - Floating Cover Alternative - PM Peak Hour

6.4 Project Alternative 3 – Aluminum Cover Construction Trip Generation

The Aluminum Cover Alternative (Alternative 3) would be constructed in four phases, with an optional fifth phase, over a period of approximately three and one-half years to complete. Trip generation for employees and trucks will vary depending on the peak month activities. To evaluate the worst-case scenario for the construction activity of the Aluminum Cover Alternative, the highest average peak number of employees and truck trips was selected to create the peak-hour trip generation estimate.

Table 9 provides the peak hour trip generation calculations for this construction scenario, based on the number of on-site employees and number of truck trips.

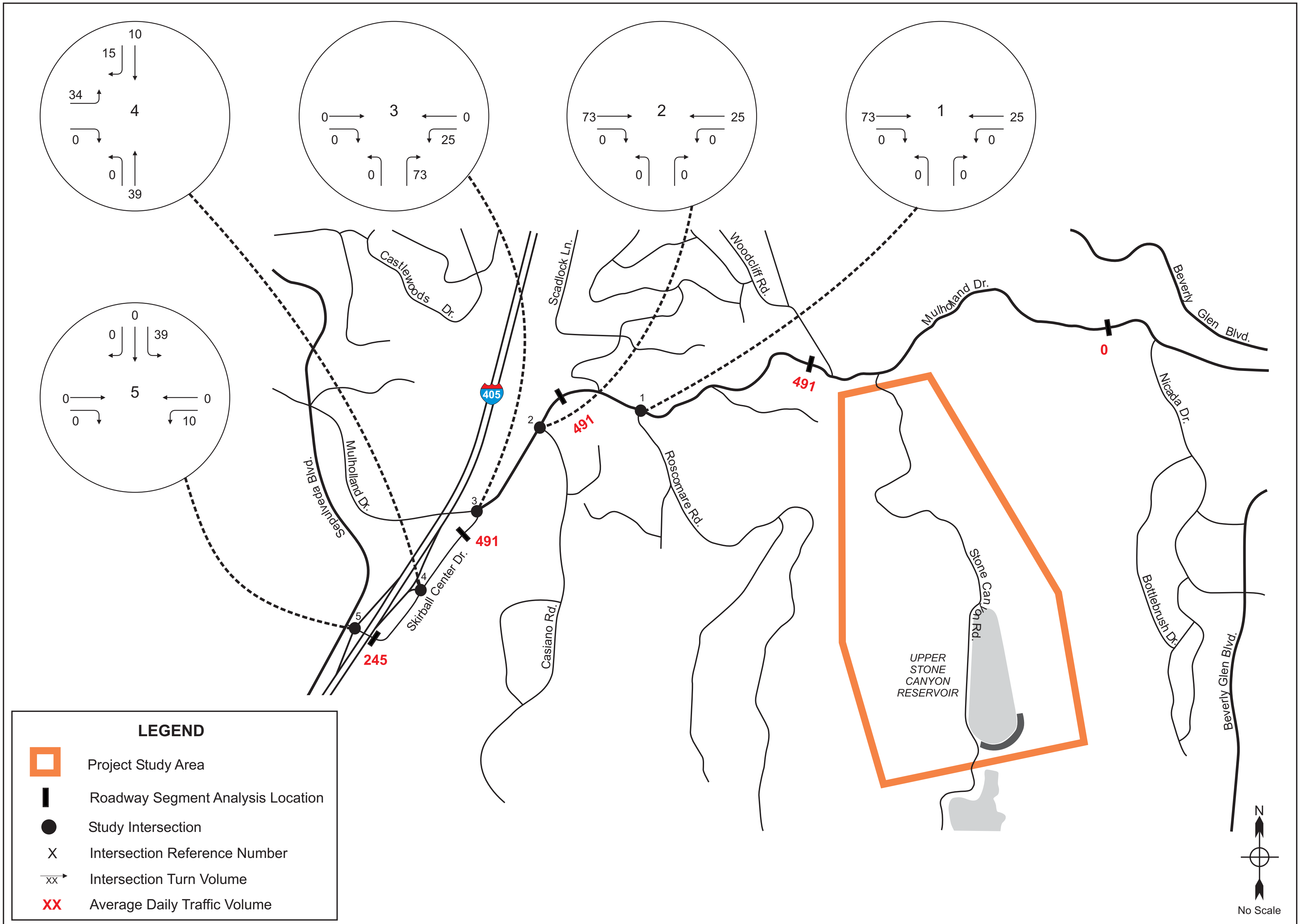
Table 9 – Peak Hour Construction Trip Generation – Aluminum Cover Alternative

Project Scenario	Generator	Daily	**Weekday AM Total**	Weekday AM IN	Weekday AM OUT	**Weekday PM Total**	Weekday PM IN	Weekday PM OUT
Aluminum Cover	Trucks	158	**20**	10	10	**20**	10	10
	Employees [a]	96	**48**	48	0	**48**	0	48
	Trucks, PCE [b]	395	**50**	25	25	**50**	25	25
TOTAL		491	**98**	73	25	**98**	25	73

[a] Employee trips = 1 vehicle/employee
[b] Vehicle trips = 2.5 PCE x truck trips

Under this scenario, the number of employee trips was based on the assumption that all 48 employees would arrive within the a.m. peak hour and depart within the p.m. peak hour. The truck trips were based on an eight-hour work shift, with delivery truck trips evenly distributed throughout the day. Based on a weekday daily total of 158 truck trips, 20 truck trips would occur during the a.m. peak hour and 20 truck trips would also occur during the p.m. peak hour. With PCE truck trip factoring and employee trips, scenario vehicle trips would total 491 trips on a daily basis, and 98 one-way trips during both the a.m. and p.m. peak hours.

The overall assignment of the project construction trips to the study area are provided on Figure 18 (a.m. peak) and Figure 19 (pm. peak). The daily project construction volumes are also provided on both figures.



LEGEND

- Project Study Area
- Roadway Segment Analysis Location
- Study Intersection
- X — Intersection Reference Number
- XX — Intersection Turn Volume
- XX — Average Daily Traffic Volume

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Upper Stone Canyon Reservoir Water Quality Improvement Project — Figure 18

Project Trip Assignment - Aluminum Cover Alternative - AM Peak Hour

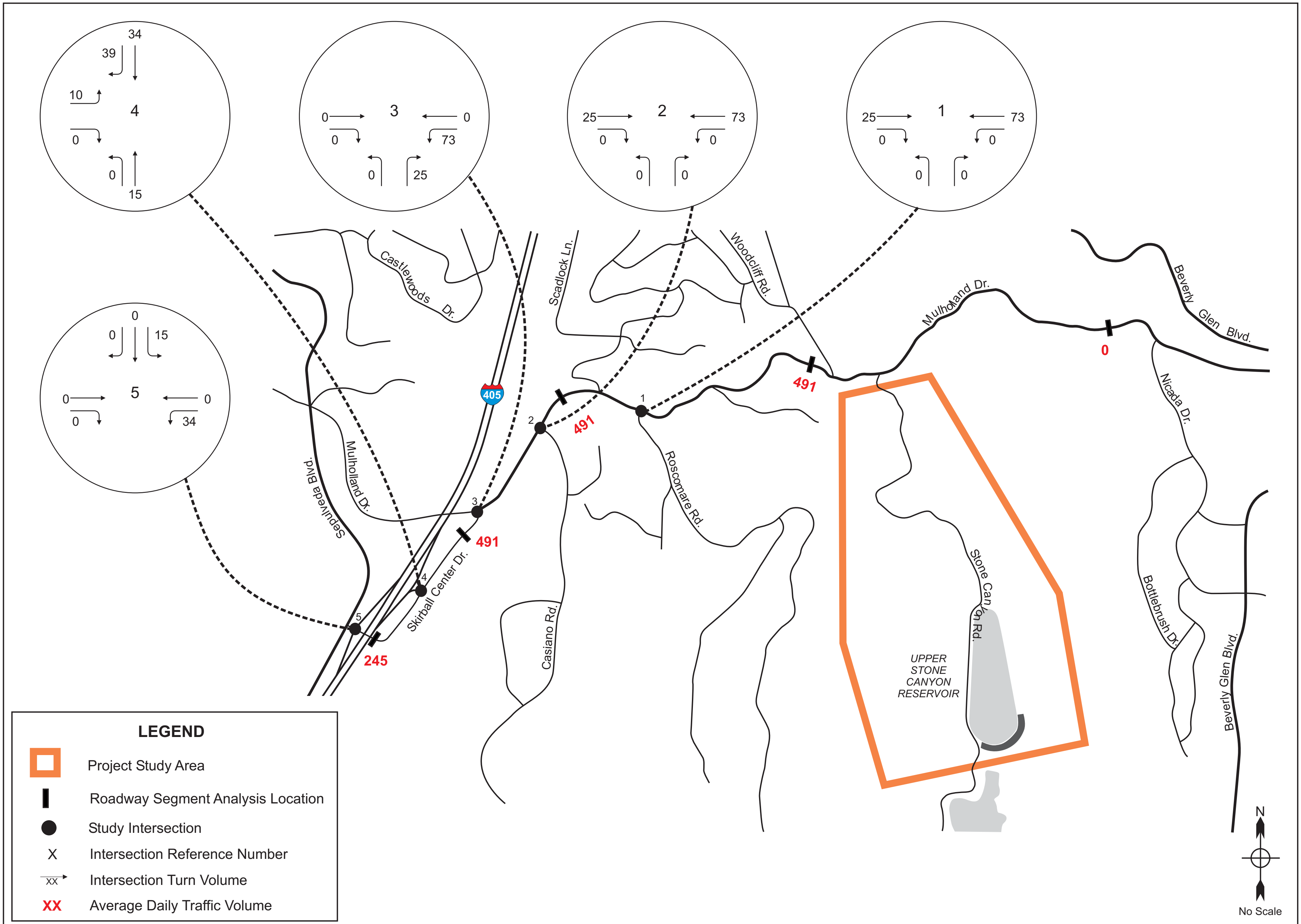

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Figure 19

Project Trip Assignment - Aluminum Cover Alternative - PM Peak Hour

6.5 Post-Project Trip Generation – Proposed Park

Under the proposed project, public access to the SCRC would be provided for recreational purposes. Public access is a component of the proposed project based on the public investment in the concrete-roof reservoir.

Because of safety conflicts related to turning movements for vehicles exiting the SCRC, left turns onto Mulholland Drive would be prohibited for trails users. Therefore, all traffic related to the trails access function would exit onto Mulholland Drive eastbound (i.e., a right turn from Stone Canyon Road onto Mulholland Drive).

The trip generation estimate is based on the empirical data provided by the Santa Monica Mountain Conservancy from the nearby Franklin Canyon Park, which is similar in size to the Stone Canyon Reservoir. The Franklin Canyon Park provides 110 parking spaces to support up to 250 daily visitors on weekends; however, a certain portion of these visitors, and the parking required to support them, are related to visits to a formal nature center facility, which would not be provided at Stone Canyon.

Based on the data provided for the other similar park use, Table 10 summarizes the proposed park trip generation estimate for the proposed project.

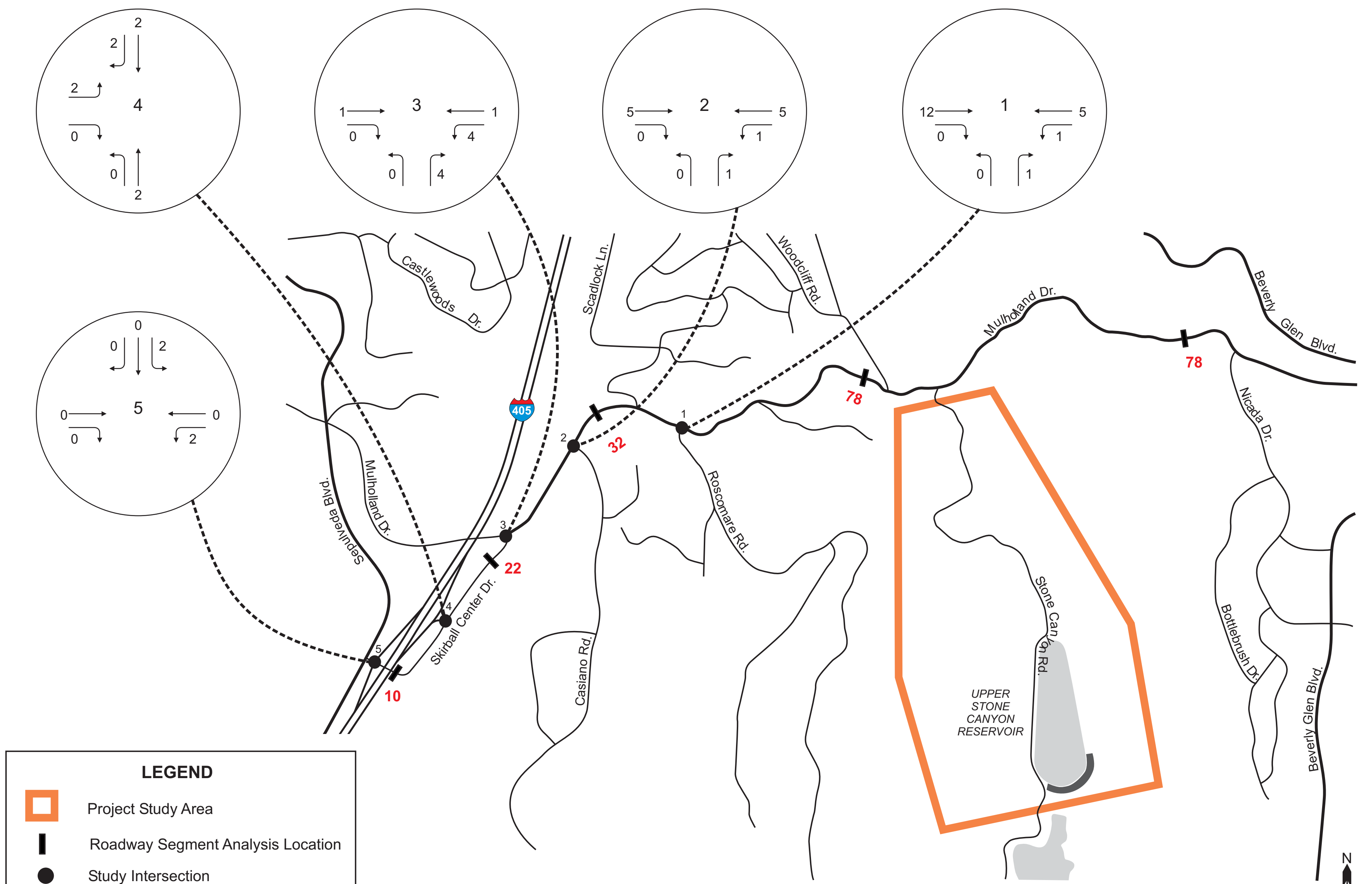
Table 10 – Peak Hour Trip Generation – Proposed Park

Land Use	Intensity	Units	**Weekday Daily**	**Weekday AM Total**	Weekday AM IN	Weekday AM OUT	**Weekday PM Total**	Weekday PM IN	Weekday PM OUT	**Weekend Daily**	**Midday Total**	Midday IN	Midday OUT
PROPOSED TRIP GENERATION													
Park	25	Spaces	**78**	**26**	13	13	**26**	13	13	**100**	50	25	25

Notes:
Daily trips were based on 1.5 turnover during the weekday and 2 turnovers during the weekend. Trips were concentrated in the peak hour to provided a conservative analysis.
A full turnover of spaces was assumed during the weekend mid-day peak hour.

The proposed project park use would generate 78 weekday daily trips, and 26 of these trips were assumed to occur during each of the a.m. and p.m. peak hours. During weekends, peak park use would likely occur on Saturdays. It has been estimated that Saturday trip generation would total 100 vehicle trips, of which 50 would occur during the mid-day peak hour.

The overall assignment of the proposed park trips to the study area are provided on Figure 20 (a.m. peak) and Figure 21 (pm. peak). The project daily volumes, with the park use trips, are also provided on both figures.



LEGEND

- Project Study Area
- Roadway Segment Analysis Location
- Study Intersection
- X Intersection Reference Number
- xx Intersection Turn Volume
- XX Average Daily Traffic Volume

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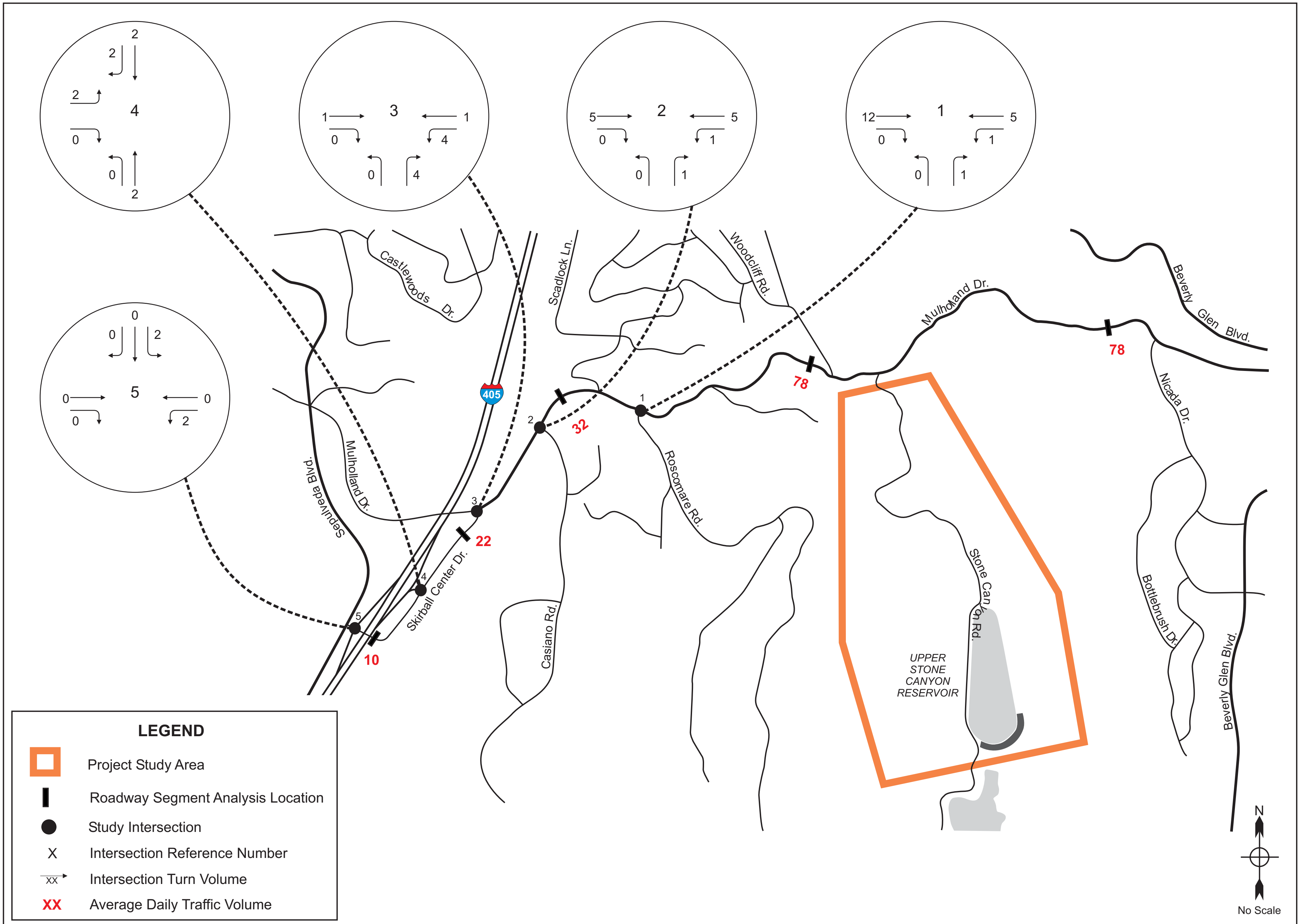
Upper Stone Canyon Reservoir Water Quality Improvement Project | Figure 20

Project Trip Assignment - Park Use - AM Peak Hour



LEGEND

- Project Study Area
- Roadway Segment Analysis Location
- Study Intersection
- X Intersection Reference Number
- xx Intersection Turn Volume
- XX Average Daily Traffic Volume

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Upper Stone Canyon Reservoir Water Quality Improvement Project

Figure 21

Project Trip Assignment - Park Use - PM Peak Hour

7. Project Construction-Period Conditions and Impacts

7.1 Significant Impact Guidelines

Traffic impacts are identified if a proposed development will result in a significant change in traffic conditions at a study intersection or roadway segment. A significant impact is typically identified if project-related traffic will cause service levels to deteriorate beyond a threshold limit specified by the overseeing agency. Impacts can also be significant if an intersection is already operating below the acceptable level of service and project traffic will cause a further decline below a threshold.

The City of Los Angeles Department of Transportation has established specific thresholds for project related increases in the volume-to-capacity ratio (V/C) of signalized study intersections. The following increases in peak-hour V/C ratios are considered significant impacts:

Level of Service	Final V/C*	Project Related v/c increase
C	< 0.70 – 0.80	Equal to or greater than 0.040
D	< 0.80 – 0.90	Equal to or greater than 0.020
E and F	0.90 or more	Equal to or greater than 0.010

Note: Final V/C is the V/C ratio at an intersection, considering impacts from the project, ambient and related project growth, and without proposed traffic impact mitigations.

For study roadway segments, LADOT defines significant impact thresholds for varying levels of total volumes, but only for residential roadway segments. Roadway significant impacts were defined based on the worsening of conditions at LOS E or F due to the project.

Study area traffic operations for the construction and post-project park use scenarios are discussed below, along with significant impact determinations.

7.1 Site Access

Construction truck and employee vehicle access, and truck routes between the site and the I-405 corridor, would be the same for all alternatives. Between I-405 and the north SCRC entry on Mulholland Drive, road closures are not anticipated during construction, but traffic control measures, such as flagpersons, may be required at times to facilitate construction vehicles ingress and egress at the SCRC gate. This would be necessary under any of the construction alternatives.

7.2 No-Build Alternative Impacts

Under the Project No-Built Alternative, trip generation to and from the project site would remain as it is under existing conditions. The No-Build Alternative would therefore not create any new significant traffic impacts.

7.3 Proposed Project – Concrete Cover Alternate Description Analysis

The study intersection operations across all analyzed scenarios, for the proposed project (Concrete Roof Alternative) are summarized in Table 11 (a.m. peak-hour) and Table 12 (p.m. peak-hour). Traffic impacts created by the project construction under this scenario were calculated by subtracting the volume-to-capacity (v/c) totals under the "Year 2019 No-Project" heading from the totals under the "Year 2019 with-Project Construction" heading.

The overall traffic impacts created by the project construction traffic and determination of significant impacts are provided in the right two columns of the tables. LOS values of E or F and significant impact determinations are highlighted by bold text. The level of service calculation worksheets for this analysis scenario are provided in Appendix C.

Table 11 – Significant Intersection Traffic Impacts – Concrete Roof Alternative – AM Peak Hour

		Existing Conditions (Year 2010)		Future No-Project Conditions (Year 2019)		Future with-Project Construction Conditions (Year 2019)			
	Study Intersections	V/C	LOS	V/C	LOS	V/C	LOS	Diff.	Signif?
1.	Roscomare Rd & Mulholland Dr	0.677	B	0.762	C	0.832	D	0.070	**Yes**
2.	Casiano Rd & Mulholland Dr	0.620	B	0.699	B	0.769	C	0.070	**Yes**
3.	Skirball Center Dr & Mulholland Dr	0.888	D	0.990	**E**	1.025	**F**	0.035	**Yes**
4.	Skirball Center Dr & I-405 NB on&off Ramps	0.799	C	0.886	D	0.915	**E**	0.029	**Yes**
5.	I-405 SB on&off Ramps & Skirball Center Dr	0.621	B	0.698	B	0.750	C	0.052	**Yes**

All study intersections are equipped with ATSAC and ATCS capability. Therefore, per LADOT policies, a 0.100 v/c credit has been applied to all calculations.

**Table 12 – Significant Intersection Traffic Impacts –
Concrete Roof Alternative – PM Peak Hour**

	Study Intersections	Existing Conditions (Year 2010)		Future No-Project Conditions (Year 2019)		Future with-Project Construction Conditions (Year 2019)		Diff.	Signif?
		V/C	LOS	V/C	LOS	V/C	LOS		
1.	Roscomare Rd & Mulholland Dr	0.506	A	0.584	A	0.652	B	0.068	No
2.	Casiano Rd & Mulholland Dr	0.394	A	0.459	A	0.496	A	0.037	No
3.	Skirball Center Dr & Mulholland Dr	0.640	B	0.730	C	0.798	C	0.068	**Yes**
4.	Skirball Center Dr & I-405 NB on&off Ramps	0.545	A	0.612	B	0.649	B	0.037	No
5.	I-405 SB on&off Ramps & Skirball Center Dr	0.503	A	0.575	A	0.628	B	0.053	No

All study intersections are equipped with ATSAC and ATCS capability. Therefore, per LADOT policies, a 0.100 v/c credit has been applied to all calculations.

Based on the results provided within Table 11 and Table 12, project construction would create significant impacts at the following study intersections:

- Roscomare Road & Mulholland Drive – a.m. peak hour
- Casiano Road & Mulholland Drive – a.m. peak hour
- Skirball Center Drive & Mulholland Drive – a.m. peak and p.m. peak hours
- Skirball Center Drive & I-405 Northbound On/Off Ramps – a.m. peak hour
- I-405 Southbound On/Off Ramps & Skirball Center Drive– a.m. peak hour

The study roadway segment volumes across all analyzed scenarios, for the Concrete Cover Alternative, are summarized in Table 13. Volume percentage increases due to Project construction are provided for reference purposes. Impacts to these roadway segments are evaluated after this informational table.

**Table 13 – Roadway Segment Summary –
Concrete Roof Alternative – Daily Vehicle Volumes**

	Street Segments	Base Volumes				Proposed Project		
		Existing	Ambient Growth	Area Projects	Future Base	Project Only	Future with Project	% Increase
A	Mulholland Drive, Between Nicada Drive & Stone Canyon Road	13,801	9%	628	15,722	0	15,722	0.0%
B	Mulholland Drive, Between Woodcliff Road & Antelo Place	12,006	9%	628	13,758	909	14,667	6.6%
C	Mulholland Drive, Between Roscomare Road & Casiano Road	14,976	9%	628	17,007	909	17,916	5.3%
D	Skirball Center Drive, Between Mulholland Drive & NB I-405 on/off Ramps	20,234	9%	628	22,757	909	23,666	4.0%
E	Skirball Center Drive, Between curve on Skirball Ctr Dr & SB I-405 on/off Ramps	14,309	9%	318	15,968	455	16,423	2.8%

Based on the data within Table 13, Segment D would have the highest percentage of Project construction vehicle trips throughout the day. The significance of impacts on the analyzed roadway segments were determined via the analysis of peak-hour volumes, discussed below.

Total construction period volumes at the study intersections are provided on Figure 22 (a.m. peak hour) and Figure 23 (p.m. peak hour).

Peak-hour levels of service were analyzed at the study roadway segments to determine potential significant impacts at these locations. Table 14 summarizes the peak-hour volumes from the daily counts. The peak-hour volumes may not necessarily occur during the typical peak hours of 7:00 a.m. to 9:00 a.m. and 4:00 p.m. to 6:00 p.m.

Table 14 – Peak Hour Roadway Segment LOS – Concrete Roof Alternative

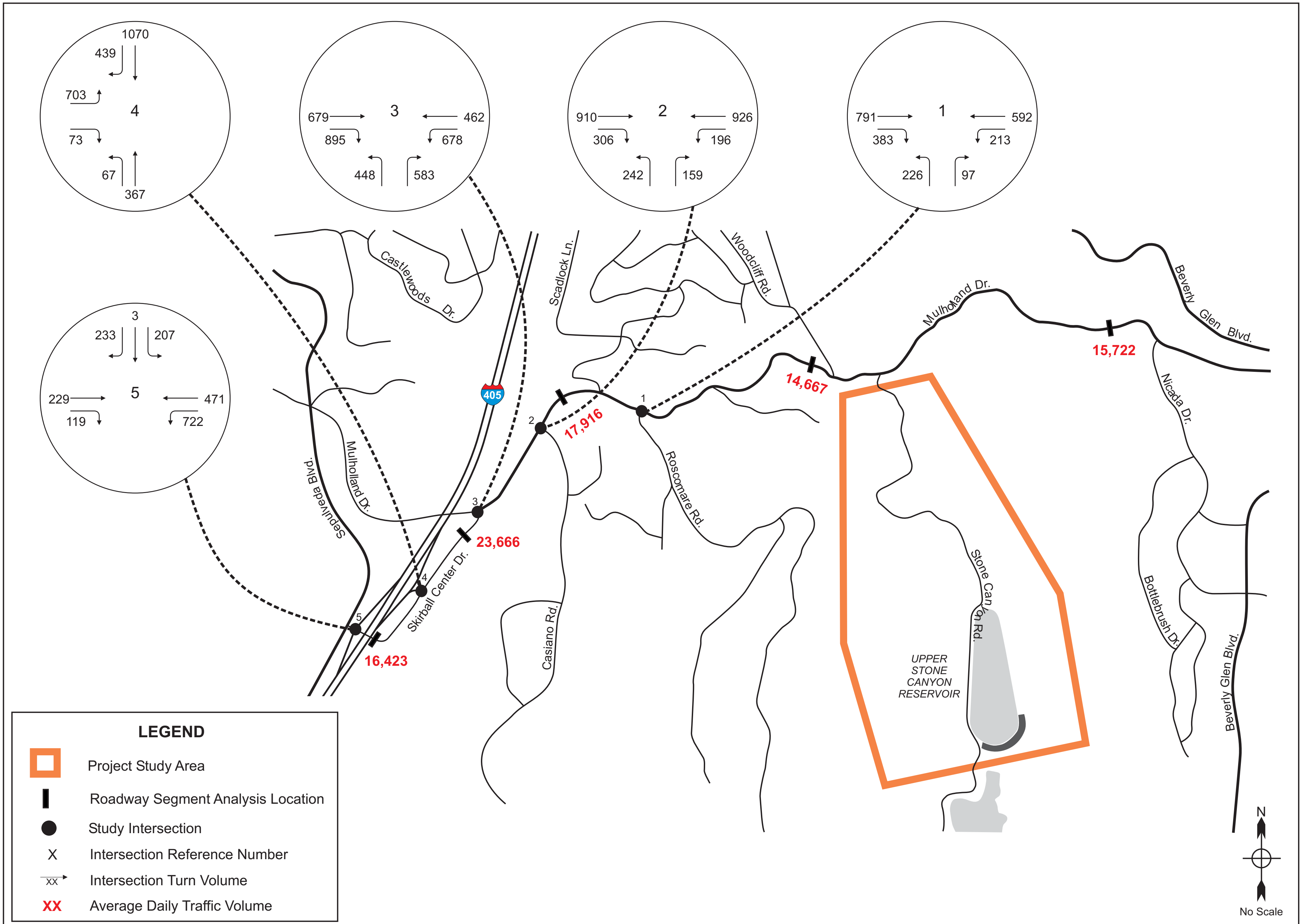
	Street Segments	# of Lanes	Capacity	Base Volumes								Proposed Project-Construction			
				Existing			Ambient	Area	Future Base			Construction	Future with Construction		
				Volumes	V/C	LOS	Growth	Projects	Volumes	V/C	LOS	Only	Volumes	V/C	LOS
A	Mulholland Drive, Between Nicada Drive & Stone Canyon Road	2	1,250	1,338	1.070	**F**	9%	58	1,521	1.217	**F**	0	1,521	1.217	**F**
B	Mulholland Drive, Between Woodcliff Road & Antelo Place	2	1,250	1,225	0.980	**E**	9%	58	1,397	1.118	**F**	149	1,546	1.237	**F**
C	Mulholland Drive, Between Roscomare Road & Casiano Road	3	1,875	1,564	0.834	D	9%	58	1,768	0.943	**E**	149	1,917	1.022	**F**
D	Skirball Center Drive, Between Mulholland Drive & NB I-405 on/off Ramps	4	2,500	1,999	0.799	C	9%	58	2,244	0.898	D	149	2,393	0.957	**E**
E	Skirball Center Drive, Between curve on Skirball Ctr Dr & SB I-405 on/off Ramps	4	2,500	1,386	0.554	A	9%	37	1,553	0.621	B	75	1,628	0.651	B

Based on the results provided within Table 14, all of the analyzed roadway segments would operate at LOS E or F, except on Skirball Center Drive. This roadway, between the curve on Skirball Center drive and I-405 southbound on-off ramps, would operate at LOS B.

Three out of four roadway segments operating at LOS E or F would be significantly impacted by the proposed project, due to worsening of operations at these locations within LOS E or F during project construction:

- Mulhollad Drive, between Woodcliff Road and Antelo Place
- Mulholland Drive, between Roscomare Road and Casiano Road
- Skirball Center Drive, between Mulholland Drive, and I-405 northbound on/off ramps

Construction trips were not assumed to travel east of the Project site. Therefore, the roadway segment on Mulholland Drive, between Nicada Drive and Stone Canyon Road would not be significantly impacted. Mitigation measures for these significant impacts are discussed in Section 10 of this report.



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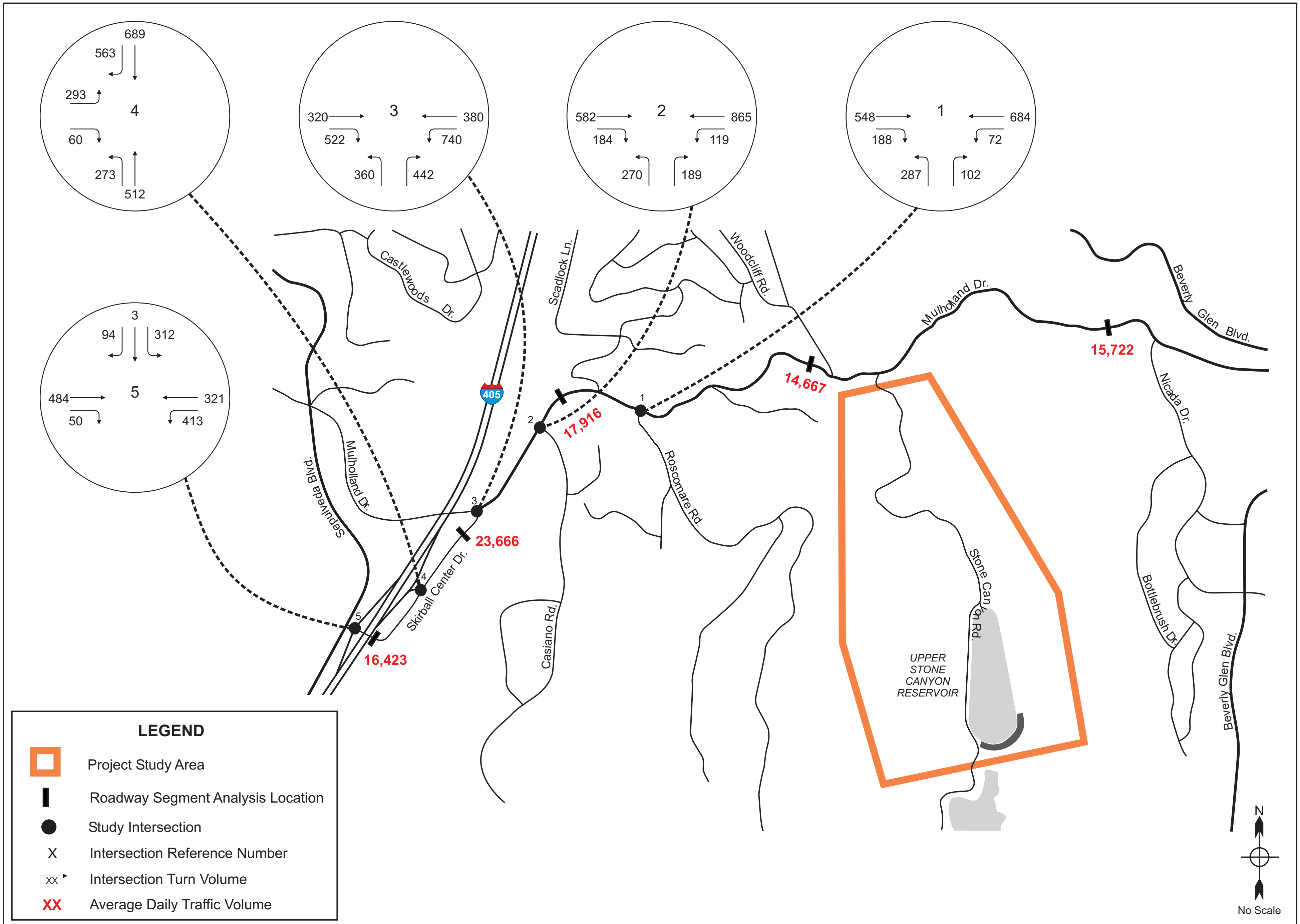
Upper Stone Canyon Reservoir Water Quality Improvement Project

Figure 22

Future (2019) with Project Construction (Concrete Roof) - AM Peak Hour Intersection Volumes



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Upper Stone Canyon Reservoir Water Quality Improvement Project

Figure 23

Future (2019) with Project Construction (Concrete Roof) - PM Peak Hour Intersection Volumes

7.4 Proposed Project Alternate Construction Intensity Analysis

In order to investigate potential effects on significant impacts identified earlier within this report section for the project Concrete Roof alternative, alternate project construction intensities were examined. The following alternate project construction configurations under the overall Concrete Roof alternative were included in this supplemental analysis:

- A 50% reduction in daily construction truck trips
- A prohibition of peak-hour construction truck trips
- An extension of the project construction timeline, with a peak in the year 2017

Table 15 provides a summary of the trip generation used for the evaluation of peak-hour impacts under these alternate project construction configurations.

Table 15 – Alternate Peak Hour Construction Trip Generation – Concrete Roof Alternative

SCENARIO A - 50% DELIVERY TRIP REDUCTION								
Project Scenario	Generator	Daily	**Weekday AM Total**	Weekday AM IN	Weekday AM OUT	**Weekday PM Total**	Weekday PM IN	Weekday PM OUT
Concrete Roof	Trucks	163	**20**	10	10	**20**	10	10
	Employees [a]	94	**47**	47	0	**47**	0	47
	Trucks, PCE [b]	408	**50**	25	25	**50**	25	25
TOTAL		502	**97**	72	25	**97**	25	72
SCENARIO B - NO PEAK HOUR DELIVERY TRIPS								
Project Scenario	Generator	Daily	**Weekday AM Total**	Weekday AM IN	Weekday AM OUT	**Weekday PM Total**	Weekday PM IN	Weekday PM OUT
Concrete Roof	Employees [a]	94	**47**	47	0	**47**	0	47
	Trucks [b]	0	**0**	0	0	**0**	0	0
TOTAL		94	**47**	47	0	**47**	0	47
SCENARIO C - PEAK @ MONTH 18 YEAR 2017								
Project Scenario	Generator	Daily	**Weekday AM Total**	Weekday AM IN	Weekday AM OUT	**Weekday PM Total**	Weekday PM IN	Weekday PM OUT
Concrete Roof	Trucks	114	**14**	7	7	**14**	7	7
	Employees [a]	214	**107**	107	0	**107**	0	107
	Trucks, PCE [b]	285	**35**	18	17	**35**	18	17
TOTAL		499	**142**	125	17	**142**	18	124

[a] Employee trips = 1 employee/vehicle
[b] Vehicle trips = 2.5 PCE x truck trips

The report sub-sections below provide a review of traffic impacts under each of the four identified alternate project construction configurations.

Scenario A – 50% Reduction in Daily Construction Truck Trips

Under Scenario A, the Concrete Roof peak construction year would remain in 2019. However, the daily construction truck trips would be reduced by 50 percent. The Project peak-hour trips would occur within the last two months of the construction period, it would be reasonable to extend the construction period from two to four months. Therefore, the total daily construction trips would be reduced by half.

Table 16 provides a summary of the a.m. and p.m. peak-hour traffic impacts for the Concrete Roof alternate analysis under Scenario A. Traffic impacts created by the project construction under this scenario were calculated by subtracting the volume-to-capacity (v/c) totals under the "Year 2019 No-Project" heading from the totals under the "Year 2019 with-Project Mitigation Construction" heading.

Table 16 – Alternate Mitigation Traffic Impacts – Concrete Roof Alternative – 50% Reduction in Daily Truck Trips

			Existing Conditions (Year 2010)		Future No-Project Conditions (Year 2019)		Future with-Project Mitigation Construction Conditions (Year 2019)			
	Study Intersections	Peak Hour	V/C	LOS	V/C	LOS	V/C	LOS	Diff.	Signif?
1.	Roscomare Rd & Mulholland Dr	AM	0.677	B	0.762	C	0.812	D	0.050	**Yes**
		PM	0.506	A	0.584	A	0.635	B	0.051	No
2.	Casiano Rd & Mulholland Dr	AM	0.620	B	0.699	B	0.750	C	0.051	**Yes**
		PM	0.394	A	0.459	A	0.477	A	0.018	No
3.	Skirball Center Dr & Mulholland Dr	AM	0.888	D	0.990	**E**	1.008	**F**	0.018	**Yes**
		PM	0.640	B	0.730	C	0.781	C	0.051	**Yes**
4.	Skirball Center Dr & I-405 NB on&off Ramps	AM	0.799	C	0.886	D	0.905	**E**	0.019	**Yes**
		PM	0.545	A	0.612	B	0.639	B	0.027	No
5.	I-405 SB on&off Ramps & Skirball Center Dr	AM	0.621	B	0.698	B	0.732	C	0.034	No
		PM	0.503	A	0.575	A	0.609	B	0.034	No

All study intersections are equipped with ATSAC and ATCS capability. Therefore, per LADOT policies, a 0.100 v/c credit has been applied to all calculations.

Based on the results provided within Table 16, the study intersection at I-405 Southbound On/Off Ramps & Skirball Center Drive would no longer be significantly-impacted based on the reduction in daily construction truck trips. Significant impacts would remain at the following study intersections:

- Roscomare Road & Mulholland Drive – a.m. peak hour
- Casiano Road & Mulholland Drive – a.m. peak hour
- Skirball Center Drive & Mulholland Drive – a.m. peak and p.m. peak hours
- Skirball Center Drive & I-405 Northbound On/Off Ramps – a.m. peak hour

Scenario B – Prohibits Peak-Hour Construction Truck Trips

Under Scenario B, the Concrete Roof peak construction year would remain in 2019. However, peak-hour construction truck trips would be prohibited. Only employee trips would be permitted during peak periods.

Table 17 provides a summary of the a.m. and p.m. peak-hour traffic impacts for the Concrete Roof alternate analysis under Scenario B. Traffic impacts created by project construction under this scenario were calculated by subtracting the volume-to-capacity (v/c) totals under the "Year 2019 No-Project" heading from the totals under the "Year 2019 with-Project Mitigation Construction" heading.

Table 17 – Alternate Mitigation Traffic Impacts – Concrete Roof Alternative – No Peak-Hour Truck Trips

	Study Intersections	Peak Hour	Existing Conditions (Year 2010)		Future No-Project Conditions (Year 2019)		Future with-Project Mitigation Construction Conditions (Year 2019)		Diff.	Signif?
			V/C	LOS	V/C	LOS	V/C	LOS		
1.	Roscomare Rd & Mulholland Dr	AM	0.677	B	0.762	C	0.795	C	0.033	No
		PM	0.506	A	0.584	A	0.617	B	0.033	No
2.	Casiano Rd & Mulholland Dr	AM	0.620	B	0.699	B	0.732	C	0.033	No
		PM	0.394	A	0.459	A	0.459	A	0.000	No
3.	Skirball Center Dr & Mulholland Dr	AM	0.888	D	0.990	**E**	0.990	**E**	0.000	No
		PM	0.640	B	0.730	C	0.763	C	0.033	No
4.	Skirball Center Dr & I-405 NB on&off Ramps	AM	0.799	C	0.886	D	0.894	D	0.008	No
		PM	0.545	A	0.612	B	0.628	B	0.016	No
5.	I-405 SB on&off Ramps & Skirball Center Dr	AM	0.621	B	0.698	B	0.714	C	0.016	No
		PM	0.503	A	0.575	A	0.592	A	0.017	No

All study intersections are equipped with ATSAC and ATCS capability. Therefore, per LADOT policies, a 0.100 v/c credit has been applied to all calculations.

Based on the data within Table 17, construction of the Concrete Roof alternative with the prohibition of construction truck trips during peak hours would not create any significant impacts at the study intersections.

Scenario C – Project Construction Extension, Year 2017

Under Scenario C, the Concrete Roof alternate construction year would be in 2017, as a majority of the activities would occur towards the middle of the construction schedule. This would affect peak-hour trips, if the construction phase duration were extended during the last two months.

Table 18 provides a summary of the a.m. and p.m. peak-hour traffic impacts for the Concrete Roof mitigation alternative analysis in Scenario C, project construction extension with a peak year 2017. Traffic impacts created by the project construction under this scenario were calculated by subtracting the volume-to-capacity (v/c) totals under the "Year 2017 No-Project" heading from the totals under the "Year 2017 with-Project Mitigation Construction" heading.

Table 18 – Alternate Mitigation Traffic Impacts – Concrete Roof Alternative – Project Construction Extension, 2017

Study Intersections		Peak Hour	Existing Conditions (Year 2010) V/C	LOS	Future No-Project Conditions (Year 2017) V/C	LOS	Future with-Project Mitigation Construction Conditions (Year 2017) V/C	LOS	Diff.	Signif?
1.	Roscomare Rd & Mulholland Dr	AM	0.677	B	0.745	C	0.833	D	0.088	**Yes**
		PM	0.506	A	0.571	A	0.658	B	0.087	No
2.	Casiano Rd & Mulholland Dr	AM	0.620	B	0.684	B	0.771	C	0.087	**Yes**
		PM	0.394	A	0.449	A	0.461	A	0.012	No
3.	Skirball Center Dr & Mulholland Dr	AM	0.888	D	0.969	**E**	1.010	**F**	0.041	**Yes**
		PM	0.640	B	0.715	C	0.802	D	0.087	**Yes**
4.	Skirball Center Dr & I-405 NB on&off Ramps	AM	0.799	C	0.866	D	0.893	D	0.027	**Yes**
		PM	0.545	A	0.599	A	0.641	B	0.042	No
5.	I-405 SB on&off Ramps & Skirball Center Dr	AM	0.621	B	0.682	B	0.732	C	0.050	**Yes**
		PM	0.503	A	0.562	A	0.612	B	0.050	No

All study intersections are equipped with ATSAC and ATCS capability. Therefore, per LADOT policies, a 0.100 v/c credit has been applied to all calculations.

Based on the results provided within Table 18, the construction of the Concrete Roof alternative with the Project construction extension, significant impacts would remain at the following study intersections:

- Roscomare Road & Mulholland Drive – a.m. peak hour
- Casiano Road & Mulholland Drive – a.m. peak hour
- Skirball Center Drive & Mulholland Drive – a.m. peak and p.m. peak hours
- Skirball Center Drive & I-405 Northbound On/Off Ramps – a.m. peak hour
- I-405 Southbound On/Off Ramps & Skirball Center Drive – a.m. peak hour

7.5 Floating Cover Alternative Analysis

The study intersection operations across all analyzed scenarios, for the Floating Cover Alternative, are summarized in Table 19 (a.m. peak-hour) and Table 20 (p.m. peak-hour). Traffic impacts created by the project construction under this scenario were calculated by subtracting the volume-to-capacity (v/c) totals under the "Year 2014 No-Project" heading from the totals under the "Year 2014 with-Project Construction" heading.

The overall traffic impacts created by the project construction traffic and determination of significant impacts are provided in the right two columns of the tables. LOS values of E or F and significant impact determinations are highlighted by bold text. The levels of service calculation worksheets for this analysis scenario are provided in Appendix D.

Table 19 – Significant Traffic Impacts – Floating Cover – AM Peak Hour

	Study Intersections	Existing Conditions (Year 2010)		Future No-Project Conditions (Year 2014)		Future with-Project Construction Conditions (Year 2014)		Diff.	Signif?
		V/C	LOS	V/C	LOS	V/C	LOS		
1.	Roscomare Rd & Mulholland Dr	0.677	B	0.720	C	0.744	C	0.024	No
2.	Casiano Rd & Mulholland Dr	0.620	B	0.661	B	0.685	B	0.024	No
3.	Skirball Center Dr & Mulholland Dr	0.888	D	0.938	**E**	0.945	**E**	0.007	No
4.	Skirball Center Dr & I-405 NB on&off Ramps	0.799	C	0.838	D	0.846	D	0.008	No
5.	I-405 SB on&off Ramps & Skirball Center Dr	0.621	B	0.659	B	0.675	B	0.016	No

All study intersections are equipped with ATSAC and ATCS capability. Therefore, per LADOT policies, a 0.100 v/c credit has been applied to all calculations.

Table 20 – Significant Traffic Impacts – Floating Cover – PM Peak Hour

	Study Intersections	Existing Conditions (Year 2010)		Future No-Project Conditions (Year 2014)		Future with-Project Construction Conditions (Year 2014)		Diff.	Signif?
		V/C	LOS	V/C	LOS	V/C	LOS		
1.	Roscomare Rd & Mulholland Dr	0.506	A	0.552	A	0.575	A	0.023	No
2.	Casiano Rd & Mulholland Dr	0.394	A	0.433	A	0.441	A	0.008	No
3.	Skirball Center Dr & Mulholland Dr	0.640	B	0.691	B	0.714	C	0.023	No
4.	Skirball Center Dr & I-405 NB on&off Ramps	0.545	A	0.578	A	0.590	A	0.012	No
5.	I-405 SB on&off Ramps & Skirball Center Dr	0.503	A	0.543	A	0.559	A	0.016	No

All study intersections are equipped with ATSAC and ATCS capability. Therefore, per LADOT policies, a 0.100 v/c credit has been applied to all calculations.

Based on the impact analysis results provided within Table 19 and Table 20, project construction under this scenario would not create any significant impacts at the study intersections.

The study roadway segment operations across all analyzed scenarios, for the Floating Cover Alternative, are summarized in Table 21.

**Table 21 – Roadway Segment Summary –
Floating Cover Alternative – Daily Vehicle Volumes**

Street Segments		Base Volumes				Proposed Project		
		Existing	Ambient Growth	Area Projects	Future Base	Project Only	Future with Project	% Increase
A	Mulholland Drive, Between Nicada Drive & Stone Canyon Road	13,801	4%	628	14,989	0	14,989	0.0%
B	Mulholland Drive, Between Woodcliff Road & Antelo Place	12,006	4%	628	13,121	216	13,337	1.6%
C	Mulholland Drive, Between Roscomare Road & Casiano Road	14,976	4%	628	16,212	216	16,428	1.3%
D	Skirball Center Drive, Between Mulholland Drive & NB I-405 on/off Ramps	20,234	4%	628	21,683	216	21,899	1.0%
E	Skirball Center Drive, Between curve on Skirball Ctr Dr & SB I-405 on/off Ramps	14,309	4%	318	15,208	109	15,317	0.7%

Based on the data within Table 21, Segment B would have the highest percentage of the Floating Cover Alternative vehicle trips throughout the day. The significance of impacts on the analyzed roadway segments were determined via the analysis of peak-hour levels of service, discussed below.

Total construction period volumes at the study intersections are provided on Figure 24 (a.m. peak hour) and Figure 25 (p.m. peak hour). Daily traffic volumes are included on both figures.

Peak-hour levels of service were analyzed at the study roadway segments to determine potential significant impacts at these locations. Table 22 summarizes the peak-hour volumes from the daily counts. The peak-hour volumes may not necessarily occur during the typical peak-hour of 7:00 a.m. to 9:00 a.m. and 4:00 p.m. to 6:00 p.m.

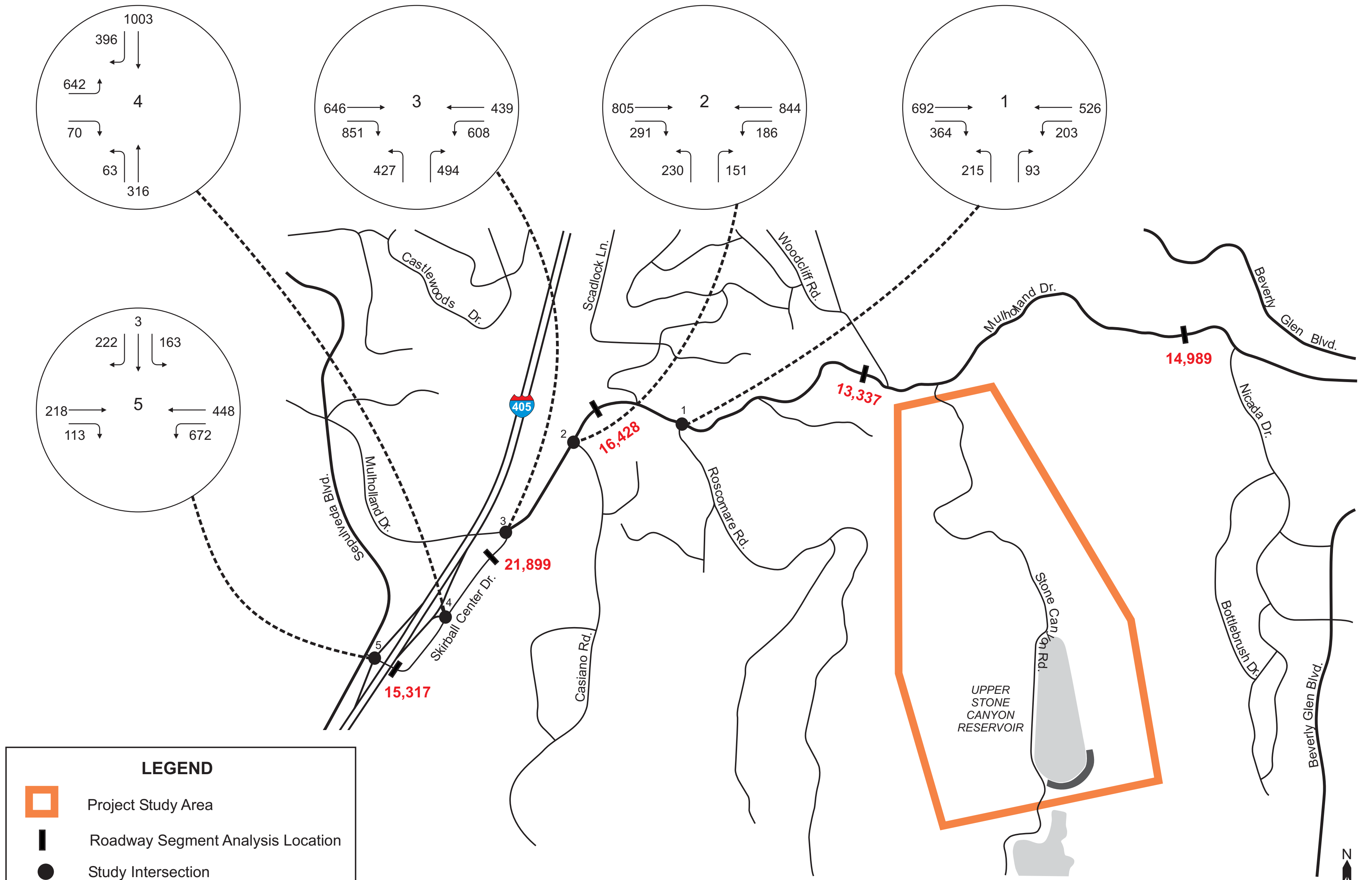
**Table 22 – Peak Hour Roadway Segment LOS –
Floating Cover Alternative**

Street Segments		# of Lanes	Capacity	**Base Volumes**								**Proposed Project-Construction**			
				Existing			Ambient	Area	Future			Construction	Future with Construction		
				Volumes	V/C	LOS	Growth	Projects	Volumes	V/C	LOS	Only	Volumes	V/C	LOS
A	Mulholland Drive, Between Nicada Drive & Stone Canyon Road	2	1,250	1,338	1.070	**F**	4%	58	1,450	1.160	**F**	0	1,450	1.160	**F**
B	Mulholland Drive, Between Woodcliff Road & Antelo Place	2	1,250	1,225	0.980	**E**	4%	58	1,332	1.066	**F**	46	1,378	1.102	**F**
C	Mulholland Drive, Between Roscomare Road & Casiano Road	3	1,875	1,564	0.834	D	4%	58	1,685	0.899	D	46	1,731	0.923	**E**
D	Skirball Center Drive, Between Mulholland Drive & NB I-405 on/off Ramps	4	2,500	1,999	0.799	C	4%	58	2,138	0.855	D	46	2,184	0.874	D
E	Skirball Center Drive, Between curve on Skirball Ctr Dr & SB I-405 on/off Ramps	4	2,500	1,386	0.554	A	4%	37	1,479	0.592	A	23	1,502	0.601	B

Based on the results provided within Table 22, two of the study roadway segments would operate at LOS D or better. The other two roadway segments would operate at LOS E or F during the peak-hour of the day:

- Mulholland Drive, between Woodcliff Road and Antelo Place – would operate at LOS F.
- Mulholland Drive, between Roscomare Road & Casiano Road – would operate at LOS E.

These two roadway segments would be significantly impacted by the proposed Project due to worsening of operations at these locations within LOS E or F during Project construction. Construction trips were not assumed to travel east of the Project site. Therefore, the roadway segment on Mulholland Drive, between Nicada Drive and Stone Canyon Road would not be significantly impacted. Mitigation measures for these roadway significant impacts are discussed in Section 10 of this report.



LEGEND

- Project Study Area
- Roadway Segment Analysis Location
- Study Intersection
- X Intersection Reference Number
- XX Intersection Turn Volume
- XX Average Daily Traffic Volume

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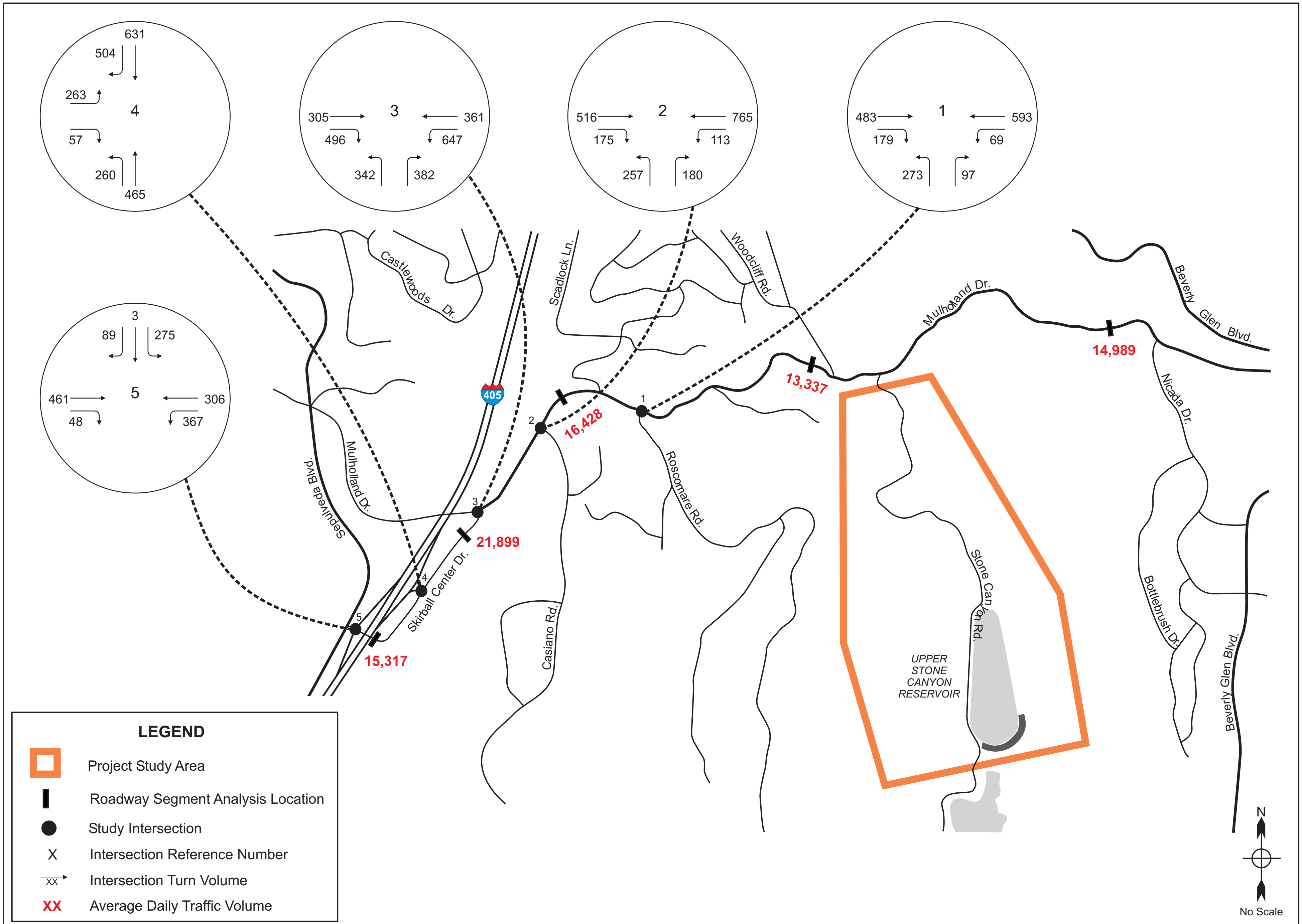
Upper Stone Canyon Reservoir Water Quality Improvement Project

Figure 24

Future (2014) with Project Construction (Floating Cover Alternative) - AM Peak Hour Intersection Volumes



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Upper Stone Canyon Reservoir Water Quality Improvement Project

Figure 25

Future (2014) with Project Construction (Floating Cover Alternative) - PM Peak Hour Intersection Volumes

7.6 Aluminum Cover Alternative Impact Calculations

The study intersection operations across all analyzed scenarios, for the Aluminum Cover Alternative, are summarized in Table 23 (a.m. peak-hour) and Table 24 (p.m. peak-hour). Traffic impacts created by the project construction under this scenario were calculated by subtracting the volume-to-capacity (v/c) totals under the "Year 2014 No-Project" heading from the totals under the "Year 2014 with-Project Construction" heading.

The overall traffic impacts created by the project construction traffic and determination of significant impacts are provided in the right two columns of the tables. LOS values of E or F and significant impact determinations are highlighted by bold text. The levels of service calculation worksheets for this analysis scenario are provided in Appendix E.

**Table 23 – Significant Traffic Impacts –
Aluminum Cover – AM Peak Hour**

	Study Intersections	Existing Conditions (Year 2010)		Future No-Project Conditions (Year 2014)		Future with-Project Construction Conditions (Year 2014)		Diff.	Signif?
		V/C	LOS	V/C	LOS	V/C	LOS		
1.	Roscomare Rd & Mulholland Dr	0.677	B	0.720	C	0.772	C	0.052	**Yes**
2.	Casiano Rd & Mulholland Dr	0.620	B	0.661	B	0.712	C	0.051	**Yes**
3.	Skirball Center Dr & Mulholland Dr	0.888	D	0.938	**E**	0.955	**E**	0.017	**Yes**
4.	Skirball Center Dr & I-405 NB on&off Ramps	0.799	C	0.838	D	0.857	D	0.019	No
5.	I-405 SB on&off Ramps & Skirball Center Dr	0.621	B	0.659	B	0.694	B	0.035	No

All study intersections are equipped with ATSAC and ATCS capability. Therefore, per LADOT policies, a 0.100 v/c credit has been applied to all calculations.

**Table 24 – Significant Traffic Impacts –
Aluminum Cover – PM Peak Hour**

	Study Intersections	Existing Conditions (Year 2010)		Future No-Project Conditions (Year 2014)		Future with-Project Construction Conditions (Year 2014)		Diff.	Signif?
		V/C	LOS	V/C	LOS	V/C	LOS		
1.	Roscomare Rd & Mulholland Dr	0.506	A	0.552	A	0.603	B	0.051	No
2.	Casiano Rd & Mulholland Dr	0.394	A	0.433	A	0.450	A	0.017	No
3.	Skirball Center Dr & Mulholland Dr	0.640	B	0.691	B	0.742	C	0.051	**Yes**
4.	Skirball Center Dr & I-405 NB on&off Ramps	0.545	A	0.578	A	0.605	B	0.027	No
5.	I-405 SB on&off Ramps & Skirball Center Dr	0.503	A	0.543	A	0.577	A	0.034	No

All study intersections are equipped with ATSAC and ATCS capability. Therefore, per LADOT policies, a 0.100 v/c credit has been applied to all calculations.

Based on the results provided within Table 23 and Table 24, project construction under this alternative would create significant impacts at the following study intersections:

- Roscomare Road & Mulholland Drive – a.m. peak hour
- Casiano Road & Mulholland Drive – a.m. peak hour
- Skirball Center Drive & Mulholland Drive – a.m. peak and p.m. peak hours

The study roadway segment volumes across all analyzed scenarios, for the Aluminum Cover Alternative, are summarized in Table 25.

Table 25 – Significant Roadway Segment Impacts – Aluminum Cover Alternative – Daily Vehicle Volumes

	Street Segments	Base Volumes				Proposed Project		
		Existing	Ambient Growth	Area Projects	Future Base	Project Only	Future with Project	% Increase
A	Mulholland Drive, Between Nicada Drive & Stone Canyon Road	13,801	4%	628	14,989	0	14,989	0.0%
B	Mulholland Drive, Between Woodcliff Road & Antelo Place	12,006	4%	628	13,121	491	13,612	3.7%
C	Mulholland Drive, Between Roscomare Road & Casiano Road	14,976	4%	628	16,212	491	16,703	3.0%
D	Skirball Center Drive, Between Mulholland Drive & NB I-405 on/off Ramps	20,234	4%	628	21,683	491	22,174	2.3%
E	Skirball Center Drive, Between curve on Skirball Ctr Dr & SB I-405 on/off Ramps	14,309	4%	318	15,208	245	15,453	1.6%

Based on the data within Table 25, segment D would have the highest percentage of Aluminum Cover Alternative vehicle trips throughout the day. The significance of impacts on the analyzed roadway segments were determined via the analysis of peak-hour levels of service, discussed below.

Total construction period volumes at the study intersections are provided on Figure 26 (a.m. peak hour) and Figure 27 (p.m. peak hour). Daily traffic volumes are included on both figures.

Peak hour traffic impacts were analyzed at the study roadway segments to determine potential significant impacts at these locations. Table 26 summarizes the peak-hour volumes from the daily counts. The peak-hour volumes may not necessarily occur during the typical peak-hour of 7:00 a.m. to 9:00 a.m. and 4:00 p.m. to 6:00 p.m.

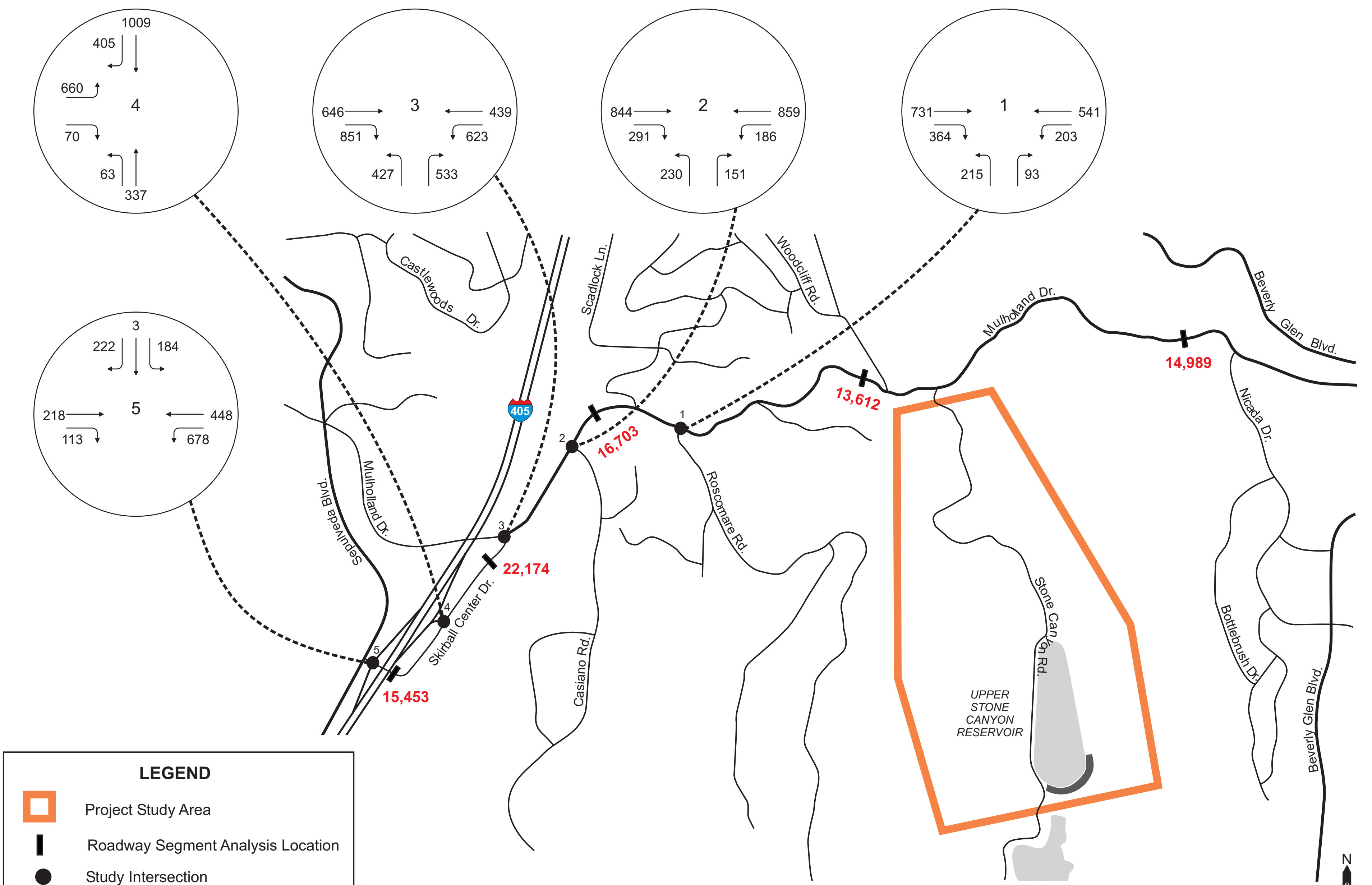
**Table 26 – Peak Hour Roadway Segment LOS –
Aluminum Cover Alternative**

	Street Segments	# of Lanes	Capacity	Base Volumes								Proposed Project-Construction			
				Existing			Ambient	Area	Future			Construction	Future with Construction		
				Volumes	V/C	LOS	Growth	Projects	Volumes	V/C	LOS	Only	Volumes	V/C	LOS
A	Mulholland Drive, Between Nicada Drive & Stone Canyon Road	2	1,250	1,338	1.070	**F**	4%	58	1,450	1.160	**F**	0	1,450	1.160	**F**
B	Mulholland Drive, Between Woodcliff Road & Antelo Place	2	1,250	1,225	0.980	**E**	4%	58	1,332	1.066	**F**	98	1,430	1.144	**F**
C	Mulholland Drive, Between Roscomare Road & Casiano Road	3	1,875	1,564	0.834	D	4%	58	1,685	0.899	D	98	1,783	0.951	**E**
D	Skirball Center Drive, Between Mulholland Drive & NB I-405 on/off Ramps	4	2,500	1,999	0.799	C	4%	58	2,138	0.855	D	98	2,236	0.894	D
E	Skirball Center Drive, Between curve on Skirball Ctr Dr & SB I-405 on/off Ramps	4	2,500	1,386	0.554	A	4%	37	1,479	0.592	A	49	1,528	0.611	B

Based on the results provide within Table 26, two of the study roadway segments would operate at LOS D or better. Two of the roadway segments would operate at LOS E or F during the peak-hour of the day and would worsen in operations with construction of the Project.

- Mulholland Drive, between Woodcliff Road and Antelo Place – would worsen within LOS F.
- Mulholland Drive, between Roscomare Road and Casiano Road – would worsen within LOS E.

Construction trips were not assumed to travel east of the Project site. Therefore, the roadway segment on Mulholland Drive, between Nicada Drive and Stone Canyon Road would not be significantly impacted. Mitigation measures for these significant impacts are discussed in Section 10 of this report.



LEGEND

- Project Study Area
- Roadway Segment Analysis Location
- Study Intersection
- X Intersection Reference Number
- xx Intersection Turn Volume
- XX Average Daily Traffic Volume

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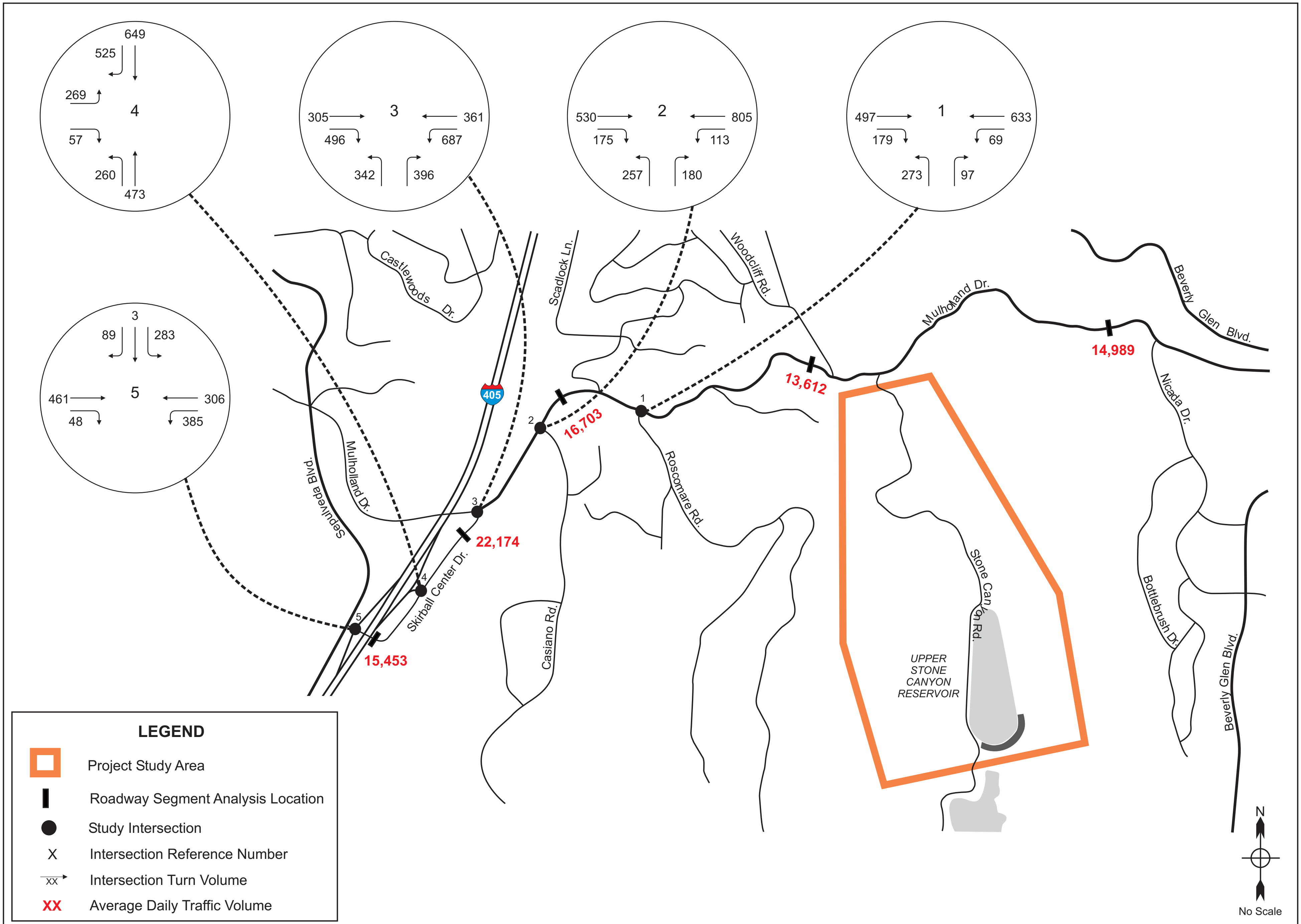
Upper Stone Canyon Reservoir Water Quality Improvement Project — Figure 26

Future (2014) with Project Construction (Aluminum Cover Alternative) - AM Peak Hour Intersection Volumes



LEGEND

- Project Study Area
- Roadway Segment Analysis Location
- Study Intersection
- X Intersection Reference Number
- xx Intersection Turn Volume
- XX Average Daily Traffic Volume

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Upper Stone Canyon Reservoir Water Quality Improvement Project — Figure 27

Future (2014) with Project Construction (Aluminum Cover Alternative) - PM Peak Hour Intersection Volumes

8. Future (2020) Post-Project Conditions and Impacts - with Proposed Park

This section documents the future traffic conditions with the proposed project park use, which would become an active site use if the Concrete Cover alternative is implemented. The traffic volumes for this scenario were derived by adding the project park vehicle trips to traffic volumes for the future 2020 no-project conditions scenario, using the methodologies within Section 5 of this report.

8.1 Intersection Level of Service

Table 27 summarizes the results of the level of service analysis for the future conditions with the Proposed Park use. Bold text indicates those intersections that would operate at LOS E or F under this scenario.

Table 27 – Level of Service Calculations – Future with-Project Conditions – Park Use

	Weekday AM Peak		Weekday PM Peak	
Study Intersections	V/C	LOS	V/C	LOS
1. Roscomare Rd & Mulholland Dr	0.780	C	0.595	A
2. Casiano Rd & Mulholland Dr	0.711	C	0.469	A
3. Skirball Center Dr & Mulholland Dr	1.004	**F**	0.741	C
4. Skirball Center Dr & I-405 NB on&off Ramps	0.897	D	0.622	B
5. I-405 SB on&off Ramps & Skirball Center Dr	0.708	C	0.584	A

All study intersections are equipped with ATSAC and ATCS capability. Therefore, per LADOT policies, a 0.100 v/c credit has been applied to all calculations.

Under this scenario, all but one of the study intersections would operation at LOS D or better during the weekday peak hours. The intersection of Skirball Center Drive and Mulholland Drive would operate at LOS F during the a.m. peak hour.

The analyzed peak-hour traffic volumes at the study intersections for this scenario are provided on Figure 28 (a.m. peak) and Figure 29 (p.m. peak). The levels of service calculation worksheets for this analysis scenario are provided in Appendix F of this report.

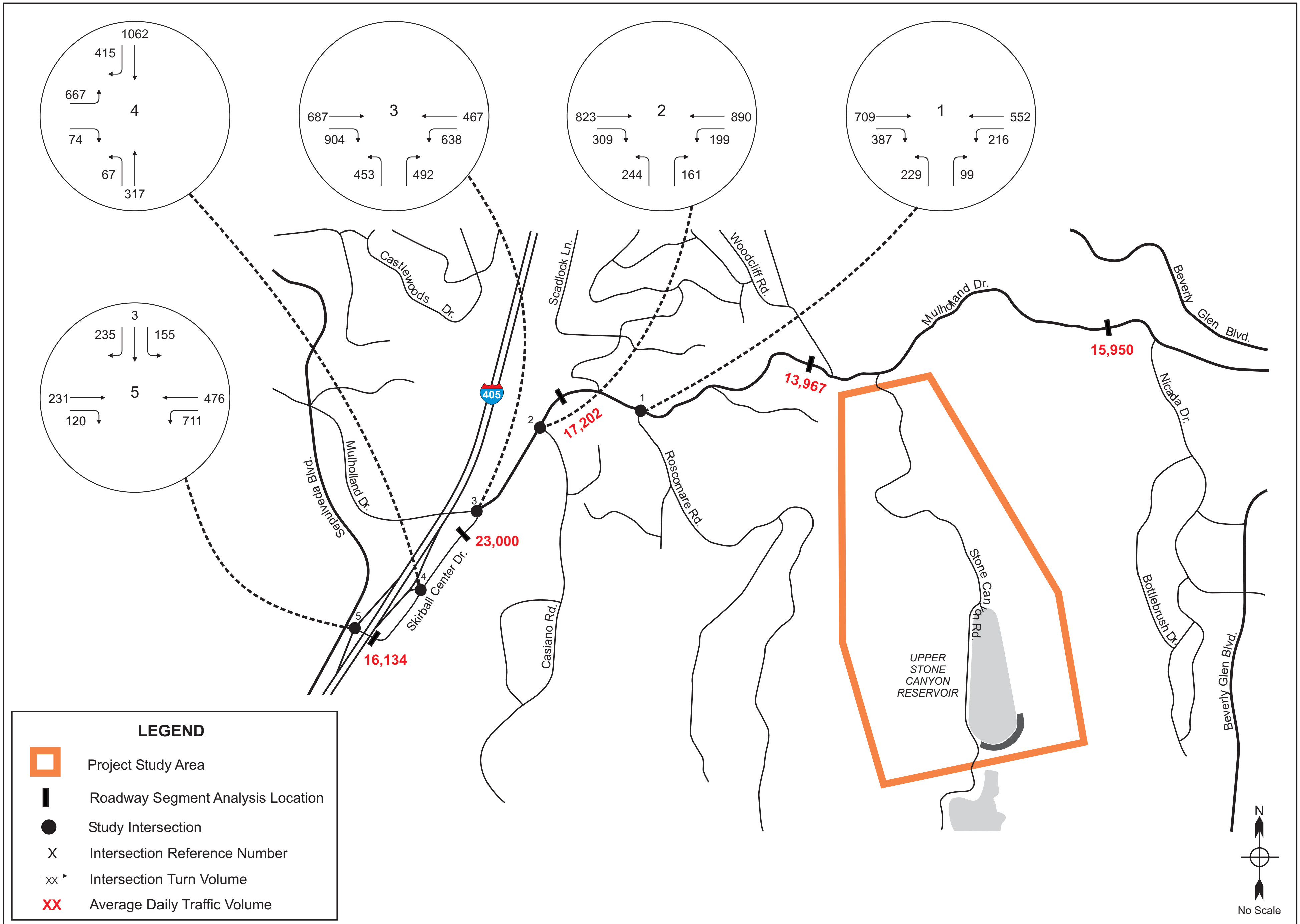

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Figure 28

Future (2020) with Project Construction (Park Use) - AM Peak Hour Intersection Volumes

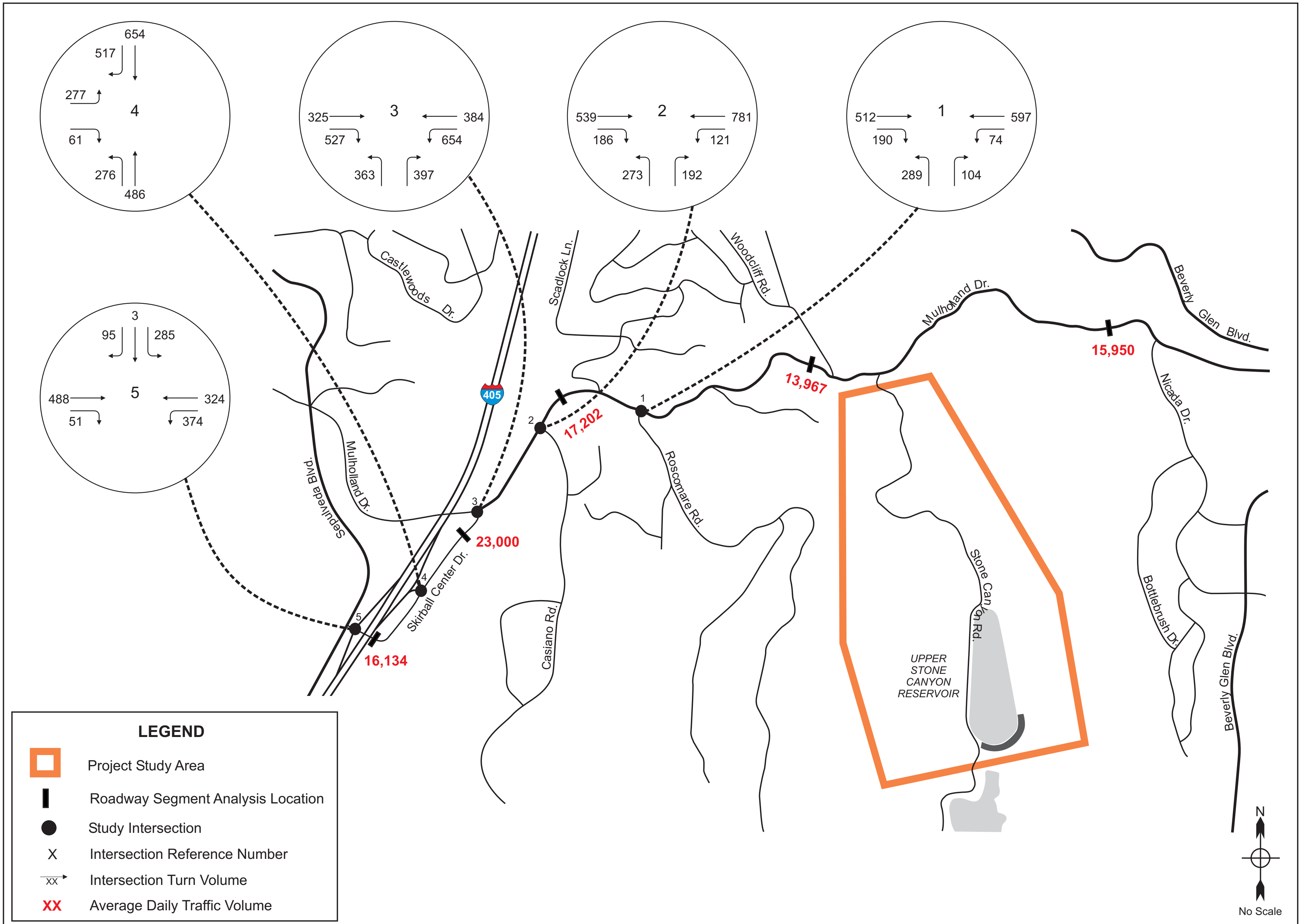

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Figure 29

Future (2020) with Project Construction (Park Use) - PM Peak Hour Intersection Volumes

8.2 Post Project Analysis – Proposed Park

The study intersection operations across all analyzed scenarios, for the proposed Park use, are summarized in Table 28 (a.m. peak-hour) and Table 29 (p.m. peak-hour). Traffic impacts created by the proposed Park under this scenario were calculated by subtracting the volume-to-capacity (v/c) totals under the "No project Year 2020" heading from the totals under the "with-Project Year 2020" heading.

The overall traffic impacts created by the proposed Park traffic and determinations of significant impacts area provided in the right two columns of the tables. LOS values of E or F and significant impact determinations are highlighted by bolded text

Table 28 – Significant Intersection Traffic Impacts – Proposed Park Use – AM Peak Hour

		Existing Conditions (Year 2010)		Future No-Project Conditions (Year 2020)		Future with-Project Conditions (Year 2020)			
	Study Intersections	V/C	LOS	V/C	LOS	V/C	LOS	Diff.	Signif?
1.	Roscomare Rd & Mulholland Dr	0.677	B	0.770	C	0.780	C	0.010	No
2.	Casiano Rd & Mulholland Dr	0.620	B	0.707	C	0.711	C	0.004	No
3.	Skirball Center Dr & Mulholland Dr	0.888	D	1.001	**F**	1.004	**F**	0.003	No
4.	Skirball Center Dr & I-405 NB on&off Ramps	0.799	C	0.895	D	0.897	D	0.002	No
5.	I-405 SB on&off Ramps & Skirball Center Dr	0.621	B	0.705	C	0.708	C	0.003	No

All study intersections are equipped with ATSAC and ATCS capability. Therefore, per LADOT policies, a 0.100 v/c credit has been applied to all calculations.

Table 29 – Significant Intersection Traffic Impacts – Proposed Park Use – PM Peak Hour

		Existing Conditions (Year 2010)		Future No-Project Conditions (Year 2020)		Future with-Project Conditions (Year 2020)			
	Study Intersections	V/C	LOS	V/C	LOS	V/C	LOS	Diff.	Signif?
1.	Roscomare Rd & Mulholland Dr	0.506	A	0.591	A	0.595	A	0.004	No
2.	Casiano Rd & Mulholland Dr	0.394	A	0.465	A	0.469	A	0.004	No
3.	Skirball Center Dr & Mulholland Dr	0.640	B	0.738	C	0.741	C	0.003	No
4.	Skirball Center Dr & I-405 NB on&off Ramps	0.545	A	0.619	B	0.622	B	0.003	No
5.	I-405 SB on&off Ramps & Skirball Center Dr	0.503	A	0.581	A	0.584	A	0.003	No

All study intersections are equipped with ATSAC and ATCS capability. Therefore, per LADOT policies, a 0.100 v/c credit has been applied to all calculations.

Based on the impact analysis results provided within Table 28 and Table 29, the park use under this scenario would not create any significant impacts at the study intersections.

8.3 Study Roadway Segment Volumes

The study roadway segment operations across al analyzed scenarios, for the proposed Park use, are summarized in Table 30. The percentages shown in the far right column represents the increase of daily volumes on the analyzed segments due to the proposed Park. The daily volumes traffic volumes are included on both Figure 28 and Figure 29.

Table 30 – Roadway Segments Summary– Proposed Park Use – Daily Vehicle Volumes

	Street Segments	Base Volumes				Proposed Project		
		Existing	Ambient Growth	Area Projects	Future Base	Project Only	Future with Project	% Increase
A	Mulholland Drive, Between Nicada Drive & Stone Canyon Road	13,801	10%	628	15,872	78	15,950	0.5%
B	Mulholland Drive, Between Woodcliff Road & Antelo Place	12,006	10%	628	13,889	78	13,967	0.6%
C	Mulholland Drive, Between Roscomare Road & Casiano Road	14,976	10%	628	17,170	32	17,202	0.2%
D	Skirball Center Drive, Between Mulholland Drive & NB I-405 on/off Ramps	20,234	10%	628	22,978	22	23,000	0.1%
E	Skirball Center Drive, Between curve on Skirball Ctr Dr & SB I-405 on/off Ramps	14,309	10%	318	16,124	10	16,134	0.1%

The data within Table 30 provides the percentage increase in weekday Park use trips. Based on the results provided, operation of the Park will increase daily traffic by less than one percent on Skirball Center Drive and Mulholland Drive.

Peak-hour levels of service were analyzed at the study roadway segments to determine potential significant impacts at the analyzed roadways. Table 31 summarizes the peak-hour volumes from the daily roadway counts, the analysis of the future pre-project traffic, and the analysis of project park traffic volumes.

Table 31 – Peak Hour Roadway Segment LOS – Proposed Park Use

	Street Segments	# of Lanes	Capacity	**Base Volumes**									**Proposed Project**			
				Existing			Ambient	Area	Future				Project	Future with Project		
				Volumes	V/C	LOS	Growth	Projects	Volumes	V/C	LOS		Only	Volumes	V/C	LOS
A	Mulholland Drive, Between Nicada Drive & Stone Canyon Road	2	1,250	1,338	1.070	**F**	10%	58	1,535	1.228	**F**		26	1,561	1.249	**F**
B	Mulholland Drive, Between Woodcliff Road & Antelo Place	2	1,250	1,225	0.980	**E**	10%	58	1,411	1.129	**F**		26	1,437	1.150	**F**
C	Mulholland Drive, Between Roscomare Road & Casiano Road	3	1,875	1,564	0.834	D	10%	58	1,785	0.952	**E**		10	1,795	0.957	**E**
D	Skirball Center Drive, Between Mulholland Drive & NB I-405 on/off Ramps	4	2,500	1,999	0.799	C	10%	58	2,266	0.906	**E**		8	2,274	0.910	**E**
E	Skirball Center Drive, Between curve on Skirball Ctr Dr & SB I-405 on/off Ramps	4	2,500	1,386	0.554	A	10%	37	1,568	0.627	B		4	1,572	0.629	B

Based on the results provided within Table 31, all of the analyzed roadway segments would operate at LOS E or F, except Skirball Center Drive, between the interchange approach curve on Skirball Center Drive and the I-405 northbound on-off ramps. As the project shares of volumes are less than one percent on all of the study roadway segments, it was determined that impacts would be less than significant.

9. Existing (2008) plus Project Conditions and Impacts

This section documents existing traffic conditions at the study intersections with the addition of project-generated traffic. This analysis was undertaken to comply with rulings in the *Sunnyvale case*, regarding the interpretation of existing conditions analysis in CEQA documents. The court's ruling indicated that impacts for a proposed project should be compared to existing conditions for the determination of impacts, and not project-year or buildout-year conditions.

9.1 Analysis Methodology

The existing year for the analysis within this report section is different than that applied to the Section 4 analysis. The Notice of Preparation (NOP) was issued in 2008. The existing conditions for this analysis were based on year-2008 volumes, in order to be consistent with the NOP date.

Peak-hour study intersection counts and daily roadway segment counts were collected in May 2010 for the primary project impact analysis. Some of the roadway segment counts were also collected in September 2008. None of the study intersection traffic counts were collected in 2008, however. A comparison of the locations where 2008 and 2010 counts were collected indicated that year-2008 traffic volumes were generally higher than year-2010 volumes. In order to define existing year-2008 conditions for all study locations, a factor of 1.0152 was utilized to increase the lower year-2010 traffic counts to year-2008 conditions.

The project traffic volumes for this analysis were based on the Project trip generation and trip distribution assumptions discussed in Section 6 of this report. The significant impact thresholds were based on the same LADOT guidelines that were applied to the future-year Project analysis, discussed within Section 7 of this report.

9.2 Concrete Roof (Project Construction) Analysis

Significant Impact Analysis

The study intersection operations for the existing (2008) plus proposed project (Concrete Roof Alternative) are summarized in Table 32 (a.m. peak-hour) and Table 33 (p.m. peak-hour). Traffic impacts created by the project construction under this scenario were calculated by subtracting the volume-to-capacity (v/c) totals under the "Existing (2008) Conditions" heading from the totals under the "Existing plus Project Construction Conditions" heading.

The overall traffic impacts created by the project construction traffic and determination of significant impacts are provided in the right two columns of the tables. LOS values of E or F and significant impact determinations are highlighted by bold text. The level of service calculation worksheets for this analysis scenario are provided in Appendix G.

Table 32 – Existing (2008) + Project Impacts – Concrete Roof – AM Peak Hour

	Study Intersections	Existing (2008) Conditions V/C	Existing (2008) Conditions LOS	Existing plus Project Construction Conditions V/C	Existing plus Project Construction Conditions LOS	Diff.	Signif?
1.	Roscomare Rd & Mulholland Dr	0.688	B	0.758	C	0.070	**Yes**
2.	Casiano Rd & Mulholland Dr	0.631	B	0.701	C	0.070	**Yes**
3.	Skirball Center Dr & Mulholland Dr	0.903	**E**	0.938	**E**	0.035	**Yes**
4.	Skirball Center Dr & I-405 NB on&off Ramps	0.813	D	0.843	D	0.030	**Yes**
5.	I-405 SB on&off Ramps & Skirball Center Dr	0.632	B	0.684	B	0.052	No

All study intersections are equipped with ATSAC and ATCS capability. Therefore, per LADOT policies, a 0.100 v/c credit has been applied to all calculations.

Table 33 – Existing (2008) + Project Impacts – Concrete Roof – PM Peak Hour

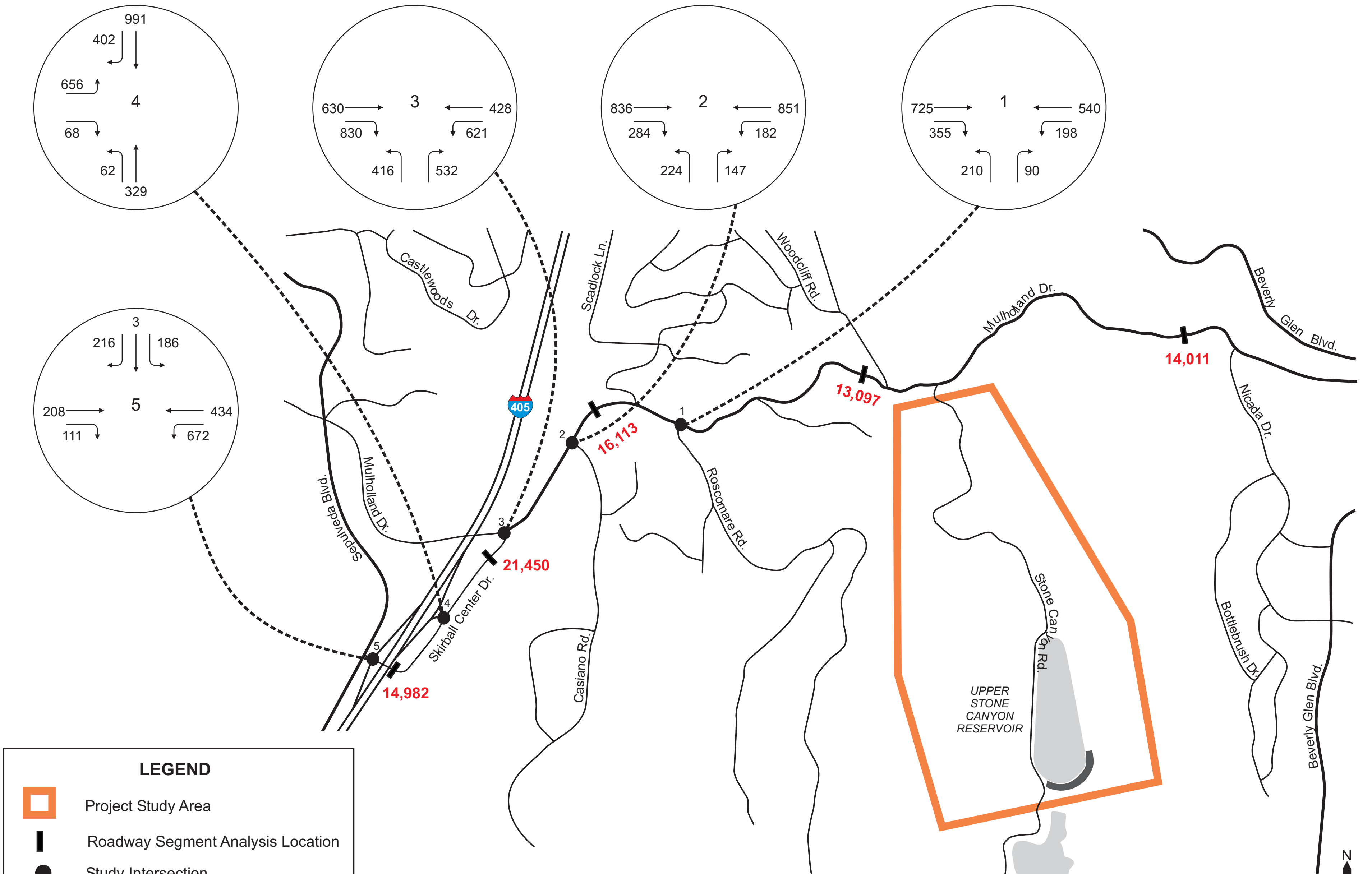
	Study Intersections	Existing (2008) Conditions V/C	Existing (2008) Conditions LOS	Existing plus Project Construction Conditions V/C	Existing plus Project Construction Conditions LOS	Diff.	Signif?
1.	Roscomare Rd & Mulholland Dr	0.515	A	0.583	A	0.068	No
2.	Casiano Rd & Mulholland Dr	0.402	A	0.439	A	0.037	No
3.	Skirball Center Dr & Mulholland Dr	0.651	B	0.719	C	0.068	**Yes**
4.	Skirball Center Dr & I-405 NB on&off Ramps	0.555	A	0.592	A	0.037	No
5.	I-405 SB on&off Ramps & Skirball Center Dr	0.512	A	0.565	A	0.053	No

All study intersections are equipped with ATSAC and ATCS capability. Therefore, per LADOT policies, a 0.100 v/c credit has been applied to all calculations.

Based on the results provided within Table 32 and Table 33, project construction would create significant impacts at the following study intersections:

- Roscomare Road & Mulholland Drive – a.m. peak hour
- Casiano Road & Mulholland Drive – a.m. peak hour
- Skirball Center Drive & Mulholland Drive – a.m. peak and p.m. peak hours
- Skirball Center Drive & I-405 Northbound On/Off Ramps – a.m. peak hour

In comparison to the future with Project construction conditions, this scenario would create one less traffic impact during the a.m. peak hour. Existing plus Project construction volumes at the study intersections are provided on Figure 30 (a.m. peak hour) and Figure 31 (p.m. peak hour). Daily traffic volumes are included on both figures.



LEGEND

- Project Study Area
- Roadway Segment Analysis Location
- Study Intersection
- X Intersection Reference Number
- xx Intersection Turn Volume
- XX Average Daily Traffic Volume

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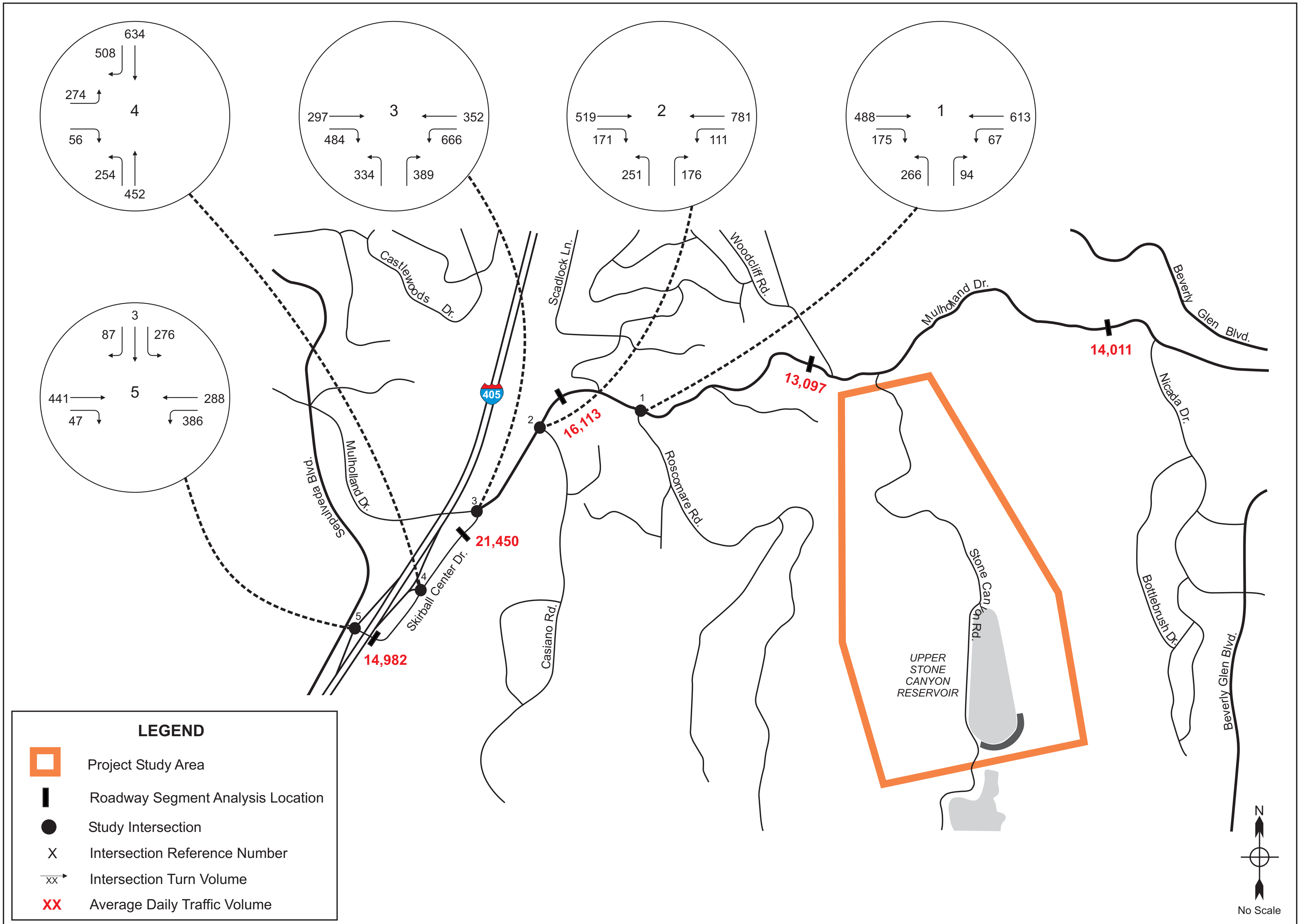
Upper Stone Canyon Reservoir Water Quality Improvement Project — Figure 30

Existing (2008) plus Project Construction (Concrete Roof) - AM Peak Hour Intersection Volumes



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Upper Stone Canyon Reservoir Water Quality Improvement Project

Figure 31

Existing (2008) plus Project Construction (Concrete Roof) - PM Peak Hour Intersection Volumes

Study Roadway Segment Volumes

The study roadway segment volumes for the existing (2008) plus Project (Concrete Roof) alternative are summarized in Table 34. Volume percentage increases due to Project construction are provided for reference purposes. Impacts to these roadway segments are evaluated after this informational table.

**Table 34 – Existing (2008) + Project –
Daily Roadway Segment Vehicle Volumes – Concrete Roof**

	Street Segments	Existing (2008)	Construction Only	Existing (2008) + Project	% Increase
A	Mulholland Drive, Between Nicada Drive & Stone Canyon Road	14,011	0	14,011	0.0%
B	Mulholland Drive, Between Woodcliff Road & Antelo Place	12,188	909	13,097	7.5%
C	Mulholland Drive, Between Roscomare Road & Casiano Road	15,204	909	16,113	6.0%
D	Skirball Center Drive, Between Mulholland Drive & NB I-405 on/off Ramps	20,541	909	21,450	4.4%
E	Skirball Center Drive, Between curve on Skirball Ctr Dr & SB I-405 on/off Ramps	14,527	455	14,982	3.1%

Peak-hour levels of service were analyzed at the study roadway segments to determine potential significant impacts at these locations. Table 35 summarizes the peak-hour volumes from the daily counts. The peak-hour volumes may not necessarily occur during the typical peak hours of 7:00 a.m. to 9:00 a.m. and 4:00 p.m. to 6:00 p.m.

**Table 35 – Existing (2008) + Project –
Peak Hour Roadway Segment LOS – Concrete Roof**

	Street Segments	# of Lanes	Capacity	Existing (2008)			Construction Only	Existing (2008) + Project		
				Volumes	V/C	LOS		Volumes	V/C	LOS
A	Mulholland Drive, Between Nicada Drive & Stone Canyon Road	2	1,250	1,358	1.086	**F**	0	1,358	1.086	**F**
B	Mulholland Drive, Between Woodcliff Road & Antelo Place	2	1,250	1,243	0.994	**E**	149	1,392	1.114	**F**
C	Mulholland Drive, Between Roscomare Road & Casiano Road	3	1,875	1,588	0.847	D	149	1,737	0.926	**E**
D	Skirball Center Drive, Between Mulholland Drive & NB I-405 on/off Ramps	4	2,500	2,029	0.812	D	149	2,178	0.871	D
E	Skirball Center Drive, Between curve on Skirball Ctr Dr & SB I-405 on/off Ramps	4	2,500	1,407	0.563	A	75	1,482	0.593	A

Based on the results provided within Table 35, three of the analyzed roadway segments would operate at LOS E or F, except the two roadway segments on Skirball Center Drive.

Two of the three roadway segments operating at LOS E or F would be significantly impacted by the proposed Project, due to worsening of operations at these locations to LOS E or F during Project construction:

- Mulhollad Drive, between Woodcliff Road and Antelo Place
- Mulholland Drive, between Roscomare Road and Casiano Road

Construction trips were not assumed to travel east of the Project site. Therefore, the roadway segment on Mulholland Drive, between Nicada Drive and Stone Canyon Road would not be significantly impacted. Mitigation measures for these significant impacts are discussed in Section 11 of this report.

9.3 Proposed Project Alternative Mitigation Analysis

Section 7.4 of this report, Proposed Project Alternative Construction Intensity Analysis, summarizes the alternative project construction intensities analyzed for the Concrete Roof alternative mitigation impact analysis. Out of the four scenarios, Scenario B was examined here, with an analysis of the prohibition of peak-hour construction truck trips under existing (2008) plus Project conditions.

Project Alternative Mitigation Impact Analysis

Alternative mitigation for the Project construction was examined with construction truck trips prohibited during peak periods. Table 36 provides a summary of the a.m. and p.m. peak-hour traffic impacts for the existing (2008) plus project alternative mitigation. Under this scenario, only employee trips would arrive to the project site during peak hours.

Table 36 – Existing (2008) + Project Alternative Mitigation – No Peak-Hour Truck Trips

	Study Intersections	Peak Hour	Existing (2008) Conditions		Existing plus Project Construction Conditions		Diff.	Signif?
			V/C	LOS	V/C	LOS		
1.	Roscomare Rd & Mulholland Dr	AM	0.688	B	0.721	C	0.033	No
		PM	0.515	A	0.548	A	0.033	No
2.	Casiano Rd & Mulholland Dr	AM	0.631	B	0.664	B	0.033	No
		PM	0.402	A	0.402	A	0.000	No
3.	Skirball Center Dr & Mulholland Dr	AM	0.903	**E**	0.903	**E**	0.000	No
		PM	0.651	B	0.684	B	0.033	No
4.	Skirball Center Dr & I-405 NB on&off Ramps	AM	0.813	D	0.822	D	0.009	No
		PM	0.555	A	0.571	A	0.016	No
5.	I-405 SB on&off Ramps & Skirball Center Dr	AM	0.632	B	0.649	B	0.017	No
		PM	0.512	A	0.529	A	0.017	No

All study intersections are equipped with ATSAC and ATCS capability. Therefore, per LADOT policies, a 0.100 v/c credit has been applied to all calculations.

Based on the results within Table 36, the Project alternative mitigation that prohibits construction truck trips during peak hours would not create any significant impacts at the study intersections.

9.4 Floating Cover Construction (Alternative 2) Analysis

Significant Impact Analysis

The study intersection operations for the existing (2008) plus proposed project (Floating Cover Alternative) are summarized in Table 37 (a.m. peak-hour) and Table 38 (p.m. peak-hour). Traffic impacts created by the project construction under this scenario were calculated by subtracting the volume-to-capacity (v/c) totals under the "Existing (2008) Conditions" heading from the totals under the "Existing plus Project Construction Conditions" heading.

The overall traffic impacts created by the project construction traffic and determination of significant impacts are provided in the right two columns of the tables. LOS values of E or F and significant impact determinations are highlighted by bold text. The level of service calculation worksheets for this analysis scenario are provided in Appendix H.

Table 37 – Existing (2008) + Project Impacts – Floating Cover – AM Peak Hour

		Existing (2008) Conditions		Existing plus Project Construction Conditions			
	Study Intersections	V/C	LOS	V/C	LOS	Diff.	Signif?
1.	Roscomare Rd & Mulholland Dr	0.688	B	0.712	C	0.024	No
2.	Casiano Rd & Mulholland Dr	0.631	B	0.655	B	0.024	No
3.	Skirball Center Dr & Mulholland Dr	0.903	**E**	0.910	**E**	0.007	No
4.	Skirball Center Dr & I-405 NB on&off Ramps	0.813	D	0.821	D	0.008	No
5.	I-405 SB on&off Ramps & Skirball Center Dr	0.632	B	0.647	B	0.015	No

All study intersections are equipped with ATSAC and ATCS capability. Therefore, per LADOT policies, a 0.100 v/c credit has been applied to all calculations.

Table 38 – Existing (2008) + Project Impacts – Floating Cover – PM Peak Hour

	Study Intersections	Existing (2008) Conditions		Existing plus Project Construction Conditions		Diff.	Signif?
		V/C	LOS	V/C	LOS		
1.	Roscomare Rd & Mulholland Dr	0.515	A	0.538	A	0.023	No
2.	Casiano Rd & Mulholland Dr	0.402	A	0.410	A	0.008	No
3.	Skirball Center Dr & Mulholland Dr	0.651	B	0.674	B	0.023	No
4.	Skirball Center Dr & I-405 NB on&off Ramps	0.555	A	0.568	A	0.013	No
5.	I-405 SB on&off Ramps & Skirball Center Dr	0.512	A	0.528	A	0.016	No

All study intersections are equipped with ATSAC and ATCS capability. Therefore, per LADOT policies, a 0.100 v/c credit has been applied to all calculations.

Based on the impact analysis results provided within Table 37 and Table 38 project construction under this scenario would not create any significant impacts at the study intersections. The future-year with project construction scenario discussed in Section 7.5, Floating Cover Analysis, would not create any significant impacts as well.

Existing plus Project construction volumes at the study intersections are provided on Figure 32 (a.m. peak hour) and Figure 33 (p.m. peak hour). Daily traffic volumes are included on both figures.

Study Roadway Segment Volumes

The study roadway segment volumes for the existing (2008) plus Floating Cover Alternative are summarized in Table 39. Volume percentage increases due to Project construction are provided for reference purposes. Impacts to these roadway segments are evaluated after this informational table.

Table 39 – Existing (2008) + Project – Daily Vehicle Volumes – Floating Cover

	Street Segments	Existing (2008)	Construction Only	Existing (2008) + Project	% Increase
A	Mulholland Drive, Between Nicada Drive & Stone Canyon Road	14,011	0	14,011	0.0%
B	Mulholland Drive, Between Woodcliff Road & Antelo Place	12,188	216	12,404	1.8%
C	Mulholland Drive, Between Roscomare Road & Casiano Road	15,204	216	15,420	1.4%
D	Skirball Center Drive, Between Mulholland Drive & NB I-405 on/off Ramps	20,541	216	20,757	1.1%
E	Skirball Center Drive, Between curve on Skirball Ctr Dr & SB I-405 on/off Ramps	14,527	109	14,636	0.8%

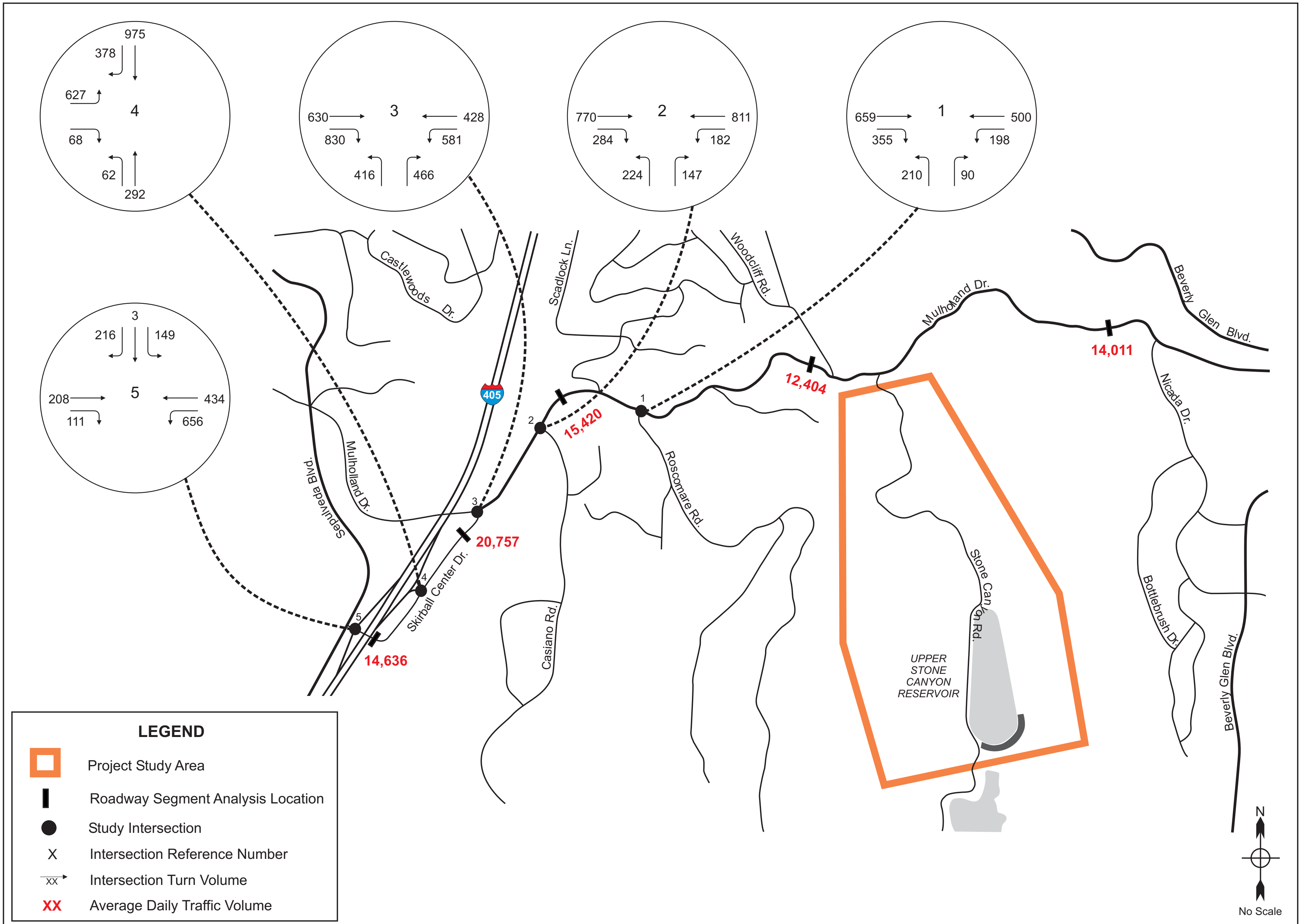

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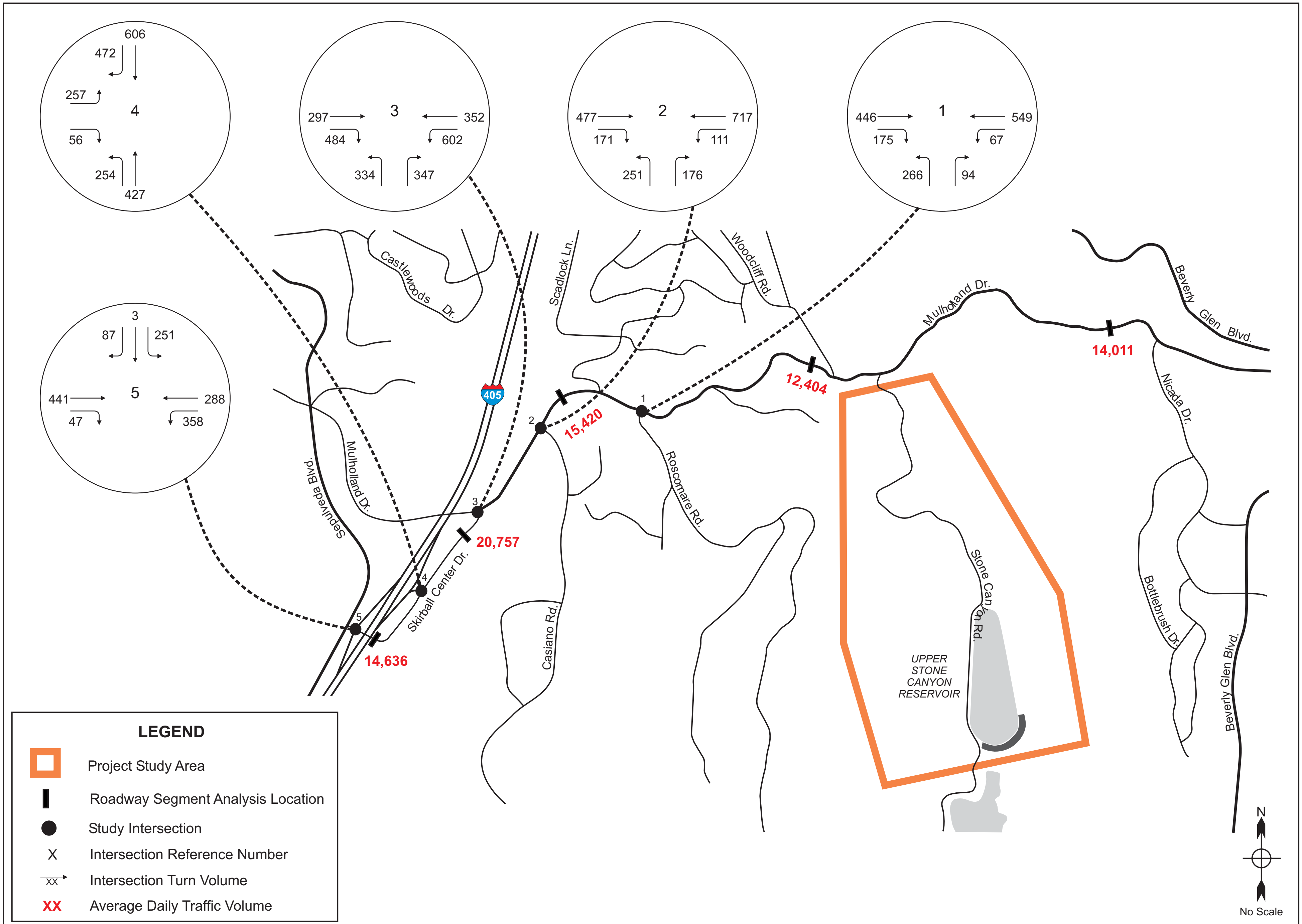
Figure 32

Existing (2008) plus Project Construction (Floating Cover Alternative) - AM Peak Hour Intersection Volumes



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Upper Stone Canyon Reservoir Water Quality Improvement Project — Figure 33

Existing (2008) plus Project Construction (Floating Cover Alternative) - PM Peak Hour Intersection Volumes

Peak-hour levels of service were analyzed at the study roadway segments to determine potential significant impacts at these locations. Table 40 summarizes the peak-hour volumes from the daily counts. The peak-hour volumes may not necessarily occur during the typical peak hours of 7:00 a.m. to 9:00 a.m. and 4:00 p.m. to 6:00 p.m.

**Table 40 – Existing (2008) + Project –
Peak Hour Roadway Segment LOS – Floating Cover**

Street Segments		# of Lanes	Capacity	Existing (2008)			Construction Only	Existing (2008) + Project		
				Volumes	V/C	LOS		Volumes	V/C	LOS
A	Mulholland Drive, Between Nicada Drive & Stone Canyon Road	2	1,250	1,358	1.086	**F**	0	1,358	1.086	**F**
B	Mulholland Drive, Between Woodcliff Road & Antelo Place	2	1,250	1,243	0.994	**E**	46	1,289	1.031	**F**
C	Mulholland Drive, Between Roscomare Road & Casiano Road	3	1,875	1,588	0.847	D	46	1,634	0.871	D
D	Skirball Center Drive, Between Mulholland Drive & NB I-405 on/off Ramps	4	2,500	2,029	0.812	D	46	2,075	0.830	D
E	Skirball Center Drive, Between curve on Skirball Ctr Dr & SB I-405 on/off Ramps	4	2,500	1,407	0.563	A	23	1,430	0.572	A

Based on the results provided within Table 41, three of the analyzed roadway segments would operate at LOS D or better. The following study roadway segments would operate at LOS E or F during the peak-hour of the day and would worsen in operations with construction of the Project.

- Mulholland Drive, between Nicada Drive and Stone Canyon Road
- Mulhollad Drive, between Woodcliff Road and Antelo Place

The roadway segment on Mulholland Drive between Woodcliff Road and Antelo Place would be significantly impacted by the proposed project, due to worsening of operations at this location to LOS F during project construction.

Construction trips were not assumed to travel east of the Project site. Therefore, the roadway segment on Mulholland Drive, between Nicada Drive and Stone Canyon Road would not be significantly impacted. Mitigation measures for significant impacts are discussed in Section 11 of this report.

9.5 Aluminum Cover Construction (Alternative 3) Analysis

Significant Impact Analysis

The study intersection operations for the existing (2008) plus proposed project (Aluminum Cover Alternative) are summarized in Table 41 (a.m. peak-hour) and Table 42 (p.m. peak-hour). Traffic impacts created by the project construction under this scenario were calculated by subtracting the volume-to-capacity (v/c) totals under the "Existing (2008) Conditions" heading from the totals under the "Existing plus Project Construction Conditions" heading.

The overall traffic impacts created by the project construction traffic and determination of significant impacts are provided in the right two columns of the tables. LOS values of E or F and significant impact determinations are highlighted by bold text. The level of service calculation worksheets for this analysis scenario are provided in Appendix I.

Table 41 – Existing (2008) + Project Impacts – Aluminum Cover – AM Peak Hour

		Existing (2008) Conditions		Existing plus Project Construction Conditions			
	Study Intersections	V/C	LOS	V/C	LOS	Diff.	Signif?
1.	Roscomare Rd & Mulholland Dr	0.688	B	0.739	C	0.051	**Yes**
2.	Casiano Rd & Mulholland Dr	0.631	B	0.682	B	0.051	No
3.	Skirball Center Dr & Mulholland Dr	0.903	**E**	0.921	**E**	0.018	**Yes**
4.	Skirball Center Dr & I-405 NB on&off Ramps	0.813	D	0.832	D	0.019	No
5.	I-405 SB on&off Ramps & Skirball Center Dr	0.632	B	0.666	B	0.034	No

All study intersections are equipped with ATSAC and ATCS capability. Therefore, per LADOT policies, a 0.100 v/c credit has been applied to all calculations.

Table 42 – Existing (2008) + Project Impacts – Aluminum Cover – PM Peak Hour

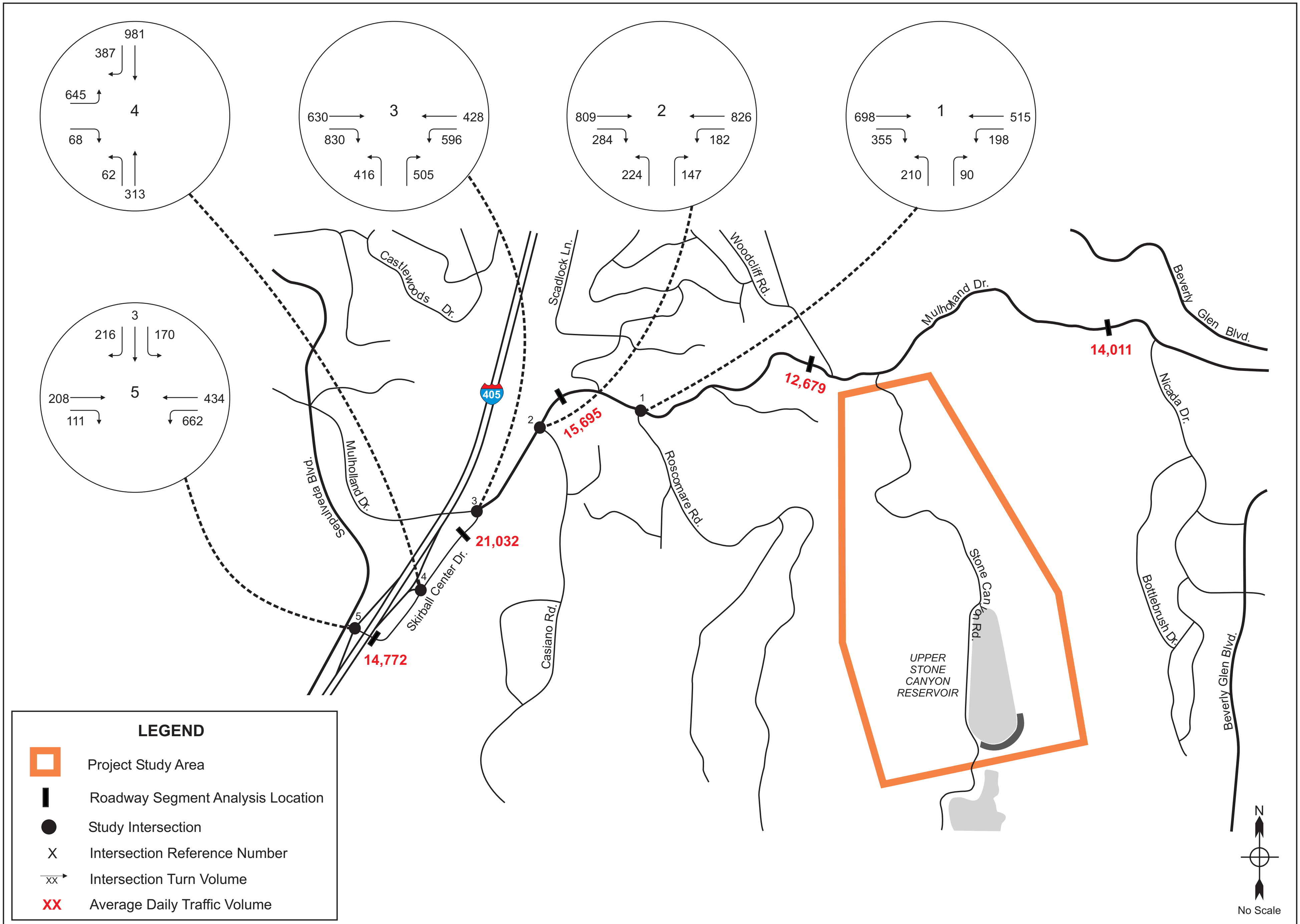
	Study Intersections	Existing (2008) Conditions		Existing plus Project Construction Conditions		Diff.	Signif?
		V/C	LOS	V/C	LOS		
1.	Roscomare Rd & Mulholland Dr	0.515	A	0.566	A	0.051	No
2.	Casiano Rd & Mulholland Dr	0.402	A	0.419	A	0.017	No
3.	Skirball Center Dr & Mulholland Dr	0.651	B	0.702	C	0.051	**Yes**
4.	Skirball Center Dr & I-405 NB on&off Ramps	0.555	A	0.582	A	0.027	No
5.	I-405 SB on&off Ramps & Skirball Center Dr	0.512	A	0.546	A	0.034	No

All study intersections are equipped with ATSAC and ATCS capability. Therefore, per LADOT policies, a 0.100 v/c credit has been applied to all calculations.

Based on the analysis results provided within Table 41 and Table 42, project construction would create significant impacts at the following study intersections:

- Roscomare Road & Mulholland Drive – a.m. peak hour
- Skirball Center Drive & Mulholland Drive – a.m. peak and p.m. peak hours

In comparison to the future with Project construction conditions, this scenario would create one less traffic impact during the a.m. peak hour. Existing plus Project construction volumes at the study intersections are provided on Figure 34 (a.m. peak hour) and Figure 35 (p.m. peak hour). Daily traffic volumes are included on both figures.



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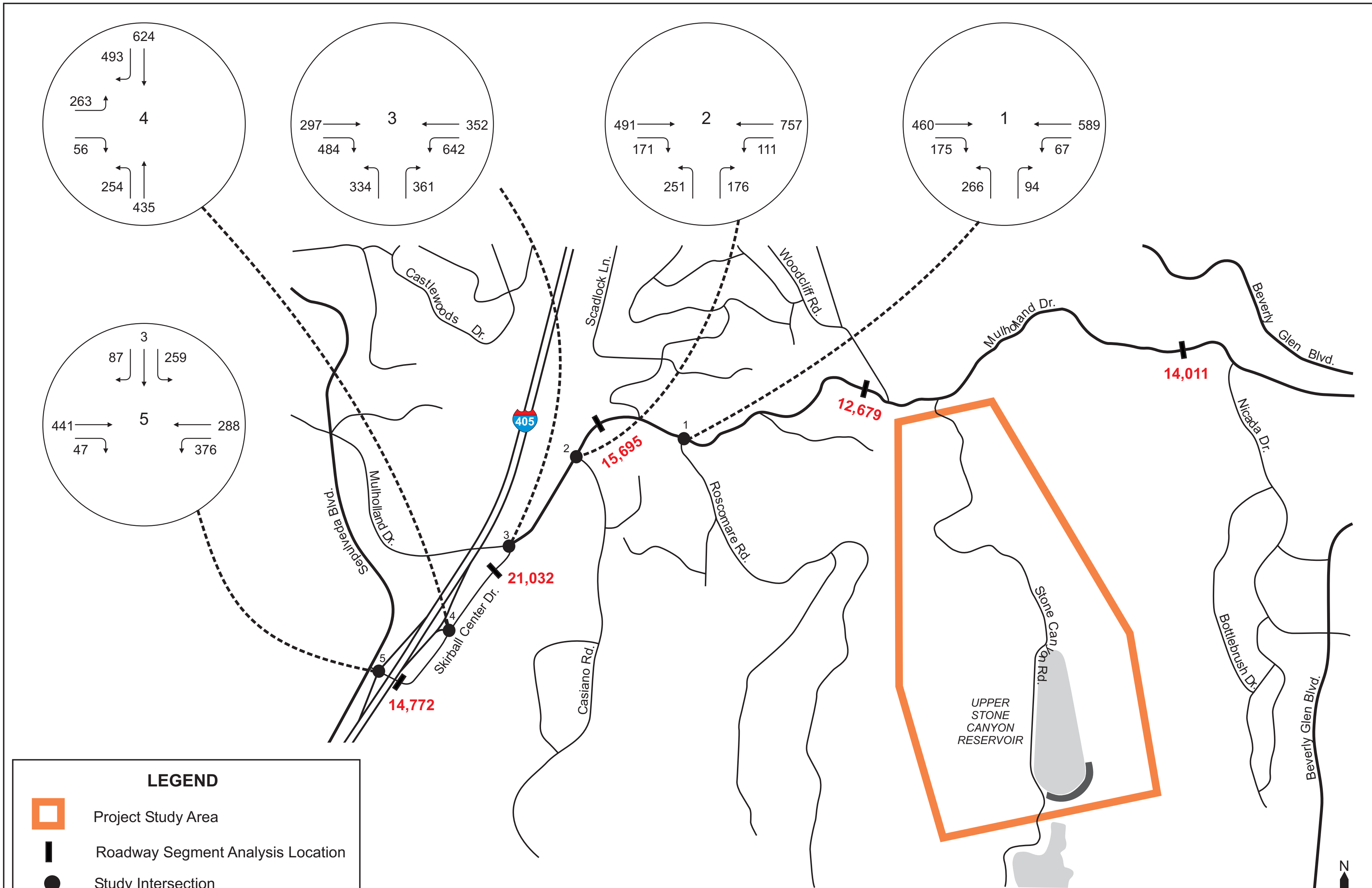
Upper Stone Canyon Reservoir Water Quality Improvement Project

Figure 34

Existing (2008) plus Project Construction (Aluminum Cover Alternative) - AM Peak Hour Intersection Volumes



LEGEND

	Project Study Area
	Roadway Segment Analysis Location
	Study Intersection
X	Intersection Reference Number
XX	Intersection Turn Volume
XX	Average Daily Traffic Volume

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Upper Stone Canyon Reservoir Water Quality Improvement Project — Figure 35

Existing (2008) plus Project Construction (Aluminum Cover Alternative) - PM Peak Hour Intersection Volumes

Study Roadway Segment Volumes

The study roadway segment volumes for the existing (2008) plus Aluminum Cover Alternative are summarized in Table 43. Volume percentage increases due to Project construction are provided for reference purposes. Impacts to these roadway segments are evaluated after this informational table.

Table 43 – Existing (2008) + Project –
Daily Vehicle Volumes – Aluminum Cover

	Street Segments	Existing (2008)	Construction Only	Existing (2008) + Project	% Increase
A	Mulholland Drive, Between Nicada Drive & Stone Canyon Road	14,011	0	14,011	0.0%
B	Mulholland Drive, Between Woodcliff Road & Antelo Place	12,188	491	12,679	4.0%
C	Mulholland Drive, Between Roscomare Road & Casiano Road	15,204	491	15,695	3.2%
D	Skirball Center Drive, Between Mulholland Drive & NB I-405 on/off Ramps	20,541	491	21,032	2.4%
E	Skirball Center Drive, Between curve on Skirball Ctr Dr & SB I-405 on/off Ramps	14,527	245	14,772	1.7%

Peak-hour levels of service were analyzed at the study roadway segments to determine potential significant impacts at these locations. Table 44 summarizes the peak-hour volumes from the daily counts. The peak-hour volumes may not necessarily occur during the typical peak hours of 7:00 a.m. to 9:00 a.m. and 4:00 p.m. to 6:00 p.m.

Table 44 – Existing (2008) + Project –
Peak Hour Roadway Segment LOS – Aluminum Cover

	Street Segments	# of Lanes	Capacity	Existing (2008)			Construction Only	Existing (2008) + Project		
				Volumes	V/C	LOS		Volumes	V/C	LOS
A	Mulholland Drive, Between Nicada Drive & Stone Canyon Road	2	1,250	1,358	1.086	**F**	0	1,358	1.086	**F**
B	Mulholland Drive, Between Woodcliff Road & Antelo Place	2	1,250	1,243	0.994	**E**	98	1,341	1.073	**F**
C	Mulholland Drive, Between Roscomare Road & Casiano Road	3	1,875	1,588	0.847	D	98	1,686	0.899	D
D	Skirball Center Drive, Between Mulholland Drive & NB I-405 on/off Ramps	4	2,500	2,029	0.812	D	98	2,127	0.851	D
E	Skirball Center Drive, Between curve on Skirball Ctr Dr & SB I-405 on/off Ramps	4	2,500	1,407	0.563	A	49	1,456	0.582	A

Based on the results provided within Table 44, three of the analyzed roadway segments would operate at LOS D or better. The following study intersections would operate at LOS E or F during peak hours and would worsen in operations with construction of the Project.

- Mulholland Drive, between Nicada Drive and Stone Canyon Road
- Mulhollad Drive, between Woodcliff Road and Antelo Place

Construction trips were not assumed to travel east of the Project site. Therefore, the roadway segment volumes on Mulholland Drive, between Nicada Drive and Stone Canyon Road would not increase due to park use construction.

9.6 Project Operation Analysis – Proposed Park

Significant Impact Analysis

The study intersection operations for the existing (year 2008) plus proposed park use conditions are summarized in Table 45 (a.m. peak-hour) and Table 46 (p.m. peak-hour). Traffic impacts created by the park use under this scenario were calculated by subtracting the volume-to-capacity (v/c) totals under the "Existing (2008) Conditions" heading from the totals under the "Existing plus Project Conditions" heading.

The overall traffic impacts created by the project park use and determination of significant impacts are provided in the right two columns of the tables. LOS values of E or F and significant impact determinations are highlighted by bold text. The level of service calculation worksheets for this analysis scenario are provided in Appendix J.

Table 45 – Existing (2008) + Project Impacts – Proposed Park – AM Peak Hour

	Study Intersections	Existing (2008) Conditions		Existing plus Project Conditions		Diff.	Signif?
		V/C	LOS	V/C	LOS		
1.	Roscomare Rd & Mulholland Dr	0.688	B	0.698	B	0.010	No
2.	Casiano Rd & Mulholland Dr	0.631	B	0.635	B	0.004	No
3.	Skirball Center Dr & Mulholland Dr	0.903	**E**	0.907	**E**	0.004	No
4.	Skirball Center Dr & I-405 NB on&off Ramps	0.813	D	0.815	D	0.002	No
5.	I-405 SB on&off Ramps & Skirball Center Dr	0.632	B	0.635	B	0.003	No

All study intersections are equipped with ATSAC and ATCS capability. Therefore, per LADOT policies, a 0.100 v/c credit has been applied to all calculations.

Table 46 – Existing (2008) + Project Impacts – Proposed Park – PM Peak Hour

	Study Intersections	Existing (2008) Conditions V/C	Existing (2008) Conditions LOS	Existing plus Project Conditions V/C	Existing plus Project Conditions LOS	Diff.	Signif?
1.	Roscomare Rd & Mulholland Dr	0.515	A	0.519	A	0.004	No
2.	Casiano Rd & Mulholland Dr	0.402	A	0.406	A	0.004	No
3.	Skirball Center Dr & Mulholland Dr	0.651	B	0.653	B	0.002	No
4.	Skirball Center Dr & I-405 NB on&off Ramps	0.555	A	0.558	A	0.003	No
5.	I-405 SB on&off Ramps & Skirball Center Dr	0.512	A	0.515	A	0.003	No

All study intersections are equipped with ATSAC and ATCS capability. Therefore, per LADOT policies, a 0.100 v/c credit has been applied to all calculations.

Based on the impact analysis results provided within Table 45 and Table 46, the proposed Park use under this existing plus project scenario would not create any significant impacts at the study intersections. The future-year analysis with the project park use impact analysis discussed in Section 8 did not define any significant impacts as well.

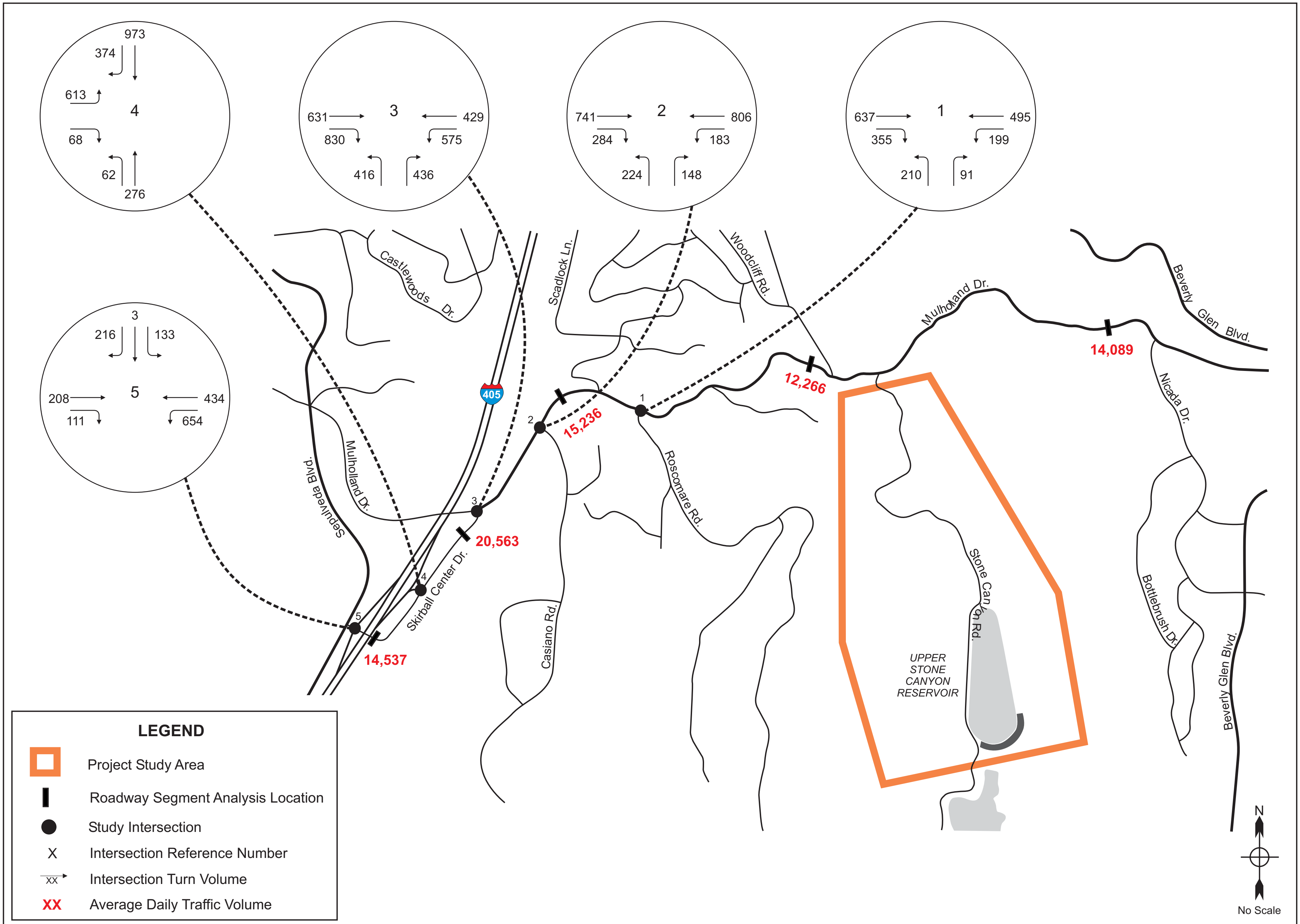
Existing plus Project construction volumes at the study intersections are provided on Figure 36 (a.m. peak hour) and Figure 37 (p.m. peak hour). Daily traffic volumes are included on both figures.

Study Roadway Segment Volumes

The study roadway segment volumes for the existing (2008) plus proposed Park use are summarized in Table 47. Volume percentage increases due to the project park use are provided for reference purposes. Impacts to these roadway segments are evaluated after this informational table.

Table 47 – Existing (2008) + Project – Daily Vehicle Volumes – Proposed Park

	Street Segments	Existing (2008)	Project Only	Existing (2008) + Project	% Increase
A	Mulholland Drive, Between Nicada Drive & Stone Canyon Road	14,011	78	14,089	0.6%
B	Mulholland Drive, Between Woodcliff Road & Antelo Place	12,188	78	12,266	0.6%
C	Mulholland Drive, Between Roscomare Road & Casiano Road	15,204	32	15,236	0.2%
D	Skirball Center Drive, Between Mulholland Drive & NB I-405 on/off Ramps	20,541	22	20,563	0.1%
E	Skirball Center Drive, Between curve on Skirball Ctr Dr & SB I-405 on/off Ramps	14,527	10	14,537	0.1%



LEGEND

- Project Study Area
- Roadway Segment Analysis Location
- Study Intersection
- X Intersection Reference Number
- xx Intersection Turn Volume
- XX Average Daily Traffic Volume

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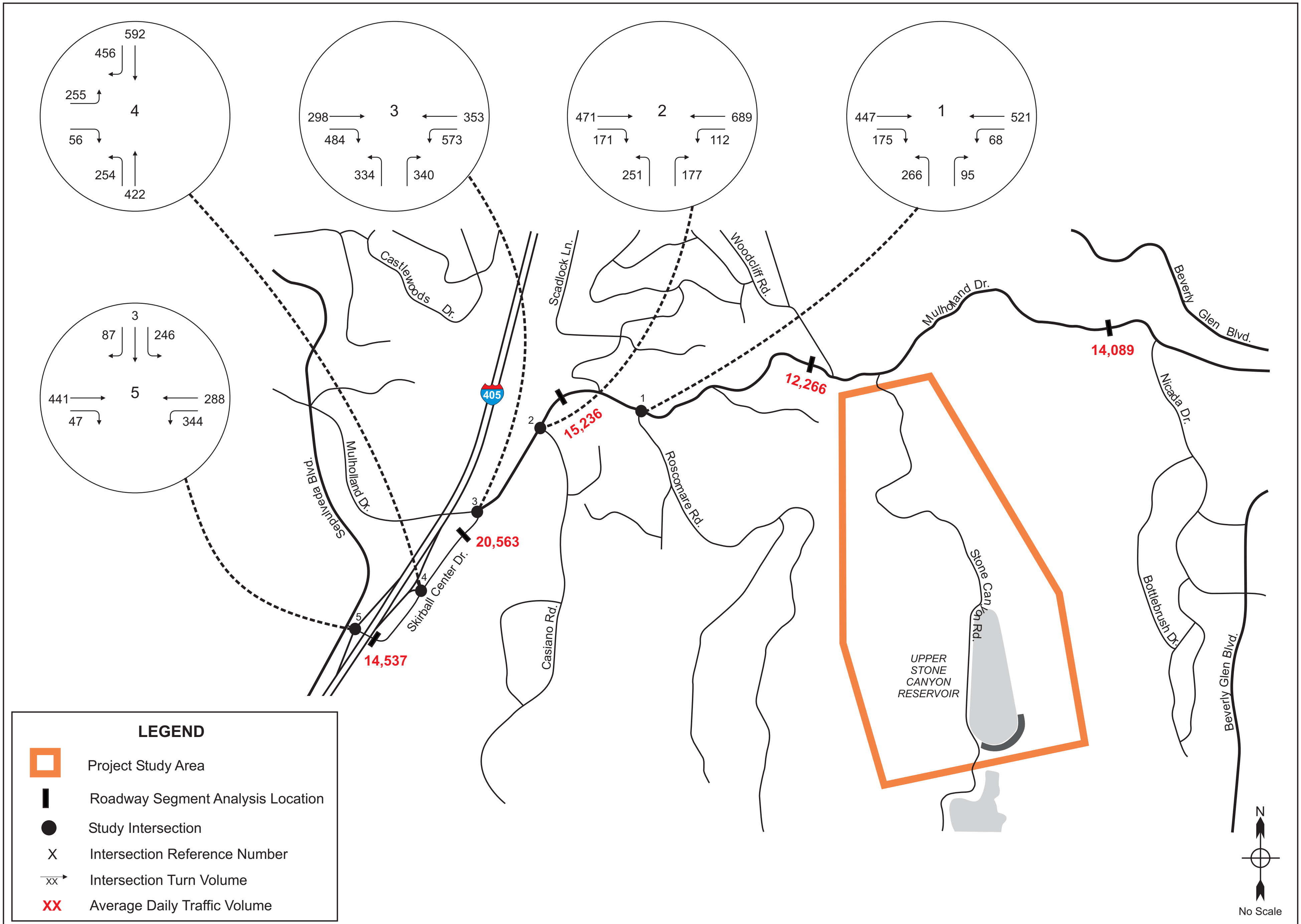
Upper Stone Canyon Reservoir Water Quality Improvement Project — Figure 36

Existing (2008) plus Project Construction (Park Use) - AM Peak Hour Intersection Volumes



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Upper Stone Canyon Reservoir Water Quality Improvement Project

Figure 37

Existing (2008) plus Project Construction (Park Use) - PM Peak Hour Intersection Volumes

Peak-hour levels of service were analyzed at the study roadway segments to determine potential significant impacts at these locations. Table 48 summarizes the peak-hour volumes from the daily counts. The peak-hour volumes may not necessarily occur during the typical peak hours of 7:00 a.m. to 9:00 a.m. and 4:00 p.m. to 6:00 p.m.

Table 48 – Existing (2008) + Project –
Peak Hour Roadway Segment LOS – Proposed Park

Street Segments		# of Lanes	Capacity	Existing (2008)			Construction Only	Existing (2008) + Project		
				Volumes	V/C	LOS		Volumes	V/C	LOS
A	Mulholland Drive, Between Nicada Drive & Stone Canyon Road	2	1,250	1,358	1.086	**F**	26	1,384	1.107	**F**
B	Mulholland Drive, Between Woodcliff Road & Antelo Place	2	1,250	1,243	0.994	**E**	26	1,269	1.015	**F**
C	Mulholland Drive, Between Roscomare Road & Casiano Road	3	1,875	1,588	0.847	D	10	1,598	0.852	D
D	Skirball Center Drive, Between Mulholland Drive & NB I-405 on/off Ramps	4	2,500	2,029	0.812	D	8	2,037	0.815	D
E	Skirball Center Drive, Between curve on Skirball Ctr Dr & SB I-405 on/off Ramps	4	2,500	1,407	0.563	A	4	1,411	0.564	A

Based on the results provided within Table 48, three of the analyzed roadway segments would operate at LOS D or better. The following study intersections operate at LOS E or F during the peak-hour of the day and would worsen in operations with the proposed Park use.

- Mulholland Drive, between Nicada Drive and Stone Canyon Road
- Mulhollad Drive, between Woodcliff Road and Antelo Place

The project share of volumes are less than one percent on all of the roadway segments, it was determined that impacts would be less than significant.

10. Congestion Management Plan Conformance

This section demonstrates the ways in which this traffic study was prepared to be in conformance with the procedures mandated by the County of Los Angeles Congestion Management Program.

The Congestion Management Program (CMP) was created statewide because of Proposition 111 and was implemented locally by the Los Angeles County Metropolitan Transportation Authority (Metro). The CMP for Los Angeles County requires that the traffic impact of individual development projects of potentially regional significance be analyzed. A specific system of arterial roadways plus all freeways comprises the CMP system. Per CMP Transportation Impact Analysis (TIA) Guidelines, a traffic impact analysis is conducted where:

- At CMP arterial monitoring intersections, including freeway on-ramps or off-ramps, where the proposed project will add 50 or more vehicle trips during either AM or PM weekday peak hours.

- At CMP mainline freeway-monitoring locations, where the project will add 150 or more trips, in either direction, during the either the AM or PM weekday peak hours.

<u>Impacts to CMP Arterials</u>

The nearest CMP arterial monitoring intersection to the project site is Ventura Boulevard at Sepulveda Boulevard. Based on the project trip generation and the distance of this CMP location from the study intersections, it is not expected that 50 or more new trips per hour would be added here. However, the freeway ramps at Skirball Center Drive would add more than 50 project-related trips during the maximum-intensity construction peak periods.

- At the I-405 southbound off-ramp, Skirball Center Drive – 55 peak-hour trips would be added during the a.m. peak hour.
- At the I-405 northbound on-ramp, Skirball Center Drive – 54 peak-hour trips would be added during the p.m. peak hour.

These locations are on the proposed Project construction truck route. It is recommended that truck trips related to Reservoir construction, destined to the north and arriving from the north via I-405 freeway, be spaced at intervals in order to avoid caravans of trucks. Avoiding the grouping of truck trips on these ramps, and avoiding peak-hour times for area traffic as much as possible, will remove any potential significant impacts at these CMP facilities.

<u>Impacts to CMP Freeways</u>

The nearest CMP mainline freeway-monitoring location to the project site is on the I-405 freeway, south of Mulholland Drive. The Project trip distribution and traffic assignment represents primarily the regional traffic rather than local traffic. However, the proposed project is expected to add less than 150 new trips per hour to any freeway segments near the project site since the Project would generate less than 150 project trips. Therefore, no further analysis of CMP freeway monitoring stations is required.

11. Impact Summary and Recommended Mitigations

10.1 Analysis Summary

The Upper Stone Reservoir is a component of the larger Stone Canyon Reservoir Complex (SCRC), which consists of approximately 750 acres of property owned and maintained by LADWP. Currently, the SCRC is not open to public access.

The primary project objectives of the project are as follows:

- Comply with updated water quality standards enacted by the EPA and, by extension, the California Department of Public Health.

- Preserve local water storage capability to maintain reliability and flexibility to meet the service area demand for drinking water including during emergency or planned outages of upstream supplies.

To accomplish the identified objectives, the open-surface Reservoir would be covered with a concrete roof under the proposed project. Alternatives to the concrete roof have also been defined for the project.

A summary of the project analysis, definitions, findings, and recommendations is provided below.

Proposed Project Alternative Summary

Under the proposed project, public access would be provided to the SCRC for passive recreation purposes. Public access would not be a component of alternative to the proposed project that do not include a buried reservoir facility.

Under the Alternative 1 (No Project) analysis, the Reservoir operations would remain the same as under existing conditions and a negligible number of vehicle trips would continue to be generated on a daily basis.

Under Project Alternative 2 (Floating Cover Alternative), the Reservoir would be retained in its existing configuration, and LADWP would install a flexible membrane floating cover over the surface of the water. Under this alternative, the Reservoir would remain under the operation of LADWP and recreational facilities would not be constructed.

Under Project Alternative 3 (Aluminum Cover Alternative), the Reservoir would be retained in its existing configuration, and LADWP would install a lightweight aluminum cover over the entire water surface. Under this alternative, the Reservoir would remain under the operation of LADWP and recreational facilities would not be constructed.

Project Trip Generation Summary

For the proposed project (Concrete Roof), the number of employee trips was based on the assumption that all 47 employees would arrive within the a.m. peak hour and depart within the p.m. peak hour. The number of truck trips was based on a typical eight-hour shift, with delivery truck trips distributed throughout the day. Based on a daily total of 326 truck trips, 41 truck trips would occur during the a.m. peak hour and 41 truck trips would also occur during the p.m. peak hour.

For the project Alternative 2 (Floating Cover), the number of employee vehicle trips was based on a total number of 23 employees that would arrive within the a.m. peak hour and depart within the p.m. peak hour. The number of truck trips was based on an eight-hour work shift, with delivery truck trips evenly distributed throughout the day. Based on a daily total of 68 truck trips, 9 truck trips would occur during the a.m. peak hour and 9 truck trips would also occur during the p.m. peak hour.

For the project Alternative 3 (Aluminum Cover), the number of employee trips was based on the assumption that all 48 employees would arrive within the a.m. peak hour and depart within the p.m. peak hour. The truck trips were based on an eight-hour work shift, with delivery truck trips evenly distributed throughout the day. Based on a weekday daily total of 158 truck trips, 20 truck trips would occur during the a.m. peak period and 20 truck trips would also occur during the p.m. peak period.

The proposed project park use would generate 78 weekday daily trips, of which 26 trips would occur during the a.m. peak hour and 26 trips during the p.m. peak hour. During weekends, peak park use would likely occur on Saturdays. It has been estimated that Saturday trip generation would total 100 vehicle trips, of which 50 would occur during the mid-day peak hour.

10.2 Significant Impact Determinations by Alternative

Significant Traffic Impacts – Proposed Project

Project construction under the proposed project (Concrete Roof Alternative) would create significant impacts at the following study intersections:

- Roscomare Road & Mulholland Drive – a.m. peak hour
- Casiano Road & Mulholland Drive – a.m. peak hour
- Skirball Center Drive & Mulholland Drive – a.m. peak and p.m. peak hours
- Skirball Center Drive & I-405 Northbound On/Off Ramps – a.m. peak hour
- I-405 Southbound On/Off Ramps & Skirball Center Drive– a.m. peak hour

Construction of the proposed project (Concrete Roof) would create significant impacts at two study roadway segments on Mulholland Drive and one segment on Skirball Center Drive.

Significant Traffic Impacts – Alternate Construction Intensities for Proposed Project

Four alternate construction scenarios for the proposed project were examined for changes in significant impacts versus the primary proposed project. The following was found from this analysis:

Alternative A - 50% Reduction in Daily Construction Truck Trips

Significant study intersection impacts under this alternate description for the proposed project construction would remain at four locations.

Scenario B - Peak-Hour Construction Truck Trips

The alternate description for proposed project construction would remove impacts at all of the study intersections.

Scenario C – Project Construction Extension, Year 2017

Significant study intersection impacts under this alternate description for proposed project construction would remain at all locations.

Significant Traffic Impacts – No-Project Alternative

Under the no-project alternative, the SCRC would continue to generate the negligible number of daily vehicle trips that it does under existing conditions. Traffic impacts could continue to remain less than significant, as construction activities would not occur.

Significant Traffic Impacts – Floating Cover Alternative

Project construction under the project Alternative 2 (Floating Cover) would not create any significant impacts at the study intersections, but would create one significant impact at a Mulholland Drive roadway segment.

Significant Traffic Impacts – Aluminum Cover Alternative

Project construction under the project Alternative 3 (Aluminum Cover) would create significant impacts at the following study intersections:

- Roscomare Road & Mulholland Drive – a.m. peak hour
- Casiano Road & Mulholland Drive – a.m. peak hour
- Skirball Center Drive & Mulholland Drive – a.m. peak and p.m. peak hours

Construction of the project Alternative 3 (Aluminum Cover) would not create any significant impacts at the study roadway segments on Mulholland Drive.

Significant Traffic Impacts – with Proposed Park

Under the future (2020) with proposed Park scenario, the Park operation would not create any significant impacts at the study intersections.

10.3 Existing (2008) plus Project Significant Impact Determinations

The existing (2008) plus Project conditions was analyzed to comply with the court's rulings in the *Sunnyvale* case. The following summarizes the significant impacts at the study intersections across all analyzed alternatives.

	Peak Periods	Concrete Roof	Project Alternative Mitigation	Floating Cover Alternative	Aluminum Cover Alternative	Proposed Park Use
1. Roscomare Rd & Mulholland Dr	AM	**Yes**	No	No	**Yes**	No
	PM	No	No	No	No	No
2. Casiano Rd & Mulholland Dr	AM	**Yes**	No	No	No	No
	PM	No	No	No	No	No
3. Skirball Center Dr & Mulholland Dr	AM	**Yes**	No	No	**Yes**	No
	PM	**Yes**	No	No	**Yes**	No
4. Skirball Center Dr & I-405 NB on&off Ramps	AM	**Yes**	No	No	No	No
	PM	No	No	No	No	No
5. I-405 SB on&off Ramps & Skirball Center Dr	AM	No	No	No	No	No
	PM	No	No	No	No	No

10.4 Recommendation Mitigation Measures

Overall Mitigation Measures, All Construction Scenarios

Construction activities and hauling truck movements within the City of Los Angeles should be scheduled per the Mayor's Directive Number 2, dated October 20, 2005. This directive states that road construction, outside of emergency repairs, cannot be conducted from 6:00 a.m. to 9:00 a.m. and from 3:30 p.m. to 7:00 p.m. The rule does state, however, that exemptions would be carefully considered for public works projects, as long as the proper mitigation measures are in place.

Based on the results of the proposed project, the alternate construction scenarios for the proposed project, and the project alternatives, it has been determined that construction truck trips would primarily cause the identified significant impacts. The prohibition of construction truck movements during peak hours would avoid the creation of any significant traffic impacts, and would support the Mayor's Directive. The significantly impacted locations identified by the analysis are located on the truck route to and from the project site. Prohibiting all truck trips during peak periods would remove the significant impacts.

The shift of truck trips away from peak periods would create additional truck trips during mid-day periods. The presence of construction truck trips during these periods may not create traditional traffic impacts, as roadway volumes would generally be reduced during these times, but traffic would be slowed due to this truck traffic. In addition, flagperson control of traffic during truck movements into and out of the SCRC site will temporarily stop traffic. Traffic flow would potentially be affected negatively during mid-day construction operations, but impacts are anticipated to be less than significant.

The LADWP and/or its contractors would prepare worksite traffic control and detour plans to best mitigate traffic impacts during construction activities. These plans would be reviewed and approved by applicable agencies prior to construction.

Site Access Mitigation Measure, All Construction Scenarios

The SCRC access roadway intersection with Mulholland Drive is located on a horizontal curve of the roadway. Visibility to the east and west from vehicles approaching Mulholland Drive from the site driveway is very limited. Flagpersons must be stationed at this driveways intersection with Mulholland Drive to temporarily stop traffic to allow vehicles to complete exit movements during truck ingress/egress periods.

For construction truck movements entering the SCRC property from eastbound Mulholland Drive, via a right-turn movement, trucks will slow traffic while these movements take place. Drivers must be warned in advance of these truck movements via signage, as the driveway location is located on a curve.

Warning signs must be placed for both traffic directions on Mulholland Drive approaching the SCRC driveway intersection, to provide notice that flagpersons are located ahead and that slow truck movements will be occurring.

Appendix A
Level-of-Service Calculation Methodology

CMA METHODOLOGY FOR SIGNALIZED INTERSECTIONS

The City of Los Angeles Department of Transportation (LADOT) specifies that the Transportation Research Board Critical Movement Analysis (CMA), Circular 212 Method, be used to analyze traffic operating conditions at signalized intersections. The CMA analysis method for evaluating signalized intersections involves the computation of volume-to-capacity (V/C) ratios for each critical movement. Capacity, or saturation flow rate, is defined as the maximum rate of flow that can pass through a given intersection approach under prevailing traffic and roadway conditions. The sum of all critical movements on a critical lane basis is used to determine the total intersection volume to capacity ratio (V/C) and corresponding Level-of-Service A facility is "at capacity" (v/c of 1.00 or greater) when extreme congestion occurs. This volume/capacity ratio value is based upon volumes by lane, signal phases, and approach lane configuration

DEFINITIONS OF LEVEL OF SERVICE FOR SIGNALIZED INTERSECTIONS

Level of Service	Volume/Capacity Ratio	Definition
A	0.000 - 0.600	EXCELLENT. No vehicle waits longer than one Red light and no approach phase is fully used.
B	0.601 - 0.700	VERY GOOD. An occasional approach phase is fully utilized; many drivers begin to feel somewhat restricted within groups of vehicles.
C	0.701 – 0.800	GOOD. Occasionally, drivers may have to wait through more than one red light; backups may develop behind turning vehicles.
D	0.801 – 0.900	FAIR. Delays may be substantial during portions of the rush hours, but enough lower volume periods occur to permit clearing of developing lines, preventing excessive backups.
E	0.900 – 1.00	POOR. Represents the most vehicles that intersection approaches can accommodate; may be long lines of waiting vehicles through several signal cycles.
F	Greater than 1.000	FAILURE. Backups from nearby intersections or on cross streets may restrict or prevent movement of vehicles out of the intersection approaches. Tremendous delays with continuously increasing queue lengths.

Appendix B
Traffic Volume Data

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Roscomare Rd DATE: 05/26/2010 LOCATION: City of Los Angeles

E-W STREET: Mulholland Dr DAY: WEDNESDAY PROJECT# 10-5211-001

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	0	0	0	1	1	1	1	0	
7:00 AM	39		3					76	32	29	97		276
7:15 AM	42		5					108	54	30	133		372
7:30 AM	51		12					138	74	41	122		438
7:45 AM	62		18					137	106	65	158		546
8:00 AM	45		34					174	113	65	119		550
8:15 AM	49		25					167	57	24	84		406
8:30 AM	37		20					137	103	23	90		410
8:45 AM	28		13					104	68	24	102		339
9:00 AM	32		7					122	64	27	94		346
9:15 AM	31		5					146	75	23	89		369
9:30 AM	30		6					93	51	28	98		306
9:45 AM	22		11					92	28	23	87		263

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES =	468	0	159	0	0	0	0	1494	825	402	1273	0	4621

AM Peak Hr Begins at: 730 AM

PEAK VOLUMES =	207	0	89	0	0	0	0	616	350	195	483	0	1940
PEAK HR. FACTOR:		0.925			0.000			0.841			0.760		0.882

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Roscomare Rd   DATE: 05/26/2010   LOCATION: City of Los Angeles

E-W STREET: Mulholland Dr   DAY: WEDNESDAY   PROJECT# 10-5211-001

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	0	0	0	1	1	1	1	0	
3:00 PM	71		32					87	36	17	138		381
3:15 PM	43		23					97	44	20	144		371
3:30 PM	61		22					126	47	9	100		365
3:45 PM	87		16					118	45	20	126		412
4:00 PM	74		25					72	26	18	122		337
4:15 PM	68		23					53	25	6	128		303
4:30 PM	67		30					52	23	9	127		308
4:45 PM	76		25					61	24	12	108		306
5:00 PM	79		27					74	23	11	128		342
5:15 PM	83		24					65	27	9	124		332
5:30 PM	89		30					55	29	21	137		361
5:45 PM	85		37					54	29	10	125		340

TOTAL VOLUMES =	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	883	0	314	0	0	0	0	914	378	162	1507	0	4158

PM Peak Hr Begins at: 300 PM

PEAK VOLUMES =	262	0	93	0	0	0	0	428	172	66	508	0	1529
PEAK HR. FACTOR:		0.862			0.000			0.867			0.875		0.928

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Mulholland Dr | DATE: 05/26/2010 | LOCATION: City of Los Angeles

E-W STREET: Casiano Rd | DAY: WEDNESDAY | PROJECT# 10-5211-002

	WESTBOUND			EASTBOUND			SOUTHBOUND			NORTHBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	1	1	1	0	0	0	0	2	0	1	
7:00 AM		87	23	17	127					10		5	269
7:15 AM		141	53	28	214					31		16	483
7:30 AM		186	87	47	183					43		41	587
7:45 AM		194	100	81	195					88		52	710
8:00 AM		204	40	23	197					59		36	559
8:15 AM		189	36	20	180					21		16	462
8:30 AM		173	37	15	191					15		12	443
8:45 AM		150	55	41	145					21		19	431
9:00 AM		148	61	50	114					43		38	454
9:15 AM		152	49	24	113					55		35	428
9:30 AM		117	31	26	132					31		25	362
9:45 AM		99	18	12	109					34		18	290

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES =	0	1840	590	384	1900	0	0	0	0	451	0	313	5478

AM Peak Hr Begins at: 715 AM

PEAK VOLUMES =	0	725	280	179	789	0	0	0	0	221	0	145	2339
PEAK HR. FACTOR:		0.855			0.877			0.000			0.654		0.824

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Mulholland Dr   DATE: 05/26/2010   LOCATION: City of Los Angeles

E-W STREET: Casiano Rd   DAY: WEDNESDAY   PROJECT# 10-5211-002

	WESTBOUND			EASTBOUND			SOUTHBOUND			NORTHBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	1	1	1	0	0	0	0	2	0	1	
3:00 PM		107	39	21	175					26		12	380
3:15 PM		120	70	41	166					37		15	449
3:30 PM		125	33	25	138					89		76	486
3:45 PM		107	26	22	195					95		70	515
4:00 PM		95	18	14	182					41		11	361
4:15 PM		76	17	8	163					25		12	301
4:30 PM		65	10	10	181					25		13	304
4:45 PM		87	12	4	174					21		10	308
5:00 PM		89	18	9	181					31		19	347
5:15 PM		86	22	20	173					15		11	327
5:30 PM		81	21	18	191					15		11	337
5:45 PM		72	43	17	182					15		7	336

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES =	0	1110	329	209	2101	0	0	0	0	435	0	267	4451

PM Peak Hr Begins at: 300 PM

PEAK VOLUMES =	0	459	168	109	674	0	0	0	0	247	0	173	1830
PEAK HR. FACTOR:		0.825			0.902			0.000			0.636		0.888

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Skirball Center Dr   DATE: 05/26/2010   LOCATION: City of Los Angeles

E-W STREET: Mulholland Dr   DAY: WEDNESDAY   PROJECT# 10-5211-003

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	2	0	1	0	0	0	0	2	0	1	2	0	
7:00 AM	64		60					48	121	91	59		443
7:15 AM	98		77					112	175	122	113		697
7:30 AM	107		116					161	191	144	104		823
7:45 AM	121		131					173	202	134	120		881
8:00 AM	128		91					144	214	145	131		853
8:15 AM	54		88					143	211	139	67		702
8:30 AM	54		92					126	160	123	87		642
8:45 AM	43		97					111	185	124	46		606
9:00 AM	35		92					117	163	116	29		552
9:15 AM	27		106					99	125	145	28		530
9:30 AM	28		73					74	112	135	31		453
9:45 AM	33		58					57	87	122	15		372

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES =	792	0	1081	0	0	0	0	1365	1946	1540	830	0	7554

AM Peak Hr Begins at: 730 AM

PEAK VOLUMES =	410	0	426	0	0	0	0	621	818	562	422	0	3259
PEAK HR. FACTOR:		0.829			0.000			0.959			0.891		0.925

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Skirball Center Dr DATE: 05/26/2010 LOCATION: City of Los Angeles

E-W STREET: Mulholland Dr DAY: WEDNESDAY PROJECT# 10-5211-003

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	2	0	1	0	0	0	0	2	0	1	2	0	
3:00 PM	96		80					90	105	125	77		573
3:15 PM	86		95					93	143	121	61		599
3:30 PM	71		81					67	126	142	106		593
3:45 PM	76		75					43	103	172	103		572
4:00 PM	45		71					44	85	151	86		482
4:15 PM	48		54					33	76	111	89		411
4:30 PM	49		51					30	78	115	84		407
4:45 PM	59		83					34	79	116	81		452
5:00 PM	63		57					40	76	122	84		442
5:15 PM	55		73					41	61	103	100		433
5:30 PM	62		65					27	52	107	97		410
5:45 PM	59		95					36	42	111	88		431

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES =	769	0	880	0	0	0	0	578	1026	1496	1056	0	5805

PM Peak Hr Begins at: 300 PM

PEAK VOLUMES =	329	0	331	0	0	0	0	293	477	560	347	0	2337
PEAK HR. FACTOR:		0.912			0.000			0.816			0.825		0.975

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Skirball Center Dr DATE: 05/26/2010 LOCATION: City of Los Angeles

E-W STREET: NB I-405 on/off ramps DAY: WEDNESDAY PROJECT# 10-5211-004

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	0	0	1	1	2	0	1	0	0	0	
7:00 AM	13	47			181	30	73		17				361
7:15 AM	18	55			228	88	129		27				545
7:30 AM	15	79			237	101	136		14				582
7:45 AM	17	76			235	92	187		12				619
8:00 AM	11	60			256	85	150		14				576
8:15 AM	18	59			274	70	85		19				525
8:30 AM	11	58			228	51	80		14				442
8:45 AM	15	57			255	52	84		13				476
9:00 AM	12	55			208	65	73		10				423
9:15 AM	26	62			219	55	68		15				445
9:30 AM	26	44			198	49	55		15				387
9:45 AM	11	36			163	41	60		16				327

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES =	193	688	0	0	2682	779	1180	0	186	0	0	0	5708

AM Peak Hr Begins at: 715 AM

PEAK VOLUMES =	61	270	0	0	956	366	602	0	67	0	0	0	2322
PEAK HR. FACTOR:		0.880			0.969			0.840			0.000		0.938

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Skirball Center Dr   DATE: 05/26/2010   LOCATION: City of Los Angeles

E-W STREET: NB I-405 on/off ramps   DAY: WEDNESDAY   PROJECT# 10-5211-004

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	0	0	1	1	2	0	1	0	0	0	
3:00 PM	65	108			128	106	67		14				488
3:15 PM	53	114			143	110	77		14				511
3:30 PM	64	103			156	114	48		15				500
3:45 PM	68	89			154	117	57		12				497
4:00 PM	88	86			96	141	38		9				458
4:15 PM	102	74			70	103	36		8				393
4:30 PM	96	61			97	104	44		9				411
4:45 PM	116	69			96	117	50		13				461
5:00 PM	134	94			83	114	42		11				478
5:15 PM	123	78			77	80	41		12				411
5:30 PM	93	78			71	95	53		20				410
5:45 PM	95	87			80	84	53		23				422

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES =	1097	1041	0	0	1251	1285	606	0	160	0	0	0	5440

PM Peak Hr Begins at: 300 PM

PEAK VOLUMES =	250	414	0	0	581	447	249	0	55	0	0	0	1996
PEAK HR. FACTOR:		0.960			0.948			0.835			0.000		0.977

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: SB I-405 on/off ramps   DATE: 05/26/2010   LOCATION: City of Los Angeles

E-W STREET: Skirball Center Dr   DAY: WEDNESDAY   PROJECT# 10-5211-005

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	0	0	0.3	0.3	1.3	0	2	0	1	2	0	
7:00 AM				40	0	64		30	24	118	79		355
7:15 AM				22	1	66		46	32	141	113		421
7:30 AM				40	1	50		48	23	148	92		402
7:45 AM				31	1	64		68	28	151	113		456
8:00 AM				32	1	55		39	27	155	121		430
8:15 AM				26	0	44		50	31	188	101		440
8:30 AM				25	0	46		44	25	161	90		391
8:45 AM				28	0	50		41	27	160	118		424
9:00 AM				31	0	49		36	32	132	85		365
9:15 AM				37	0	58		53	37	152	82		419
9:30 AM				27	1	48		48	36	122	83		365
9:45 AM				30	1	46		22	29	125	57		310

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES =	0	0	0	369	6	640	0	525	351	1753	1134	0	4778

AM Peak Hr Begins at: 730 AM

PEAK VOLUMES =	0	0	0	129	3	213	0	205	109	642	427	0	1728
PEAK HR. FACTOR:		0.000			0.898			0.818			0.925		0.947

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: SB I-405 on/off ramps DATE: 05/26/2010 LOCATION: City of Los Angeles

E-W STREET: Skirball Center Dr DAY: WEDNESDAY PROJECT# 10-5211-005

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	0	0	0.3	0.3	1.3	0	2	0	1	2	0	
3:00 PM				64	1	19		103	10	79	59		335
3:15 PM				71	1	21		109	11	87	62		362
3:30 PM				54	1	21		117	12	92	82		379
3:45 PM				51	0	25		105	13	79	81		354
4:00 PM				41	2	18		124	12	58	56		311
4:15 PM				38	1	27		136	8	55	32		297
4:30 PM				25	1	21		137	9	62	43		298
4:45 PM				35	1	21		153	10	63	40		323
5:00 PM				33	2	24		179	11	55	26		330
5:15 PM				47	1	9		159	5	61	37		319
5:30 PM				34	0	27		137	7	49	36		290
5:45 PM				54	2	25		132	10	51	49		323

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES =	0	0	0	547	13	258	0	1591	118	791	603	0	3921

PM Peak Hr Begins at: 300 PM

PEAK VOLUMES =	0	0	0	240	3	86	0	434	46	337	284	0	1430
PEAK HR. FACTOR:		0.000			0.884			0.930			0.892		0.943

CONTROL: Signalized

Prepared by NDS/ATD

Volumes for: Tuesday, May 25, 2010	City: Los Angeles	Daily Totals				
		NB	SB	EB	WB	Total
Location: Mulholland Dr between Nicada Dr & Stone Canyon Rd	Project: 10-5212-001	0	0	6,665	7,469	14,134

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			7		4			12:00			108		79		
00:15			5		9			12:15			126		76		
00:30			6		11			12:30			66		67		
00:45			5	23	6	30	53	12:45			87	387	77	299	686
01:00			5		4			13:00			67		86		
01:15			4		3			13:15			101		75		
01:30			4		4			13:30			81		78		
01:45			1	14	4	15	29	13:45			67	316	80	319	635
02:00			5		2			14:00			101		127		
02:15			3		4			14:15			89		125		
02:30			2		1			14:30			87		140		
02:45			0	10	0	7	17	14:45			96	373	183	575	948
03:00			1		2			15:00			122		159		
03:15			3		4			15:15			103		217		
03:30			1		0			15:30			148		213		
03:45			1	6	2	8	14	15:45			147	520	189	778	1298
04:00			1		1			16:00			108		218		
04:15			2		0			16:15			87		199		
04:30			1		4			16:30			98		189		
04:45			1	5	0	5	10	16:45			95	388	224	830	1218
05:00			1		2			17:00			97		202		
05:15			6		6			17:15			91		227		
05:30			8		8			17:30			84		214		
05:45			10	25	10	26	51	17:45			87	359	230	873	1232
06:00			17		10			18:00			81		236		
06:15			40		9			18:15			85		249		
06:30			69		21			18:30			75		218		
06:45			74	200	32	72	272	18:45			69	310	186	889	1199
07:00			122		61			19:00			62		143		
07:15			151		131			19:15			49		116		
07:30			225		155			19:30			50		102		
07:45			220	718	225	572	1290	19:45			44	205	65	426	631
08:00			264		155			20:00			40		48		
08:15			219		93			20:15			30		33		
08:30			211		92			20:30			42		28		
08:45			210	904	94	434	1338	20:45			49	161	31	140	301
09:00			181		102			21:00			30		30		
09:15			196		83			21:15			32		37		
09:30			189		76			21:30			35		21		
09:45			148	714	65	326	1040	21:45			31	128	24	112	240
10:00			121		59			22:00			17		23		
10:15			97		69			22:15			25		25		
10:30			117		63			22:30			25		22		
10:45			90	425	76	267	692	22:45			17	84	20	90	174
11:00			89		75			23:00			16		16		
11:15			86		66			23:15			4		13		
11:30			88		75			23:30			12		13		
11:45			87	350	107	323	673	23:45			8	40	11	53	93
Total Vol.				3394		2085	**5479**					3271		5384	**8655**

	NB	SB	EB	WB	Total
Daily Totals :	0	0	6,665	7,469	14,134

	AM				PM		
Split %	61.9%	38.1%	**38.8%**		37.8%	62.2%	**61.2%**
AM Peak Hr.	07:30	07:15	**07:30**	**PM Peak Hr.**	15:00	17:45	**15:15**
Volume	928	666	**1556**	**Volume**	520	933	**1343**
P.H.F.	0.879	0.740	**0.874**	**P.H.F.**	0.878	0.937	**0.930**
7 - 9 Vol.	1622	1006	**2628**	**4 - 6 Vol.**	747	1703	**2450**
Peak Hr.	07:30	07:15	**07:30**	**Peak Hr.**	16:00	17:00	**16:45**
Volume	928	666	**1556**	**Volume**	388	873	**1234**
P.H.F.	0.879	0.740	**0.874**	**P.H.F.**	0.898	0.949	**0.967**

Prepared by NDS/ATD

Volumes for: Wednesday, May 26, 2010	City: Los Angeles	Daily Totals NB	SB	EB	WB	Total
Location: Mulholland Dr between Nicada Dr & Stone Canyon Rd	Project: 10-5212-001	0	0	6,307	7,160	13,467

AM Period	NB		SB		EB		WB			PM Period	NB		SB		EB		WB		
00:00					8		8			12:00					73		73		
00:15					8		7			12:15					88		68		
00:30					5		4			12:30					83		74		
00:45					5	26	3	22	48	12:45					68	312	79	294	606
01:00					5		7			13:00					59		64		
01:15					5		5			13:15					73		53		
01:30					2		5			13:30					62		76		
01:45					2	14	1	18	32	13:45					66	260	70	263	523
02:00					4		3			14:00					71		100		
02:15					5		3			14:15					61		114		
02:30					2		0			14:30					77		139		
02:45					2	13	0	6	19	14:45					105	314	162	515	829
03:00					0		2			15:00					112		175		
03:15					4		2			15:15					93		178		
03:30					2		2			15:30					117		186		
03:45					1	7	1	7	14	15:45					137	459	160	699	1158
04:00					0		0			16:00					99		175		
04:15					1		1			16:15					79		185		
04:30					1		1			16:30					95		195		
04:45					2	4	3	5	9	16:45					93	366	178	733	1099
05:00					3		2			17:00					81		192		
05:15					3		2			17:15					94		239		
05:30					13		7			17:30					73		222		
05:45					21	40	10	21	61	17:45					65	313	234	887	1200
06:00					15		14			18:00					75		215		
06:15					50		12			18:15					106		175		
06:30					81		23			18:30					64		173		
06:45					99	245	58	107	352	18:45					62	307	207	770	1077
07:00					107		111			19:00					64		149		
07:15					154		136			19:15					52		106		
07:30					228		168			19:30					46		88		
07:45					208	697	198	613	1310	19:45					43	205	63	406	611
08:00					248		145			20:00					38		54		
08:15					237		101			20:15					38		38		
08:30					231		95			20:30					45		37		
08:45					192	908	88	429	1337	20:45					31	152	34	163	315
09:00					177		101			21:00					38		24		
09:15					199		91			21:15					38		27		
09:30					140		99			21:30					28		26		
09:45					135	651	109	400	1051	21:45					28	132	20	97	229
10:00					124		67			22:00					23		20		
10:15					91		73			22:15					21		21		
10:30					94		82			22:30					21		15		
10:45					104	413	75	297	710	22:45					13	78	15	71	149
11:00					78		66			23:00					15		19		
11:15					104		66			23:15					6		13		
11:30					81		79			23:30					10		11		
11:45					88	351	78	289	640	23:45					9	40	5	48	88
Total Vol.						3369		2214	**5583**							2938		4946	**7884**

	NB	SB	EB	WB	Total
Daily Totals :	0	0	6,307	7,160	13,467

	AM EB	AM WB	AM Total		PM EB	PM WB	PM Total
Split %	60.3%	39.7%	**41.5%**		37.3%	62.7%	**58.5%**
AM Peak Hr.	07:45	07:15	**07:30**	**PM Peak Hr.**	15:00	17:15	**17:15**
Volume	924	647	**1533**	**Volume**	459	910	**1217**
P.H.F.	0.931	0.817	**0.944**	**P.H.F.**	0.838	0.952	**0.914**
7 - 9 Vol.	1605	1042	**2647**	**4 - 6 Vol.**	679	1620	**2299**
Peak Hr.	07:45	07:15	**07:30**	**Peak Hr.**	16:00	17:00	**17:00**
Volume	924	647	**1533**	**Volume**	366	887	**1200**
P.H.F.	0.931	0.817	**0.944**	**P.H.F.**	0.924	0.928	**0.901**

Prepared by NDS/ATD

Volumes for: Tuesday, May 25, 2010	City: Los Angeles	Daily Totals NB	SB	EB	WB	Total
Location: Mulholland Dr between Woodcliff Rd & Antelo Place	Project: 10-5212-002	0	0	5,738	6,525	12,263

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			7		4			12:00			107		74		
00:15			3		6			12:15			103		65		
00:30			4		10			12:30			69		61		
00:45			5	19	7	27	46	12:45			72	351	67	267	618
01:00			3		4			13:00			55		83		
01:15			3		4			13:15			90		78		
01:30			2		2			13:30			75		64		
01:45			2	10	3	13	23	13:45			76	296	70	295	591
02:00			5		1			14:00			78		114		
02:15			2		3			14:15			77		117		
02:30			2		1			14:30			84		139		
02:45			0	9	0	5	14	14:45			96	335	170	540	875
03:00			1		2			15:00			117		150		
03:15			0		2			15:15			110		189		
03:30			1		0			15:30			159		173		
03:45			0	2	1	5	7	15:45			164	550	155	667	1217
04:00			0		1			16:00			110		141		
04:15			1		1			16:15			81		165		
04:30			0		4			16:30			104		138		
04:45			0	1	1	7	8	16:45			96	391	133	577	968
05:00			0		0			17:00			107		133		
05:15			3		7			17:15			93		144		
05:30			6		10			17:30			93		143		
05:45			8	17	9	26	43	17:45			98	391	164	584	975
06:00			19		13			18:00			89		163		
06:15			23		14			18:15			73		155		
06:30			41		28			18:30			69		138		
06:45			53	136	46	101	237	18:45			63	294	130	586	880
07:00			81		67			19:00			58		110		
07:15			108		151			19:15			41		76		
07:30			164		175			19:30			52		59		
07:45			168	521	240	633	1154	19:45			37	188	50	295	483
08:00			225		176			20:00			39		43		
08:15			169		114			20:15			32		25		
08:30			161		126			20:30			38		25		
08:45			156	711	110	526	1237	20:45			43	152	30	123	275
09:00			143		121			21:00			36		29		
09:15			141		112			21:15			18		28		
09:30			129		93			21:30			36		19		
09:45			113	526	78	404	930	21:45			25	115	20	96	211
10:00			89		59			22:00			18		22		
10:15			82		72			22:15			21		20		
10:30			81		61			22:30			21		18		
10:45			70	322	84	276	598	22:45			15	75	25	85	160
11:00			70		71			23:00			10		16		
11:15			76		77			23:15			8		11		
11:30			70		71			23:30			8		14		
11:45			75	291	116	335	626	23:45			9	35	11	52	87
Total Vol.				2565		2358	**4923**					3173		4167	**7340**

	NB	SB	EB	WB	Total
Daily Totals :	0	0	5,738	6,525	12,263

	AM EB	AM WB	AM Total		PM EB	PM WB	PM Total
Split %	52.1%	47.9%	**40.1%**		43.2%	56.8%	**59.9%**
AM Peak Hr.	07:30	07:15	**07:30**	**PM Peak Hr.**	15:00	14:45	**15:00**
Volume	726	742	**1431**	**Volume**	550	682	**1217**
P.H.F.	0.807	0.773	**0.877**	**P.H.F.**	0.838	0.902	**0.916**
7 - 9 Vol.	1232	1159	**2391**	**4 - 6 Vol.**	782	1161	**1943**
Peak Hr.	07:30	07:15	**07:30**	**Peak Hr.**	16:30	17:00	**17:00**
Volume	726	742	**1431**	**Volume**	400	584	**975**
P.H.F.	0.807	0.773	**0.877**	**P.H.F.**	0.935	0.890	**0.930**

Prepared by NDS/ATD

Volumes for: Wednesday, May 26, 2010	City: Los Angeles	Daily Totals NB	SB	EB	WB	Total
Location: Mulholland Dr between Woodcliff Rd & Antelo Place	Project: 10-5212-002	0	0	5,369	6,379	11,748

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			4		7			12:00			66		69		
00:15			7		5			12:15			88		70		
00:30			2		4			12:30			71		69		
00:45			3	16	3	19	35	12:45			60	285	72	280	565
01:00			5		5			13:00			58		64		
01:15			3		4			13:15			56		56		
01:30			1		4			13:30			48		69		
01:45			3	12	0	13	25	13:45			62	224	64	253	477
02:00			3		0			14:00			58		84		
02:15			1		2			14:15			56		107		
02:30			3		1			14:30			66		134		
02:45			1	8	0	3	11	14:45			106	286	137	462	748
03:00			0		1			15:00			103		158		
03:15			1		2			15:15			95		169		
03:30			2		1			15:30			122		140		
03:45			0	3	0	4	7	15:45			145	465	130	597	1062
04:00			0		1			16:00			104		119		
04:15			0		0			16:15			69		141		
04:30			1		1			16:30			98		141		
04:45			1	2	4	6	8	16:45			86	357	118	519	876
05:00			0		1			17:00			101		115		
05:15			2		3			17:15			102		146		
05:30			8		8			17:30			82		157		
05:45			18	28	10	22	50	17:45			72	357	157	575	932
06:00			13		16			18:00			75		150		
06:15			30		25			18:15			103		112		
06:30			58		29			18:30			55		125		
06:45			80	181	68	138	319	18:45			55	288	148	535	823
07:00			67		127			19:00			71		130		
07:15			109		170			19:15			53		73		
07:30			172		195			19:30			44		72		
07:45			160	508	216	708	1216	19:45			40	208	52	327	535
08:00			203		169			20:00			31		34		
08:15			177		114			20:15			37		38		
08:30			167		116			20:30			46		31		
08:45			139	686	127	526	1212	20:45			31	145	25	128	273
09:00			123		119			21:00			33		27		
09:15			162		114			21:15			41		22		
09:30			99		116			21:30			23		22		
09:45			107	491	112	461	952	21:45			28	125	17	88	213
10:00			93		78			22:00			16		13		
10:15			67		68			22:15			16		20		
10:30			66		81			22:30			21		12		
10:45			76	302	91	318	620	22:45			12	65	16	61	126
11:00			64		65			23:00			10		14		
11:15			74		75			23:15			6		13		
11:30			76		82			23:30			12		6		
11:45			77	291	78	300	591	23:45			8	36	3	36	72
Total Vol.				2528		2518	**5046**					2841		3861	**6702**

	NB	SB	EB	WB	Total
Daily Totals :	0	0	5,369	6,379	11,748

	AM				PM		
Split %	50.1%	49.9%	**43.0%**		42.4%	57.6%	**57.0%**
AM Peak Hr.	07:30	07:15	**07:30**	**PM Peak Hr.**	15:15	17:15	**15:00**
Volume	712	750	**1406**	**Volume**	466	610	**1062**
P.H.F.	0.877	0.868	**0.935**	**P.H.F.**	0.803	0.971	**0.965**
7 - 9 Vol.	1194	1234	**2428**	**4 - 6 Vol.**	714	1094	**1808**
Peak Hr.	07:30	07:15	**07:30**	**Peak Hr.**	16:30	17:00	**17:00**
Volume	712	750	**1406**	**Volume**	387	575	**932**
P.H.F.	0.877	0.868	**0.935**	**P.H.F.**	0.949	0.916	**0.940**

Prepared by NDS/ATD

Volumes for: Tuesday, May 25, 2010	City: Los Angeles	Daily Totals NB	SB	EB	WB	Total
Location: Mulholland Dr between Roscomare Rd & Casiano Rd	Project: 10-5212-003	0	0	7,040	8,197	15,237

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			6		5			12:00			129		83		
00:15			7		6			12:15			108		87		
00:30			3		10			12:30			85		91		
00:45			6	22	6	27	49	12:45			90	412	100	361	773
01:00			5		5			13:00			75		97		
01:15			3		3			13:15			109		96		
01:30			1		3			13:30			85		93		
01:45			3	12	2	13	25	13:45			97	366	73	359	725
02:00			5		3			14:00			113		124		
02:15			5		5			14:15			100		124		
02:30			5		2			14:30			132		154		
02:45			0	15	0	10	25	14:45			105	450	219	621	1071
03:00			1		2			15:00			105		216		
03:15			1		4			15:15			113		235		
03:30			0		0			15:30			160		223		
03:45			0	2	0	6	8	15:45			163	541	218	892	1433
04:00			1		1			16:00			99		199		
04:15			1		1			16:15			75		208		
04:30			1		5			16:30			104		189		
04:45			1	4	4	11	15	16:45			96	374	206	802	1176
05:00			2		2			17:00			76		187		
05:15			3		6			17:15			80		218		
05:30			10		12			17:30			85		215		
05:45			13	28	12	32	60	17:45			90	331	242	862	1193
06:00			25		12			18:00			101		213		
06:15			46		19			18:15			67		205		
06:30			65		26			18:30			77		188		
06:45			89	225	41	98	323	18:45			69	314	170	776	1090
07:00			124		71			19:00			50		143		
07:15			164		176			19:15			52		101		
07:30			244		194			19:30			60		73		
07:45			269	801	242	683	1484	19:45			45	207	61	378	585
08:00			300		215			20:00			46		44		
08:15			201		134			20:15			43		32		
08:30			221		163			20:30			42		37		
08:45			222	944	121	633	1577	20:45			56	187	41	154	341
09:00			212		121			21:00			49		37		
09:15			206		128			21:15			29		31		
09:30			172		108			21:30			50		25		
09:45			139	729	97	454	1183	21:45			28	156	28	121	277
10:00			120		80			22:00			21		28		
10:15			103		76			22:15			27		18		
10:30			97		86			22:30			28		25		
10:45			88	408	98	340	748	22:45			24	100	25	96	196
11:00			90		83			23:00			13		17		
11:15			97		98			23:15			14		10		
11:30			89		83			23:30			10		9		
11:45			89	365	156	420	785	23:45			10	47	12	48	95
Total Vol.				3555		2727	**6282**					3485		5470	**8955**

	NB	SB	EB	WB	Total
Daily Totals :	0	0	7,040	8,197	15,237

	AM EB	AM WB	AM Total		PM EB	PM WB	PM Total
Split %	56.6%	43.4%	**41.2%**		38.9%	61.1%	**58.8%**
AM Peak Hr.	07:30	07:15	**07:15**	**PM Peak Hr.**	15:00	14:45	**15:00**
Volume	1014	827	**1804**	**Volume**	541	893	**1433**
P.H.F.	0.845	0.854	**0.876**	**P.H.F.**	0.830	0.950	**0.935**
7 - 9 Vol.	1745	1316	**3061**	**4 - 6 Vol.**	705	1664	**2369**
Peak Hr.	07:30	07:15	**07:15**	**Peak Hr.**	16:00	17:00	**17:00**
Volume	1014	827	**1804**	**Volume**	374	862	**1193**
P.H.F.	0.845	0.854	**0.876**	**P.H.F.**	0.899	0.890	**0.898**

Prepared by NDS/ATD

Volumes for: Wednesday, May 26, 2010	City: Los Angeles	Daily Totals NB	SB	EB	WB	Total
Location: Mulholland Dr between Roscomare Rd & Casiano Rd	Project: 10-5212-003	0	0	6,780	7,935	14,715

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			9		10			12:00			86		98		
00:15			10		4			12:15			87		81		
00:30			3		3			12:30			79		72		
00:45			4	26	1	18	44	12:45			61	313	90	341	654
01:00			5		9			13:00			75		78		
01:15			5		4			13:15			74		93		
01:30			1		5			13:30			70		88		
01:45			5	16	2	20	36	13:45			78	297	73	332	629
02:00			4		0			14:00			76		120		
02:15			5		1			14:15			86		120		
02:30			1		1			14:30			92		141		
02:45			2	12	0	2	14	14:45			120	374	204	585	959
03:00			1		1			15:00			107		193		
03:15			1		3			15:15			105		228		
03:30			3		1			15:30			169		211		
03:45			0	5	0	5	10	15:45			171	552	179	811	1363
04:00			0		2			16:00			117		162		
04:15			0		0			16:15			78		190		
04:30			2		3			16:30			100		200		
04:45			2	4	7	12	16	16:45			83	378	174	726	1104
05:00			4		3			17:00			100		172		
05:15			6		5			17:15			92		189		
05:30			12		13			17:30			76		235		
05:45			24	46	15	36	82	17:45			65	333	189	785	1118
06:00			28		19			18:00			77		203		
06:15			45		21			18:15			103		175		
06:30			81		28			18:30			67		181		
06:45			128	282	47	115	397	18:45			60	307	175	734	1041
07:00			103		102			19:00			75		171		
07:15			165		186			19:15			61		94		
07:30			230		187			19:30			55		81		
07:45			269	767	239	714	1481	19:45			64	255	76	422	677
08:00			308		183			20:00			43		41		
08:15			219		152			20:15			45		45		
08:30			236		134			20:30			49		34		
08:45			177	940	141	610	1550	20:45			42	179	30	150	329
09:00			182		133			21:00			54		28		
09:15			221		130			21:15			39		28		
09:30			144		125			21:30			32		29		
09:45			125	672	118	506	1178	21:45			39	164	20	105	269
10:00			112		100			22:00			33		13		
10:15			80		86			22:15			31		26		
10:30			80		97			22:30			24		22		
10:45			90	362	108	391	753	22:45			13	101	13	74	175
11:00			80		87			23:00			13		23		
11:15			85		82			23:15			8		15		
11:30			103		114			23:30			16		6		
11:45			77	345	111	394	739	23:45			13	50	3	47	97
Total Vol.				3477		2823	**6300**					3303		5112	**8415**

	NB	SB	EB	WB	Total
Daily Totals :	0	0	6,780	7,935	14,715

	AM EB	AM WB	AM Total		PM EB	PM WB	PM Total
Split %	55.2%	44.8%	**42.8%**		39.3%	60.7%	**57.2%**
AM Peak Hr.	07:45	07:15	**07:30**	**PM Peak Hr.**	15:15	14:45	**15:00**
Volume	1032	795	**1787**	**Volume**	562	836	**1363**
P.H.F.	0.838	0.832	**0.879**	**P.H.F.**	0.822	0.917	**0.897**
7 - 9 Vol.	1707	1324	**3031**	**4 - 6 Vol.**	711	1511	**2222**
Peak Hr.	07:45	07:15	**07:30**	**Peak Hr.**	16:00	17:00	**16:45**
Volume	1032	795	**1787**	**Volume**	378	785	**1121**
P.H.F.	0.838	0.832	**0.879**	**P.H.F.**	0.808	0.835	**0.901**

Prepared by NDS/ATD

Volumes for: Tuesday, May 25, 2010	City: Los Angeles	Daily Totals NB	SB	EB	WB	Total
Location: Skirball Center Dr between Mulholland Dr & NB I-405 on/off ramps	Project: 10-5212-004	8,805	11,279	0	0	20,084

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	13		21					12:00	120		184				
00:15	15		16					12:15	103		204				
00:30	12		33					12:30	99		169				
00:45	13	53	22	92			145	12:45	134	456	134	691			1147
01:00	11		10					13:00	117		118				
01:15	8		6					13:15	141		120				
01:30	4		8					13:30	142		125				
01:45	4	27	3	27			54	13:45	142	542	98	461			1003
02:00	5		3					14:00	146		144				
02:15	3		3					14:15	172		150				
02:30	5		3					14:30	192		174				
02:45	0	13	2	11			24	14:45	213	723	192	660			1383
03:00	4		4					15:00	180		280				
03:15	2		6					15:15	182		271				
03:30	1		0					15:30	207		273				
03:45	0	7	1	11			18	15:45	180	749	235	1059			1808
04:00	6		4					16:00	172		242				
04:15	3		8					16:15	127		195				
04:30	5		14					16:30	142		154				
04:45	7	21	15	41			62	16:45	122	563	177	768			1331
05:00	5		9					17:00	117		206				
05:15	12		17					17:15	123		169				
05:30	12		37					17:30	138		150				
05:45	33	62	27	90			152	17:45	130	508	173	698			1206
06:00	37		38					18:00	159		187				
06:15	60		47					18:15	129		144				
06:30	78		75					18:30	125		137				
06:45	93	268	125	285			553	18:45	138	551	134	602			1153
07:00	127		178					19:00	114		128				
07:15	184		310					19:15	123		102				
07:30	213		341					19:30	119		90				
07:45	269	793	324	1153			1946	19:45	115	471	73	393			864
08:00	216		346					20:00	141		72				
08:15	153		335					20:15	86		68				
08:30	134		326					20:30	61		116				
08:45	165	668	283	1290			1958	20:45	82	370	101	357			727
09:00	129		253					21:00	74		86				
09:15	126		246					21:15	62		81				
09:30	112		251					21:30	72		102				
09:45	105	472	171	921			1393	21:45	52	260	94	363			623
10:00	119		127					22:00	44		117				
10:15	98		148					22:15	54		56				
10:30	104		128					22:30	42		46				
10:45	111	432	116	519			951	22:45	41	181	49	268			449
11:00	101		107					23:00	35		37				
11:15	118		111					23:15	21		19				
11:30	141		94					23:30	30		25				
11:45	154	514	104	416			930	23:45	15	101	22	103			204
Total Vol.		3330		4856			**8186**			5475		6423			**11898**

	NB	SB	EB	WB	Total
Daily Totals :	8,805	11,279	0	0	20,084

	AM NB	AM SB	AM Total		PM NB	PM SB	PM Total
Split %	40.7%	59.3%	**40.8%**		46.0%	54.0%	**59.2%**
AM Peak Hr.	07:15	07:30	**07:15**	**PM Peak Hr.**	14:45	15:00	**15:00**
Volume	882	1346	**2203**	**Volume**	782	1059	**1808**
P.H.F.	0.820	0.973	**0.929**	**P.H.F.**	0.918	0.946	**0.942**
7 - 9 Vol.	1461	2443	**3904**	**4 - 6 Vol.**	1071	1466	**2537**
Peak Hr.	07:15	07:30	**07:15**	**Peak Hr.**	16:00	16:00	**16:00**
Volume	882	1346	**2203**	**Volume**	563	768	**1331**
P.H.F.	0.820	0.973	**0.929**	**P.H.F.**	0.818	0.793	**0.804**

Prepared by NDS/ATD

Volumes for: Wednesday, May 26, 2010	City:	Los Angeles	Daily Totals				
			NB	SB	EB	WB	Total
Location: Skirball Center Dr between Mulholland Dr & NB I-405 on/off ramps	Project:	10-5212-004	8,536	11,847	0	0	20,383

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	23		20					12:00	106		162				
00:15	19		27					12:15	125		122				
00:30	7		25					12:30	127		126				
00:45	14	63	3	75			138	12:45	111	469	117	527			996
01:00	15		29					13:00	108		127				
01:15	9		11					13:15	103		123				
01:30	11		2					13:30	95		142				
01:45	8	43	6	48			91	13:45	106	412	108	500			912
02:00	5		6					14:00	103		167				
02:15	7		2					14:15	150		154				
02:30	2		2					14:30	133		212				
02:45	1	15	0	10			25	14:45	185	571	207	740			1311
03:00	3		5					15:00	189		230				
03:15	3		5					15:15	175		264				
03:30	2		2					15:30	162		287				
03:45	7	15	5	17			32	15:45	145	671	236	1017			1688
04:00	2		1					16:00	126		211				
04:15	0		8					16:15	146		191				
04:30	3		10					16:30	140		186				
04:45	7	12	24	43			55	16:45	123	535	169	757			1292
05:00	8		7					17:00	131		206				
05:15	21		23					17:15	139		195				
05:30	22		33					17:30	117		209				
05:45	34	85	35	98			183	17:45	138	525	171	781			1306
06:00	50		76					18:00	123		195				
06:15	63		52					18:15	157		202				
06:30	92		94					18:30	150		123				
06:45	121	326	146	368			694	18:45	154	584	112	632			1216
07:00	124		237					19:00	169		140				
07:15	191		324					19:15	147		92				
07:30	216		338					19:30	123		98				
07:45	276	807	345	1244			2051	19:45	144	583	68	398			981
08:00	203		368					20:00	72		69				
08:15	139		355					20:15	79		66				
08:30	152		295					20:30	80		120				
08:45	142	636	313	1331			1967	20:45	65	296	98	353			649
09:00	126		284					21:00	69		138				
09:15	128		270					21:15	54		153				
09:30	103		238					21:30	48		54				
09:45	95	452	213	1005			1457	21:45	58	229	81	426			655
10:00	110		185					22:00	67		48				
10:15	109		164					22:15	46		46				
10:30	117		144					22:30	35		52				
10:45	105	441	143	636			1077	22:45	37	185	37	183			368
11:00	102		129					23:00	25		50				
11:15	141		119					23:15	23		30				
11:30	114		153					23:30	26		18				
11:45	131	488	152	553			1041	23:45	19	93	7	105			198
Total Vol.		3383		5428			**8811**			5153		6419			**11572**

					NB	SB	EB	WB	Total
				Daily Totals :	8,536	11,847	0	0	20,383
	AM				**PM**				
Split %	38.4%	61.6%	**43.2%**		44.5%	55.5%			**56.8%**
AM Peak Hr.	07:15	07:30	**07:15**	**PM Peak Hr.**	14:45	15:00			**14:45**
Volume	886	1406	**2261**	**Volume**	711	1017			**1699**
P.H.F.	0.803	0.955	**0.910**	**P.H.F.**	0.940	0.886			**0.946**
7 - 9 Vol.	1443	2575	**4018**	**4 - 6 Vol.**	1060	1538			**2598**
Peak Hr.	07:15	07:30	**07:15**	**Peak Hr.**	16:15	17:00			**17:00**
Volume	886	1406	**2261**	**Volume**	540	781			**1306**
P.H.F.	0.803	0.955	**0.910**	**P.H.F.**	0.925	0.934			**0.969**

Prepared by NDS/ATD

Volumes for: Tuesday, May 25, 2010	City: Los Angeles	Daily Totals				
		NB	SB	EB	WB	Total
Location: Skirball center Dr on the overpass btwn the curve on Skirball Ctr Dr&SB I-405 on/off	Project: 10-5212-005	0	0	6,348	7,925	14,273

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			2		12			12:00			74		109		
00:15			8		9			12:15			103		97		
00:30			5		11			12:30			121		100		
00:45			3	18	8	40	58	12:45			106	404	78	384	788
01:00			5		8			13:00			114		84		
01:15			1		5			13:15			98		93		
01:30			2		8			13:30			70		89		
01:45			2	10	6	27	37	13:45			67	349	80	346	695
02:00			1		5			14:00			73		86		
02:15			2		4			14:15			91		98		
02:30			2		2			14:30			115		97		
02:45			0	5	5	16	21	14:45			138	417	108	389	806
03:00			2		4			15:00			127		152		
03:15			2		6			15:15			148		159		
03:30			3		1			15:30			191		203		
03:45			2	9	1	12	21	15:45			185	651	148	662	1313
04:00			5		2			16:00			167		127		
04:15			2		6			16:15			179		111		
04:30			3		13			16:30			162		81		
04:45			5	15	9	30	45	16:45			171	679	85	404	1083
05:00			2		5			17:00			166		99		
05:15			5		16			17:15			172		87		
05:30			9		27			17:30			168		90		
05:45			20	36	20	68	104	17:45			173	679	108	384	1063
06:00			21		36			18:00			150		91		
06:15			36		50			18:15			157		93		
06:30			41		76			18:30			135		83		
06:45			70	168	111	273	441	18:45			139	581	58	325	906
07:00			65		166			19:00			140		70		
07:15			71		247			19:15			116		70		
07:30			89		248			19:30			96		57		
07:45			103	328	253	914	1242	19:45			80	432	49	246	678
08:00			92		285			20:00			57		44		
08:15			80		282			20:15			51		34		
08:30			65		255			20:30			49		59		
08:45			76	313	243	1065	1378	20:45			43	200	76	213	413
09:00			63		221			21:00			33		51		
09:15			72		197			21:15			24		41		
09:30			58		216			21:30			32		66		
09:45			61	254	163	797	1051	21:45			29	118	51	209	327
10:00			70		140			22:00			14		62		
10:15			64		120			22:15			10		40		
10:30			65		107			22:30			12		28		
10:45			60	259	103	470	729	22:45			9	45	27	157	202
11:00			76		110			23:00			11		21		
11:15			91		115			23:15			8		16		
11:30			85		103			23:30			11		21		
11:45			90	342	91	419	761	23:45			6	36	17	75	111
Total Vol.				1757		4131	**5888**					4591		3794	**8385**

	NB	SB	EB	WB	Total
Daily Totals :	0	0	6,348	7,925	14,273

	AM			PM			
Split %	29.8%	70.2%	**41.3%**		54.8%	45.2%	**58.7%**
AM Peak Hr.	11:45	07:45	**07:30**	**PM Peak Hr.**	15:30	15:00	**15:15**
Volume	388	1075	**1432**	**Volume**	722	662	**1328**
P.H.F.	0.802	0.943	**0.950**	**P.H.F.**	0.945	0.815	**0.843**
7 - 9 Vol.	641	1979	**2620**	**4 - 6 Vol.**	1358	788	**2146**
Peak Hr.	07:30	07:45	**07:30**	**Peak Hr.**	16:00	16:00	**16:00**
Volume	364	1075	**1432**	**Volume**	679	404	**1083**
P.H.F.	0.883	0.943	**0.950**	**P.H.F.**	0.948	0.795	**0.921**

Prepared by NDS/ATD

Volumes for: Wednesday, May 26, 2010	City:	Los Angeles	Daily Totals				
			NB	SB	EB	WB	Total
Location: Skirball center Dr on the overpass btwn the curve on Skirball Ctr Dr&SB I-405 on/off	Project:	10-5212-005	0	0	6,488	7,857	14,345

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			4		8			12:00			67		118		
00:15			4		18			12:15			90		80		
00:30			2		7			12:30			138		86		
00:45			4	14	4	37	51	12:45			112	407	75	359	766
01:00			4		15			13:00			115		70		
01:15			2		6			13:15			90		94		
01:30			4		6			13:30			57		88		
01:45			3	13	5	32	45	13:45			57	319	69	321	640
02:00			1		5			14:00			56		85		
02:15			2		2			14:15			79		75		
02:30			0		4			14:30			126		109		
02:45			1	4	0	11	15	14:45			127	388	125	394	782
03:00			4		3			15:00			138		142		
03:15			1		6			15:15			156		150		
03:30			6		5			15:30			210		193		
03:45			3	14	2	16	30	15:45			190	694	155	640	1334
04:00			1		2			16:00			174		100		
04:15			5		3			16:15			183		87		
04:30			1		7			16:30			164		86		
04:45			3	10	16	28	38	16:45			184	705	86	359	1064
05:00			4		4			17:00			178		109		
05:15			8		17			17:15			181		100		
05:30			11		25			17:30			175		95		
05:45			14	37	27	73	110	17:45			184	718	81	385	1103
06:00			25		46			18:00			141		92		
06:15			42		43			18:15			161		119		
06:30			40		79			18:30			143		72		
06:45			74	181	97	265	446	18:45			147	592	51	334	926
07:00			72		198			19:00			155		65		
07:15			71		236			19:15			123		57		
07:30			97		243			19:30			101		55		
07:45			94	334	238	915	1249	19:45			86	465	49	226	691
08:00			82		278			20:00			50		40		
08:15			86		295			20:15			54		41		
08:30			67		242			20:30			54		76		
08:45			76	311	268	1083	1394	20:45			47	205	56	213	418
09:00			77		209			21:00			38		61		
09:15			76		224			21:15			27		84		
09:30			64		200			21:30			21		37		
09:45			62	279	174	807	1086	21:45			25	111	47	229	340
10:00			55		149			22:00			15		37		
10:15			52		116			22:15			13		33		
10:30			71		99			22:30			8		35		
10:45			64	242	120	484	726	22:45			9	45	22	127	172
11:00			72		117			23:00			10		31		
11:15			102		97			23:15			6		17		
11:30			97		120			23:30			8		17		
11:45			101	372	111	445	817	23:45			4	28	9	74	102
Total Vol.				1811		4196	**6007**					4677		3661	**8338**

					NB	SB	EB	WB	Total
				Daily Totals :	0	0	6,488	7,857	14,345

	AM				PM		
Split %	30.1%	69.9%	**41.9%**		56.1%	43.9%	**58.1%**
AM Peak Hr.	11:45	08:00	**07:30**	**PM Peak Hr.**	15:30	15:00	**15:00**
Volume	396	1083	**1413**	**Volume**	757	640	**1334**
P.H.F.	0.717	0.918	**0.927**	**P.H.F.**	0.901	0.829	**0.828**
7 - 9 Vol.	645	1998	**2643**	**4 - 6 Vol.**	1423	744	**2167**
Peak Hr.	07:30	08:00	**07:30**	**Peak Hr.**	16:45	16:45	**16:45**
Volume	359	1083	**1413**	**Volume**	718	390	**1108**
P.H.F.	0.925	0.918	**0.927**	**P.H.F.**	0.976	0.894	**0.965**

Appendix C
Level-of-Service Worksheets
All Scenarios for Proposed Project (Concrete Roof)

CMACalc - Critical Movement Analysis Calculator

Upper Stone Canyon Reservoir Water Quality Improvement Project

LADOT
Bureau of Planning and Land Use Development

Intersection No. 1	2010, EXISTING		2019, PROJECTED CUMULATIVE BASE				2019, WITH PROJECT					2019, WITH TRAFFIC MITIGATION	
North/South Street:	Critical Phases:	3	Ambient Growth		Critical Phases:	3	☐ Adjacent		In	Out	Total	Critical Phases:	3
Roscomare Road	Capacity:	1425	from:	2010	Capacity:	1425	Trip Gen 1	AM	100	50	150	Capacity:	1425
East/West Street:	Signal System:	3	to:	2019	Signal System:	3		PM	53	97	150	☐ Use Dist 2? Signal System:	3
Mulholland Drive	v/c reduction:	10%	at:	1.0%	v/c reduction:	10%	Trip Gen 2	AM	0	0	0	v/c reduction:	10%
Analysis Date: 01/26/2011	Opposed Phasing:	0			Opposed Phasing:	0		PM	0	0	0	Opposed Phasing:	0
AM Peak: 7:30 AM													

Movement	RTOR	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume	%	+ Project Volume	= Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound Left		207	0	0	19	0	226	0	0	0%	0	226	0	0	0	226	0	0
Lt-Th	N/B RTOR:		0	0				0	0	0%			0	0			0	0
Thru	Existing: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
Right	Mitigated: 50%	89	0	0	8	0	97	0	0	0%	0	97	0	0	0	97	0	0
Shared			1	296				1	324	0%			1	324			1	324
Southbound Left		0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
Lt-Th	S/B RTOR:		0	0				0	0	0%			0	0			0	0
Thru	Existing: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
Right	Mitigated: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
Shared			0	0				0	0	0%			0	0			0	0
Eastbound Left		0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
Lt-Th	E/B RTOR:		0	0				0	0	0%			0	0			0	0
Thru	Existing: 50%	616	1	616	58	17	691	1	691	100%	100	791	1	791	0	791	1	791
Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
Right	Mitigated: 50%	350	1	246	33	0	383	1	270	0%	0	383	1	270	0	383	1	270
Shared			0	0				0	0	0%			0	0			0	0
Westbound Left		195	1	195	18	0	213	1	213	0%	0	213	1	213	0	213	1	213
Lt-Th	W/B RTOR:		0	0				0	0	0%			0	0			0	0
Thru	Existing: 50%	483	1	483	45	13	541	1	541	0%	50	591	1	591	0	591	1	591
Th-Rt	Projected: 50%		0	0				0	0	100%			0	0			0	0
Right	Mitigated: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
Shared			0	0				0	0	0%			0	0			0	0

Critical Volumes:	2010, Existing	2019, Projected Cumulative Base	2019, With Project	2019, With Traffic Mitigation
North-South:	296	324	324	324
East-West:	811	904	1004	1004
Total:	1107	1228	1328	1328
Volume/capacity (*v/c*) ratio:	0.777	0.862	0.932	0.932
v/c less ATSAC adjustment:	0.677	0.762	0.832	0.832
Level of Service (LOS):	**B**	**C**	**D**	**D**

PROJECT IMPACT

Change in *v/c* due to project:	0.070	Δ*v/c* after mitigation:	0.070
Significantly impacted?	YES	Fully mitigated?	NO

Filename: J:\2008\JA81142 LADWP Reservoirs EIR\Upper Stone Canyon - Task 1\Analysis\UpperStoneCyn - Concrete Roof.xls

Developed 2005-2007 by Ken Aitchison

CMACalc - Critical Movement Analysis Calculator

Upper Stone Canyon Reservoir Water Quality Improvement Project

LADOT Bureau of Planning and Land Use Development

Intersection No. 1	2010, EXISTING	2019, PROJECTED CUMULATIVE BASE		2019, WITH PROJECT	2019, WITH TRAFFIC MITIGATION
North/South Street: **Roscomare Road**	Critical Phases: 3	Ambient Growth	Critical Phases: 3	☐ Adjacent — In / Out / Total	Critical Phases: 3
	Capacity: 1425	from: 2010	Capacity: 1425	Trip Gen 1 AM: 100 / 50 / 150	Capacity: 1425
East/West Street: **Mulholland Drive**	Signal System: 3	to: 2019	Signal System: 3	Trip Gen 1 PM: 53 / 97 / 150	☐ Use Dist 2? Signal System: 3
	v/c reduction: 10%	at: 1.0%	v/c reduction: 10%	Trip Gen 2 AM: 0 / 0 / 0	v/c reduction: 10%
Analysis Date: 01/26/2011	Opposed Phasing: 0		Opposed Phasing: 0	Trip Gen 2 PM: 0 / 0 / 0	Opposed Phasing: 0
PM Peak: 3:00 PM					

Approach	Movement	RTOR	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume	%	+ Project Volume	Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left		262	0	0	25	0	287	0	0	0%	0	287	0	0	0	287	0	0
	Lt-Th	N/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	93	0	0	9	0	102	0	0	0%	0	102	0	0	0	102	0	0
	Shared			1	355				1	388	0%			1	388			1	388
Southbound	Left		0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	S/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0
Eastbound	Left		0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	E/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	428	1	428	40	27	495	1	495	100%	53	548	1	548	0	548	1	548
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	172	1	41	16	0	188	1	45	0%	0	188	1	45	0	188	1	45
	Shared			0	0				0	0	0%			0	0			0	0
Westbound	Left		66	1	66	6	0	72	1	72	0%	0	72	1	72	0	72	1	72
	Lt-Th	W/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	508	1	508	48	31	587	1	587	0%	97	684	1	684	0	684	1	684
	Th-Rt	Projected: 50%		0	0				0	0	100%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0

Critical Volumes:	2010, Existing	2019, Projected Cumulative Base	2019, With Project	2019, With Traffic Mitigation
North-South:	355	388	388	388
East-West:	508	587	684	684
Total:	863	975	1072	1072
Volume/capacity (*v/c*) ratio:	0.606	0.684	0.752	0.752
v/c less ATSAC adjustment:	0.506	0.584	0.652	0.652
Level of Service (LOS):	**A**	**A**	**B**	**B**

PROJECT IMPACT

Change in *v/c* due to project:	0.068	Δ*v/c* after mitigation:	0.068
Significantly impacted?	NO	Fully mitigated?	N/A

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CMACalc - Critical Movement Analysis Calculator

Upper Stone Canyon Reservoir Water Quality Improvement Project

Intersection No. 2

North/South Street: **Casiano Road**

East/West Street: **Mulholland Drive**

Analysis Date: 01/26/2011

AM Peak: 7:15 AM

	2010, EXISTING	2019, PROJECTED CUMULATIVE BASE	2019, WITH PROJECT	2019, WITH TRAFFIC MITIGATION
Critical Phases	3	3		3
Capacity	1425	1425		1425
Signal System	3	3		3
v/c reduction	10%	10%		10%
Opposed Phasing	0	0		0

Ambient Growth — from: 2010; to: 2019; at: 1.0%

☐ Adjacent

		In	Out	Total
Trip Gen 1	AM	100	50	150
Trip Gen 1	PM	53	97	150
Trip Gen 2	AM	0	0	0
Trip Gen 2	PM	0	0	0

☐ Use Dist 2?

Approach	Movement	RTOR	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume	%	+ Project Volume	= Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left		221	2	122	21	0	242	2	133	0%	0	242	2	133	0	242	2	133
	Lt-Th	N/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	145	1	55	14	0	159	1	61	0%	0	159	1	61	0	159	1	61
	Shared			0	0				0	0	0%			0	0			0	0
Southbound	Left		0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	S/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0
Eastbound	Left		0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	E/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	725	1	725	68	17	810	1	810	100%	100	910	1	910	0	910	1	910
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	280	1	170	26	0	306	1	185	0%	0	306	1	185	0	306	1	185
	Shared			0	0				0	0	0%			0	0			0	0
Westbound	Left		179	1	179	17	0	196	1	196	0%	0	196	1	196	0	196	1	196
	Lt-Th	W/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	789	2	395	74	13	876	2	438	0%	50	926	2	463	0	926	2	463
	Th-Rt	Projected: 50%		0	0				0	0	100%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0

Critical Volumes:	2010, Existing	2019, Projected Cumulative Base	2019, With Project	2019, With Traffic Mitigation
North-South:	122	133	133	133
East-West:	904	1006	1106	1106
Total:	1026	1139	1239	1239
Volume/capacity (*v/c*) ratio:	0.720	0.799	0.869	0.869
v/c less ATSAC adjustment:	0.620	0.699	0.769	0.769
Level of Service (LOS):	**B**	**B**	**C**	**C**

PROJECT IMPACT

Change in *v/c* due to project:	0.070	Δ*v/c* after mitigation:	0.070
Significantly impacted?	YES	Fully mitigated?	NO

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CMACalc - Critical Movement Analysis Calculator

Upper Stone Canyon Reservoir Water Quality Improvement Project

Intersection No. 2	**2010, EXISTING**	**2019, PROJECTED CUMULATIVE BASE**	**2019, WITH PROJECT**	**2019, WITH TRAFFIC MITIGATION**
North/South Street: **Casiano Road**	Critical Phases: 3	Ambient Growth from: 2010 to: 2019 at: 1.0%	☐ Adjacent	Critical Phases: 3
East/West Street: **Mulholland Drive**	Capacity: 1425	Critical Phases: 3	Trip Gen 1 — AM: In 100, Out 50, Total 150	Capacity: 1425
Analysis Date: 01/26/2011	Signal System: 3	Capacity: 1425	Trip Gen 1 — PM: In 53, Out 97, Total 150	☐ Use Dist 2? Signal System: 3
PM Peak: 3:00 PM	v/c reduction: 10%	Signal System: 3	Trip Gen 2 — AM: In 0, Out 0, Total 0	v/c reduction: 10%
	Opposed Phasing: 0	v/c reduction: 10%	Trip Gen 2 — PM: In 0, Out 0, Total 0	Opposed Phasing: 0
		Opposed Phasing: 0		

Approach	Movement	RTOR	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume	%	+ Project Volume	Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left		247	2	136	23	0	270	2	149	0%	0	270	2	149	0	270	2	149
	Lt-Th	N/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	173	1	119	16	0	189	1	129	0%	0	189	1	129	0	189	1	129
	Shared			0	0				0	0	0%			0	0			0	0
Southbound	Left		0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	S/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0
Eastbound	Left		0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	E/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	459	1	459	43	27	529	1	529	100%	53	582	1	582	0	582	1	582
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	168	1	44	16	0	184	1	49	0%	0	184	1	49	0	184	1	49
	Shared			0	0				0	0	0%			0	0			0	0
Westbound	Left		109	1	109	10	0	119	1	119	0%	0	119	1	119	0	119	1	119
	Lt-Th	W/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	674	2	337	63	31	768	2	384	0%	97	865	2	433	0	865	2	433
	Th-Rt	Projected: 50%		0	0				0	0	100%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0

Critical Volumes:	2010, Existing	2019, Projected Cumulative Base	2019, With Project	2019, With Traffic Mitigation
North-South:	136	149	149	149
East-West:	568	648	701	701
Total:	704	797	850	850
Volume/capacity (*v/c*) ratio:	0.494	0.559	0.596	0.596
v/c less ATSAC adjustment:	0.394	0.459	0.496	0.496
Level of Service (LOS):	**A**	**A**	**A**	**A**

PROJECT IMPACT

Change in *v/c* due to project:	0.037	Δ*v/c* after mitigation:	0.037
Significantly impacted?	NO	Fully mitigated?	N/A

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CMACalc - Critical Movement Analysis Calculator

Upper Stone Canyon Reservoir Water Quality Improvement Project

Intersection No. 3	2010, EXISTING	2019, PROJECTED CUMULATIVE BASE		2019, WITH PROJECT	2019, WITH TRAFFIC MITIGATION
North/South Street: **Skirball Center Drive**	Critical Phases: 3	Ambient Growth	Critical Phases: 3	☐ Adjacent — In / Out / Total	Critical Phases: 3
	Capacity: 1425	from: 2010	Capacity: 1425	Trip Gen 1 AM: 100 / 50 / 150	Capacity: 1425
East/West Street: **Mulholland Drive**	Signal System: 3	to: 2019	Signal System: 3	Trip Gen 1 PM: 53 / 97 / 150	☐ Use Dist 2? Signal System: 3
	v/c reduction: 10%	at: 1.0%	v/c reduction: 10%	Trip Gen 2 AM: 0 / 0 / 0	v/c reduction: 10%
Analysis Date: 01/26/2011	Opposed Phasing: 0		Opposed Phasing: 0	Trip Gen 2 PM: 0 / 0 / 0	Opposed Phasing: 0
AM Peak: 7:30 AM					

Approach	Movement	RTOR	Existing Counts Volume	Existing Lanes	Existing Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume	Project %	+ Project Volume	= Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left		410	2	226	38	0	448	2	247	0%	0	448	2	247	0	448	2	247
	Lt-Th	N/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	426	1	145	40	17	483	1	169	100%	100	583	1	244	0	583	1	244
	Shared			0	0				0	0	0%			0	0			0	0
Southbound	Left		0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	S/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0
Eastbound	Left		0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	E/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	621	1	621	58	0	679	1	679	0%	0	679	1	679	0	679	1	679
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	818	1	613	77	0	895	1	671	0%	0	895	1	671	0	895	1	671
	Shared			0	0				0	0	0%			0	0			0	0
Westbound	Left		562	1	562	53	13	628	1	628	0%	50	678	1	678	0	678	1	678
	Lt-Th	W/B RTOR:		0	0				0	0	100%			0	0			0	0
	Thru	Existing: 50%	422	2	211	40	0	462	2	231	0%	0	462	2	231	0	462	2	231
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0

Critical Volumes:	2010, Existing	2019, Projected Cumulative Base	2019, With Project	2019, With Traffic Mitigation
North-South:	226	247	247	247
East-West:	1183	1307	1357	1357
Total:	1409	1553	1603	1603
Volume/capacity (*v/c*) ratio:	0.988	1.090	1.125	1.125
v/c less ATSAC adjustment:	0.888	0.990	1.025	1.025
Level of Service (LOS):	D	E	F	F

PROJECT IMPACT

Change in *v/c* due to project: 0.035
Δ*v/c* after mitigation: 0.035
Significantly impacted? YES
Fully mitigated? NO

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Upper Stone Canyon Reservoir Water Quality Improvement Project

Intersection No. 3		**2010, EXISTING**		**2019, PROJECTED CUMULATIVE BASE**				**2019, WITH PROJECT**					**2019, WITH TRAFFIC MITIGATION**	
North/South Street:		Critical Phases:	3	Ambient Growth		Critical Phases:	3	☐ Adjacent		In	Out	Total	Critical Phases:	3
Skirball Center Drive		Capacity:	1425	from:	2010	Capacity:	1425	Trip Gen 1	AM	100	50	150	Capacity:	1425
East/West Street:		Signal System:	3	to:	2019	Signal System:	3		PM	53	97	150	☐ Use Dist 2? Signal System:	3
Mulholland Drive		v/c reduction:	10%	at:	1.0%	v/c reduction:	10%	Trip Gen 2	AM	0	0	0	v/c reduction:	10%
Analysis Date:	01/26/2011	Opposed Phasing:	0			Opposed Phasing:	0		PM	0	0	0	Opposed Phasing:	0
PM Peak:	3:00 PM													

Approach	Movement	RTOR	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume	%	+ Project Volume	Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left		329	2	181	31	0	360	2	198	0%	0	360	2	198	0	360	2	198
	Lt-Th	N/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	331	1	51	31	27	389	1	67	100%	53	442	1	72	0	442	1	72
	Shared			0	0				0	0	0%			0	0			0	0
Southbound	Left		0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	S/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0
Eastbound	Left		0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	E/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	293	1	293	27	0	320	1	320	0%	0	320	1	320	0	320	1	320
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	477	1	313	45	0	522	1	342	0%	0	522	1	342	0	522	1	342
	Shared			0	0				0	0	0%			0	0			0	0
Westbound	Left		560	1	560	52	31	643	1	643	0%	97	740	1	740	0	740	1	740
	Lt-Th	W/B RTOR:		0	0				0	0	100%			0	0			0	0
	Thru	Existing: 50%	347	2	174	33	0	380	2	190	0%	0	380	2	190	0	380	2	190
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0

		2010, Existing	2019, Projected Cumulative Base	2019, With Project	2019, With Traffic Mitigation
Critical Volumes:	North-South:	181	198	198	198
	East-West:	873	985	1082	1082
	Total:	1054	1183	1280	1280
Volume/capacity (*v/c*) ratio:		0.740	0.830	0.898	0.898
v/c less ATSAC adjustment:		0.640	0.730	0.798	0.798
Level of Service (LOS):		**B**	**C**	**C**	**C**

PROJECT IMPACT

Change in *v/c* due to project:	0.068	Δ*v/c* after mitigation:	0.068
Significantly impacted?	YES	Fully mitigated?	NO

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Upper Stone Canyon Reservoir Water Quality Improvement Project

Intersection No. 4	2010, EXISTING	2019, PROJECTED CUMULATIVE BASE	2019, WITH PROJECT	2019, WITH TRAFFIC MITIGATION
North/South Street: **Skirball Center Drive**	Critical Phases: 2	Ambient Growth from: 2010 to: 2019 at: 1.0%	☐ Adjacent	Critical Phases: 2
East/West Street: **I-405 NB on/off Ramps**	Capacity: 1500	Critical Phases: 2	Trip Gen 1: AM In 100, Out 50, Total 150; PM In 53, Out 97, Total 150	Capacity: 1500
Analysis Date: 01/26/2011	Signal System: 3	Capacity: 1500	Trip Gen 2: AM In 0, Out 0, Total 0; PM In 0, Out 0, Total 0	☐ Use Dist 2? Signal System: 3
AM Peak: 7:15 AM	v/c reduction: 10%	Signal System: 3		v/c reduction: 10%
	Opposed Phasing: 0	v/c reduction: 10%		Opposed Phasing: 0
		Opposed Phasing: 0		

Approach	Movement	RTOR	2010 Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume	Project %	+ Project Volume	= Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left		61	1	61	6	0	67	1	67	0%	0	67	1	67	0	67	1	67
	Lt-Th	N/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	270	1	270	25	17	312	1	312	57%	55	367	1	367	0	367	1	367
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0
Southbound	Left		0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	S/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	956	1	956	90	4	1050	1	1050	0%	20	1070	1	1070	0	1070	1	1070
	Th-Rt	Projected: 50%		0	0				0	0	43%			0	0			0	0
	Right	Mitigated: 50%	366	1	65	34	9	409	1	80	0%	30	439	1	87	0	439	1	87
	Shared			0	0				0	0	57%			0	0			0	0
Eastbound	Left		602	2	331	56	0	658	2	362	43%	45	703	2	387	0	703	2	387
	Lt-Th	E/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	67	1	37	6	0	73	1	40	0%	0	73	1	40	0	73	1	40
	Shared			0	0				0	0	0%			0	0			0	0
Westbound	Left		0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	W/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0

	2010, Existing	2019, Projected Cumulative Base	2019, With Project	2019, With Traffic Mitigation
Critical Volumes: North-South:	1017	1116	1136	1136
East-West:	331	362	387	387
Total:	1348	1478	1523	1523
Volume/capacity (*v/c*) ratio:	0.899	0.986	1.015	1.015
v/c less ATSAC adjustment:	0.799	0.886	0.915	0.915
Level of Service (LOS):	C	D	E	E

PROJECT IMPACT

Change in *v/c* due to project:	0.029	Δ*v/c* after mitigation:	0.029
Significantly impacted?	YES	Fully mitigated?	NO

Filename: J:\2008\JA81142 LADWP Reservoirs EIR\Upper Stone Canyon - Task 1\Analysis\UpperStoneCyn - Concrete Roof.xls

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CMACalc - Critical Movement Analysis Calculator

Upper Stone Canyon Reservoir Water Quality Improvement Project

LADOT — Bureau of Planning and Land Use Development

Intersection No. 4	2010, EXISTING		2019, PROJECTED CUMULATIVE BASE			2019, WITH PROJECT				2019, WITH TRAFFIC MITIGATION	
North/South Street:	Critical Phases:	2	Ambient Growth	Critical Phases:	2	☐ Adjacent	In	Out	Total	Critical Phases:	2
Skirball Center Drive	Capacity:	1500	from: 2010	Capacity:	1500	Trip Gen 1 AM	100	50	150	Capacity:	1500
East/West Street:	Signal System:	3	to: 2019	Signal System:	3	Trip Gen 1 PM	53	97	150	☐ Use Dist 2? Signal System:	3
I-405 NB on/off Ramps	v/c reduction:	10%	at: 1.0%	v/c reduction:	10%	Trip Gen 2 AM	0	0	0	v/c reduction:	10%
Analysis Date: 01/26/2011	Opposed Phasing:	0		Opposed Phasing:	0	Trip Gen 2 PM	0	0	0	Opposed Phasing:	0
PM Peak: 3:00 PM											

Approach	Movement	RTOR	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume	%	+ Project Volume	Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left		250	1	250	23	0	273	1	273	0%	0	273	1	273	0	273	1	273
	Lt-Th	N/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	414	1	414	39	27	480	1	480	57%	32	512	1	512	0	512	1	512
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0
Southbound	Left		0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	S/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	581	1	581	54	10	645	1	645	0%	44	689	1	689	0	689	1	689
	Th-Rt	Projected: 50%		0	0				0	0	43%			0	0			0	0
	Right	Mitigated: 50%	447	1	323	42	21	510	1	374	0%	54	564	1	417	0	564	1	417
	Shared			0	0				0	0	57%			0	0			0	0
Eastbound	Left		249	2	137	23	0	272	2	150	43%	21	293	2	161	0	293	2	161
	Lt-Th	E/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	55	1	0	5	0	60	1	0	0%	0	60	1	0	0	60	1	0
	Shared			0	0				0	0	0%			0	0			0	0
Westbound	Left		0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	W/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0

Critical Volumes:	2010, Existing	2019, Projected Cumulative Base	2019, With Project	2019, With Traffic Mitigation
North-South:	831	919	963	963
East-West:	137	150	161	161
Total:	968	1069	1124	1124
Volume/capacity (*v/c*) ratio:	0.645	0.712	0.749	0.749
v/c less ATSAC adjustment:	0.545	0.612	0.649	0.649
Level of Service (LOS):	**A**	**B**	**B**	**B**

PROJECT IMPACT

Change in *v/c* due to project:	0.037	Δ*v/c* after mitigation:	0.037
Significantly impacted?	NO	Fully mitigated?	N/A

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Bureau of Planning and Land Use Development

CMACalc - Critical Movement Analysis Calculator

Upper Stone Canyon Reservoir Water Quality Improvement Project

Intersection No. 5	2010, EXISTING	2019, PROJECTED CUMULATIVE BASE		2019, WITH PROJECT				2019, WITH TRAFFIC MITIGATION
North/South Street:	Critical Phases: 3	Ambient Growth	Critical Phases: 3	☐ Adjacent		In	Out	Total	Critical Phases: 3
I-405 SB on/off Ramps	Capacity: 1425	from: 2010	Capacity: 1425	Trip Gen 1	AM	100	50	150	Capacity: 1425
East/West Street:	Signal System: 3	to: 2019	Signal System: 3		PM	53	97	150	☐ Use Dist 2? Signal System: 3
Skirball Center Drive	v/c reduction: 10%	at: 1.0%	v/c reduction: 10%	Trip Gen 2	AM	0	0	0	v/c reduction: 10%
Analysis Date: 01/26/2011	Opposed Phasing: 0		Opposed Phasing: 0		PM	0	0	0	Opposed Phasing: 0

AM Peak: 7:30 AM

Approach	Movement	RTOR	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume	%	+ Project Volume	= Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left		0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	N/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0
Southbound	Left		129	0	0	12	11	152	0	0	57%	55	207	0	0	0	207	0	0
	Lt-Th	S/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	3	0	0	0	0	3	0	0	0%	0	3	0	0	0	3	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	213	1	117	20	0	233	1	128	0%	0	233	1	128	0	233	1	128
	Shared			1	228				1	260	0%			1	315			1	315
Eastbound	Left		0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	E/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	205	1	157	19	5	229	1	174	0%	0	229	1	174	0	229	1	174
	Th-Rt	Projected: 50%		1	157				1	174	0%			1	174			1	174
	Right	Mitigated: 50%	109	0	0	10	0	119	0	0	0%	0	119	0	0	0	119	0	0
	Shared			0	0				0	0	0%			0	0			0	0
Westbound	Left		642	1	642	60	0	702	1	702	0%	20	722	1	722	0	722	1	722
	Lt-Th	W/B RTOR:		0	0				0	0	43%			0	0			0	0
	Thru	Existing: 50%	427	2	214	40	4	471	2	236	0%	0	471	2	236	0	471	2	236
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0

Critical Volumes:	2010, Existing		2019, Projected Cumulative Base		2019, With Project		2019, With Traffic Mitigation	
	North-South:	228	North-South:	260	North-South:	315	North-South:	315
	East-West:	799	East-West:	876	East-West:	896	East-West:	896
	Total:	1027	Total:	1137	Total:	1212	Total:	1212
Volume/capacity (*v/c*) ratio:		0.721		0.798		0.850		0.850
v/c less ATSAC adjustment:		0.621		0.698		0.750		0.750
Level of Service (LOS):		**B**		**B**		**C**		**C**

PROJECT IMPACT

Change in *v/c* due to project:	0.052	Δ*v/c* after mitigation:	0.052
Significantly impacted?	YES	Fully mitigated?	NO

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Bureau of Planning and Land Use Development

CMACalc - Critical Movement Analysis Calculator

Upper Stone Canyon Reservoir Water Quality Improvement Project

Intersection No. 5	2010, EXISTING	2019, PROJECTED CUMULATIVE BASE		2019, WITH PROJECT	2019, WITH TRAFFIC MITIGATION
North/South Street: **I-405 SB on/off Ramps**	Critical Phases: 3	Ambient Growth	Critical Phases: 3	☐ Adjacent — In / Out / Total	Critical Phases: 3
	Capacity: 1425	from: 2010	Capacity: 1425	Trip Gen 1 AM: 100 / 50 / 150	Capacity: 1425
East/West Street: **Skirball Center Drive**	Signal System: 3	to: 2019	Signal System: 3	Trip Gen 1 PM: 53 / 97 / 150	☐ Use Dist 2? Signal System: 3
	v/c reduction: 10%	at: 1.0%	v/c reduction: 10%	Trip Gen 2 AM: 0 / 0 / 0	v/c reduction: 10%
Analysis Date: 01/26/2011	Opposed Phasing: 0		Opposed Phasing: 0	Trip Gen 2 PM: 0 / 0 / 0	Opposed Phasing: 0
PM Peak: 3:00 PM					

Direction	Movement	RTOR	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume	%	+ Project Volume	Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left		0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	N/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0
Southbound	Left		240	0	0	22	18	280	0	0	57%	32	312	0	0	0	312	0	0
	Lt-Th	S/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	3	0	0	0	0	3	0	0	0%	0	3	0	0	0	3	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	86	1	47	8	0	94	1	52	0%	0	94	1	52	0	94	1	52
	Shared			1	**282**				1	**326**	0%			1	**358**			1	**358**
Eastbound	Left		0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	E/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	434	1	**240**	41	9	484	1	**267**	0%	0	484	1	**267**	0	484	1	**267**
	Th-Rt	Projected: 50%		1	**240**				1	**267**	0%			1	**267**			1	**267**
	Right	Mitigated: 50%	46	0	0	4	0	50	0	0	0%	0	50	0	0	0	50	0	0
	Shared			0	0				0	0	0%			0	0			0	0
Westbound	Left		337	1	**337**	32	0	369	1	**369**	0%	44	413	1	**413**	0	413	1	**413**
	Lt-Th	W/B RTOR:		0	0				0	0	43%			0	0			0	0
	Thru	Existing: 50%	284	2	142	27	10	321	2	160	0%	0	321	2	160	0	321	2	160
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0

	2010, Existing	2019, Projected Cumulative Base	2019, With Project	2019, With Traffic Mitigation
Critical Volumes: North-South:	282	326	358	358
East-West:	577	636	680	680
Total:	859	962	1038	1038
Volume/capacity (*v/c*) ratio:	0.603	0.675	0.728	0.728
v/c less ATSAC adjustment:	0.503	0.575	0.628	0.628
Level of Service (LOS):	**A**	**A**	**B**	**B**

PROJECT IMPACT

Change in *v/c* due to project:	0.053	Δ*v/c* after mitigation:	0.053
Significantly impacted?	NO	Fully mitigated?	N/A

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Appendix D
Level-of-Service Worksheets
All Scenarios for Alternative 1 (No Project)
And Alternative 2 (Floating Cover) Analysis

Bureau of Planning and Land Use Development

CMACalc - Critical Movement Analysis Calculator

Upper Stone Canyon Reservoir Water Quality Improvement Project

Intersection No. 1

North/South Street: **Roscomare Road**

East/West Street: **Mulholland Drive**

Analysis Date: 03/02/2011

AM Peak: 7:30 AM

	2010, EXISTING	2014, PROJECTED CUMULATIVE BASE	2014, WITH TRAFFIC MITIGATION
Critical Phases:	3	3	3
Capacity:	1425	1425	1425
Signal System:	3	3	3
v/c reduction:	10%	10%	10%
Opposed Phasing:	0	0	0

Ambient Growth — from: 2010, to: 2014, at: 1.0%

2014, WITH PROJECT — ☐ Adjacent; ☐ Use Dist 2?

		In	Out	Total
Trip Gen 1	AM	34	10	44
	PM	11	33	44
Trip Gen 2	AM	0	0	0
	PM	0	0	0

Direction	Movement	2010 Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume	%	+ Project Volume	= Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left	207	0	0	8	0	215	0	0	0%	0	215	0	0	0	215	0	0
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	89	0	0	4	0	93	0	0	0%	0	93	0	0	0	93	0	0
	Shared		1	296				1	308	0%			1	308			1	308
Southbound	Left	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Shared		0	0				0	0	0%			0	0			0	0
Eastbound	Left	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	616	1	616	25	17	658	1	658	100%	34	692	1	692	0	692	1	692
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	350	1	246	14	0	364	1	256	0%	0	364	1	256	0	364	1	256
	Shared		0	0				0	0	0%			0	0			0	0
Westbound	Left	195	1	195	8	0	203	1	203	0%	0	203	1	203	0	203	1	203
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	483	1	483	20	13	516	1	516	0%	10	526	1	526	0	526	1	526
	Th-Rt		0	0				0	0	100%			0	0			0	0
	Right	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Shared		0	0				0	0	0%			0	0			0	0

RTOR	Existing	Projected	Mitigated
N/B RTOR:	50%	50%	50%
S/B RTOR:	50%	50%	50%
E/B RTOR:	50%	50%	50%
W/B RTOR:	50%	50%	50%

	2010, Existing	2014, Projected Cumulative Base	2014, With Project	2014, With Traffic Mitigation
Critical Volumes: North-South:	296	308	308	308
East-West:	811	861	895	895
Total:	1107	1169	1203	1203
Volume/capacity (*v/c*) ratio:	0.777	0.820	0.844	0.844
v/c less ATSAC adjustment:	0.677	0.720	0.744	0.744
Level of Service (LOS):	**B**	**C**	**C**	**C**

PROJECT IMPACT

Change in *v/c* due to project:	0.024	Δ*v/c* after mitigation:	0.024
Significantly impacted?	NO	Fully mitigated?	N/A

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LADOT
Bureau of Planning and Land Use Development

CMACalc - Critical Movement Analysis Calculator

Upper Stone Canyon Reservoir Water Quality Improvement Project

Intersection No. 1	2010, EXISTING	2014, PROJECTED CUMULATIVE BASE	2014, WITH PROJECT	2014, WITH TRAFFIC MITIGATION
North/South Street: **Roscomare Road**	Critical Phases: 3	Ambient Growth from: 2010 to: 2014 at: 1.0%	Critical Phases: 3	Critical Phases: 3
East/West Street: **Mulholland Drive**	Capacity: 1425	Capacity: 1425	☐ Adjacent	Capacity: 1425
Analysis Date: 03/02/2011	Signal System: 3	Signal System: 3		☐ Use Dist 2? Signal System: 3
PM Peak: 3:00 PM	v/c reduction: 10%	v/c reduction: 10%		v/c reduction: 10%
	Opposed Phasing: 0	Opposed Phasing: 0		Opposed Phasing: 0

Trip Generation	Period	In	Out	Total
Trip Gen 1	AM	34	10	44
Trip Gen 1	PM	11	33	44
Trip Gen 2	AM	0	0	0
Trip Gen 2	PM	0	0	0

Approach	Movement	RTOR	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume	%	+ Project Volume	Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left		262	0	0	11	0	273	0	0	0%	0	273	0	0	0	273	0	0
	Lt-Th	N/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	93	0	0	4	0	97	0	0	0%	0	97	0	0	0	97	0	0
	Shared			1	355				1	369	0%			1	369			1	369
Southbound	Left		0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	S/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0
Eastbound	Left		0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	E/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	428	1	428	17	27	472	1	472	100%	11	483	1	483	0	483	1	483
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	172	1	41	7	0	179	1	43	0%	0	179	1	43	0	179	1	43
	Shared			0	0				0	0	0%			0	0			0	0
Westbound	Left		66	1	66	3	0	69	1	69	0%	0	69	1	69	0	69	1	69
	Lt-Th	W/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	508	1	508	21	31	560	1	560	0%	33	593	1	593	0	593	1	593
	Th-Rt	Projected: 50%		0	0				0	0	100%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0

Critical Volumes:	2010, Existing	2014, Projected Cumulative Base	2014, With Project	2014, With Traffic Mitigation
North-South:	355	369	369	369
East-West:	508	560	593	593
Total:	863	929	962	962
Volume/capacity (*v/c*) ratio:	0.606	0.652	0.675	0.675
v/c less ATSAC adjustment:	0.506	0.552	0.575	0.575
Level of Service (LOS):	A	A	A	A

PROJECT IMPACT

Change in *v/c* due to project:	0.023	Δ*v/c* after mitigation:	0.023
Significantly impacted?	NO	Fully mitigated?	N/A

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CMACalc - Critical Movement Analysis Calculator

Upper Stone Canyon Reservoir Water Quality Improvement Project

LADOT
Bureau of Planning and Land Use Development

Intersection No. 2	2010, EXISTING	2014, PROJECTED CUMULATIVE BASE	2014, WITH PROJECT	2014, WITH TRAFFIC MITIGATION
North/South Street: **Casiano Road**	Critical Phases: 3	Ambient Growth from: 2010 to: 2014 at: 1.0%	☐ Adjacent	Critical Phases: 3
East/West Street: **Mulholland Drive**	Capacity: 1425	Critical Phases: 3	Trip Gen 1 — AM: In 34, Out 10, Total 44	Capacity: 1425
Analysis Date: 03/02/2011	Signal System: 3	Capacity: 1425	Trip Gen 1 — PM: In 11, Out 33, Total 44	☐ Use Dist 2? Signal System: 3
AM Peak: 7:15 AM	v/c reduction: 10%	Signal System: 3	Trip Gen 2 — AM: In 0, Out 0, Total 0	v/c reduction: 10%
	Opposed Phasing: 0	v/c reduction: 10%	Trip Gen 2 — PM: In 0, Out 0, Total 0	Opposed Phasing: 0
		Opposed Phasing: 0		

Direction	Movement	RTOR	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume	%	+ Project Volume	= Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left		221	2	122	9	0	230	2	126	0%	0	230	2	126	0	230	2	126
	Lt-Th	N/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	145	1	55	6	0	151	1	58	0%	0	151	1	58	0	151	1	58
	Shared			0	0				0	0	0%			0	0			0	0
Southbound	Left		0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	S/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0
Eastbound	Left		0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	E/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	725	1	725	29	17	771	1	771	100%	34	805	1	805	0	805	1	805
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	280	1	170	11	0	291	1	176	0%	0	291	1	176	0	291	1	176
	Shared			0	0				0	0	0%			0	0			0	0
Westbound	Left		179	1	179	7	0	186	1	186	0%	0	186	1	186	0	186	1	186
	Lt-Th	W/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	789	2	395	32	13	834	2	417	0%	10	844	2	422	0	844	2	422
	Th-Rt	Projected: 50%		0	0				0	0	100%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0

	2010, Existing	2014, Projected Cumulative Base	2014, With Project	2014, With Traffic Mitigation
Critical Volumes: North-South:	122	126	126	126
East-West:	904	958	992	992
Total:	1026	1084	1118	1118
Volume/capacity (*v/c*) ratio:	0.720	0.761	0.785	0.785
v/c less ATSAC adjustment:	0.620	0.661	0.685	0.685
Level of Service (LOS):	**B**	**B**	**B**	**B**

PROJECT IMPACT

Change in *v/c* due to project:	0.024	Δ*v/c* after mitigation:	0.024
Significantly impacted?	NO	Fully mitigated?	N/A

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Upper Stone Canyon Reservoir Water Quality Improvement Project

Bureau of Planning and Land Use Development

Intersection No. 2	2010, EXISTING		2014, PROJECTED CUMULATIVE BASE				2014, WITH PROJECT					2014, WITH TRAFFIC MITIGATION	
North/South Street:	Critical Phases:	3	Ambient Growth		Critical Phases:	3	☐ Adjacent		In	Out	Total	Critical Phases:	3
Casiano Road	Capacity:	1425	from:	2010	Capacity:	1425	Trip Gen 1	AM	34	10	44	Capacity:	1425
East/West Street:	Signal System:	3	to:	2014	Signal System:	3		PM	11	33	44	☐ Use Dist 2? Signal System:	3
Mulholland Drive	v/c reduction:	10%	at:	1.0%	v/c reduction:	10%	Trip Gen 2	AM	0	0	0	v/c reduction:	10%
Analysis Date: 03/02/2011	Opposed Phasing:	0			Opposed Phasing:	0		PM	0	0	0	Opposed Phasing:	0
PM Peak: 3:00 PM													

Approach	Movement	RTOR	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume	%	+ Project Volume	Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left		247	2	136	10	0	257	2	141	0%	0	257	2	141	0	257	2	141
	Lt-Th	N/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	173	1	119	7	0	180	1	123	0%	0	180	1	123	0	180	1	123
	Shared			0	0				0	0	0%			0	0			0	0
Southbound	Left		0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	S/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0
Eastbound	Left		0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	E/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	459	1	459	19	27	505	1	505	100%	11	516	1	516	0	516	1	516
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	168	1	44	7	0	175	1	46	0%	0	175	1	46	0	175	1	46
	Shared			0	0				0	0	0%			0	0			0	0
Westbound	Left		109	1	109	4	0	113	1	113	0%	0	113	1	113	0	113	1	113
	Lt-Th	W/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	674	2	337	27	31	732	2	366	0%	33	765	2	383	0	765	2	383
	Th-Rt	Projected: 50%		0	0				0	0	100%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0

Critical Volumes:	2010, Existing	2014, Projected Cumulative Base	2014, With Project	2014, With Traffic Mitigation
North-South:	136	141	141	141
East-West:	568	618	629	629
Total:	704	759	770	770
Volume/capacity (*v/c*) ratio:	0.494	0.533	0.541	0.541
v/c less ATSAC adjustment:	0.394	0.433	0.441	0.441
Level of Service (LOS):	A	A	A	A

PROJECT IMPACT

Change in *v/c* due to project:	0.008	Δ*v/c* after mitigation:	0.008
Significantly impacted?	NO	Fully mitigated?	N/A

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Upper Stone Canyon Reservoir Water Quality Improvement Project

Intersection No. 3	2010, EXISTING		2014, PROJECTED CUMULATIVE BASE			2014, WITH PROJECT				2014, WITH TRAFFIC MITIGATION	
North/South Street:	Critical Phases:	3	Ambient Growth	Critical Phases:	3	☐ Adjacent	In	Out	Total	Critical Phases:	3
Skirball Center Drive	Capacity:	1425	from: 2010	Capacity:	1425	Trip Gen 1 AM	34	10	44	Capacity:	1425
East/West Street:	Signal System:	3	to: 2014	Signal System:	3	PM	11	33	44	☐ Use Dist 2? Signal System:	3
Mulholland Drive	v/c reduction:	10%	at: 1.0%	v/c reduction:	10%	Trip Gen 2 AM	0	0	0	v/c reduction:	10%
Analysis Date: 03/02/2011	Opposed Phasing:	0		Opposed Phasing:	0	PM	0	0	0	Opposed Phasing:	0
AM Peak: 7:30 AM											

Approach	Movement	RTOR	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume	%	+ Project Volume	= Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left		410	2	**226**	17	0	427	2	**235**	0%	0	427	2	**235**	0	427	2	**235**
	Lt-Th	N/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	426	1	145	17	17	460	1	161	100%	34	494	1	190	0	494	1	190
	Shared			0	0				0	0	0%			0	0			0	0
Southbound	Left		0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	S/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0
Eastbound	Left		0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	E/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	621	1	**621**	25	0	646	1	**646**	0%	0	646	1	**646**	0	646	1	**646**
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	818	1	613	33	0	851	1	638	0%	0	851	1	638	0	851	1	638
	Shared			0	0				0	0	0%			0	0			0	0
Westbound	Left		562	1	**562**	23	13	598	1	**598**	0%	10	608	1	**608**	0	608	1	**608**
	Lt-Th	W/B RTOR:		0	0				0	0	100%			0	0			0	0
	Thru	Existing: 50%	422	2	211	17	0	439	2	220	0%	0	439	2	220	0	439	2	220
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0

Critical Volumes:	2010, Existing	2014, Projected Cumulative Base	2014, With Project	2014, With Traffic Mitigation
North-South:	226	235	235	235
East-West:	1183	1244	1254	1254
Total:	1409	1479	1489	1489
Volume/capacity (*v/c*) ratio:	0.988	1.038	1.045	1.045
v/c less ATSAC adjustment:	0.888	0.938	0.945	0.945
Level of Service (LOS):	**D**	**E**	**E**	**E**

PROJECT IMPACT

Change in *v/c* due to project:	0.007	Δ*v/c* after mitigation:	0.007
Significantly impacted?	NO	Fully mitigated?	N/A

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Upper Stone Canyon Reservoir Water Quality Improvement Project

Intersection No. 3	2010, EXISTING	2014, PROJECTED CUMULATIVE BASE	2014, WITH PROJECT	2014, WITH TRAFFIC MITIGATION
North/South Street: **Skirball Center Drive**	Critical Phases: 3	Ambient Growth from: 2010 / Critical Phases: 3	☐ Adjacent	Critical Phases: 3
East/West Street: **Mulholland Drive**	Capacity: 1425	to: 2014 / Capacity: 1425		Capacity: 1425
Analysis Date: 03/02/2011	Signal System: 3	at: 1.0% / Signal System: 3		☐ Use Dist 2? Signal System: 3
PM Peak: 3:00 PM	v/c reduction: 10%	v/c reduction: 10%		v/c reduction: 10%
	Opposed Phasing: 0	Opposed Phasing: 0		Opposed Phasing: 0

Trip Generation	Period	In	Out	Total
Trip Gen 1	AM	34	10	44
Trip Gen 1	PM	11	33	44
Trip Gen 2	AM	0	0	0
Trip Gen 2	PM	0	0	0

Approach	Movement	RTOR	Counts Volume (2010)	Lanes (2010)	Lane Volume (2010)	+ Amb. Growth	+ Area Projects	= Total Volume (2014 Base)	Lanes (2014 Base)	Lane Volume (2014 Base)	%	+ Project Volume	Total Volume (With Project)	Lanes (With Project)	Lane Volume (With Project)	Adjusted Volume	Total Volume (Mitigation)	Lanes (Mitigation)	Lane Volume (Mitigation)
Northbound	Left		329	2	181	13	0	342	2	188	0%	0	342	2	188	0	342	2	188
	Lt-Th	N/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	331	1	51	13	27	371	1	64	100%	11	382	1	59	0	382	1	59
	Shared			0	0				0	0	0%			0	0			0	0
Southbound	Left		0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	S/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0
Eastbound	Left		0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	E/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	293	1	293	12	0	305	1	305	0%	0	305	1	305	0	305	1	305
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	477	1	313	19	0	496	1	325	0%	0	496	1	325	0	496	1	325
	Shared			0	0				0	0	0%			0	0			0	0
Westbound	Left		560	1	560	23	31	614	1	614	0%	33	647	1	647	0	647	1	647
	Lt-Th	W/B RTOR:		0	0				0	0	100%			0	0			0	0
	Thru	Existing: 50%	347	2	174	14	0	361	2	181	0%	0	361	2	181	0	361	2	181
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0

Critical Volumes:	2010, Existing	2014, Projected Cumulative Base	2014, With Project	2014, With Traffic Mitigation
North-South:	181	188	188	188
East-West:	873	939	972	972
Total:	1054	1127	1160	1160
Volume/capacity (*v/c*) ratio:	0.740	0.791	0.814	0.814
v/c less ATSAC adjustment:	0.640	0.691	0.714	0.714
Level of Service (LOS):	**B**	**B**	**C**	**C**

PROJECT IMPACT

Change in *v/c* due to project:	0.023	Δ*v/c* after mitigation:	0.023
Significantly impacted?	NO	Fully mitigated?	N/A

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Upper Stone Canyon Reservoir Water Quality Improvement Project

Intersection No. 4

North/South Street: **Skirball Center Drive**

East/West Street: **I-405 NB on/off Ramps**

Analysis Date: 03/02/2011

AM Peak: 7:15 AM

2010, EXISTING	
Critical Phases:	2
Capacity:	1500
Signal System:	3
v/c reduction:	10%
Opposed Phasing:	0

2014, PROJECTED CUMULATIVE BASE			
Ambient Growth		Critical Phases:	2
from:	2010	Capacity:	1500
to:	2014	Signal System:	3
at:	1.0%	v/c reduction:	10%
		Opposed Phasing:	0

2014, WITH PROJECT		In	Out	Total
☐ Adjacent				
Trip Gen 1	AM	34	10	44
	PM	11	33	44
Trip Gen 2	AM	0	0	0
	PM	0	0	0

2014, WITH TRAFFIC MITIGATION	
Critical Phases:	2
Capacity:	1500
☐ Use Dist 2? Signal System:	3
v/c reduction:	10%
Opposed Phasing:	0

Approach	Movement	RTOR	Existing Counts Volume	Existing Lanes	Existing Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume	Project %	+ Project Volume	= Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left		61	1	61	2	0	63	1	63	0%	0	63	1	63	0	63	1	63
	Lt-Th	N/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	270	1	270	11	17	298	1	298	55%	18	316	1	316	0	316	1	316
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0
Southbound	Left		0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	S/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	956	1	956	39	4	999	1	999	0%	4	1003	1	1003	0	1003	1	1003
	Th-Rt	Projected: 50%		0	0				0	0	45%			0	0			0	0
	Right	Mitigated: 50%	366	1	65	15	9	390	1	77	0%	6	396	1	75	0	396	1	75
	Shared			0	0				0	0	55%			0	0			0	0
Eastbound	Left		602	2	331	24	0	626	2	345	45%	16	642	2	353	0	642	2	353
	Lt-Th	E/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	67	1	37	3	0	70	1	38	0%	0	70	1	38	0	70	1	38
	Shared			0	0				0	0	0%			0	0			0	0
Westbound	Left		0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	W/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0

Critical Volumes:	2010, Existing	2014, Projected Cumulative Base	2014, With Project	2014, With Traffic Mitigation
North-South:	1017	1062	1066	1066
East-West:	331	345	353	353
Total:	1348	1407	1420	1420
Volume/capacity (*v/c*) ratio:	0.899	0.938	0.946	0.946
v/c less ATSAC adjustment:	0.799	0.838	0.846	0.846
Level of Service (LOS):	C	D	D	D

PROJECT IMPACT

Change in *v/c* due to project:	0.008	Δ*v/c* after mitigation:	0.008
Significantly impacted?	NO	Fully mitigated?	N/A

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CMACalc - Critical Movement Analysis Calculator

Upper Stone Canyon Reservoir Water Quality Improvement Project

Intersection No. 4	
North/South Street:	**Skirball Center Drive**
East/West Street:	**I-405 NB on/off Ramps**
Analysis Date:	03/02/2011
PM Peak:	3:00 PM

	2010, EXISTING	2014, PROJECTED CUMULATIVE BASE	2014, WITH TRAFFIC MITIGATION
Critical Phases:	2	2	2
Capacity:	1500	1500	1500
Signal System:	3	3	3
v/c reduction:	10%	10%	10%
Opposed Phasing:	0	0	0

Ambient Growth: from: 2010; to: 2014; at: 1.0%

2014, WITH PROJECT

☐ Adjacent

		In	Out	Total
Trip Gen 1	AM	34	10	44
	PM	11	33	44
Trip Gen 2	AM	0	0	0
	PM	0	0	0

☐ Use Dist 2?

Direction	Movement	RTOR	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume	%	+ Project Volume	Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left		250	1	250	10	0	260	1	260	0%	0	260	1	260	0	260	1	260
	Lt-Th	N/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	414	1	414	17	27	458	1	458	55%	7	465	1	465	0	465	1	465
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0
Southbound	Left		0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	S/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	581	1	581	24	10	615	1	615	0%	16	631	1	631	0	631	1	631
	Th-Rt	Projected: 50%		0	0				0	0	45%			0	0			0	0
	Right	Mitigated: 50%	447	1	323	18	21	486	1	356	0%	18	504	1	372	0	504	1	372
	Shared			0	0				0	0	55%			0	0			0	0
Eastbound	Left		249	2	137	10	0	259	2	143	45%	4	263	2	145	0	263	2	145
	Lt-Th	E/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	55	1	0	2	0	57	1	0	0%	0	57	1	0	0	57	1	0
	Shared			0	0				0	0	0%			0	0			0	0
Westbound	Left		0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	W/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0

Critical Volumes:	2010, Existing	2014, Projected Cumulative Base	2014, With Project	2014, With Traffic Mitigation
North-South:	831	875	891	891
East-West:	137	143	145	145
Total:	968	1017	1035	1035
Volume/capacity (*v/c*) ratio:	0.645	0.678	0.690	0.690
v/c less ATSAC adjustment:	0.545	0.578	0.590	0.590
Level of Service (LOS):	**A**	**A**	**A**	**A**

PROJECT IMPACT

Change in *v/c* due to project:	0.012	Δ*v/c* after mitigation:	0.012
Significantly impacted?	NO	Fully mitigated?	N/A

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CMACalc - Critical Movement Analysis Calculator

Upper Stone Canyon Reservoir Water Quality Improvement Project

Intersection No. 5		**2010, EXISTING**		**2014, PROJECTED CUMULATIVE BASE**				**2014, WITH PROJECT**				**2014, WITH TRAFFIC MITIGATION**	
North/South Street:		Critical Phases:	3	Ambient Growth		Critical Phases:	3	☐ Adjacent		In	Out	Total	Critical Phases: 3
I-405 SB on/off Ramps		Capacity:	1425	from:	2010	Capacity:	1425	Trip	AM	34	10	44	Capacity: 1425
East/West Street:		Signal System:	3	to:	2014	Signal System:	3	Gen 1	PM	11	33	44	☐ Use Dist 2? Signal System: 3
Skirball Center Drive		v/c reduction:	10%	at:	1.0%	v/c reduction:	10%	Trip	AM	0	0	0	v/c reduction: 10%
Analysis Date:	03/02/2011	Opposed Phasing:	0			Opposed Phasing:	0	Gen 2	PM	0	0	0	Opposed Phasing: 0
AM Peak:	7:30 AM												

Direction	Movement	RTOR	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume	%	+ Project Volume	= Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left		0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	N/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0
Southbound	Left		129	0	0	5	11	145	0	0	55%	18	163	0	0	0	163	0	0
	Lt-Th	S/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	3	0	0	0	0	3	0	0	0%	0	3	0	0	0	3	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	213	1	117	9	0	222	1	122	0%	0	222	1	122	0	222	1	122
	Shared			1	228				1	248	0%			1	266			1	266
Eastbound	Left		0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	E/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	205	1	157	8	5	218	1	166	0%	0	218	1	166	0	218	1	166
	Th-Rt	Projected: 50%		1	157				1	166	0%			1	166			1	166
	Right	Mitigated: 50%	109	0	0	4	0	113	0	0	0%	0	113	0	0	0	113	0	0
	Shared			0	0				0	0	0%			0	0			0	0
Westbound	Left		642	1	642	26	0	668	1	668	0%	4	672	1	672	0	672	1	672
	Lt-Th	W/B RTOR:		0	0				0	0	45%			0	0			0	0
	Thru	Existing: 50%	427	2	214	17	4	448	2	224	0%	0	448	2	224	0	448	2	224
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0

	2010, Existing	2014, Projected Cumulative Base	2014, With Project	2014, With Traffic Mitigation
Critical Volumes: North-South:	228	248	266	266
East-West:	799	834	838	838
Total:	1027	1082	1104	1104
Volume/capacity (*v/c*) ratio:	0.721	0.759	0.775	0.775
v/c less ATSAC adjustment:	0.621	0.659	0.675	0.675
Level of Service (LOS):	**B**	**B**	**B**	**B**

PROJECT IMPACT

Change in *v/c* due to project:	0.016	Δ*v/c* after mitigation:	0.016
Significantly impacted?	NO	Fully mitigated?	N/A

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Bureau of Planning and Land Use Development

CMACalc - Critical Movement Analysis Calculator

Upper Stone Canyon Reservoir Water Quality Improvement Project

Intersection No. 5	2010, EXISTING	2014, PROJECTED CUMULATIVE BASE		2014, WITH PROJECT				2014, WITH TRAFFIC MITIGATION
North/South Street: **I-405 SB on/off Ramps**	Critical Phases: 3	Ambient Growth	Critical Phases: 3	☐ Adjacent	In	Out	Total	Critical Phases: 3
	Capacity: 1425	from: 2010	Capacity: 1425	Trip Gen 1 AM	34	10	44	Capacity: 1425
East/West Street: **Skirball Center Drive**	Signal System: 3	to: 2014	Signal System: 3	Trip Gen 1 PM	11	33	44	☐ Use Dist 2? Signal System: 3
	v/c reduction: 10%	at: 1.0%	v/c reduction: 10%	Trip Gen 2 AM	0	0	0	v/c reduction: 10%
Analysis Date: 03/02/2011	Opposed Phasing: 0		Opposed Phasing: 0	Trip Gen 2 PM	0	0	0	Opposed Phasing: 0
PM Peak: 3:00 PM								

Approach	Movement	RTOR	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume	%	+ Project Volume	Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left		0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	N/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0
Southbound	Left		240	0	0	10	18	268	0	0	55%	7	275	0	0	0	275	0	0
	Lt-Th	S/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	3	0	0	0	0	3	0	0	0%	0	3	0	0	0	3	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	86	1	47	3	0	89	1	49	0%	0	89	1	49	0	89	1	49
	Shared			1	**282**				1	**311**	0%			1	**318**			1	**318**
Eastbound	Left		0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	E/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	434	1	**240**	18	9	461	1	**254**	0%	0	461	1	**254**	0	461	1	**254**
	Th-Rt	Projected: 50%		1	**240**				1	**254**	0%			1	**254**			1	**254**
	Right	Mitigated: 50%	46	0	0	2	0	48	0	0	0%	0	48	0	0	0	48	0	0
	Shared			0	0				0	0	0%			0	0			0	0
Westbound	Left		337	1	**337**	14	0	351	1	**351**	0%	16	367	1	**367**	0	367	1	**367**
	Lt-Th	W/B RTOR:		0	0				0	0	45%			0	0			0	0
	Thru	Existing: 50%	284	2	142	12	10	306	2	153	0%	0	306	2	153	0	306	2	153
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0

Critical Volumes:	2010, Existing	2014, Projected Cumulative Base	2014, With Project	2014, With Traffic Mitigation
North-South:	282	311	318	318
East-West:	577	605	621	621
Total:	859	916	939	939
Volume/capacity (*v/c*) ratio:	0.603	0.643	0.659	0.659
v/c less ATSAC adjustment:	0.503	0.543	0.559	0.559
Level of Service (LOS):	A	A	A	A

PROJECT IMPACT

Change in *v/c* due to project:	0.016	Δ*v/c* after mitigation:	0.016
Significantly impacted?	NO	Fully mitigated?	N/A

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Appendix E
Level-of-Service Worksheets
All Scenarios for Alternative 3
(Aluminum Cover) Analysis

LADOT
Bureau of Planning and Land Use Development

CMACalc - Critical Movement Analysis Calculator

Upper Stone Canyon Reservoir Water Quality Improvement Project

Intersection No. 1	2010, EXISTING	2014, PROJECTED CUMULATIVE BASE		2014, WITH PROJECT	2014, WITH TRAFFIC MITIGATION
North/South Street: **Roscomare Road**	Critical Phases: 3	Ambient Growth	Critical Phases: 3	☐ Adjacent — In / Out / Total	Critical Phases: 3
	Capacity: 1425	from: 2010	Capacity: 1425	Trip Gen 1 AM: 73 / 25 / 98	Capacity: 1425
East/West Street: **Mulholland Drive**	Signal System: 3	to: 2014	Signal System: 3	Trip Gen 1 PM: 25 / 73 / 98	☐ Use Dist 2? Signal System: 3
	v/c reduction: 10%	at: 1.0%	v/c reduction: 10%	Trip Gen 2 AM: 0 / 0 / 0	v/c reduction: 10%
Analysis Date: 01/26/2011	Opposed Phasing: 0		Opposed Phasing: 0	Trip Gen 2 PM: 0 / 0 / 0	Opposed Phasing: 0
AM Peak: 7:30 AM					

Approach	Movement	RTOR	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume	%	+ Project Volume	= Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left		207	0	0	8	0	215	0	0	0%	0	215	0	0	0	215	0	0
	Lt-Th	N/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	89	0	0	4	0	93	0	0	0%	0	93	0	0	0	93	0	0
	Shared			1	**296**				1	**308**	0%			1	**308**			1	**308**
Southbound	Left		0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	S/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0
Eastbound	Left		0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	E/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	616	1	**616**	25	17	658	1	**658**	100%	73	731	1	**731**	0	731	1	**731**
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	350	1	246	14	0	364	1	256	0%	0	364	1	256	0	364	1	256
	Shared			0	0				0	0	0%			0	0			0	0
Westbound	Left		195	1	**195**	8	0	203	1	**203**	0%	0	203	1	**203**	0	203	1	**203**
	Lt-Th	W/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	483	1	483	20	13	516	1	516	0%	25	541	1	541	0	541	1	541
	Th-Rt	Projected: 50%		0	0				0	0	100%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0

Critical Volumes:	2010, Existing	2014, Projected Cumulative Base	2014, With Project	2014, With Traffic Mitigation
North-South:	296	308	308	308
East-West:	811	861	934	934
Total:	1107	1169	1242	1242
Volume/capacity (*v/c*) ratio:	0.777	0.820	0.872	0.872
v/c less ATSAC adjustment:	0.677	0.720	0.772	0.772
Level of Service (LOS):	**B**	**C**	**C**	**C**

PROJECT IMPACT

Change in *v/c* due to project:	0.052	Δ*v/c* after mitigation:	0.052
Significantly impacted?	YES	Fully mitigated?	NO

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LADOT
Bureau of Planning and Land Use Development

CMACalc - Critical Movement Analysis Calculator

Upper Stone Canyon Reservoir Water Quality Improvement Project

Intersection No. 1	**2010, EXISTING**		**2014, PROJECTED CUMULATIVE BASE**			**2014, WITH PROJECT**				**2014, WITH TRAFFIC MITIGATION**	
North/South Street:	Critical Phases:	3	Ambient Growth	Critical Phases:	3	☐ Adjacent	In	Out	Total	Critical Phases:	3
Roscomare Road	Capacity:	1425	from: 2010	Capacity:	1425	Trip Gen 1 AM	73	25	98	Capacity:	1425
East/West Street:	Signal System:	3	to: 2014	Signal System:	3	Trip Gen 1 PM	25	73	98	☐ Use Dist 2? Signal System:	3
Mulholland Drive	v/c reduction:	10%	at: 1.0%	v/c reduction:	10%	Trip Gen 2 AM	0	0	0	v/c reduction:	10%
Analysis Date: 01/26/2011	Opposed Phasing:	0		Opposed Phasing:	0	Trip Gen 2 PM	0	0	0	Opposed Phasing:	0
PM Peak: 3:00 PM											

Approach	Movement	RTOR	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume	%	+ Project Volume	Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left		262	0	0	11	0	273	0	0	0%	0	273	0	0	0	273	0	0
	Lt-Th	N/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	93	0	0	4	0	97	0	0	0%	0	97	0	0	0	97	0	0
	Shared			1	**355**				1	**369**	0%			1	**369**			1	**369**
Southbound	Left		0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	S/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0
Eastbound	Left		0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	E/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	428	1	428	17	27	472	1	472	100%	25	497	1	497	0	497	1	497
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	172	1	41	7	0	179	1	43	0%	0	179	1	43	0	179	1	43
	Shared			0	0				0	0	0%			0	0			0	0
Westbound	Left		66	1	66	3	0	69	1	69	0%	0	69	1	69	0	69	1	69
	Lt-Th	W/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	508	1	**508**	21	31	560	1	**560**	0%	73	633	1	**633**	0	633	1	**633**
	Th-Rt	Projected: 50%		0	0				0	0	100%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0

		2010, Existing	2014, Projected Cumulative Base	2014, With Project	2014, With Traffic Mitigation
Critical Volumes:	North-South:	355	369	369	369
	East-West:	508	560	633	633
	Total:	863	929	1002	1002
Volume/capacity (*v/c*) ratio:		0.606	0.652	0.703	0.703
v/c less ATSAC adjustment:		0.506	0.552	0.603	0.603
Level of Service (LOS):		**A**	**A**	**B**	**B**

PROJECT IMPACT

Change in *v/c* due to project:	0.051	Δ*v/c* after mitigation:	0.051
Significantly impacted?	NO	Fully mitigated?	N/A

Filename: J:\2008\JA81142 LADWP Reservoirs EIR\Upper Stone Canyon - Task 1\Analysis\UpperStoneCyn - ALT Aluminum Cover.xls

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CMACalc - Critical Movement Analysis Calculator

Upper Stone Canyon Reservoir Water Quality Improvement Project

Intersection No. 2

North/South Street: **Casiano Road**

East/West Street: **Mulholland Drive**

Analysis Date: 01/26/2011

AM Peak: 7:15 AM

	2010, EXISTING	2014, PROJECTED CUMULATIVE BASE	2014, WITH PROJECT	2014, WITH TRAFFIC MITIGATION
Critical Phases	3	3		3
Capacity	1425	1425		1425
Signal System	3	3		3
v/c reduction	10%	10%		10%
Opposed Phasing	0	0		0

Ambient Growth: from: 2010; to: 2014; at: 1.0%

☐ Adjacent

		In	Out	Total
Trip Gen 1	AM	73	25	98
	PM	25	73	98
Trip Gen 2	AM	0	0	0
	PM	0	0	0

☐ Use Dist 2?

Approach	Movement	RTOR	2010 Counts Volume	2010 Lanes	2010 Lane Volume	+ Amb. Growth	+ Area Projects	2014 Base = Total Volume	2014 Base Lanes	2014 Base Lane Volume	Project %	+ Project Volume	2014 w/ Project = Total Volume	2014 w/ Project Lanes	2014 w/ Project Lane Volume	Mitigation Adjusted Volume	Mitigation Total Volume	Mitigation Lanes	Mitigation Lane Volume
Northbound	Left		221	2	122	9	0	230	2	126	0%	0	230	2	126	0	230	2	126
	Lt-Th	N/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	145	1	55	6	0	151	1	58	0%	0	151	1	58	0	151	1	58
	Shared			0	0				0	0	0%			0	0			0	0
Southbound	Left		0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	S/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0
Eastbound	Left		0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	E/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	725	1	725	29	17	771	1	771	100%	73	844	1	844	0	844	1	844
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	280	1	170	11	0	291	1	176	0%	0	291	1	176	0	291	1	176
	Shared			0	0				0	0	0%			0	0			0	0
Westbound	Left		179	1	179	7	0	186	1	186	0%	0	186	1	186	0	186	1	186
	Lt-Th	W/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	789	2	395	32	13	834	2	417	0%	25	859	2	430	0	859	2	430
	Th-Rt	Projected: 50%		0	0				0	0	100%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0

Critical Volumes:	2010, Existing	2014, Projected Cumulative Base	2014, With Project	2014, With Traffic Mitigation
North-South:	122	126	126	126
East-West:	904	958	1031	1031
Total:	1026	1084	1157	1157
Volume/capacity (*v/c*) ratio:	0.720	0.761	0.812	0.812
v/c less ATSAC adjustment:	0.620	0.661	0.712	0.712
Level of Service (LOS):	**B**	**B**	**C**	**C**

PROJECT IMPACT

Change in *v/c* due to project:	0.051	Δ*v/c* after mitigation:	0.051
Significantly impacted?	YES	Fully mitigated?	NO

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CMACalc - Critical Movement Analysis Calculator

Upper Stone Canyon Reservoir Water Quality Improvement Project

Intersection No. 2	2010, EXISTING	2014, PROJECTED CUMULATIVE BASE		2014, WITH PROJECT					2014, WITH TRAFFIC MITIGATION	
North/South Street:	Critical Phases: 3	Ambient Growth	Critical Phases: 3	☐ Adjacent		In	Out	Total		Critical Phases: 3
Casiano Road	Capacity: 1425	from: 2010	Capacity: 1425	Trip	AM	73	25	98		Capacity: 1425
East/West Street:	Signal System: 3	to: 2014	Signal System: 3	Gen 1	PM	25	73	98	☐ Use Dist 2?	Signal System: 3
Mulholland Drive	v/c reduction: 10%	at: 1.0%	v/c reduction: 10%	Trip	AM	0	0	0		v/c reduction: 10%
Analysis Date: 01/26/2011	Opposed Phasing: 0		Opposed Phasing: 0	Gen 2	PM	0	0	0		Opposed Phasing: 0
PM Peak: 3:00 PM										

Approach	Movement	RTOR	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume	%	+ Project Volume	Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left		247	2	136	10	0	257	2	141	0%	0	257	2	141	0	257	2	141
	Lt-Th	N/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	173	1	119	7	0	180	1	123	0%	0	180	1	123	0	180	1	123
	Shared			0	0				0	0	0%			0	0			0	0
Southbound	Left		0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	S/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0
Eastbound	Left		0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	E/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	459	1	459	19	27	505	1	505	100%	25	530	1	530	0	530	1	530
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	168	1	44	7	0	175	1	46	0%	0	175	1	46	0	175	1	46
	Shared			0	0				0	0	0%			0	0			0	0
Westbound	Left		109	1	109	4	0	113	1	113	0%	0	113	1	113	0	113	1	113
	Lt-Th	W/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	674	2	337	27	31	732	2	366	0%	73	805	2	403	0	805	2	403
	Th-Rt	Projected: 50%		0	0				0	0	100%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0

	2010, Existing	2014, Projected Cumulative Base	2014, With Project	2014, With Traffic Mitigation
Critical Volumes: North-South:	136	141	141	141
East-West:	568	618	643	643
Total:	704	759	784	784
Volume/capacity (*v/c*) ratio:	0.494	0.533	0.550	0.550
v/c less ATSAC adjustment:	0.394	0.433	0.450	0.450
Level of Service (LOS):	**A**	**A**	**A**	**A**

PROJECT IMPACT

Change in *v/c* due to project:	0.017	Δ*v/c* after mitigation:	0.017
Significantly impacted?	NO	Fully mitigated?	N/A

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CMACalc - Critical Movement Analysis Calculator

Upper Stone Canyon Reservoir Water Quality Improvement Project

Intersection No. 3		2010, EXISTING		2014, PROJECTED CUMULATIVE BASE				2014, WITH PROJECT					2014, WITH TRAFFIC MITIGATION	
North/South Street:		Critical Phases:	3	Ambient Growth		Critical Phases:	3	☐ Adjacent		In	Out	Total	Critical Phases:	3
Skirball Center Drive		Capacity:	1425	from:	2010	Capacity:	1425	Trip Gen 1	AM	73	25	98	Capacity:	1425
East/West Street:		Signal System:	3	to:	2014	Signal System:	3		PM	25	73	98	☐ Use Dist 2? Signal System:	3
Mulholland Drive		v/c reduction:	10%	at:	1.0%	v/c reduction:	10%	Trip Gen 2	AM	0	0	0	v/c reduction:	10%
Analysis Date:	01/26/2011	Opposed Phasing:	0			Opposed Phasing:	0		PM	0	0	0	Opposed Phasing:	0
AM Peak:	7:30 AM													

Approach	Movement	RTOR	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume	%	+ Project Volume	= Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left		410	2	226	17	0	427	2	235	0%	0	427	2	235	0	427	2	235
	Lt-Th	N/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	426	1	145	17	17	460	1	161	100%	73	533	1	222	0	533	1	222
	Shared			0	0				0	0	0%			0	0			0	0
Southbound	Left		0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	S/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0
Eastbound	Left		0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	E/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	621	1	621	25	0	646	1	646	0%	0	646	1	646	0	646	1	646
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	818	1	613	33	0	851	1	638	0%	0	851	1	638	0	851	1	638
	Shared			0	0				0	0	0%			0	0			0	0
Westbound	Left		562	1	562	23	13	598	1	598	0%	25	623	1	623	0	623	1	623
	Lt-Th	W/B RTOR:		0	0				0	0	100%			0	0			0	0
	Thru	Existing: 50%	422	2	211	17	0	439	2	220	0%	0	439	2	220	0	439	2	220
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0

	2010, Existing		2014, Projected Cumulative Base		2014, With Project		2014, With Traffic Mitigation	
Critical Volumes:	North-South:	226	North-South:	235	North-South:	235	North-South:	235
	East-West:	1183	East-West:	1244	East-West:	1269	East-West:	1269
	Total:	1409	Total:	1479	Total:	1504	Total:	1504
Volume/capacity (*v/c*) ratio:		0.988		1.038		1.055		1.055
v/c less ATSAC adjustment:		0.888		0.938		0.955		0.955
Level of Service (LOS):		**D**		**E**		**E**		**E**

PROJECT IMPACT

Change in *v/c* due to project:	0.017	Δ*v/c* after mitigation:	0.017
Significantly impacted?	YES	Fully mitigated?	NO

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Upper Stone Canyon Reservoir Water Quality Improvement Project

Intersection No. 3	2010, EXISTING	2014, PROJECTED CUMULATIVE BASE		2014, WITH PROJECT				2014, WITH TRAFFIC MITIGATION
North/South Street:	Critical Phases: 3	Ambient Growth	Critical Phases: 3	☐ Adjacent		In	Out	Total	Critical Phases: 3
Skirball Center Drive	Capacity: 1425	from: 2010	Capacity: 1425	Trip Gen 1	AM	73	25	98	Capacity: 1425
East/West Street:	Signal System: 3	to: 2014	Signal System: 3		PM	25	73	98	☐ Use Dist 2? Signal System: 3
Mulholland Drive	v/c reduction: 10%	at: 1.0%	v/c reduction: 10%	Trip Gen 2	AM	0	0	0	v/c reduction: 10%
Analysis Date: 01/26/2011	Opposed Phasing: 0		Opposed Phasing: 0		PM	0	0	0	Opposed Phasing: 0
PM Peak: 3:00 PM									

Approach	Movement	RTOR	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume	%	+ Project Volume	Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left		329	2	181	13	0	342	2	188	0%	0	342	2	188	0	342	2	188
	Lt-Th	N/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	331	1	51	13	27	371	1	64	100%	25	396	1	53	0	396	1	53
	Shared			0	0				0	0	0%			0	0			0	0
Southbound	Left		0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	S/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0
Eastbound	Left		0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	E/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	293	1	293	12	0	305	1	305	0%	0	305	1	305	0	305	1	305
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	477	1	313	19	0	496	1	325	0%	0	496	1	325	0	496	1	325
	Shared			0	0				0	0	0%			0	0			0	0
Westbound	Left		560	1	560	23	31	614	1	614	0%	73	687	1	687	0	687	1	687
	Lt-Th	W/B RTOR:		0	0				0	0	100%			0	0			0	0
	Thru	Existing: 50%	347	2	174	14	0	361	2	181	0%	0	361	2	181	0	361	2	181
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0

Critical Volumes:	2010, Existing	2014, Projected Cumulative Base	2014, With Project	2014, With Traffic Mitigation
North-South:	181	188	188	188
East-West:	873	939	1012	1012
Total:	1054	1127	1200	1200
Volume/capacity (*v/c*) ratio:	0.740	0.791	0.842	0.842
v/c less ATSAC adjustment:	0.640	0.691	0.742	0.742
Level of Service (LOS):	**B**	**B**	**C**	**C**

PROJECT IMPACT

Change in *v/c* due to project:	0.051	Δ*v/c* after mitigation:	0.051
Significantly impacted?	YES	Fully mitigated?	NO

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Upper Stone Canyon Reservoir Water Quality Improvement Project

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Intersection No. 4

North/South Street: **Skirball Center Drive**

East/West Street: **I-405 NB on/off Ramps**

Analysis Date: 01/26/2011

AM Peak: 7:15 AM

2010, EXISTING		2014, PROJECTED CUMULATIVE BASE		2014, WITH PROJECT					2014, WITH TRAFFIC MITIGATION	
Critical Phases:	2	Ambient Growth	Critical Phases: 2	☐ Adjacent		In	Out	Total	Critical Phases:	2
Capacity:	1500	from: 2010	Capacity: 1500	Trip Gen 1	AM	73	25	98	Capacity:	1500
Signal System:	3	to: 2014	Signal System: 3		PM	25	73	98	☐ Use Dist 2? Signal System:	3
v/c reduction:	10%	at: 1.0%	v/c reduction: 10%	Trip Gen 2	AM	0	0	0	v/c reduction:	10%
Opposed Phasing:	0		Opposed Phasing: 0		PM	0	0	0	Opposed Phasing:	0

Approach	Movement	RTOR	Existing Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume	%	+ Project Volume	= Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left		61	1	61	2	0	63	1	63	0%	0	63	1	63	0	63	1	63
	Lt-Th	N/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	270	1	270	11	17	298	1	298	55%	39	337	1	337	0	337	1	337
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0
Southbound	Left		0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	S/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	956	1	956	39	4	999	1	999	0%	10	1009	1	1009	0	1009	1	1009
	Th-Rt	Projected: 50%		0	0				0	0	45%			0	0			0	0
	Right	Mitigated: 50%	366	1	65	15	9	390	1	77	0%	15	405	1	75	0	405	1	75
	Shared			0	0				0	0	55%			0	0			0	0
Eastbound	Left		602	2	331	24	0	626	2	345	45%	34	660	2	363	0	660	2	363
	Lt-Th	E/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	67	1	37	3	0	70	1	38	0%	0	70	1	38	0	70	1	38
	Shared			0	0				0	0	0%			0	0			0	0
Westbound	Left		0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	W/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0

Critical Volumes:	2010, Existing	2014, Projected Cumulative Base	2014, With Project	2014, With Traffic Mitigation
North-South:	1017	1062	1072	1072
East-West:	331	345	363	363
Total:	1348	1407	1436	1436
Volume/capacity (*v/c*) ratio:	0.899	0.938	0.957	0.957
v/c less ATSAC adjustment:	0.799	0.838	0.857	0.857
Level of Service (LOS):	**C**	**D**	**D**	**D**

PROJECT IMPACT

Change in *v/c* due to project:	0.019	Δ*v/c* after mitigation:	0.019
Significantly impacted?	NO	Fully mitigated?	N/A

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CMACalc - Critical Movement Analysis Calculator

Upper Stone Canyon Reservoir Water Quality Improvement Project

LADOT
Bureau of Planning and Land Use Development

Intersection No. 4

North/South Street: **Skirball Center Drive**

East/West Street: **I-405 NB on/off Ramps**

Analysis Date: 01/26/2011

PM Peak: 3:00 PM

	2010, EXISTING	2014, PROJECTED CUMULATIVE BASE	2014, WITH TRAFFIC MITIGATION
Critical Phases	2	2	2
Capacity	1500	1500	1500
Signal System	3	3	3
v/c reduction	10%	10%	10%
Opposed Phasing	0	0	0

Ambient Growth — from: 2010; to: 2014; at: 1.0%

2014, WITH PROJECT

☐ Adjacent

		In	Out	Total
Trip Gen 1	AM	73	25	98
	PM	25	73	98
Trip Gen 2	AM	0	0	0
	PM	0	0	0

☐ Use Dist 2?

N/B RTOR: Existing: 50%; Projected: 50%; Mitigated: 50%

S/B RTOR: Existing: 50%; Projected: 50%; Mitigated: 50%

E/B RTOR: Existing: 50%; Projected: 50%; Mitigated: 50%

W/B RTOR: Existing: 50%; Projected: 50%; Mitigated: 50%

Approach	Movement	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume	%	+ Project Volume	Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left	250	1	**250**	10	0	260	1	**260**	0%	0	260	1	**260**	0	260	1	**260**
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	414	1	414	17	27	458	1	458	55%	15	473	1	473	0	473	1	473
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Shared		0	0				0	0	0%			0	0			0	0
Southbound	Left	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	581	1	**581**	24	10	615	1	**615**	0%	34	649	1	**649**	0	649	1	**649**
	Th-Rt		0	0				0	0	45%			0	0			0	0
	Right	447	1	323	18	21	486	1	356	0%	39	525	1	390	0	525	1	390
	Shared		0	0				0	0	55%			0	0			0	0
Eastbound	Left	249	2	**137**	10	0	259	2	**143**	45%	10	269	2	**148**	0	269	2	**148**
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	55	1	0	2	0	57	1	0	0%	0	57	1	0	0	57	1	0
	Shared		0	0				0	0	0%			0	0			0	0
Westbound	Left	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Shared		0	0				0	0	0%			0	0			0	0

Critical Volumes	2010, Existing	2014, Projected Cumulative Base	2014, With Project	2014, With Traffic Mitigation
North-South	831	875	909	909
East-West	137	143	148	148
Total	968	1017	1057	1057
Volume/capacity (*v/c*) ratio	0.645	0.678	0.705	0.705
v/c less ATSAC adjustment	0.545	0.578	0.605	0.605
Level of Service (LOS)	**A**	**A**	**B**	**B**

PROJECT IMPACT

Change in *v/c* due to project: 0.027 | Δ*v/c* after mitigation: 0.027

Significantly impacted? NO | Fully mitigated? N/A

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CMACalc - Critical Movement Analysis Calculator

Upper Stone Canyon Reservoir Water Quality Improvement Project

Intersection No. 5	2010, EXISTING		2014, PROJECTED CUMULATIVE BASE				2014, WITH PROJECT					2014, WITH TRAFFIC MITIGATION	
North/South Street:	Critical Phases:	3	Ambient Growth		Critical Phases:	3	☐ Adjacent		In	Out	Total	Critical Phases:	3
I-405 SB on/off Ramps	Capacity:	1425	from:	2010	Capacity:	1425	Trip Gen 1	AM	73	25	98	Capacity:	1425
East/West Street:	Signal System:	3	to:	2014	Signal System:	3		PM	25	73	98	☐ Use Dist 2? Signal System:	3
Skirball Center Drive	v/c reduction:	10%	at:	1.0%	v/c reduction:	10%	Trip Gen 2	AM	0	0	0	v/c reduction:	10%
Analysis Date: 01/26/2011	Opposed Phasing:	0			Opposed Phasing:	0		PM	0	0	0	Opposed Phasing:	0

AM Peak: 7:30 AM

Approach	Movement	RTOR	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume	%	+ Project Volume	= Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left		0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	N/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0
Southbound	Left		129	0	0	5	11	145	0	0	55%	39	184	0	0	0	184	0	0
	Lt-Th	S/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	3	0	0	0	0	3	0	0	0%	0	3	0	0	0	3	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	213	1	117	9	0	222	1	122	0%	0	222	1	122	0	222	1	122
	Shared			1	**228**				1	**248**	0%			1	**287**			1	**287**
Eastbound	Left		0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	E/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	205	1	**157**	8	5	218	1	**166**	0%	0	218	1	**166**	0	218	1	**166**
	Th-Rt	Projected: 50%		1	**157**				1	**166**	0%			1	**166**			1	**166**
	Right	Mitigated: 50%	109	0	0	4	0	113	0	0	0%	0	113	0	0	0	113	0	0
	Shared			0	0				0	0	0%			0	0			0	0
Westbound	Left		642	1	**642**	26	0	668	1	**668**	0%	10	678	1	**678**	0	678	1	**678**
	Lt-Th	W/B RTOR:		0	0				0	0	45%			0	0			0	0
	Thru	Existing: 50%	427	2	214	17	4	448	2	224	0%	0	448	2	224	0	448	2	224
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0

Critical Volumes:	2010, Existing	2014, Projected Cumulative Base	2014, With Project	2014, With Traffic Mitigation
North-South:	228	248	287	287
East-West:	799	834	844	844
Total:	1027	1082	1131	1131
Volume/capacity (*v/c*) ratio:	0.721	0.759	0.794	0.794
v/c less ATSAC adjustment:	0.621	0.659	0.694	0.694
Level of Service (LOS):	**B**	**B**	**B**	**B**

P R O J E C T   I M P A C T

Change in *v/c* due to project:	0.035	Δ*v/c* after mitigation:	0.035
Significantly impacted?	NO	Fully mitigated?	N/A

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CMACalc - Critical Movement Analysis Calculator

Upper Stone Canyon Reservoir Water Quality Improvement Project

LADOT Bureau of Planning and Land Use Development

Intersection No. 5

North/South Street: **I-405 SB on/off Ramps**

East/West Street: **Skirball Center Drive**

Analysis Date: 01/26/2011

PM Peak: 3:00 PM

	2010, EXISTING	2014, PROJECTED CUMULATIVE BASE	2014, WITH TRAFFIC MITIGATION
Critical Phases	3	3	3
Capacity	1425	1425	1425
Signal System	3	3	3
v/c reduction	10%	10%	10%
Opposed Phasing	0	0	0

Ambient Growth — from: 2010; to: 2014; at: 1.0%

2014, WITH PROJECT

☐ Adjacent

		In	Out	Total
Trip Gen 1	AM	73	25	98
	PM	25	73	98
Trip Gen 2	AM	0	0	0
	PM	0	0	0

☐ Use Dist 2?

Approach	Movement	RTOR	Existing Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume	%	+ Project Volume	Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left		0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	N/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0
Southbound	Left		240	0	0	10	18	268	0	0	55%	15	283	0	0	0	283	0	0
	Lt-Th	S/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	3	0	0	0	0	3	0	0	0%	0	3	0	0	0	3	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	86	1	47	3	0	89	1	49	0%	0	89	1	49	0	89	1	49
	Shared			1	282				1	311	0%			1	326			1	326
Eastbound	Left		0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	E/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	434	1	240	18	9	461	1	254	0%	0	461	1	254	0	461	1	254
	Th-Rt	Projected: 50%		1	240				1	254	0%			1	254			1	254
	Right	Mitigated: 50%	46	0	0	2	0	48	0	0	0%	0	48	0	0	0	48	0	0
	Shared			0	0				0	0	0%			0	0			0	0
Westbound	Left		337	1	337	14	0	351	1	351	0%	34	385	1	385	0	385	1	385
	Lt-Th	W/B RTOR:		0	0				0	0	45%			0	0			0	0
	Thru	Existing: 50%	284	2	142	12	10	306	2	153	0%	0	306	2	153	0	306	2	153
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0

Critical Volumes:	2010, Existing	2014, Projected Cumulative Base	2014, With Project	2014, With Traffic Mitigation
North-South:	282	311	326	326
East-West:	577	605	639	639
Total:	859	916	965	965
Volume/capacity (*v/c*) ratio:	0.603	0.643	0.677	0.677
v/c less ATSAC adjustment:	0.503	0.543	0.577	0.577
Level of Service (LOS):	A	A	A	A

PROJECT IMPACT

Change in *v/c* due to project: 0.034 — Δ*v/c* after mitigation: 0.034

Significantly impacted? NO — Fully mitigated? N/A

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Appendix F

Level-of-Service Worksheets All Scenarios for Post-Project Proposed Alternative with Park Use

CMACalc - Critical Movement Analysis Calculator

Upper Stone Canyon Reservoir Water Quality Improvement Project

LADOT Bureau of Planning and Land Use Development

Intersection No. 1	2010, EXISTING	2020, PROJECTED CUMULATIVE BASE	2020, WITH PROJECT	2020, WITH TRAFFIC MITIGATION
North/South Street: **Roscomare Road**	Critical Phases: 3	Ambient Growth from: 2010 to: 2020 at: 1.0%	☐ Adjacent	Critical Phases: 3
East/West Street: **Mulholland Drive**	Capacity: 1425	Critical Phases: 3	Trip Gen 1 AM: In 13, Out 13, Total 26	Capacity: 1425
Analysis Date: 05/09/2011	Signal System: 3	Capacity: 1425	Trip Gen 1 PM: In 13, Out 13, Total 26	☐ Use Dist 2? Signal System: 3
AM Peak: 7:30 AM	v/c reduction: 10%	Signal System: 3	Trip Gen 2 AM: In 0, Out 0, Total 0	v/c reduction: 10%
	Opposed Phasing: 0	v/c reduction: 10%	Trip Gen 2 PM: In 0, Out 0, Total 0	Opposed Phasing: 0
		Opposed Phasing: 0		

Approach	Movement	RTOR	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume	%	+ Project Volume	= Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left	N/B RTOR:	207	0	0	22	0	229	0	0	0%	0	229	0	0	0	229	0	0
	Lt-Th	Existing: 50%		0	0				0	0	0%			0	0			0	0
	Thru	Projected: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Mitigated: 50%		0	0				0	0	0%			0	0			0	0
	Right		89	0	0	9	0	98	0	0	8%	1	99	0	0	0	99	0	0
	Shared			1	296				1	327	0%			1	328			1	328
Southbound	Left	S/B RTOR:	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	Existing: 50%		0	0				0	0	0%			0	0			0	0
	Thru	Projected: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Mitigated: 50%		0	0				0	0	0%			0	0			0	0
	Right		0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0
Eastbound	Left	E/B RTOR:	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	Existing: 50%		0	0				0	0	0%			0	0			0	0
	Thru	Projected: 50%	616	1	616	64	17	697	1	697	92%	12	709	1	709	0	709	1	709
	Th-Rt	Mitigated: 50%		0	0				0	0	0%			0	0			0	0
	Right		350	1	246	37	0	387	1	273	0%	0	387	1	273	0	387	1	273
	Shared			0	0				0	0	0%			0	0			0	0
Westbound	Left	W/B RTOR:	195	1	195	20	0	215	1	215	0%	1	216	1	216	0	216	1	216
	Lt-Th	Existing: 50%		0	0				0	0	8%			0	0			0	0
	Thru	Projected: 50%	483	1	483	51	13	547	1	547	0%	5	552	1	552	0	552	1	552
	Th-Rt	Mitigated: 50%		0	0				0	0	42%			0	0			0	0
	Right		0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0

Critical Volumes:	2010, Existing	2020, Projected Cumulative Base	2020, With Project	2020, With Traffic Mitigation
North-South:	296	327	328	328
East-West:	811	913	926	926
Total:	1107	1240	1254	1254
Volume/capacity (*v/c*) ratio:	0.777	0.870	0.880	0.880
v/c less ATSAC adjustment:	0.677	0.770	0.780	0.780
Level of Service (LOS):	**B**	**C**	**C**	**C**

PROJECT IMPACT

Change in *v/c* due to project:	0.010	Δ*v/c* after mitigation:	0.010
Significantly impacted?	NO	Fully mitigated?	N/A

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CMACalc - Critical Movement Analysis Calculator

Upper Stone Canyon Reservoir Water Quality Improvement Project

Intersection No. 1	2010, EXISTING	2020, PROJECTED CUMULATIVE BASE	2020, WITH PROJECT	2020, WITH TRAFFIC MITIGATION
North/South Street: **Roscomare Road**	Critical Phases: 3	Ambient Growth from: 2010 to: 2020 at: 1.0%	☐ Adjacent	Critical Phases: 3
East/West Street: **Mulholland Drive**	Capacity: 1425	Critical Phases: 3	Trip Gen 1 AM: In 13, Out 13, Total 26	Capacity: 1425
Analysis Date: 05/09/2011	Signal System: 3	Capacity: 1425	Trip Gen 1 PM: In 13, Out 13, Total 26	☐ Use Dist 2? Signal System: 3
PM Peak: 3:00 PM	v/c reduction: 10%	Signal System: 3	Trip Gen 2 AM: In 0, Out 0, Total 0	v/c reduction: 10%
	Opposed Phasing: 0	v/c reduction: 10%	Trip Gen 2 PM: In 0, Out 0, Total 0	Opposed Phasing: 0
		Opposed Phasing: 0		

Direction	Movement	RTOR	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume	%	+ Project Volume	Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left		262	0	0	27	0	289	0	0	0%	0	289	0	0	0	289	0	0
	Lt-Th	N/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	93	0	0	10	0	103	0	0	8%	1	104	0	0	0	104	0	0
	Shared			1	355				1	392	0%			1	393			1	393
Southbound	Left		0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	S/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0
Eastbound	Left		0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	E/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	428	1	428	45	27	500	1	500	92%	12	512	1	512	0	512	1	512
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	172	1	41	18	0	190	1	45	0%	0	190	1	45	0	190	1	45
	Shared			0	0				0	0	0%			0	0			0	0
Westbound	Left		66	1	66	7	0	73	1	73	0%	1	74	1	74	0	74	1	74
	Lt-Th	W/B RTOR:		0	0				0	0	8%			0	0			0	0
	Thru	Existing: 50%	508	1	508	53	31	592	1	592	0%	5	597	1	597	0	597	1	597
	Th-Rt	Projected: 50%		0	0				0	0	42%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0

	2010, EXISTING	2020, PROJECTED CUMULATIVE BASE	2020, WITH PROJECT	2020, WITH TRAFFIC MITIGATION
Critical Volumes: North-South:	355	392	393	393
East-West:	508	592	597	597
Total:	863	984	990	990
Volume/capacity (*v/c*) ratio:	0.606	0.691	0.695	0.695
v/c less ATSAC adjustment:	0.506	0.591	0.595	0.595
Level of Service (LOS):	A	A	A	A

PROJECT IMPACT

Change in *v/c* due to project:	0.004	Δ*v/c* after mitigation:	0.004
Significantly impacted?	NO	Fully mitigated?	N/A

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CMACalc - Critical Movement Analysis Calculator

Upper Stone Canyon Reservoir Water Quality Improvement Project

Intersection No. 2	2010, EXISTING		2020, PROJECTED CUMULATIVE BASE			2020, WITH PROJECT				2020, WITH TRAFFIC MITIGATION	
North/South Street:	Critical Phases:	3	Ambient Growth	Critical Phases:	3	☐ Adjacent	In	Out	Total	Critical Phases:	3
Casiano Road	Capacity:	1425	from: 2010	Capacity:	1425	Trip Gen 1 AM	13	13	26	Capacity:	1425
East/West Street:	Signal System:	3	to: 2020	Signal System:	3	Trip Gen 1 PM	13	13	26	☐ Use Dist 2? Signal System:	3
Mulholland Drive	v/c reduction:	10%	at: 1.0%	v/c reduction:	10%	Trip Gen 2 AM	0	0	0	v/c reduction:	10%
Analysis Date: 05/09/2011	Opposed Phasing:	0		Opposed Phasing:	0	Trip Gen 2 PM	0	0	0	Opposed Phasing:	0
AM Peak: 7:15 AM											

Approach	Movement	RTOR	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume	%	+ Project Volume	= Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left		221	2	122	23	0	244	2	134	0%	0	244	2	134	0	244	2	134
	Lt-Th	N/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	145	1	55	15	0	160	1	61	10%	1	161	1	62	0	161	1	62
	Shared			0	0				0	0	0%			0	0			0	0
Southbound	Left		0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	S/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0
Eastbound	Left		0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	E/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	725	1	725	76	17	818	1	818	35%	5	823	1	823	0	823	1	823
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	280	1	170	29	0	309	1	187	0%	0	309	1	187	0	309	1	187
	Shared			0	0				0	0	0%			0	0			0	0
Westbound	Left		179	1	179	19	0	198	1	198	0%	1	199	1	199	0	199	1	199
	Lt-Th	W/B RTOR:		0	0				0	0	7%			0	0			0	0
	Thru	Existing: 50%	789	2	395	83	13	885	2	442	0%	5	890	2	445	0	890	2	445
	Th-Rt	Projected: 50%		0	0				0	0	35%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0

	2010, Existing	2020, Projected Cumulative Base	2020, With Project	2020, With Traffic Mitigation
Critical Volumes: North-South:	122	134	134	134
East-West:	904	1016	1022	1022
Total:	1026	1150	1156	1156
Volume/capacity (*v/c*) ratio:	0.720	0.807	0.811	0.811
v/c less ATSAC adjustment:	0.620	0.707	0.711	0.711
Level of Service (LOS):	**B**	**C**	**C**	**C**

PROJECT IMPACT

Change in *v/c* due to project: 0.004
Δ*v/c* after mitigation: 0.004
Significantly impacted? NO
Fully mitigated? N/A

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CMACalc - Critical Movement Analysis Calculator

Upper Stone Canyon Reservoir Water Quality Improvement Project

Intersection No. 2

North/South Street: **Casiano Road**

East/West Street: **Mulholland Drive**

Analysis Date: 05/09/2011

PM Peak: 3:00 PM

	2010, EXISTING	2020, PROJECTED CUMULATIVE BASE	2020, WITH TRAFFIC MITIGATION
Critical Phases	3	3	3
Capacity	1425	1425	1425
Signal System	3	3	3
v/c reduction	10%	10%	10%
Opposed Phasing	0	0	0

Ambient Growth: from: 2010, to: 2020, at: 1.0%

2020, WITH PROJECT

☐ Adjacent

		In	Out	Total
Trip Gen 1	AM	13	13	26
	PM	13	13	26
Trip Gen 2	AM	0	0	0
	PM	0	0	0

☐ Use Dist 2?

N/B RTOR: Existing: 50%, Projected: 50%, Mitigated: 50%

S/B RTOR: Existing: 50%, Projected: 50%, Mitigated: 50%

E/B RTOR: Existing: 50%, Projected: 50%, Mitigated: 50%

W/B RTOR: Existing: 50%, Projected: 50%, Mitigated: 50%

Approach	Movement	Existing Counts Volume	Existing Lanes	Existing Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume	Project %	+ Project Volume	Total Volume	Lanes	Lane Volume	Mitigation Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left	247	2	136	26	0	273	2	150	0%	0	273	2	150	0	273	2	150
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	173	1	119	18	0	191	1	131	10%	1	192	1	131	0	192	1	131
	Shared		0	0				0	0	0%			0	0			0	0
Southbound	Left	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Shared		0	0				0	0	0%			0	0			0	0
Eastbound	Left	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	459	1	459	48	27	534	1	534	35%	5	539	1	539	0	539	1	539
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	168	1	44	18	0	186	1	50	0%	0	186	1	50	0	186	1	50
	Shared		0	0				0	0	0%			0	0			0	0
Westbound	Left	109	1	109	11	0	120	1	120	0%	1	121	1	121	0	121	1	121
	Lt-Th		0	0				0	0	7%			0	0			0	0
	Thru	674	2	337	71	31	776	2	388	0%	5	781	2	390	0	781	2	390
	Th-Rt		0	0				0	0	35%			0	0			0	0
	Right	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Shared		0	0				0	0	0%			0	0			0	0

Critical Volumes:	2010, Existing	2020, Projected Cumulative Base	2020, With Project	2020, With Traffic Mitigation
North-South:	136	150	150	150
East-West:	568	654	660	660
Total:	704	804	810	810
Volume/capacity (*v/c*) ratio:	0.494	0.565	0.569	0.569
v/c less ATSAC adjustment:	0.394	0.465	0.469	0.469
Level of Service (LOS):	A	A	A	A

PROJECT IMPACT

Change in *v/c* due to project: 0.004

Significantly impacted? NO

Δ*v/c* after mitigation: 0.004

Fully mitigated? N/A

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Upper Stone Canyon Reservoir Water Quality Improvement Project

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Intersection No. 3	**2010, EXISTING**		**2020, PROJECTED CUMULATIVE BASE**				**2020, WITH PROJECT**				**2020, WITH TRAFFIC MITIGATION**	
North/South Street:	Critical Phases:	3	Ambient Growth		Critical Phases:	3	☐ Adjacent		In	Out	Total		Critical Phases: 3
Skirball Center Drive	Capacity:	1425	from:	2010	Capacity:	1425	Trip	AM	13	13	26	Capacity: 1425
East/West Street:	Signal System:	3	to:	2020	Signal System:	3	Gen 1	PM	13	13	26	☐ Use Dist 2? Signal System: 3
Mulholland Drive	v/c reduction:	10%	at:	1.0%	v/c reduction:	10%	Trip	AM	0	0	0	v/c reduction: 10%
Analysis Date: 05/09/2011	Opposed Phasing:	0			Opposed Phasing:	0	Gen 2	PM	0	0	0	Opposed Phasing: 0

AM Peak: 7:30 AM

Approach	Movement	RTOR	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume	%	+ Project Volume	= Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left		410	2	**226**	43	0	453	2	**249**	0%	0	453	2	**249**	0	453	2	**249**
	Lt-Th	N/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	426	1	145	45	17	488	1	171	27%	4	492	1	173	0	492	1	173
	Shared			0	0				0	0	0%			0	0			0	0
Southbound	Left		0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	S/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0
Eastbound	Left		0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	E/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	621	1	**621**	65	0	686	1	**686**	8%	1	687	1	**687**	0	687	1	**687**
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	818	1	613	86	0	904	1	678	0%	0	904	1	678	0	904	1	678
	Shared			0	0				0	0	0%			0	0			0	0
Westbound	Left		562	1	**562**	59	13	634	1	**634**	0%	4	638	1	**638**	0	638	1	**638**
	Lt-Th	W/B RTOR:		0	0				0	0	27%			0	0			0	0
	Thru	Existing: 50%	422	2	211	44	0	466	2	233	0%	1	467	2	234	0	467	2	234
	Th-Rt	Projected: 50%		0	0				0	0	8%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0

Critical Volumes:	2010, Existing		2020, Projected Cumulative Base		2020, With Project		2020, With Traffic Mitigation	
	North-South:	226	North-South:	249	North-South:	249	North-South:	249
	East-West:	1183	East-West:	1320	East-West:	1325	East-West:	1325
	Total:	1409	Total:	1569	Total:	1574	Total:	1574
Volume/capacity (*v/c*) ratio:		0.988		1.101		1.104		1.104
v/c less ATSAC adjustment:		0.888		1.001		1.004		1.004
Level of Service (LOS):		**D**		**F**		**F**		**F**

PROJECT IMPACT

Change in *v/c* due to project:	0.003	Δ*v/c* after mitigation:	0.003
Significantly impacted?	NO	Fully mitigated?	N/A

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Upper Stone Canyon Reservoir Water Quality Improvement Project

Intersection No. 3	2010, EXISTING	2020, PROJECTED CUMULATIVE BASE	2020, WITH PROJECT	2020, WITH TRAFFIC MITIGATION
North/South Street: **Skirball Center Drive**	Critical Phases: 3	Ambient Growth from: 2010 to: 2020 at: 1.0%	☐ Adjacent	Critical Phases: 3
East/West Street: **Mulholland Drive**	Capacity: 1425	Critical Phases: 3		Capacity: 1425
Analysis Date: 05/09/2011	Signal System: 3	Capacity: 1425		☐ Use Dist 2? Signal System: 3
PM Peak: 3:00 PM	v/c reduction: 10%	Signal System: 3		v/c reduction: 10%
	Opposed Phasing: 0	v/c reduction: 10%		Opposed Phasing: 0
		Opposed Phasing: 0		

2020, With Project		In	Out	Total
Trip Gen 1	AM	13	13	26
	PM	13	13	26
Trip Gen 2	AM	0	0	0
	PM	0	0	0

Direction	Movement	RTOR	2010 Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume	%	+ Project Volume	Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left		329	2	181	34	0	363	2	200	0%	0	363	2	200	0	363	2	200
	Lt-Th	N/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	331	1	51	35	27	393	1	68	27%	4	397	1	70	0	397	1	70
	Shared			0	0				0	0	0%			0	0			0	0
Southbound	Left		0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	S/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0
Eastbound	Left		0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	E/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	293	1	293	31	0	324	1	324	8%	1	325	1	325	0	325	1	325
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	477	1	313	50	0	527	1	345	0%	0	527	1	345	0	527	1	345
	Shared			0	0				0	0	0%			0	0			0	0
Westbound	Left		560	1	560	59	31	650	1	650	0%	4	654	1	654	0	654	1	654
	Lt-Th	W/B RTOR:		0	0				0	0	27%			0	0			0	0
	Thru	Existing: 50%	347	2	174	36	0	383	2	192	0%	1	384	2	192	0	384	2	192
	Th-Rt	Projected: 50%		0	0				0	0	8%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0

Critical Volumes:	2010, Existing	2020, Projected Cumulative Base	2020, With Project	2020, With Traffic Mitigation
North-South:	181	200	200	200
East-West:	873	994	998	998
Total:	1054	1194	1198	1198
Volume/capacity (*v/c*) ratio:	0.740	0.838	0.841	0.841
v/c less ATSAC adjustment:	0.640	0.738	0.741	0.741
Level of Service (LOS):	**B**	**C**	**C**	**C**

PROJECT IMPACT

Change in *v/c* due to project:	0.003	Δ*v/c* after mitigation:	0.003
Significantly impacted?	NO	Fully mitigated?	N/A

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Upper Stone Canyon Reservoir Water Quality Improvement Project

Intersection No. 4	**2010, EXISTING**	**2020, PROJECTED CUMULATIVE BASE**		**2020, WITH PROJECT**				**2020, WITH TRAFFIC MITIGATION**
North/South Street:	Critical Phases: 2	Ambient Growth	Critical Phases: 2	☐ Adjacent		In	Out	Total	Critical Phases: 2
Skirball Center Drive	Capacity: 1500	from: 2010	Capacity: 1500	Trip	AM	13	13	26	Capacity: 1500
East/West Street:	Signal System: 3	to: 2020	Signal System: 3	Gen 1	PM	13	13	26	☐ Use Dist 2? Signal System: 3
I-405 NB on/off Ramps	v/c reduction: 10%	at: 1.0%	v/c reduction: 10%	Trip	AM	0	0	0	v/c reduction: 10%
Analysis Date: 05/09/2011	Opposed Phasing: 0		Opposed Phasing: 0	Gen 2	PM	0	0	0	Opposed Phasing: 0
AM Peak: 7:15 AM									

Direction	Movement	RTOR	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume	%	+ Project Volume	= Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left		61	1	**61**	6	0	67	1	67	0%	0	67	1	67	0	67	1	67
	Lt-Th	N/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	270	1	270	28	17	315	1	315	14%	2	317	1	317	0	317	1	317
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0
Southbound	Left		0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	S/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	956	1	**956**	100	4	1060	1	**1060**	0%	2	1062	1	**1062**	0	1062	1	**1062**
	Th-Rt	Projected: 50%		0	0				0	0	13%			0	0			0	0
	Right	Mitigated: 50%	366	1	65	38	9	413	1	81	0%	2	415	1	82	0	415	1	82
	Shared			0	0				0	0	14%			0	0			0	0
Eastbound	Left		602	2	**331**	63	0	665	2	**366**	13%	2	667	2	**367**	0	667	2	**367**
	Lt-Th	E/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	67	1	37	7	0	74	1	40	0%	0	74	1	40	0	74	1	40
	Shared			0	0				0	0	0%			0	0			0	0
Westbound	Left		0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	W/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0

	2010, Existing	2020, Projected Cumulative Base	2020, With Project	2020, With Traffic Mitigation
Critical Volumes: North-South:	1017	1127	1129	1129
East-West:	331	366	367	367
Total:	1348	1493	1496	1496
Volume/capacity (*v/c*) ratio:	0.899	0.995	0.997	0.997
v/c less ATSAC adjustment:	0.799	0.895	0.897	0.897
Level of Service (LOS):	**C**	**D**	**D**	**D**

PROJECT IMPACT

Change in *v/c* due to project:	0.002	Δ*v/c* after mitigation:	0.002
Significantly impacted?	NO	Fully mitigated?	N/A

Filename: J:\2008\JA81142 LADWP Reservoirs EIR\Upper Stone Canyon - Task 1\Analysis\UpperStoneCyn - Proposed Park.xls

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LADOT
Bureau of Planning and Land Use Development

CMACalc - Critical Movement Analysis Calculator

Upper Stone Canyon Reservoir Water Quality Improvement Project

Intersection No. 4	2010, EXISTING		2020, PROJECTED CUMULATIVE BASE				2020, WITH PROJECT					2020, WITH TRAFFIC MITIGATION	
North/South Street:	Critical Phases:	2	Ambient Growth		Critical Phases:	2	☐ Adjacent		In	Out	Total	Critical Phases:	2
Skirball Center Drive	Capacity:	1500	from:	2010	Capacity:	1500	Trip Gen 1	AM	13	13	26	Capacity:	1500
East/West Street:	Signal System:	3	to:	2020	Signal System:	3		PM	13	13	26	☐ Use Dist 2? Signal System:	3
I-405 NB on/off Ramps	v/c reduction:	10%	at:	1.0%	v/c reduction:	10%	Trip Gen 2	AM	0	0	0	v/c reduction:	10%
Analysis Date: 05/09/2011	Opposed Phasing:	0			Opposed Phasing:	0		PM	0	0	0	Opposed Phasing:	0
PM Peak: 3:00 PM													

Approach	Movement	RTOR	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume	%	+ Project Volume	Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left		250	1	250	26	0	276	1	276	0%	0	276	1	276	0	276	1	276
	Lt-Th	N/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	414	1	414	43	27	484	1	484	14%	2	486	1	486	0	486	1	486
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0
Southbound	Left		0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	S/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	581	1	581	61	10	652	1	652	0%	2	654	1	654	0	654	1	654
	Th-Rt	Projected: 50%		0	0				0	0	13%			0	0			0	0
	Right	Mitigated: 50%	447	1	323	47	21	515	1	377	0%	2	517	1	378	0	517	1	378
	Shared			0	0				0	0	14%			0	0			0	0
Eastbound	Left		249	2	137	26	0	275	2	151	13%	2	277	2	152	0	277	2	152
	Lt-Th	E/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	55	1	0	6	0	61	1	0	0%	0	61	1	0	0	61	1	0
	Shared			0	0				0	0	0%			0	0			0	0
Westbound	Left		0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	W/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0

	2010, Existing	2020, Projected Cumulative Base	2020, With Project	2020, With Traffic Mitigation
Critical Volumes: North-South:	831	928	930	930
East-West:	137	151	152	152
Total:	968	1079	1082	1082
Volume/capacity (*v/c*) ratio:	0.645	0.719	0.722	0.722
v/c less ATSAC adjustment:	0.545	0.619	0.622	0.622
Level of Service (LOS):	**A**	**B**	**B**	**B**

PROJECT IMPACT

Change in *v/c* due to project:	0.003	Δ*v/c* after mitigation:	0.003
Significantly impacted?	NO	Fully mitigated?	N/A

Filename: J:\2008\JA81142 LADWP Reservoirs EIR\Upper Stone Canyon - Task 1\Analysis\UpperStoneCyn - Proposed Park.xls

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Bureau of Planning and Land Use Development

CMACalc - Critical Movement Analysis Calculator

Upper Stone Canyon Reservoir Water Quality Improvement Project

Intersection No. 5	2010, EXISTING	2020, PROJECTED CUMULATIVE BASE		2020, WITH PROJECT					2020, WITH TRAFFIC MITIGATION
North/South Street:	Critical Phases: 3	Ambient Growth	Critical Phases: 3	☐ Adjacent		In	Out	Total	Critical Phases: 3
I-405 SB on/off Ramps	Capacity: 1425	from: 2010	Capacity: 1425	Trip	AM	13	13	26	Capacity: 1425
East/West Street:	Signal System: 3	to: 2020	Signal System: 3	Gen 1	PM	13	13	26	☐ Use Dist 2? Signal System: 3
Skirball Center Drive	v/c reduction: 10%	at: 1.0%	v/c reduction: 10%	Trip	AM	0	0	0	v/c reduction: 10%
Analysis Date: 05/09/2011	Opposed Phasing: 0		Opposed Phasing: 0	Gen 2	PM	0	0	0	Opposed Phasing: 0

AM Peak: 7:30 AM

Approach	Movement	RTOR	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume	%	+ Project Volume	= Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left		0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	N/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0
Southbound	Left		129	0	0	13	11	153	0	0	14%	2	155	0	0	0	155	0	0
	Lt-Th	S/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	3	0	0	0	0	3	0	0	0%	0	3	0	0	0	3	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	213	1	117	22	0	235	1	129	0%	0	235	1	129	0	235	1	129
	Shared			1	228				1	263	0%			1	265			1	265
Eastbound	Left		0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	E/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	205	1	157	21	5	231	1	176	0%	0	231	1	176	0	231	1	176
	Th-Rt	Projected: 50%		1	157				1	176	0%			1	176			1	176
	Right	Mitigated: 50%	109	0	0	11	0	120	0	0	0%	0	120	0	0	0	120	0	0
	Shared			0	0				0	0	0%			0	0			0	0
Westbound	Left		642	1	642	67	0	709	1	709	0%	2	711	1	711	0	711	1	711
	Lt-Th	W/B RTOR:		0	0				0	0	13%			0	0			0	0
	Thru	Existing: 50%	427	2	214	45	4	476	2	238	0%	0	476	2	238	0	476	2	238
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0

	2010, Existing	2020, Projected Cumulative Base	2020, With Project	2020, With Traffic Mitigation
Critical Volumes: North-South:	228	263	265	265
East-West:	799	885	887	887
Total:	1027	1148	1152	1152
Volume/capacity (*v/c*) ratio:	0.721	0.805	0.808	0.808
v/c less ATSAC adjustment:	0.621	0.705	0.708	0.708
Level of Service (LOS):	B	C	C	C

PROJECT IMPACT

Change in *v/c* due to project:	0.003	Δ*v/c* after mitigation:	0.003
Significantly impacted?	NO	Fully mitigated?	N/A

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LADOT
Bureau of Planning and Land Use Development

CMACalc - Critical Movement Analysis Calculator

Upper Stone Canyon Reservoir Water Quality Improvement Project

Intersection No. 5	2010, EXISTING		2020, PROJECTED CUMULATIVE BASE			2020, WITH PROJECT					2020, WITH TRAFFIC MITIGATION	
North/South Street:	Critical Phases:	3	Ambient Growth	Critical Phases:	3	☐ Adjacent		In	Out	Total	Critical Phases:	3
I-405 SB on/off Ramps	Capacity:	1425	from: 2010	Capacity:	1425	Trip Gen 1	AM	13	13	26	Capacity:	1425
East/West Street:	Signal System:	3	to: 2020	Signal System:	3		PM	13	13	26	☐ Use Dist 2? Signal System:	3
Skirball Center Drive	v/c reduction:	10%	at: 1.0%	v/c reduction:	10%	Trip Gen 2	AM	0	0	0	v/c reduction:	10%
Analysis Date: 05/09/2011	Opposed Phasing:	0		Opposed Phasing:	0		PM	0	0	0	Opposed Phasing:	0
PM Peak: 3:00 PM												

Approach	Movement	RTOR	2010 Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume	%	+ Project Volume	Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left		0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	N/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0
Southbound	Left		240	0	0	25	18	283	0	0	14%	2	285	0	0	0	285	0	0
	Lt-Th	S/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	3	0	0	0	0	3	0	0	0%	0	3	0	0	0	3	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	86	1	47	9	0	95	1	52	0%	0	95	1	52	0	95	1	52
	Shared			1	282				1	329	0%			1	331			1	331
Eastbound	Left		0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	E/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	434	1	240	45	9	488	1	270	0%	0	488	1	270	0	488	1	270
	Th-Rt	Projected: 50%		1	240				1	270	0%			1	270			1	270
	Right	Mitigated: 50%	46	0	0	5	0	51	0	0	0%	0	51	0	0	0	51	0	0
	Shared			0	0				0	0	0%			0	0			0	0
Westbound	Left		337	1	337	35	0	372	1	372	0%	2	374	1	374	0	374	1	374
	Lt-Th	W/B RTOR:		0	0				0	0	13%			0	0			0	0
	Thru	Existing: 50%	284	2	142	30	10	324	2	162	0%	0	324	2	162	0	324	2	162
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0

		2010, Existing	2020, Projected Cumulative Base	2020, With Project	2020, With Traffic Mitigation
Critical Volumes:	North-South:	282	329	331	331
	East-West:	577	642	644	644
	Total:	859	971	975	975
Volume/capacity (*v/c*) ratio:		0.603	0.681	0.684	0.684
v/c less ATSAC adjustment:		0.503	0.581	0.584	0.584
Level of Service (LOS):		A	A	A	A

PROJECT IMPACT

Change in *v/c* due to project:	0.003	Δ*v/c* after mitigation:	0.003
Significantly impacted?	NO	Fully mitigated?	N/A

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Appendix G
Level-of-Service Worksheets
Existing (2008) + Project Analysis
Concrete Roof

LADOT

Bureau of Planning and Land Use Development

CMACalc - Critical Movement Analysis Calculator

Upper Stone Canyon - Existing (2008) Plus Project

Intersection No. 1	2008, EXISTING	, PROJECTED CUMULATIVE BASE	, WITH PROJECT	, WITH TRAFFIC MITIGATION
North/South Street: **Roscomare Road**	Critical Phases: 3	Ambient Growth from: 2008 to: 0 at: 0.0%	☐ Adjacent	Critical Phases: 3
East/West Street: **Mulholland Drive**	Capacity: 1425	Critical Phases: 3	Trip Gen 1: AM In 100, Out 50, Total 150; PM In 53, Out 97, Total 150	Capacity: 1425
Analysis Date: 05/09/2011	Signal System: 3	Capacity: 1425	Trip Gen 2: AM In 0, Out 0, Total 0; PM In 0, Out 0, Total 0	☐ Use Dist 2? Signal System: 3
AM Peak: 7:30 AM	v/c reduction: 10%	Signal System: 3		v/c reduction: 10%
	Opposed Phasing: 0	v/c reduction: 10%		Opposed Phasing: 0
		Opposed Phasing: 0		

Approach	Movement	RTOR	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume	%	+ Project Volume	= Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left		210	0	0	0		210	0	0	0%	0	210	0	0	0	210	0	0
	Lt-Th	N/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	90	0	0	0		90	0	0	0%	0	90	0	0	0	90	0	0
	Shared			1	**300**				1	**300**	0%			1	**300**			1	**300**
Southbound	Left		0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	S/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0
Eastbound	Left		0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	E/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	625	1	**625**	0		625	1	**625**	100%	100	725	1	**725**	0	725	1	**725**
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	355	1	250	0		355	1	250	0%	0	355	1	250	0	355	1	250
	Shared			0	0				0	0	0%			0	0			0	0
Westbound	Left		198	1	**198**	0		198	1	**198**	0%	0	198	1	**198**	0	198	1	**198**
	Lt-Th	W/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	490	1	490	0		490	1	490	0%	50	540	1	540	0	540	1	540
	Th-Rt	Projected: 50%		0	0				0	0	100%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0

Critical Volumes:	2008, Existing	Projected Cumulative Base	With Project	With Traffic Mitigation
North-South:	300	300	300	300
East-West:	823	823	923	923
Total:	1123	1123	1223	1223
Volume/capacity (*v/c*) ratio:	0.788	0.788	0.858	0.858
v/c less ATSAC adjustment:	0.688	0.688	0.758	0.758
Level of Service (LOS):	**B**	**B**	**C**	**C**

PROJECT IMPACT

Change in *v/c* due to project:	0.070	Δ*v/c* after mitigation:	0.070
Significantly impacted?	YES	Fully mitigated?	NO

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CMACalc - Critical Movement Analysis Calculator

Upper Stone Canyon - Existing (2008) Plus Project

Bureau of Planning and Land Use Development

Intersection No. 1	2008, EXISTING	, PROJECTED CUMULATIVE BASE	, WITH PROJECT	, WITH TRAFFIC MITIGATION
North/South Street: **Roscomare Road**	Critical Phases: 3	Ambient Growth from: 2008 to: 0 at: 0.0%	☐ Adjacent	Critical Phases: 3
East/West Street: **Mulholland Drive**	Capacity: 1425	Critical Phases: 3	Trip Gen 1 AM: In 100, Out 50, Total 150	Capacity: 1425
Analysis Date: 05/09/2011	Signal System: 3	Capacity: 1425	Trip Gen 1 PM: In 53, Out 97, Total 150	☐ Use Dist 2? Signal System: 3
PM Peak: 3:00 PM	v/c reduction: 10%	Signal System: 3	Trip Gen 2 AM: In 0, Out 0, Total 0	v/c reduction: 10%
	Opposed Phasing: 0	v/c reduction: 10%	Trip Gen 2 PM: In 0, Out 0, Total 0	Opposed Phasing: 0
		Opposed Phasing: 0		

Approach	Movement	RTOR	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume	%	+ Project Volume	Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left		266	0	0	0		266	0	0	0%	0	266	0	0	0	266	0	0
	Lt-Th	N/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	94	0	0	0		94	0	0	0%	0	94	0	0	0	94	0	0
	Shared			1	360				1	360	0%			1	360			1	360
Southbound	Left		0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	S/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0
Eastbound	Left		0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	E/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	435	1	435	0		435	1	435	100%	53	488	1	488	0	488	1	488
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	175	1	42	0		175	1	42	0%	0	175	1	42	0	175	1	42
	Shared			0	0				0	0	0%			0	0			0	0
Westbound	Left		67	1	67	0		67	1	67	0%	0	67	1	67	0	67	1	67
	Lt-Th	W/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	516	1	516	0		516	1	516	0%	97	613	1	613	0	613	1	613
	Th-Rt	Projected: 50%		0	0				0	0	100%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0

Critical Volumes:	2008, Existing	Projected Cumulative Base	With Project	With Traffic Mitigation
North-South:	360	360	360	360
East-West:	516	516	613	613
Total:	876	876	973	973
Volume/capacity (*v/c*) ratio:	0.615	0.615	0.683	0.683
v/c less ATSAC adjustment:	0.515	0.515	0.583	0.583
Level of Service (LOS):	A	A	A	A

PROJECT IMPACT

Change in *v/c* due to project:	0.068	Δ*v/c* after mitigation:	0.068
Significantly impacted?	NO	Fully mitigated?	N/A

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CMACalc - Critical Movement Analysis Calculator

Upper Stone Canyon - Existing (2008) Plus Project

Intersection No. 2	2008, EXISTING	, PROJECTED CUMULATIVE BASE		, WITH PROJECT	, WITH TRAFFIC MITIGATION
North/South Street: **Casiano Road**	Critical Phases: 3	Ambient Growth	Critical Phases: 3	☐ Adjacent — In / Out / Total	Critical Phases: 3
	Capacity: 1425	from: 2008	Capacity: 1425	Trip Gen 1 AM: 100 / 50 / 150	Capacity: 1425
East/West Street: **Mulholland Drive**	Signal System: 3	to: 0	Signal System: 3	Trip Gen 1 PM: 53 / 97 / 150	☐ Use Dist 2? Signal System: 3
	v/c reduction: 10%	at: 0.0%	v/c reduction: 10%	Trip Gen 2 AM: 0 / 0 / 0	v/c reduction: 10%
Analysis Date: 05/09/2011	Opposed Phasing: 0		Opposed Phasing: 0	Trip Gen 2 PM: 0 / 0 / 0	Opposed Phasing: 0
AM Peak: 7:15 AM					

Approach	Movement	RTOR	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume	Project %	+ Project Volume	= Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left		224	2	123	0		224	2	123	0%	0	224	2	123	0	224	2	123
	Lt-Th	N/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	147	1	56	0		147	1	56	0%	0	147	1	56	0	147	1	56
	Shared			0	0				0	0	0%			0	0			0	0
Southbound	Left		0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	S/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0
Eastbound	Left		0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	E/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	736	1	736	0		736	1	736	100%	100	836	1	836	0	836	1	836
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	284	1	172	0		284	1	172	0%	0	284	1	172	0	284	1	172
	Shared			0	0				0	0	0%			0	0			0	0
Westbound	Left		182	1	182	0		182	1	182	0%	0	182	1	182	0	182	1	182
	Lt-Th	W/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	801	2	401	0		801	2	401	0%	50	851	2	426	0	851	2	426
	Th-Rt	Projected: 50%		0	0				0	0	100%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0

Critical Volumes:	2008, Existing	Projected Cumulative Base	With Project	With Traffic Mitigation
North-South:	123	123	123	123
East-West:	918	918	1018	1018
Total:	1041	1041	1141	1141
Volume/capacity (*v/c*) ratio:	0.731	0.731	0.801	0.801
v/c less ATSAC adjustment:	0.631	0.631	0.701	0.701
Level of Service (LOS):	**B**	**B**	**C**	**C**

PROJECT IMPACT

Change in *v/c* due to project:	0.070	Δ*v/c* after mitigation:	0.070
Significantly impacted?	YES	Fully mitigated?	NO

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CMACalc - Critical Movement Analysis Calculator

Upper Stone Canyon - Existing (2008) Plus Project

Intersection No. 2

North/South Street: **Casiano Road**

East/West Street: **Mulholland Drive**

Analysis Date: 05/09/2011

PM Peak: 3:00 PM

	2008, EXISTING	, PROJECTED CUMULATIVE BASE	, WITH PROJECT	, WITH TRAFFIC MITIGATION
Critical Phases	3	3		3
Capacity	1425	1425		1425
Signal System	3	3		3
v/c reduction	10%	10%		10%
Opposed Phasing	0	0		0

Ambient Growth — from: 2008; to: 0; at: 0.0%

☐ Adjacent

		In	Out	Total
Trip Gen 1	AM	100	50	150
	PM	53	97	150
Trip Gen 2	AM	0	0	0
	PM	0	0	0

☐ Use Dist 2?

Northbound

N/B RTOR: Existing: 50%; Projected: 50%; Mitigated: 50%

Movement	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume	%	+ Project Volume	Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Left	251	2	138	0		251	2	138	0%	0	251	2	138	0	251	2	138
Lt-Th		0	0				0	0	0%			0	0			0	0
Thru	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
Th-Rt		0	0				0	0	0%			0	0			0	0
Right	176	1	120	0		176	1	120	0%	0	176	1	120	0	176	1	120
Shared		0	0				0	0	0%			0	0			0	0

Southbound

S/B RTOR: Existing: 50%; Projected: 50%; Mitigated: 50%

Movement	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume	%	+ Project Volume	Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Left	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
Lt-Th		0	0				0	0	0%			0	0			0	0
Thru	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
Th-Rt		0	0				0	0	0%			0	0			0	0
Right	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
Shared		0	0				0	0	0%			0	0			0	0

Eastbound

E/B RTOR: Existing: 50%; Projected: 50%; Mitigated: 50%

Movement	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume	%	+ Project Volume	Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Left	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
Lt-Th		0	0				0	0	0%			0	0			0	0
Thru	466	1	466	0		466	1	466	100%	53	519	1	519	0	519	1	519
Th-Rt		0	0				0	0	0%			0	0			0	0
Right	171	1	45	0		171	1	45	0%	0	171	1	45	0	171	1	45
Shared		0	0				0	0	0%			0	0			0	0

Westbound

W/B RTOR: Existing: 50%; Projected: 50%; Mitigated: 50%

Movement	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume	%	+ Project Volume	Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Left	111	1	111	0		111	1	111	0%	0	111	1	111	0	111	1	111
Lt-Th		0	0				0	0	0%			0	0			0	0
Thru	684	2	342	0		684	2	342	0%	97	781	2	391	0	781	2	391
Th-Rt		0	0				0	0	100%			0	0			0	0
Right	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
Shared		0	0				0	0	0%			0	0			0	0

Results

Critical Volumes:	2008, Existing	Projected Cumulative Base	With Project	With Traffic Mitigation
North-South:	138	138	138	138
East-West:	577	577	630	630
Total:	715	715	768	768
Volume/capacity (*v/c*) ratio:	0.502	0.502	0.539	0.539
v/c less ATSAC adjustment:	0.402	0.402	0.439	0.439
Level of Service (LOS):	A	A	A	A

PROJECT IMPACT

Change in *v/c* due to project: 0.037

Significantly impacted? NO

Δ*v/c* after mitigation: 0.037

Fully mitigated? N/A

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Upper Stone Canyon - Existing (2008) Plus Project

LADOT Bureau of Planning and Land Use Development

Intersection No. 3	2008, EXISTING	, PROJECTED CUMULATIVE BASE	, WITH PROJECT	, WITH TRAFFIC MITIGATION
North/South Street: **Skirball Center Drive**	Critical Phases: 3	Ambient Growth from: 2008 to: 0 at: 0.0%	☐ Adjacent	Critical Phases: 3
East/West Street: **Mulholland Drive**	Capacity: 1425	Critical Phases: 3		Capacity: 1425
Analysis Date: 05/09/2011	Signal System: 3	Capacity: 1425		☐ Use Dist 2? Signal System: 3
AM Peak: 7:30 AM	v/c reduction: 10%	Signal System: 3		v/c reduction: 10%
	Opposed Phasing: 0	v/c reduction: 10%		Opposed Phasing: 0
		Opposed Phasing: 0		

		In	Out	Total
Trip Gen 1	AM	100	50	150
	PM	53	97	150
Trip Gen 2	AM	0	0	0
	PM	0	0	0

Approach	Movement	RTOR	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume	%	+ Project Volume	= Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left		416	2	229	0		416	2	229	0%	0	416	2	229	0	416	2	229
	Lt-Th	N/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	432	1	146	0		432	1	146	100%	100	532	1	222	0	532	1	222
	Shared			0	0				0	0	0%			0	0			0	0
Southbound	Left		0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	S/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0
Eastbound	Left		0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	E/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	630	1	630	0		630	1	630	0%	0	630	1	630	0	630	1	630
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	830	1	622	0		830	1	622	0%	0	830	1	622	0	830	1	622
	Shared			0	0				0	0	0%			0	0			0	0
Westbound	Left		571	1	571	0		571	1	571	0%	50	621	1	621	0	621	1	621
	Lt-Th	W/B RTOR:		0	0				0	0	100%			0	0			0	0
	Thru	Existing: 50%	428	2	214	0		428	2	214	0%	0	428	2	214	0	428	2	214
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0

Critical Volumes:	2008, Existing	Projected Cumulative Base	With Project	With Traffic Mitigation
North-South:	229	229	229	229
East-West:	1201	1201	1251	1251
Total:	1430	1430	1480	1480
Volume/capacity (*v/c*) ratio:	1.003	1.003	1.038	1.038
v/c less ATSAC adjustment:	0.903	0.903	0.938	0.938
Level of Service (LOS):	E	E	E	E

PROJECT IMPACT

Change in *v/c* due to project:	0.035	Δ*v/c* after mitigation:	0.035
Significantly impacted?	YES	Fully mitigated?	NO

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CMACalc - Critical Movement Analysis Calculator

Upper Stone Canyon - Existing (2008) Plus Project

Intersection No. 3	2008, EXISTING		, PROJECTED CUMULATIVE BASE			, WITH PROJECT				, WITH TRAFFIC MITIGATION	
North/South Street:	Critical Phases:	3	Ambient Growth	Critical Phases:	3	☐ Adjacent	In	Out	Total	Critical Phases:	3
Skirball Center Drive	Capacity:	1425	from: 2008	Capacity:	1425	Trip AM	100	50	150	Capacity:	1425
East/West Street:	Signal System:	3	to: 0	Signal System:	3	Gen 1 PM	53	97	150	☐ Use Dist 2? Signal System:	3
Mulholland Drive	v/c reduction:	10%	at: 0.0%	v/c reduction:	10%	Trip AM	0	0	0	v/c reduction:	10%
Analysis Date: 05/09/2011	Opposed Phasing:	0		Opposed Phasing:	0	Gen 2 PM	0	0	0	Opposed Phasing:	0
PM Peak: 3:00 PM											

Direction	Movement	RTOR	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume	%	+ Project Volume	Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left		334	2	184	0		334	2	184	0%	0	334	2	184	0	334	2	184
	Lt-Th	N/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	336	1	52	0		336	1	52	100%	53	389	1	56	0	389	1	56
	Shared			0	0				0	0	0%			0	0			0	0
Southbound	Left		0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	S/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0
Eastbound	Left		0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	E/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	297	1	297	0		297	1	297	0%	0	297	1	297	0	297	1	297
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	484	1	317	0		484	1	317	0%	0	484	1	317	0	484	1	317
	Shared			0	0				0	0	0%			0	0			0	0
Westbound	Left		569	1	569	0		569	1	569	0%	97	666	1	666	0	666	1	666
	Lt-Th	W/B RTOR:		0	0				0	0	100%			0	0			0	0
	Thru	Existing: 50%	352	2	176	0		352	2	176	0%	0	352	2	176	0	352	2	176
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0

	2008, Existing	Projected Cumulative Base	With Project	With Traffic Mitigation
Critical Volumes: North-South:	184	184	184	184
East-West:	886	886	983	983
Total:	1070	1070	1167	1167
Volume/capacity (*v/c*) ratio:	0.751	0.751	0.819	0.819
v/c less ATSAC adjustment:	0.651	0.651	0.719	0.719
Level of Service (LOS):	**B**	**B**	**C**	**C**

PROJECT IMPACT

Change in *v/c* due to project:	0.068	Δ*v/c* after mitigation:	0.068
Significantly impacted?	YES	Fully mitigated?	NO

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Upper Stone Canyon - Existing (2008) Plus Project

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Intersection No. 4		2008, EXISTING		, PROJECTED CUMULATIVE BASE				, WITH PROJECT				, WITH TRAFFIC MITIGATION	
North/South Street:		Critical Phases:	2	Ambient Growth		Critical Phases:	2	☐ Adjacent	In	Out	Total	Critical Phases:	2
Skirball Center Drive		Capacity:	1500	from:	2008	Capacity:	1500	Trip Gen 1 AM	100	50	150	Capacity:	1500
East/West Street:		Signal System:	3	to:	0	Signal System:	3	Trip Gen 1 PM	53	97	150	☐ Use Dist 2? Signal System:	3
I-405 NB on/off Ramps		v/c reduction:	10%	at:	0.0%	v/c reduction:	10%	Trip Gen 2 AM	0	0	0	v/c reduction:	10%
Analysis Date:	05/09/2011	Opposed Phasing:	0			Opposed Phasing:	0	Trip Gen 2 PM	0	0	0	Opposed Phasing:	0
AM Peak:	7:15 AM												

Approach / Movement	RTOR	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume	%	+ Project Volume	= Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound Left		62	1	**62**	0		62	1	**62**	0%	0	62	1	**62**	0	62	1	**62**
Northbound Lt-Th	N/B RTOR:		0	0				0	0	0%			0	0			0	0
Northbound Thru	Existing: 50%	274	1	274	0		274	1	274	57%	55	329	1	329	0	329	1	329
Northbound Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
Northbound Right	Mitigated: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
Northbound Shared			0	0				0	0	0%			0	0			0	0
Southbound Left		0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
Southbound Lt-Th	S/B RTOR:		0	0				0	0	0%			0	0			0	0
Southbound Thru	Existing: 50%	971	1	**971**	0		971	1	**971**	0%	20	991	1	**991**	0	991	1	**991**
Southbound Th-Rt	Projected: 50%		0	0				0	0	43%			0	0			0	0
Southbound Right	Mitigated: 50%	372	1	66	0		372	1	66	0%	30	402	1	74	0	402	1	74
Southbound Shared			0	0				0	0	57%			0	0			0	0
Eastbound Left		611	2	**336**	0		611	2	**336**	43%	45	656	2	**361**	0	656	2	**361**
Eastbound Lt-Th	E/B RTOR:		0	0				0	0	0%			0	0			0	0
Eastbound Thru	Existing: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
Eastbound Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
Eastbound Right	Mitigated: 50%	68	1	37	0		68	1	37	0%	0	68	1	37	0	68	1	37
Eastbound Shared			0	0				0	0	0%			0	0			0	0
Westbound Left		0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
Westbound Lt-Th	W/B RTOR:		0	0				0	0	0%			0	0			0	0
Westbound Thru	Existing: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
Westbound Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
Westbound Right	Mitigated: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
Westbound Shared			0	0				0	0	0%			0	0			0	0

Critical Volumes:	2008, Existing	Projected Cumulative Base	With Project	With Traffic Mitigation
North-South:	1033	1033	1053	1053
East-West:	336	336	361	361
Total:	1369	1369	1414	1414
Volume/capacity (*v/c*) ratio:	0.913	0.913	0.943	0.943
v/c less ATSAC adjustment:	0.813	0.813	0.843	0.843
Level of Service (LOS):	**D**	**D**	**D**	**D**

PROJECT IMPACT

Change in *v/c* due to project:	0.030	Δ*v/c* after mitigation:	0.030
Significantly impacted?	YES	Fully mitigated?	NO

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CMACalc - Critical Movement Analysis Calculator

Upper Stone Canyon - Existing (2008) Plus Project

LADOT
Bureau of Planning and Land Use Development

Intersection No. 4	2008, EXISTING		, PROJECTED CUMULATIVE BASE			, WITH PROJECT				, WITH TRAFFIC MITIGATION	
North/South Street:	Critical Phases:	2	Ambient Growth	Critical Phases:	2	☐ Adjacent	In	Out	Total	Critical Phases:	2
Skirball Center Drive	Capacity:	1500	from: 2008	Capacity:	1500	Trip Gen 1 AM	100	50	150	Capacity:	1500
East/West Street:	Signal System:	3	to: 0	Signal System:	3	Trip Gen 1 PM	53	97	150	☐ Use Dist 2? Signal System:	3
I-405 NB on/off Ramps	v/c reduction:	10%	at: 0.0%	v/c reduction:	10%	Trip Gen 2 AM	0	0	0	v/c reduction:	10%
Analysis Date: 05/09/2011	Opposed Phasing:	0		Opposed Phasing:	0	Trip Gen 2 PM	0	0	0	Opposed Phasing:	0
PM Peak: 3:00 PM											

Approach	Movement	RTOR	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume	%	+ Project Volume	Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left		254	1	254	0		254	1	254	0%	0	254	1	254	0	254	1	254
	Lt-Th	N/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	420	1	420	0		420	1	420	57%	32	452	1	452	0	452	1	452
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0
Southbound	Left		0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	S/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	590	1	590	0		590	1	590	0%	44	634	1	634	0	634	1	634
	Th-Rt	Projected: 50%		0	0				0	0	43%			0	0			0	0
	Right	Mitigated: 50%	454	1	328	0		454	1	328	0%	54	508	1	371	0	508	1	371
	Shared			0	0				0	0	57%			0	0			0	0
Eastbound	Left		253	2	139	0		253	2	139	43%	21	274	2	151	0	274	2	151
	Lt-Th	E/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	56	1	0	0		56	1	0	0%	0	56	1	0	0	56	1	0
	Shared			0	0				0	0	0%			0	0			0	0
Westbound	Left		0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	W/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0

Critical Volumes:	2008, Existing	Projected Cumulative Base	With Project	With Traffic Mitigation
North-South:	844	844	888	888
East-West:	139	139	151	151
Total:	983	983	1039	1039
Volume/capacity (*v/c*) ratio:	0.655	0.655	0.692	0.692
v/c less ATSAC adjustment:	0.555	0.555	0.592	0.592
Level of Service (LOS):	**A**	**A**	**A**	**A**

PROJECT IMPACT

Change in *v/c* due to project:	0.037	Δ*v/c* after mitigation:	0.037
Significantly impacted?	NO	Fully mitigated?	N/A

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CMACalc - Critical Movement Analysis Calculator

Upper Stone Canyon - Existing (2008) Plus Project

LADOT
Bureau of Planning and Land Use Development

Intersection No. 5	2008, EXISTING		, PROJECTED CUMULATIVE BASE			, WITH PROJECT				, WITH TRAFFIC MITIGATION	
North/South Street:	Critical Phases:	3	Ambient Growth	Critical Phases:	3	☐ Adjacent		In / Out / Total		Critical Phases:	3
I-405 SB on/off Ramps	Capacity:	1425	from: 2008	Capacity:	1425	Trip Gen 1	AM	100 / 50 / 150		Capacity:	1425
East/West Street:	Signal System:	3	to: 0	Signal System:	3		PM	53 / 97 / 150	☐ Use Dist 2?	Signal System:	3
Skirball Center Drive	v/c reduction:	10%	at: 0.0%	v/c reduction:	10%	Trip Gen 2	AM	0 / 0 / 0		v/c reduction:	10%
Analysis Date: 05/09/2011	Opposed Phasing:	0		Opposed Phasing:	0		PM	0 / 0 / 0		Opposed Phasing:	0
AM Peak: 7:30 AM											

Approach	Movement	RTOR	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume	%	+ Project Volume	= Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left		0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	N/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0
Southbound	Left		131	0	0	0		131	0	0	57%	55	186	0	0	0	186	0	0
	Lt-Th	S/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	3	0	0	0		3	0	0	0%	0	3	0	0	0	3	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	216	1	119	0		216	1	119	0%	0	216	1	119	0	216	1	119
	Shared			1	**231**				1	**231**	0%			1	**286**			1	**286**
Eastbound	Left		0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	E/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	208	1	**160**	0		208	1	**160**	0%	0	208	1	**160**	0	208	1	**160**
	Th-Rt	Projected: 50%		1	**160**				1	**160**	0%			1	**160**			1	**160**
	Right	Mitigated: 50%	111	0	0	0		111	0	0	0%	0	111	0	0	0	111	0	0
	Shared			0	0				0	0	0%			0	0			0	0
Westbound	Left		652	1	**652**	0		652	1	**652**	0%	20	672	1	**672**	0	672	1	**672**
	Lt-Th	W/B RTOR:		0	0				0	0	43%			0	0			0	0
	Thru	Existing: 50%	434	2	217	0		434	2	217	0%	0	434	2	217	0	434	2	217
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0

	2008, Existing	Projected Cumulative Base	With Project	With Traffic Mitigation
Critical Volumes: North-South:	231	231	286	286
East-West:	812	812	832	832
Total:	1043	1043	1118	1118
Volume/capacity (*v/c*) ratio:	0.732	0.732	0.784	0.784
v/c less ATSAC adjustment:	0.632	0.632	0.684	0.684
Level of Service (LOS):	**B**	**B**	**B**	**B**

P R O J E C T   I M P A C T

Change in *v/c* due to project:	0.052	Δ*v/c* after mitigation:	0.052
Significantly impacted?	NO	Fully mitigated?	N/A

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Bureau of Planning and Land Use Development

CMACalc - Critical Movement Analysis Calculator

Upper Stone Canyon - Existing (2008) Plus Project

Intersection No. 5	2008, EXISTING		, PROJECTED CUMULATIVE BASE			, WITH PROJECT				, WITH TRAFFIC MITIGATION	
North/South Street:	Critical Phases:	3	Ambient Growth	Critical Phases:	3	☐ Adjacent	In	Out	Total	Critical Phases:	3
I-405 SB on/off Ramps	Capacity:	1425	from: 2008	Capacity:	1425	Trip Gen 1 AM	100	50	150	Capacity:	1425
East/West Street:	Signal System:	3	to: 0	Signal System:	3	PM	53	97	150	☐ Use Dist 2? Signal System:	3
Skirball Center Drive	v/c reduction:	10%	at: 0.0%	v/c reduction:	10%	Trip Gen 2 AM	0	0	0	v/c reduction:	10%
Analysis Date: 05/09/2011	Opposed Phasing:	0		Opposed Phasing:	0	PM	0	0	0	Opposed Phasing:	0
PM Peak: 3:00 PM											

Approach	Movement	RTOR	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume	%	+ Project Volume	Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left		0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	N/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0
Southbound	Left		244	0	0	0		244	0	0	57%	32	276	0	0	0	276	0	0
	Lt-Th	S/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	3	0	0	0		3	0	0	0%	0	3	0	0	0	3	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	87	1	48	0		87	1	48	0%	0	87	1	48	0	87	1	48
	Shared			1	286				1	286	0%			1	318			1	318
Eastbound	Left		0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	E/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	441	1	244	0		441	1	244	0%	0	441	1	244	0	441	1	244
	Th-Rt	Projected: 50%		1	244				1	244	0%			1	244			1	244
	Right	Mitigated: 50%	47	0	0	0		47	0	0	0%	0	47	0	0	0	47	0	0
	Shared			0	0				0	0	0%			0	0			0	0
Westbound	Left		342	1	342	0		342	1	342	0%	44	386	1	386	0	386	1	386
	Lt-Th	W/B RTOR:		0	0				0	0	43%			0	0			0	0
	Thru	Existing: 50%	288	2	144	0		288	2	144	0%	0	288	2	144	0	288	2	144
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0

Critical Volumes:	2008, Existing	Projected Cumulative Base	With Project	With Traffic Mitigation
North-South:	286	286	318	318
East-West:	586	586	630	630
Total:	872	872	948	948
Volume/capacity (*v/c*) ratio:	0.612	0.612	0.665	0.665
v/c less ATSAC adjustment:	0.512	0.512	0.565	0.565
Level of Service (LOS):	**A**	**A**	**A**	**A**

PROJECT IMPACT

Change in *v/c* due to project:	0.053	Δ*v/c* after mitigation:	0.053
Significantly impacted?	NO	Fully mitigated?	N/A

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Appendix H
Level-of-Service Worksheets
Existing (2008) + Project Analysis
Floating Cover Alternative (Alternative 2)

LADOT

Bureau of Planning and Land Use Development

CMACalc - Critical Movement Analysis Calculator

Upper Stone Canyon Reservoir - Existing (2008) plus Project

Intersection No. 1	2008, EXISTING	, PROJECTED CUMULATIVE BASE	, WITH PROJECT	, WITH TRAFFIC MITIGATION
North/South Street: **Roscomare Road**	Critical Phases: 3	Ambient Growth; Critical Phases: 3	☐ Adjacent — In / Out / Total	Critical Phases: 3
	Capacity: 1425	from: 2008; Capacity: 1425	Trip Gen 1 AM: 34 / 10 / 44	Capacity: 1425
East/West Street: **Mulholland Drive**	Signal System: 3	to: 0; Signal System: 3	Trip Gen 1 PM: 11 / 33 / 44	☐ Use Dist 2? Signal System: 3
	v/c reduction: 10%	at: 0.0%; v/c reduction: 10%	Trip Gen 2 AM: 0 / 0 / 0	v/c reduction: 10%
Analysis Date: 05/09/2011	Opposed Phasing: 0	Opposed Phasing: 0	Trip Gen 2 PM: 0 / 0 / 0	Opposed Phasing: 0
AM Peak: 7:30 AM				

Approach / Movement	RTOR	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume	%	+ Project Volume	= Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound Left		210	0	0	0		210	0	0	0%	0	210	0	0	0	210	0	0
Northbound Lt-Th	N/B RTOR:		0	0				0	0	0%			0	0			0	0
Northbound Thru	Existing: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
Northbound Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
Northbound Right	Mitigated: 50%	90	0	0	0		90	0	0	0%	0	90	0	0	0	90	0	0
Northbound Shared			1	300				1	300	0%			1	300			1	300
Southbound Left		0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
Southbound Lt-Th	S/B RTOR:		0	0				0	0	0%			0	0			0	0
Southbound Thru	Existing: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
Southbound Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
Southbound Right	Mitigated: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
Southbound Shared			0	0				0	0	0%			0	0			0	0
Eastbound Left		0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
Eastbound Lt-Th	E/B RTOR:		0	0				0	0	0%			0	0			0	0
Eastbound Thru	Existing: 50%	625	1	625	0		625	1	625	100%	34	659	1	659	0	659	1	659
Eastbound Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
Eastbound Right	Mitigated: 50%	355	1	250	0		355	1	250	0%	0	355	1	250	0	355	1	250
Eastbound Shared			0	0				0	0	0%			0	0			0	0
Westbound Left		198	1	198	0		198	1	198	0%	0	198	1	198	0	198	1	198
Westbound Lt-Th	W/B RTOR:		0	0				0	0	0%			0	0			0	0
Westbound Thru	Existing: 50%	490	1	490	0		490	1	490	0%	10	500	1	500	0	500	1	500
Westbound Th-Rt	Projected: 50%		0	0				0	0	100%			0	0			0	0
Westbound Right	Mitigated: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
Westbound Shared			0	0				0	0	0%			0	0			0	0

Critical Volumes:	2008, Existing	Projected Cumulative Base	With Project	With Traffic Mitigation
North-South:	300	300	300	300
East-West:	823	823	857	857
Total:	1123	1123	1157	1157
Volume/capacity (*v/c*) ratio:	0.788	0.788	0.812	0.812
v/c less ATSAC adjustment:	0.688	0.688	0.712	0.712
Level of Service (LOS):	**B**	**B**	**C**	**C**

PROJECT IMPACT

Change in *v/c* due to project:	0.024	Δ*v/c* after mitigation:	0.024
Significantly impacted?	NO	Fully mitigated?	N/A

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CMACalc - Critical Movement Analysis Calculator

Upper Stone Canyon Reservoir - Existing (2008) plus Project

LADOT
Bureau of Planning and Land Use Development

Intersection No. 1	2008, EXISTING	, PROJECTED CUMULATIVE BASE	, WITH PROJECT	, WITH TRAFFIC MITIGATION
North/South Street: **Roscomare Road**	Critical Phases: 3	Ambient Growth from: 2008 to: 0 at: 0.0%	☐ Adjacent	Critical Phases: 3
East/West Street: **Mulholland Drive**	Capacity: 1425	Critical Phases: 3	Trip Gen 1 AM: In 34, Out 10, Total 44	Capacity: 1425
Analysis Date: 05/09/2011	Signal System: 3	Capacity: 1425	Trip Gen 1 PM: In 11, Out 33, Total 44	☐ Use Dist 2? Signal System: 3
PM Peak: 3:00 PM	v/c reduction: 10%	Signal System: 3	Trip Gen 2 AM: In 0, Out 0, Total 0	v/c reduction: 10%
	Opposed Phasing: 0	v/c reduction: 10%	Trip Gen 2 PM: In 0, Out 0, Total 0	Opposed Phasing: 0
		Opposed Phasing: 0		

Approach	Movement	RTOR	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume	%	+ Project Volume	Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left		266	0	0	0		266	0	0	0%	0	266	0	0	0	266	0	0
	Lt-Th	N/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	94	0	0	0		94	0	0	0%	0	94	0	0	0	94	0	0
	Shared			1	360				1	360	0%			1	360			1	360
Southbound	Left		0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	S/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0
Eastbound	Left		0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	E/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	435	1	435	0		435	1	435	100%	11	446	1	446	0	446	1	446
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	175	1	42	0		175	1	42	0%	0	175	1	42	0	175	1	42
	Shared			0	0				0	0	0%			0	0			0	0
Westbound	Left		67	1	67	0		67	1	67	0%	0	67	1	67	0	67	1	67
	Lt-Th	W/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	516	1	516	0		516	1	516	0%	33	549	1	549	0	549	1	549
	Th-Rt	Projected: 50%		0	0				0	0	100%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0

Critical Volumes:	2008, Existing	Projected Cumulative Base	With Project	With Traffic Mitigation
North-South:	360	360	360	360
East-West:	516	516	549	549
Total:	876	876	909	909
Volume/capacity (*v/c*) ratio:	0.615	0.615	0.638	0.638
v/c less ATSAC adjustment:	0.515	0.515	0.538	0.538
Level of Service (LOS):	A	A	A	A

PROJECT IMPACT

Change in *v/c* due to project:	0.023	Δ*v/c* after mitigation:	0.023
Significantly impacted?	NO	Fully mitigated?	N/A

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Bureau of Planning and Land Use Development

CMACalc - Critical Movement Analysis Calculator

Upper Stone Canyon Reservoir - Existing (2008) plus Project

Intersection No. 2	2008, EXISTING	, PROJECTED CUMULATIVE BASE	, WITH PROJECT	, WITH TRAFFIC MITIGATION
North/South Street: **Casiano Road**	Critical Phases: 3	Critical Phases: 3		Critical Phases: 3
East/West Street: **Mulholland Drive**	Capacity: 1425	Capacity: 1425		Capacity: 1425
Analysis Date: 05/09/2011	Signal System: 3	Signal System: 3		Signal System: 3
AM Peak: 7:15 AM	v/c reduction: 10%	v/c reduction: 10%		v/c reduction: 10%
	Opposed Phasing: 0	Opposed Phasing: 0		Opposed Phasing: 0

Ambient Growth	
from:	2008
to:	0
at:	0.0%

☐ Adjacent		In	Out	Total
Trip Gen 1	AM	34	10	44
	PM	11	33	44
Trip Gen 2	AM	0	0	0
	PM	0	0	0

☐ Use Dist 2?

Approach	Movement	RTOR	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume	%	+ Project Volume	= Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left		224	2	123	0		224	2	123	0%	0	224	2	123	0	224	2	123
	Lt-Th	N/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	147	1	56	0		147	1	56	0%	0	147	1	56	0	147	1	56
	Shared			0	0				0	0	0%			0	0			0	0
Southbound	Left		0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	S/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0
Eastbound	Left		0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	E/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	736	1	736	0		736	1	736	100%	34	770	1	770	0	770	1	770
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	284	1	172	0		284	1	172	0%	0	284	1	172	0	284	1	172
	Shared			0	0				0	0	0%			0	0			0	0
Westbound	Left		182	1	182	0		182	1	182	0%	0	182	1	182	0	182	1	182
	Lt-Th	W/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	801	2	401	0		801	2	401	0%	10	811	2	406	0	811	2	406
	Th-Rt	Projected: 50%		0	0				0	0	100%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0

	2008, EXISTING	PROJECTED CUMULATIVE BASE	WITH PROJECT	WITH TRAFFIC MITIGATION
Critical Volumes: North-South:	123	123	123	123
East-West:	918	918	952	952
Total:	1041	1041	1075	1075
Volume/capacity (*v/c*) ratio:	0.731	0.731	0.755	0.755
v/c less ATSAC adjustment:	0.631	0.631	0.655	0.655
Level of Service (LOS):	**B**	**B**	**B**	**B**

PROJECT IMPACT

Change in *v/c* due to project:	0.024	Δ*v/c* after mitigation:	0.024
Significantly impacted?	NO	Fully mitigated?	N/A

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CMACalc - Critical Movement Analysis Calculator

Upper Stone Canyon Reservoir - Existing (2008) plus Project

Intersection No. 2	**2008, EXISTING**		**, PROJECTED CUMULATIVE BASE**		**, WITH PROJECT**		**, WITH TRAFFIC MITIGATION**
North/South Street:	Critical Phases: 3	Ambient Growth	Critical Phases: 3	☐ Adjacent	In / Out / Total		Critical Phases: 3
Casiano Road	Capacity: 1425	from: 2008	Capacity: 1425	Trip Gen 1 AM	34 / 10 / 44		Capacity: 1425
East/West Street:	Signal System: 3	to: 0	Signal System: 3	Trip Gen 1 PM	11 / 33 / 44	☐ Use Dist 2?	Signal System: 3
Mulholland Drive	v/c reduction: 10%	at: 0.0%	v/c reduction: 10%	Trip Gen 2 AM	0 / 0 / 0		v/c reduction: 10%
Analysis Date: 05/09/2011	Opposed Phasing: 0		Opposed Phasing: 0	Trip Gen 2 PM	0 / 0 / 0		Opposed Phasing: 0
PM Peak: 3:00 PM							

Approach	Movement	RTOR	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume	%	+ Project Volume	Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left		251	2	138	0		251	2	138	0%	0	251	2	138	0	251	2	138
	Lt-Th	N/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	176	1	120	0		176	1	120	0%	0	176	1	120	0	176	1	120
	Shared			0	0				0	0	0%			0	0			0	0
Southbound	Left		0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	S/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0
Eastbound	Left		0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	E/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	466	1	466	0		466	1	466	100%	11	477	1	477	0	477	1	477
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	171	1	45	0		171	1	45	0%	0	171	1	45	0	171	1	45
	Shared			0	0				0	0	0%			0	0			0	0
Westbound	Left		111	1	111	0		111	1	111	0%	0	111	1	111	0	111	1	111
	Lt-Th	W/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	684	2	342	0		684	2	342	0%	33	717	2	359	0	717	2	359
	Th-Rt	Projected: 50%		0	0				0	0	100%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0

	2008, Existing	Projected Cumulative Base	With Project	With Traffic Mitigation
Critical Volumes: North-South:	138	138	138	138
East-West:	577	577	588	588
Total:	715	715	726	726
Volume/capacity (*v/c*) ratio:	0.502	0.502	0.510	0.510
v/c less ATSAC adjustment:	0.402	0.402	0.410	0.410
Level of Service (LOS):	**A**	**A**	**A**	**A**

P R O J E C T   I M P A C T

Change in *v/c* due to project: 0.008 | Δ*v/c* after mitigation: 0.008
Significantly impacted? NO | Fully mitigated? N/A

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CMACalc - Critical Movement Analysis Calculator

Upper Stone Canyon Reservoir - Existing (2008) plus Project

Intersection No. 3

North/South Street: **Skirball Center Drive**

East/West Street: **Mulholland Drive**

Analysis Date: 05/09/2011

AM Peak: 7:30 AM

	2008, EXISTING	, PROJECTED CUMULATIVE BASE	, WITH PROJECT	, WITH TRAFFIC MITIGATION
Critical Phases	3	3		3
Capacity	1425	1425		1425
Signal System	3	3		3
v/c reduction	10%	10%		10%
Opposed Phasing	0	0		0

Ambient Growth — from: 2008; to: 0; at: 0.0%

☐ Adjacent

Trip		In	Out	Total
Gen 1	AM	34	10	44
Gen 1	PM	11	33	44
Gen 2	AM	0	0	0
Gen 2	PM	0	0	0

☐ Use Dist 2?

Approach	Movement	RTOR	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume	%	+ Project Volume	= Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left		416	2	229	0		416	2	229	0%	0	416	2	229	0	416	2	229
	Lt-Th	N/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	432	1	146	0		432	1	146	100%	34	466	1	176	0	466	1	176
	Shared			0	0				0	0	0%			0	0			0	0
Southbound	Left		0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	S/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0
Eastbound	Left		0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	E/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	630	1	630	0		630	1	630	0%	0	630	1	630	0	630	1	630
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	830	1	622	0		830	1	622	0%	0	830	1	622	0	830	1	622
	Shared			0	0				0	0	0%			0	0			0	0
Westbound	Left		571	1	571	0		571	1	571	0%	10	581	1	581	0	581	1	581
	Lt-Th	W/B RTOR:		0	0				0	0	100%			0	0			0	0
	Thru	Existing: 50%	428	2	214	0		428	2	214	0%	0	428	2	214	0	428	2	214
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0

Critical Volumes:	2008, Existing	Projected Cumulative Base	With Project	With Traffic Mitigation
North-South:	229	229	229	229
East-West:	1201	1201	1211	1211
Total:	1430	1430	1440	1440
Volume/capacity (*v/c*) ratio:	1.003	1.003	1.010	1.010
v/c less ATSAC adjustment:	0.903	0.903	0.910	0.910
Level of Service (LOS):	E	E	E	E

PROJECT IMPACT

Change in *v/c* due to project: 0.007

Significantly impacted? NO

Δ*v/c* after mitigation: 0.007

Fully mitigated? N/A

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Upper Stone Canyon Reservoir - Existing (2008) plus Project

Intersection No. 3	2008, EXISTING		, PROJECTED CUMULATIVE BASE		, WITH PROJECT				, WITH TRAFFIC MITIGATION	
North/South Street:	Critical Phases:	3	Ambient Growth / Critical Phases:	3	☐ Adjacent		In	Out / Total	Critical Phases:	3
Skirball Center Drive	Capacity:	1425	from: 2008 / Capacity:	1425	Trip Gen 1	AM	34	10 / 44	Capacity:	1425
East/West Street:	Signal System:	3	to: 0 / Signal System:	3		PM	11	33 / 44	☐ Use Dist 2? Signal System:	3
Mulholland Drive	v/c reduction:	10%	at: 0.0% / v/c reduction:	10%	Trip Gen 2	AM	0	0 / 0	v/c reduction:	10%
Analysis Date: 05/09/2011	Opposed Phasing:	0	Opposed Phasing:	0		PM	0	0 / 0	Opposed Phasing:	0
PM Peak: 3:00 PM										

Movement	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume	%	+ Project Volume	Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound Left	334	2	184	0		334	2	184	0%	0	334	2	184	0	334	2	184
Lt-Th		0	0				0	0	0%			0	0			0	0
Thru	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
Th-Rt		0	0				0	0	0%			0	0			0	0
Right	336	1	52	0		336	1	52	100%	11	347	1	46	0	347	1	46
Shared		0	0				0	0	0%			0	0			0	0
Southbound Left	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
Lt-Th		0	0				0	0	0%			0	0			0	0
Thru	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
Th-Rt		0	0				0	0	0%			0	0			0	0
Right	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
Shared		0	0				0	0	0%			0	0			0	0
Eastbound Left	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
Lt-Th		0	0				0	0	0%			0	0			0	0
Thru	297	1	297	0		297	1	297	0%	0	297	1	297	0	297	1	297
Th-Rt		0	0				0	0	0%			0	0			0	0
Right	484	1	317	0		484	1	317	0%	0	484	1	317	0	484	1	317
Shared		0	0				0	0	0%			0	0			0	0
Westbound Left	569	1	569	0		569	1	569	0%	33	602	1	602	0	602	1	602
Lt-Th		0	0				0	0	100%			0	0			0	0
Thru	352	2	176	0		352	2	176	0%	0	352	2	176	0	352	2	176
Th-Rt		0	0				0	0	0%			0	0			0	0
Right	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
Shared		0	0				0	0	0%			0	0			0	0

N/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%

S/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%

E/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%

W/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%

Critical Volumes:	2008, Existing	Projected Cumulative Base	With Project	With Traffic Mitigation
North-South:	184	184	184	184
East-West:	886	886	919	919
Total:	1070	1070	1103	1103
Volume/capacity (*v/c*) ratio:	0.751	0.751	0.774	0.774
v/c less ATSAC adjustment:	0.651	0.651	0.674	0.674
Level of Service (LOS):	**B**	**B**	**B**	**B**

PROJECT IMPACT

Change in *v/c* due to project:	0.023	Δ*v/c* after mitigation:	0.023
Significantly impacted?	NO	Fully mitigated?	N/A

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Upper Stone Canyon Reservoir - Existing (2008) plus Project

Intersection No. 4	2008, EXISTING		, PROJECTED CUMULATIVE BASE			, WITH PROJECT				, WITH TRAFFIC MITIGATION	
North/South Street:	Critical Phases:	2	Ambient Growth	Critical Phases:	2	☐ Adjacent	In	Out	Total	Critical Phases:	2
Skirball Center Drive	Capacity:	1500	from: 2008	Capacity:	1500	Trip Gen 1 AM	34	10	44	Capacity:	1500
East/West Street:	Signal System:	3	to: 0	Signal System:	3	PM	11	33	44	☐ Use Dist 2? Signal System:	3
I-405 NB on/off Ramps	v/c reduction:	10%	at: 0.0%	v/c reduction:	10%	Trip Gen 2 AM	0	0	0	v/c reduction:	10%
Analysis Date: 05/09/2011	Opposed Phasing:	0		Opposed Phasing:	0	PM	0	0	0	Opposed Phasing:	0
AM Peak: 7:15 AM											

Direction	Movement	RTOR	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume	%	+ Project Volume	= Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left		62	1	62	0		62	1	62	0%	0	62	1	62	0	62	1	62
	Lt-Th	N/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	274	1	274	0		274	1	274	55%	18	292	1	292	0	292	1	292
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0
Southbound	Left		0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	S/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	971	1	971	0		971	1	971	0%	4	975	1	975	0	975	1	975
	Th-Rt	Projected: 50%		0	0				0	0	45%			0	0			0	0
	Right	Mitigated: 50%	372	1	66	0		372	1	66	0%	6	378	1	64	0	378	1	64
	Shared			0	0				0	0	55%			0	0			0	0
Eastbound	Left		611	2	336	0		611	2	336	45%	16	627	2	345	0	627	2	345
	Lt-Th	E/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	68	1	37	0		68	1	37	0%	0	68	1	37	0	68	1	37
	Shared			0	0				0	0	0%			0	0			0	0
Westbound	Left		0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	W/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0

	2008, Existing		Projected Cumulative Base		With Project		With Traffic Mitigation	
Critical Volumes:	North-South:	1033	North-South:	1033	North-South:	1037	North-South:	1037
	East-West:	336	East-West:	336	East-West:	345	East-West:	345
	Total:	1369	Total:	1369	Total:	1382	Total:	1382
Volume/capacity (*v/c*) ratio:		0.913		0.913		0.921		0.921
v/c less ATSAC adjustment:		0.813		0.813		0.821		0.821
Level of Service (LOS):		**D**		**D**		**D**		**D**

PROJECT IMPACT

Change in *v/c* due to project:	0.008	Δ*v/c* after mitigation:	0.008
Significantly impacted?	NO	Fully mitigated?	N/A

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Upper Stone Canyon Reservoir - Existing (2008) plus Project

Intersection No. 4	2008, EXISTING	, PROJECTED CUMULATIVE BASE	, WITH PROJECT	, WITH TRAFFIC MITIGATION
North/South Street: **Skirball Center Drive**	Critical Phases: 2	Ambient Growth — from: 2008; to: 0; at: 0.0%	☐ Adjacent	Critical Phases: 2
East/West Street: **I-405 NB on/off Ramps**	Capacity: 1500	Critical Phases: 2		Capacity: 1500
Analysis Date: 05/09/2011	Signal System: 3	Capacity: 1500		☐ Use Dist 2? Signal System: 3
PM Peak: 3:00 PM	v/c reduction: 10%	Signal System: 3		v/c reduction: 10%
	Opposed Phasing: 0	v/c reduction: 10%		Opposed Phasing: 0
		Opposed Phasing: 0		

		In	Out	Total
Trip Gen 1	AM	34	10	44
	PM	11	33	44
Trip Gen 2	AM	0	0	0
	PM	0	0	0

Approach	Movement	RTOR	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume	%	+ Project Volume	Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left		254	1	254	0		254	1	254	0%	0	254	1	254	0	254	1	254
	Lt-Th	N/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	420	1	420	0		420	1	420	55%	7	427	1	427	0	427	1	427
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0
Southbound	Left		0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	S/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	590	1	590	0		590	1	590	0%	16	606	1	606	0	606	1	606
	Th-Rt	Projected: 50%		0	0				0	0	45%			0	0			0	0
	Right	Mitigated: 50%	454	1	328	0		454	1	328	0%	18	472	1	344	0	472	1	344
	Shared			0	0				0	0	55%			0	0			0	0
Eastbound	Left		253	2	139	0		253	2	139	45%	4	257	2	141	0	257	2	141
	Lt-Th	E/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	56	1	0	0		56	1	0	0%	0	56	1	0	0	56	1	0
	Shared			0	0				0	0	0%			0	0			0	0
Westbound	Left		0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	W/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0

	2008, Existing	Projected Cumulative Base	With Project	With Traffic Mitigation
Critical Volumes: North-South:	844	844	860	860
East-West:	139	139	141	141
Total:	983	983	1001	1001
Volume/capacity (*v/c*) ratio:	0.655	0.655	0.668	0.668
v/c less ATSAC adjustment:	0.555	0.555	0.568	0.568
Level of Service (LOS):	A	A	A	A

PROJECT IMPACT

Change in *v/c* due to project:	0.013	Δ*v/c* after mitigation:	0.013
Significantly impacted?	NO	Fully mitigated?	N/A

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CMACalc - Critical Movement Analysis Calculator

Upper Stone Canyon Reservoir - Existing (2008) plus Project

LADOT Bureau of Planning and Land Use Development

Intersection No. 5	2008, EXISTING	, PROJECTED CUMULATIVE BASE	, WITH PROJECT	, WITH TRAFFIC MITIGATION
North/South Street: **I-405 SB on/off Ramps**	Critical Phases: 3	Ambient Growth from: 2008 to: 0 at: 0.0%	☐ Adjacent	Critical Phases: 3
East/West Street: **Skirball Center Drive**	Capacity: 1425	Critical Phases: 3	Trip Gen 1 AM: In 34, Out 10, Total 44	Capacity: 1425
Analysis Date: 05/09/2011	Signal System: 3	Capacity: 1425	Trip Gen 1 PM: In 11, Out 33, Total 44	☐ Use Dist 2? Signal System: 3
AM Peak: 7:30 AM	v/c reduction: 10%	Signal System: 3	Trip Gen 2 AM: In 0, Out 0, Total 0	v/c reduction: 10%
	Opposed Phasing: 0	v/c reduction: 10%	Trip Gen 2 PM: In 0, Out 0, Total 0	Opposed Phasing: 0
		Opposed Phasing: 0		

Approach / Movement	RTOR	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume	%	+ Project Volume	= Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound Left		0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
Lt-Th	N/B RTOR:		0	0				0	0	0%			0	0			0	0
Thru	Existing: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
Right	Mitigated: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
Shared			0	0				0	0	0%			0	0			0	0
Southbound Left		131	0	0	0		131	0	0	55%	18	149	0	0	0	149	0	0
Lt-Th	S/B RTOR:		0	0				0	0	0%			0	0			0	0
Thru	Existing: 50%	3	0	0	0		3	0	0	0%	0	3	0	0	0	3	0	0
Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
Right	Mitigated: 50%	216	1	119	0		216	1	119	0%	0	216	1	119	0	216	1	119
Shared			1	**231**				1	**231**	0%			1	**249**			1	**249**
Eastbound Left		0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
Lt-Th	E/B RTOR:		0	0				0	0	0%			0	0			0	0
Thru	Existing: 50%	208	1	**160**	0		208	1	**160**	0%	0	208	1	**160**	0	208	1	**160**
Th-Rt	Projected: 50%		1	**160**				1	**160**	0%			1	**160**			1	**160**
Right	Mitigated: 50%	111	0	0	0		111	0	0	0%	0	111	0	0	0	111	0	0
Shared			0	0				0	0	0%			0	0			0	0
Westbound Left		652	1	**652**	0		652	1	**652**	0%	4	656	1	**656**	0	656	1	**656**
Lt-Th	W/B RTOR:		0	0				0	0	45%			0	0			0	0
Thru	Existing: 50%	434	2	217	0		434	2	217	0%	0	434	2	217	0	434	2	217
Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
Right	Mitigated: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
Shared			0	0				0	0	0%			0	0			0	0

	2008, Existing	Projected Cumulative Base	With Project	With Traffic Mitigation
Critical Volumes: North-South:	231	231	249	249
East-West:	812	812	816	816
Total:	1043	1043	1065	1065
Volume/capacity (*v/c*) ratio:	0.732	0.732	0.747	0.747
v/c less ATSAC adjustment:	0.632	0.632	0.647	0.647
Level of Service (LOS):	**B**	**B**	**B**	**B**

P R O J E C T I M P A C T

Change in *v/c* due to project:	0.015	Δ*v/c* after mitigation:	0.015
Significantly impacted?	NO	Fully mitigated?	N/A

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CMACalc - Critical Movement Analysis Calculator

Upper Stone Canyon Reservoir - Existing (2008) plus Project

LADOT
Bureau of Planning and Land Use Development

Intersection No. 5	2008, EXISTING		, PROJECTED CUMULATIVE BASE			, WITH PROJECT				, WITH TRAFFIC MITIGATION	
North/South Street:	Critical Phases:	3	Ambient Growth	Critical Phases:	3	☐ Adjacent	In	Out	Total	Critical Phases:	3
I-405 SB on/off Ramps	Capacity:	1425	from: 2008	Capacity:	1425	Trip Gen 1 AM	34	10	44	Capacity:	1425
East/West Street:	Signal System:	3	to: 0	Signal System:	3	PM	11	33	44	☐ Use Dist 2? Signal System:	3
Skirball Center Drive	v/c reduction:	10%	at: 0.0%	v/c reduction:	10%	Trip Gen 2 AM	0	0	0	v/c reduction:	10%
Analysis Date: 05/09/2011	Opposed Phasing:	0		Opposed Phasing:	0	PM	0	0	0	Opposed Phasing:	0
PM Peak: 3:00 PM											

Approach	Movement	RTOR	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume	%	+ Project Volume	Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left		0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	N/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0
Southbound	Left		244	0	0	0		244	0	0	55%	7	251	0	0	0	251	0	0
	Lt-Th	S/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	3	0	0	0		3	0	0	0%	0	3	0	0	0	3	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	87	1	48	0		87	1	48	0%	0	87	1	48	0	87	1	48
	Shared			1	**286**				1	**286**	0%			1	**293**			1	**293**
Eastbound	Left		0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	E/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	441	1	**244**	0		441	1	**244**	0%	0	441	1	**244**	0	441	1	**244**
	Th-Rt	Projected: 50%		1	**244**				1	**244**	0%			1	**244**			1	**244**
	Right	Mitigated: 50%	47	0	0	0		47	0	0	0%	0	47	0	0	0	47	0	0
	Shared			0	0				0	0	0%			0	0			0	0
Westbound	Left		342	1	**342**	0		342	1	**342**	0%	16	358	1	**358**	0	358	1	**358**
	Lt-Th	W/B RTOR:		0	0				0	0	45%			0	0			0	0
	Thru	Existing: 50%	288	2	144	0		288	2	144	0%	0	288	2	144	0	288	2	144
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0

	2008, Existing		Projected Cumulative Base		With Project		With Traffic Mitigation	
Critical Volumes:	North-South:	286	North-South:	286	North-South:	293	North-South:	293
	East-West:	586	East-West:	586	East-West:	602	East-West:	602
	Total:	872	Total:	872	Total:	895	Total:	895
Volume/capacity (*v/c*) ratio:		0.612		0.612		0.628		0.628
v/c less ATSAC adjustment:		0.512		0.512		0.528		0.528
Level of Service (LOS):		**A**		**A**		**A**		**A**

PROJECT IMPACT

Change in *v/c* due to project:	0.016	Δ*v/c* after mitigation:	0.016
Significantly impacted?	NO	Fully mitigated?	N/A

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Appendix I
Level-of-Service Worksheets
Existing (2008) + Project Analysis
Aluminum Cover Alternative (Alternative 3)

LADOT

Bureau of Planning and Land Use Development

CMACalc - Critical Movement Analysis Calculator

Upper Stone Canyon Reservoir + Existing (2008) plus Project

Intersection No. 1	**2008, EXISTING**		**, PROJECTED CUMULATIVE BASE**				**, WITH PROJECT**				**, WITH TRAFFIC MITIGATION**	
North/South Street:	Critical Phases:	3	Ambient Growth		Critical Phases:	3	☐ Adjacent		In	Out	Total	Critical Phases: 3
Roscomare Road	Capacity:	1425	from:	2008	Capacity:	1425	Trip Gen 1	AM	73	25	98	Capacity: 1425
East/West Street:	Signal System:	3	to:	0	Signal System:	3		PM	25	73	98	☐ Use Dist 2? Signal System: 3
Mulholland Drive	v/c reduction:	10%	at:	0.0%	v/c reduction:	10%	Trip Gen 2	AM	0	0	0	v/c reduction: 10%
Analysis Date: 05/09/2011	Opposed Phasing:	0			Opposed Phasing:	0		PM	0	0	0	Opposed Phasing: 0
AM Peak: 7:30 AM												

Direction	Movement	RTOR	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume	%	+ Project Volume	= Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left		210	0	0	0		210	0	0	0%	0	210	0	0	0	210	0	0
	Lt-Th	N/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	90	0	0	0		90	0	0	0%	0	90	0	0	0	90	0	0
	Shared			1	**300**				1	**300**	0%			1	**300**			1	**300**
Southbound	Left		0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	S/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0
Eastbound	Left		0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	E/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	625	1	**625**	0		625	1	**625**	100%	73	698	1	**698**	0	698	1	**698**
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	355	1	250	0		355	1	250	0%	0	355	1	250	0	355	1	250
	Shared			0	0				0	0	0%			0	0			0	0
Westbound	Left		198	1	**198**	0		198	1	**198**	0%	0	198	1	**198**	0	198	1	**198**
	Lt-Th	W/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	490	1	490	0		490	1	490	0%	25	515	1	515	0	515	1	515
	Th-Rt	Projected: 50%		0	0				0	0	100%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0

	2008, Existing		Projected Cumulative Base		With Project		With Traffic Mitigation	
Critical Volumes:	North-South:	300	North-South:	300	North-South:	300	North-South:	300
	East-West:	823	East-West:	823	East-West:	896	East-West:	896
	Total:	1123	Total:	1123	Total:	1196	Total:	1196
Volume/capacity (*v/c*) ratio:		0.788		0.788		0.839		0.839
v/c less ATSAC adjustment:		0.688		0.688		0.739		0.739
Level of Service (LOS):		**B**		**B**		**C**		**C**

PROJECT IMPACT

Change in *v/c* due to project:	0.051	Δ*v/c* after mitigation:	0.051
Significantly impacted?	YES	Fully mitigated?	NO

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Bureau of Planning and Land Use Development

CMACalc - Critical Movement Analysis Calculator

Upper Stone Canyon Reservoir + Existing (2008) plus Project

Intersection No. 1		**2008, EXISTING**		**, PROJECTED CUMULATIVE BASE**				**, WITH PROJECT**				**, WITH TRAFFIC MITIGATION**	
North/South Street:		Critical Phases:	3	Ambient Growth		Critical Phases:	3	☐ Adjacent	In	Out	Total	Critical Phases:	3
Roscomare Road		Capacity:	1425	from:	2008	Capacity:	1425	Trip AM	73	25	98	Capacity:	1425
East/West Street:		Signal System:	3	to:	0	Signal System:	3	Gen 1 PM	25	73	98	☐ Use Dist 2? Signal System:	3
Mulholland Drive		v/c reduction:	10%	at:	0.0%	v/c reduction:	10%	Trip AM	0	0	0	v/c reduction:	10%
Analysis Date:	05/09/2011	Opposed Phasing:	0			Opposed Phasing:	0	Gen 2 PM	0	0	0	Opposed Phasing:	0
PM Peak:	3:00 PM												

Direction	Movement	RTOR	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume	%	+ Project Volume	Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left		266	0	0	0		266	0	0	0%	0	266	0	0	0	266	0	0
	Lt-Th	N/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	94	0	0	0		94	0	0	0%	0	94	0	0	0	94	0	0
	Shared			1	**360**				1	**360**	0%			1	**360**			1	**360**
Southbound	Left		0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	S/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0
Eastbound	Left		0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	E/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	435	1	435	0		435	1	435	100%	25	460	1	460	0	460	1	460
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	175	1	42	0		175	1	42	0%	0	175	1	42	0	175	1	42
	Shared			0	0				0	0	0%			0	0			0	0
Westbound	Left		67	1	67	0		67	1	67	0%	0	67	1	67	0	67	1	67
	Lt-Th	W/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	516	1	**516**	0		516	1	**516**	0%	73	589	1	**589**	0	589	1	**589**
	Th-Rt	Projected: 50%		0	0				0	0	100%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0

	2008, Existing		Projected Cumulative Base		With Project		With Traffic Mitigation	
Critical Volumes:	North-South:	360	North-South:	360	North-South:	360	North-South:	360
	East-West:	516	East-West:	516	East-West:	589	East-West:	589
	Total:	876	Total:	876	Total:	949	Total:	949
Volume/capacity (*v/c*) ratio:		0.615		0.615		0.666		0.666
v/c less ATSAC adjustment:		0.515		0.515		0.566		0.566
Level of Service (LOS):		**A**		**A**		**A**		**A**

PROJECT IMPACT

Change in *v/c* due to project:	0.051	Δ*v/c* after mitigation:	0.051
Significantly impacted?	NO	Fully mitigated?	N/A

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CMACalc - Critical Movement Analysis Calculator

Upper Stone Canyon Reservoir + Existing (2008) plus Project

LADOT
Bureau of Planning and Land Use Development

Intersection No. 2	2008, EXISTING		, PROJECTED CUMULATIVE BASE		, WITH PROJECT				, WITH TRAFFIC MITIGATION	
North/South Street:	Critical Phases:	3	Ambient Growth / Critical Phases:	3	☐ Adjacent		In	Out / Total	Critical Phases:	3
Casiano Road	Capacity:	1425	from: 2008 / Capacity:	1425	Trip Gen 1	AM	73	25 / 98	Capacity:	1425
East/West Street:	Signal System:	3	to: 0 / Signal System:	3		PM	25	73 / 98	☐ Use Dist 2? Signal System:	3
Mulholland Drive	v/c reduction:	10%	at: 0.0% / v/c reduction:	10%	Trip Gen 2	AM	0	0 / 0	v/c reduction:	10%
Analysis Date: 05/09/2011	Opposed Phasing:	0	Opposed Phasing:	0		PM	0	0 / 0	Opposed Phasing:	0
AM Peak: 7:15 AM										

Direction	Movement	RTOR	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume	%	+ Project Volume	= Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left		224	2	123	0		224	2	123	0%	0	224	2	123	0	224	2	123
	Lt-Th	N/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	147	1	56	0		147	1	56	0%	0	147	1	56	0	147	1	56
	Shared			0	0				0	0	0%			0	0			0	0
Southbound	Left		0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	S/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0
Eastbound	Left		0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	E/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	736	1	736	0		736	1	736	100%	73	809	1	809	0	809	1	809
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	284	1	172	0		284	1	172	0%	0	284	1	172	0	284	1	172
	Shared			0	0				0	0	0%			0	0			0	0
Westbound	Left		182	1	182	0		182	1	182	0%	0	182	1	182	0	182	1	182
	Lt-Th	W/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	801	2	401	0		801	2	401	0%	25	826	2	413	0	826	2	413
	Th-Rt	Projected: 50%		0	0				0	0	100%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0

	2008, Existing	Projected Cumulative Base	With Project	With Traffic Mitigation
Critical Volumes: North-South:	123	123	123	123
East-West:	918	918	991	991
Total:	1041	1041	1114	1114
Volume/capacity (*v/c*) ratio:	0.731	0.731	0.782	0.782
v/c less ATSAC adjustment:	0.631	0.631	0.682	0.682
Level of Service (LOS):	**B**	**B**	**B**	**B**

PROJECT IMPACT

Change in *v/c* due to project:	0.051	Δ*v/c* after mitigation:	0.051
Significantly impacted?	NO	Fully mitigated?	N/A

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Bureau of Planning and Land Use Development

CMACalc - Critical Movement Analysis Calculator

Upper Stone Canyon Reservoir + Existing (2008) plus Project

Intersection No. 2	2008, EXISTING	, PROJECTED CUMULATIVE BASE		, WITH PROJECT				, WITH TRAFFIC MITIGATION
North/South Street:	Critical Phases: 3	Ambient Growth	Critical Phases: 3	Adjacent	In	Out	Total	Critical Phases: 3
Casiano Road	Capacity: 1425	from: 2008	Capacity: 1425	Trip Gen 1 AM	73	25	98	Capacity: 1425
East/West Street:	Signal System: 3	to: 0	Signal System: 3	PM	25	73	98	Use Dist 2? Signal System: 3
Mulholland Drive	v/c reduction: 10%	at: 0.0%	v/c reduction: 10%	Trip Gen 2 AM	0	0	0	v/c reduction: 10%
Analysis Date: 05/09/2011	Opposed Phasing: 0		Opposed Phasing: 0	PM	0	0	0	Opposed Phasing: 0
PM Peak: 3:00 PM								

Approach / Movement	RTOR	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume	%	+ Project Volume	Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound Left	N/B RTOR:	251	2	138	0		251	2	138	0%	0	251	2	138	0	251	2	138
Lt-Th	Existing: 50%		0	0				0	0	0%			0	0			0	0
Thru	Projected: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
Th-Rt	Mitigated: 50%		0	0				0	0	0%			0	0			0	0
Right		176	1	120	0		176	1	120	0%	0	176	1	120	0	176	1	120
Shared			0	0				0	0	0%			0	0			0	0
Southbound Left	S/B RTOR:	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
Lt-Th	Existing: 50%		0	0				0	0	0%			0	0			0	0
Thru	Projected: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
Th-Rt	Mitigated: 50%		0	0				0	0	0%			0	0			0	0
Right		0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
Shared			0	0				0	0	0%			0	0			0	0
Eastbound Left	E/B RTOR:	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
Lt-Th	Existing: 50%		0	0				0	0	0%			0	0			0	0
Thru	Projected: 50%	466	1	466	0		466	1	466	100%	25	491	1	491	0	491	1	491
Th-Rt	Mitigated: 50%		0	0				0	0	0%			0	0			0	0
Right		171	1	45	0		171	1	45	0%	0	171	1	45	0	171	1	45
Shared			0	0				0	0	0%			0	0			0	0
Westbound Left	W/B RTOR:	111	1	111	0		111	1	111	0%	0	111	1	111	0	111	1	111
Lt-Th	Existing: 50%		0	0				0	0	0%			0	0			0	0
Thru	Projected: 50%	684	2	342	0		684	2	342	0%	73	757	2	379	0	757	2	379
Th-Rt	Mitigated: 50%		0	0				0	0	100%			0	0			0	0
Right		0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
Shared			0	0				0	0	0%			0	0			0	0

Critical Volumes:	2008, Existing	Projected Cumulative Base	With Project	With Traffic Mitigation
North-South:	138	138	138	138
East-West:	577	577	602	602
Total:	715	715	740	740
Volume/capacity (*v/c*) ratio:	0.502	0.502	0.519	0.519
v/c less ATSAC adjustment:	0.402	0.402	0.419	0.419
Level of Service (LOS):	**A**	**A**	**A**	**A**

PROJECT IMPACT

Change in *v/c* due to project:	0.017	Δ*v/c* after mitigation:	0.017
Significantly impacted?	NO	Fully mitigated?	N/A

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CMACalc - Critical Movement Analysis Calculator

Upper Stone Canyon Reservoir + Existing (2008) plus Project

Intersection No. 3

North/South Street: **Skirball Center Drive**

East/West Street: **Mulholland Drive**

Analysis Date: 05/09/2011

AM Peak: 7:30 AM

	2008, EXISTING	, PROJECTED CUMULATIVE BASE		, WITH PROJECT	, WITH TRAFFIC MITIGATION
Critical Phases	3	Ambient Growth	3	☐ Adjacent — In / Out / Total	3
Capacity	1425	from: 2008	1425	Trip Gen 1 AM: 73 / 25 / 98	1425
Signal System	3	to: 0	3	Trip Gen 1 PM: 25 / 73 / 98	3 (☐ Use Dist 2?)
v/c reduction	10%	at: 0.0%	10%	Trip Gen 2 AM: 0 / 0 / 0	10%
Opposed Phasing	0		0	Trip Gen 2 PM: 0 / 0 / 0	0

Approach	Movement	RTOR	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume	%	+ Project Volume	= Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left		416	2	229	0		416	2	229	0%	0	416	2	229	0	416	2	229
	Lt-Th	N/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	432	1	146	0		432	1	146	100%	73	505	1	207	0	505	1	207
	Shared			0	0				0	0	0%			0	0			0	0
Southbound	Left		0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	S/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0
Eastbound	Left		0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	E/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	630	1	630	0		630	1	630	0%	0	630	1	630	0	630	1	630
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	830	1	622	0		830	1	622	0%	0	830	1	622	0	830	1	622
	Shared			0	0				0	0	0%			0	0			0	0
Westbound	Left		571	1	571	0		571	1	571	0%	25	596	1	596	0	596	1	596
	Lt-Th	W/B RTOR:		0	0				0	0	100%			0	0			0	0
	Thru	Existing: 50%	428	2	214	0		428	2	214	0%	0	428	2	214	0	428	2	214
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0

Critical Volumes	2008, Existing	Projected Cumulative Base	With Project	With Traffic Mitigation
North-South	229	229	229	229
East-West	1201	1201	1226	1226
Total	1430	1430	1455	1455
Volume/capacity (*v/c*) ratio	1.003	1.003	1.021	1.021
v/c less ATSAC adjustment	0.903	0.903	0.921	0.921
Level of Service (LOS)	E	E	E	E

PROJECT IMPACT

Change in *v/c* due to project:	0.018	Δ*v/c* after mitigation:	0.018
Significantly impacted?	YES	Fully mitigated?	NO

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CMACalc - Critical Movement Analysis Calculator

Upper Stone Canyon Reservoir + Existing (2008) plus Project

Intersection No. 3	2008, EXISTING		, PROJECTED CUMULATIVE BASE			, WITH PROJECT				, WITH TRAFFIC MITIGATION	
North/South Street:	Critical Phases:	3	Ambient Growth	Critical Phases:	3	☐ Adjacent	In	Out	Total	Critical Phases:	3
Skirball Center Drive	Capacity:	1425	from: 2008	Capacity:	1425	Trip Gen 1 AM	73	25	98	Capacity:	1425
East/West Street:	Signal System:	3	to: 0	Signal System:	3	PM	25	73	98	☐ Use Dist 2? Signal System:	3
Mulholland Drive	v/c reduction:	10%	at: 0.0%	v/c reduction:	10%	Trip Gen 2 AM	0	0	0	v/c reduction:	10%
Analysis Date: 05/09/2011	Opposed Phasing:	0		Opposed Phasing:	0	PM	0	0	0	Opposed Phasing:	0
PM Peak: 3:00 PM											

Direction	Movement	RTOR	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume	%	+ Project Volume	Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left		334	2	**184**	0		334	2	**184**	0%	0	334	2	**184**	0	334	2	**184**
	Lt-Th	N/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	336	1	52	0		336	1	52	100%	25	361	1	40	0	361	1	40
	Shared			0	0				0	0	0%			0	0			0	0
Southbound	Left		0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	S/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0
Eastbound	Left		0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	E/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	297	1	297	0		297	1	297	0%	0	297	1	297	0	297	1	297
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	484	1	**317**	0		484	1	**317**	0%	0	484	1	**317**	0	484	1	**317**
	Shared			0	0				0	0	0%			0	0			0	0
Westbound	Left		569	1	**569**	0		569	1	**569**	0%	73	642	1	**642**	0	642	1	**642**
	Lt-Th	W/B RTOR:		0	0				0	0	100%			0	0			0	0
	Thru	Existing: 50%	352	2	176	0		352	2	176	0%	0	352	2	176	0	352	2	176
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0

	2008, Existing	Projected Cumulative Base	With Project	With Traffic Mitigation
Critical Volumes: North-South:	184	184	184	184
East-West:	886	886	959	959
Total:	1070	1070	1143	1143
Volume/capacity (*v/c*) ratio:	0.751	0.751	0.802	0.802
v/c less ATSAC adjustment:	0.651	0.651	0.702	0.702
Level of Service (LOS):	**B**	**B**	**C**	**C**

PROJECT IMPACT

Change in *v/c* due to project:	0.051	Δ*v/c* after mitigation:	0.051
Significantly impacted?	YES	Fully mitigated?	NO

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Upper Stone Canyon Reservoir + Existing (2008) plus Project

Intersection No. 4	2008, EXISTING	, PROJECTED CUMULATIVE BASE	, WITH PROJECT	, WITH TRAFFIC MITIGATION
North/South Street: **Skirball Center Drive**	Critical Phases: 2	Ambient Growth from: 2008 to: 0 at: 0.0%	☐ Adjacent	Critical Phases: 2
East/West Street: **I-405 NB on/off Ramps**	Capacity: 1500	Critical Phases: 2	Trip Gen 1: AM In 73, Out 25, Total 98; PM In 25, Out 73, Total 98	Capacity: 1500
Analysis Date: 05/09/2011	Signal System: 3	Capacity: 1500	Trip Gen 2: AM In 0, Out 0, Total 0; PM In 0, Out 0, Total 0	☐ Use Dist 2? Signal System: 3
AM Peak: 7:15 AM	v/c reduction: 10%	Signal System: 3		v/c reduction: 10%
	Opposed Phasing: 0	v/c reduction: 10%		Opposed Phasing: 0
		Opposed Phasing: 0		

Approach	Movement	RTOR	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume	%	+ Project Volume	= Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left		62	1	62	0		62	1	62	0%	0	62	1	62	0	62	1	62
	Lt-Th	N/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	274	1	274	0		274	1	274	55%	39	313	1	313	0	313	1	313
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0
Southbound	Left		0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	S/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	971	1	971	0		971	1	971	0%	10	981	1	981	0	981	1	981
	Th-Rt	Projected: 50%		0	0				0	0	45%			0	0			0	0
	Right	Mitigated: 50%	372	1	66	0		372	1	66	0%	15	387	1	65	0	387	1	65
	Shared			0	0				0	0	55%			0	0			0	0
Eastbound	Left		611	2	336	0		611	2	336	45%	34	645	2	355	0	645	2	355
	Lt-Th	E/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	68	1	37	0		68	1	37	0%	0	68	1	37	0	68	1	37
	Shared			0	0				0	0	0%			0	0			0	0
Westbound	Left		0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	W/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0

	2008, Existing	Projected Cumulative Base	With Project	With Traffic Mitigation
Critical Volumes: North-South:	1033	1033	1043	1043
East-West:	336	336	355	355
Total:	1369	1369	1398	1398
Volume/capacity (*v/c*) ratio:	0.913	0.913	0.932	0.932
v/c less ATSAC adjustment:	0.813	0.813	0.832	0.832
Level of Service (LOS):	**D**	**D**	**D**	**D**

PROJECT IMPACT

Change in *v/c* due to project: 0.019 — Δ*v/c* after mitigation: 0.019

Significantly impacted? NO — Fully mitigated? N/A

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Upper Stone Canyon Reservoir + Existing (2008) plus Project

Intersection No. 4	2008, EXISTING		, PROJECTED CUMULATIVE BASE		, WITH PROJECT				, WITH TRAFFIC MITIGATION	
North/South Street:	Critical Phases:	2	Ambient Growth / Critical Phases:	2	☐ Adjacent		In	Out / Total	Critical Phases:	2
Skirball Center Drive	Capacity:	1500	from: 2008 / Capacity:	1500	Trip Gen 1	AM	73	25 / 98	Capacity:	1500
East/West Street:	Signal System:	3	to: 0 / Signal System:	3		PM	25	73 / 98	☐ Use Dist 2? Signal System:	3
I-405 NB on/off Ramps	v/c reduction:	10%	at: 0.0% / v/c reduction:	10%	Trip Gen 2	AM	0	0 / 0	v/c reduction:	10%
Analysis Date: 05/09/2011	Opposed Phasing:	0	Opposed Phasing:	0		PM	0	0 / 0	Opposed Phasing:	0
PM Peak: 3:00 PM										

Approach	Movement	RTOR	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume	Project %	+ Project Volume	Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left		254	1	**254**	0		254	1	**254**	0%	0	254	1	**254**	0	254	1	**254**
	Lt-Th	N/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	420	1	420	0		420	1	420	55%	15	435	1	435	0	435	1	435
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0
Southbound	Left		0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	S/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	590	1	**590**	0		590	1	**590**	0%	34	624	1	**624**	0	624	1	**624**
	Th-Rt	Projected: 50%		0	0				0	0	45%			0	0			0	0
	Right	Mitigated: 50%	454	1	328	0		454	1	328	0%	39	493	1	361	0	493	1	361
	Shared			0	0				0	0	55%			0	0			0	0
Eastbound	Left		253	2	**139**	0		253	2	**139**	45%	10	263	2	**145**	0	263	2	**145**
	Lt-Th	E/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	56	1	0	0		56	1	0	0%	0	56	1	0	0	56	1	0
	Shared			0	0				0	0	0%			0	0			0	0
Westbound	Left		0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	W/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0

Critical Volumes:	2008, Existing	Projected Cumulative Base	With Project	With Traffic Mitigation
North-South:	844	844	878	878
East-West:	139	139	145	145
Total:	983	983	1023	1023
Volume/capacity (*v/c*) ratio:	0.655	0.655	0.682	0.682
v/c less ATSAC adjustment:	0.555	0.555	0.582	0.582
Level of Service (LOS):	**A**	**A**	**A**	**A**

PROJECT IMPACT

Change in *v/c* due to project:	0.027	Δ*v/c* after mitigation:	0.027
Significantly impacted?	NO	Fully mitigated?	N/A

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CMACalc - Critical Movement Analysis Calculator

Upper Stone Canyon Reservoir + Existing (2008) plus Project

LADOT
Bureau of Planning and Land Use Development

Intersection No. 5	**2008, EXISTING**		**, PROJECTED CUMULATIVE BASE**			**, WITH PROJECT**				**, WITH TRAFFIC MITIGATION**	
North/South Street:	Critical Phases:	3	Ambient Growth	Critical Phases:	3	☐ Adjacent	In	Out	Total	Critical Phases:	3
I-405 SB on/off Ramps	Capacity:	1425	from: 2008	Capacity:	1425	Trip Gen 1 AM	73	25	98	Capacity:	1425
East/West Street:	Signal System:	3	to: 0	Signal System:	3	Trip Gen 1 PM	25	73	98	☐ Use Dist 2? Signal System:	3
Skirball Center Drive	v/c reduction:	10%	at: 0.0%	v/c reduction:	10%	Trip Gen 2 AM	0	0	0	v/c reduction:	10%
Analysis Date: 05/09/2011	Opposed Phasing:	0		Opposed Phasing:	0	Trip Gen 2 PM	0	0	0	Opposed Phasing:	0
AM Peak: 7:30 AM											

Approach	Movement	RTOR	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume	Project %	+ Project Volume	= Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left		0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	N/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0
Southbound	Left		131	0	0	0		131	0	0	55%	39	170	0	0	0	170	0	0
	Lt-Th	S/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	3	0	0	0		3	0	0	0%	0	3	0	0	0	3	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	216	1	119	0		216	1	119	0%	0	216	1	119	0	216	1	119
	Shared			1	231				1	231	0%			1	270			1	270
Eastbound	Left		0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	E/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	208	1	160	0		208	1	160	0%	0	208	1	160	0	208	1	160
	Th-Rt	Projected: 50%		1	160				1	160	0%			1	160			1	160
	Right	Mitigated: 50%	111	0	0	0		111	0	0	0%	0	111	0	0	0	111	0	0
	Shared			0	0				0	0	0%			0	0			0	0
Westbound	Left		652	1	652	0		652	1	652	0%	10	662	1	662	0	662	1	662
	Lt-Th	W/B RTOR:		0	0				0	0	45%			0	0			0	0
	Thru	Existing: 50%	434	2	217	0		434	2	217	0%	0	434	2	217	0	434	2	217
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0

		2008, Existing	Projected Cumulative Base	With Project	With Traffic Mitigation
Critical Volumes:	North-South:	231	231	270	270
	East-West:	812	812	822	822
	Total:	1043	1043	1092	1092
Volume/capacity (*v/c*) ratio:		0.732	0.732	0.766	0.766
v/c less ATSAC adjustment:		0.632	0.632	0.666	0.666
Level of Service (LOS):		**B**	**B**	**B**	**B**

PROJECT IMPACT

Change in *v/c* due to project:	0.034	Δ*v/c* after mitigation:	0.034
Significantly impacted?	NO	Fully mitigated?	N/A

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Bureau of Planning and Land Use Development

CMACalc - Critical Movement Analysis Calculator

Upper Stone Canyon Reservoir + Existing (2008) plus Project

Intersection No. 5	2008, EXISTING		, PROJECTED CUMULATIVE BASE		, WITH PROJECT				, WITH TRAFFIC MITIGATION	
North/South Street:	Critical Phases:	3	Ambient Growth	Critical Phases: 3	☐ Adjacent		In	Out	Total	Critical Phases: 3
I-405 SB on/off Ramps	Capacity:	1425	from: 2008	Capacity: 1425	Trip Gen 1	AM	73	25	98	Capacity: 1425
East/West Street:	Signal System:	3	to: 0	Signal System: 3		PM	25	73	98	☐ Use Dist 2? Signal System: 3
Skirball Center Drive	v/c reduction:	10%	at: 0.0%	v/c reduction: 10%	Trip Gen 2	AM	0	0	0	v/c reduction: 10%
Analysis Date: 05/09/2011	Opposed Phasing:	0		Opposed Phasing: 0		PM	0	0	0	Opposed Phasing: 0
PM Peak: 3:00 PM										

Movement	RTOR	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume	%	+ Project Volume	Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound Left		0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
Lt-Th	N/B RTOR:		0	0				0	0	0%			0	0			0	0
Thru	Existing: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
Right	Mitigated: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
Shared			0	0				0	0	0%			0	0			0	0
Southbound Left		244	0	0	0		244	0	0	55%	15	259	0	0	0	259	0	0
Lt-Th	S/B RTOR:		0	0				0	0	0%			0	0			0	0
Thru	Existing: 50%	3	0	0	0		3	0	0	0%	0	3	0	0	0	3	0	0
Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
Right	Mitigated: 50%	87	1	48	0		87	1	48	0%	0	87	1	48	0	87	1	48
Shared			1	286				1	286	0%			1	301			1	301
Eastbound Left		0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
Lt-Th	E/B RTOR:		0	0				0	0	0%			0	0			0	0
Thru	Existing: 50%	441	1	244	0		441	1	244	0%	0	441	1	244	0	441	1	244
Th-Rt	Projected: 50%		1	244				1	244	0%			1	244			1	244
Right	Mitigated: 50%	47	0	0	0		47	0	0	0%	0	47	0	0	0	47	0	0
Shared			0	0				0	0	0%			0	0			0	0
Westbound Left		342	1	342	0		342	1	342	0%	34	376	1	376	0	376	1	376
Lt-Th	W/B RTOR:		0	0				0	0	45%			0	0			0	0
Thru	Existing: 50%	288	2	144	0		288	2	144	0%	0	288	2	144	0	288	2	144
Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
Right	Mitigated: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
Shared			0	0				0	0	0%			0	0			0	0

	2008, Existing		Projected Cumulative Base		With Project		With Traffic Mitigation	
Critical Volumes:	North-South:	286	North-South:	286	North-South:	301	North-South:	301
	East-West:	586	East-West:	586	East-West:	620	East-West:	620
	Total:	872	Total:	872	Total:	921	Total:	921
Volume/capacity (*v/c*) ratio:		0.612		0.612		0.646		0.646
v/c less ATSAC adjustment:		0.512		0.512		0.546		0.546
Level of Service (LOS):		**A**		**A**		**A**		**A**

PROJECT IMPACT

Change in *v/c* due to project:	0.034	Δ*v/c* after mitigation:	0.034
Significantly impacted?	NO	Fully mitigated?	N/A

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Appendix J
Level-of-Service Worksheets
Existing (2008) + Project Analysis
Proposed Park (Proposed Project)

Bureau of Planning and Land Use Development

CMACalc - Critical Movement Analysis Calculator

Upper Stone Canyon Reservoir - Existing (2008) plus Project

Intersection No. 1	2008, EXISTING	, PROJECTED CUMULATIVE BASE	, WITH PROJECT	, WITH TRAFFIC MITIGATION
North/South Street: **Roscomare Road**	Critical Phases: 3	Ambient Growth from: 2008 to: 0 at: 0.0%	☐ Adjacent	Critical Phases: 3
East/West Street: **Mulholland Drive**	Capacity: 1425	Critical Phases: 3	Trip Gen 1: AM In 13, Out 13, Total 26	Capacity: 1425
Analysis Date: 05/09/2011	Signal System: 3	Capacity: 1425	Trip Gen 1: PM In 13, Out 13, Total 26	☐ Use Dist 2? Signal System: 3
AM Peak: 7:30 AM	v/c reduction: 10%	Signal System: 3	Trip Gen 2: AM In 0, Out 0, Total 0	v/c reduction: 10%
	Opposed Phasing: 0	v/c reduction: 10%	Trip Gen 2: PM In 0, Out 0, Total 0	Opposed Phasing: 0
		Opposed Phasing: 0		

Direction	Movement	RTOR	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume	%	+ Project Volume	= Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left		210	0	0	0		210	0	0	0%	0	210	0	0	0	210	0	0
	Lt-Th	N/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	90	0	0	0		90	0	0	8%	1	91	0	0	0	91	0	0
	Shared			1	300				1	300	0%			1	301			1	301
Southbound	Left		0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	S/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0
Eastbound	Left		0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	E/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	625	1	625	0		625	1	625	92%	12	637	1	637	0	637	1	637
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	355	1	250	0		355	1	250	0%	0	355	1	250	0	355	1	250
	Shared			0	0				0	0	0%			0	0			0	0
Westbound	Left		198	1	198	0		198	1	198	0%	1	199	1	199	0	199	1	199
	Lt-Th	W/B RTOR:		0	0				0	0	8%			0	0			0	0
	Thru	Existing: 50%	490	1	490	0		490	1	490	0%	5	495	1	495	0	495	1	495
	Th-Rt	Projected: 50%		0	0				0	0	42%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0

Critical Volumes:	2008, Existing	Projected Cumulative Base	With Project	With Traffic Mitigation
North-South:	300	300	301	301
East-West:	823	823	836	836
Total:	1123	1123	1137	1137
Volume/capacity (*v/c*) ratio:	0.788	0.788	0.798	0.798
v/c less ATSAC adjustment:	0.688	0.688	0.698	0.698
Level of Service (LOS):	**B**	**B**	**B**	**B**

PROJECT IMPACT

Change in *v/c* due to project:	0.010	Δ*v/c* after mitigation:	0.010
Significantly impacted?	NO	Fully mitigated?	N/A

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LADOT
Bureau of Planning and Land Use Development

CMACalc - Critical Movement Analysis Calculator

Upper Stone Canyon Reservoir - Existing (2008) plus Project

Intersection No. 1	2008, EXISTING		, PROJECTED CUMULATIVE BASE		, WITH PROJECT				, WITH TRAFFIC MITIGATION	
North/South Street:	Critical Phases:	3	Ambient Growth / Critical Phases:	3	☐ Adjacent		In	Out	Total	Critical Phases: 3
Roscomare Road	Capacity:	1425	from: 2008 / Capacity:	1425	Trip Gen 1	AM	13	13	26	Capacity: 1425
East/West Street:	Signal System:	3	to: 0 / Signal System:	3		PM	13	13	26	☐ Use Dist 2? Signal System: 3
Mulholland Drive	v/c reduction:	10%	at: 0.0% / v/c reduction:	10%	Trip Gen 2	AM	0	0	0	v/c reduction: 10%
Analysis Date: 05/09/2011	Opposed Phasing:	0	Opposed Phasing:	0		PM	0	0	0	Opposed Phasing: 0
PM Peak: 3:00 PM										

Approach	Movement	RTOR	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume	%	+ Project Volume	Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left		266	0	0	0		266	0	0	0%	0	266	0	0	0	266	0	0
	Lt-Th	N/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	94	0	0	0		94	0	0	8%	1	95	0	0	0	95	0	0
	Shared			1	**360**				1	**360**	0%			1	**361**			1	**361**
Southbound	Left		0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	S/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0
Eastbound	Left		0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	E/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	435	1	435	0		435	1	435	92%	12	447	1	447	0	447	1	447
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	175	1	42	0		175	1	42	0%	0	175	1	42	0	175	1	42
	Shared			0	0				0	0	0%			0	0			0	0
Westbound	Left		67	1	67	0		67	1	67	0%	1	68	1	68	0	68	1	68
	Lt-Th	W/B RTOR:		0	0				0	0	8%			0	0			0	0
	Thru	Existing: 50%	516	1	**516**	0		516	1	**516**	0%	5	521	1	**521**	0	521	1	**521**
	Th-Rt	Projected: 50%		0	0				0	0	42%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0

Critical Volumes:	2008, Existing	Projected Cumulative Base	With Project	With Traffic Mitigation
North-South:	360	360	361	361
East-West:	516	516	521	521
Total:	876	876	882	882
Volume/capacity (*v/c*) ratio:	0.615	0.615	0.619	0.619
v/c less ATSAC adjustment:	0.515	0.515	0.519	0.519
Level of Service (LOS):	**A**	**A**	**A**	**A**

P R O J E C T   I M P A C T

Change in *v/c* due to project:	0.004	Δ*v/c* after mitigation:	0.004
Significantly impacted?	NO	Fully mitigated?	N/A

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Bureau of Planning and Land Use Development

CMACalc - Critical Movement Analysis Calculator

Upper Stone Canyon Reservoir - Existing (2008) plus Project

Intersection No. 2

North/South Street:	**Casiano Road**
East/West Street:	**Mulholland Drive**
Analysis Date:	05/09/2011
AM Peak:	7:15 AM

	2008, EXISTING	, PROJECTED CUMULATIVE BASE	, WITH PROJECT	, WITH TRAFFIC MITIGATION
Critical Phases:	3	3		3
Capacity:	1425	1425		1425
Signal System:	3	3		3
v/c reduction:	10%	10%		10%
Opposed Phasing:	0	0		0

Ambient Growth: from: 2008; to: 0; at: 0.0%

☐ Adjacent		In	Out	Total
Trip Gen 1	AM	13	13	26
	PM	13	13	26
Trip Gen 2	AM	0	0	0
	PM	0	0	0

☐ Use Dist 2?

Approach	Movement	RTOR	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume	Project %	+ Project Volume	= Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left		224	2	123	0		224	2	123	0%	0	224	2	123	0	224	2	123
	Lt-Th	N/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	147	1	56	0		147	1	56	10%	1	148	1	56	0	148	1	56
	Shared			0	0				0	0	0%			0	0			0	0
Southbound	Left		0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	S/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0
Eastbound	Left		0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	E/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	736	1	736	0		736	1	736	35%	5	741	1	741	0	741	1	741
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	284	1	172	0		284	1	172	0%	0	284	1	172	0	284	1	172
	Shared			0	0				0	0	0%			0	0			0	0
Westbound	Left		182	1	182	0		182	1	182	0%	1	183	1	183	0	183	1	183
	Lt-Th	W/B RTOR:		0	0				0	0	7%			0	0			0	0
	Thru	Existing: 50%	801	2	401	0		801	2	401	0%	5	806	2	403	0	806	2	403
	Th-Rt	Projected: 50%		0	0				0	0	35%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0

Critical Volumes:	2008, Existing	Projected Cumulative Base	With Project	With Traffic Mitigation
North-South:	123	123	123	123
East-West:	918	918	924	924
Total:	1041	1041	1047	1047
Volume/capacity (*v/c*) ratio:	0.731	0.731	0.735	0.735
v/c less ATSAC adjustment:	0.631	0.631	0.635	0.635
Level of Service (LOS):	**B**	**B**	**B**	**B**

PROJECT IMPACT

Change in *v/c* due to project:	0.004	Δ*v/c* after mitigation:	0.004
Significantly impacted?	NO	Fully mitigated?	N/A

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LADOT
Bureau of Planning and Land Use Development

CMACalc - Critical Movement Analysis Calculator

Upper Stone Canyon Reservoir - Existing (2008) plus Project

Intersection No. 2	2008, EXISTING	, PROJECTED CUMULATIVE BASE	, WITH PROJECT	, WITH TRAFFIC MITIGATION
North/South Street: **Casiano Road**	Critical Phases: 3	Ambient Growth from: 2008 to: 0 at: 0.0%	☐ Adjacent — In / Out / Total	Critical Phases: 3
East/West Street: **Mulholland Drive**	Capacity: 1425	Critical Phases: 3	Trip Gen 1 AM: 13 / 13 / 26	Capacity: 1425
Analysis Date: 05/09/2011	Signal System: 3	Capacity: 1425	Trip Gen 1 PM: 13 / 13 / 26	☐ Use Dist 2? Signal System: 3
PM Peak: 3:00 PM	v/c reduction: 10%	Signal System: 3	Trip Gen 2 AM: 0 / 0 / 0	v/c reduction: 10%
	Opposed Phasing: 0	v/c reduction: 10%	Trip Gen 2 PM: 0 / 0 / 0	Opposed Phasing: 0
		Opposed Phasing: 0		

Approach	Movement	RTOR	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume	%	+ Project Volume	Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left		251	2	138	0		251	2	138	0%	0	251	2	138	0	251	2	138
	Lt-Th	N/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	176	1	120	0		176	1	120	10%	1	177	1	121	0	177	1	121
	Shared			0	0				0	0	0%			0	0			0	0
Southbound	Left		0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	S/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0
Eastbound	Left		0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	E/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	466	1	466	0		466	1	466	35%	5	471	1	471	0	471	1	471
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	171	1	45	0		171	1	45	0%	0	171	1	45	0	171	1	45
	Shared			0	0				0	0	0%			0	0			0	0
Westbound	Left		111	1	111	0		111	1	111	0%	1	112	1	112	0	112	1	112
	Lt-Th	W/B RTOR:		0	0				0	0	7%			0	0			0	0
	Thru	Existing: 50%	684	2	342	0		684	2	342	0%	5	689	2	345	0	689	2	345
	Th-Rt	Projected: 50%		0	0				0	0	35%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0

	2008, Existing	Projected Cumulative Base	With Project	With Traffic Mitigation
Critical Volumes: North-South:	138	138	138	138
East-West:	577	577	583	583
Total:	715	715	721	721
Volume/capacity (*v/c*) ratio:	0.502	0.502	0.506	0.506
v/c less ATSAC adjustment:	0.402	0.402	0.406	0.406
Level of Service (LOS):	A	A	A	A

PROJECT IMPACT

Change in *v/c* due to project: 0.004
Significantly impacted? NO
Δ*v/c* after mitigation: 0.004
Fully mitigated? N/A

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LADOT

Bureau of Planning and Land Use Development

CMACalc - Critical Movement Analysis Calculator

Upper Stone Canyon Reservoir - Existing (2008) plus Project

Intersection No. 3

North/South Street: **Skirball Center Drive**

East/West Street: **Mulholland Drive**

Analysis Date: 05/09/2011

AM Peak: 7:30 AM

	2008, EXISTING	, PROJECTED CUMULATIVE BASE	, WITH TRAFFIC MITIGATION
Critical Phases:	3	3	3
Capacity:	1425	1425	1425
Signal System:	3	3	3
v/c reduction:	10%	10%	10%
Opposed Phasing:	0	0	0

Ambient Growth — from: 2008; to: 0; at: 0.0%

, WITH PROJECT — ☐ Adjacent; ☐ Use Dist 2?

		In	Out	Total
Trip Gen 1	AM	13	13	26
	PM	13	13	26
Trip Gen 2	AM	0	0	0
	PM	0	0	0

Approach	Movement	RTOR	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume	%	+ Project Volume	= Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left		416	2	229	0		416	2	229	0%	0	416	2	229	0	416	2	229
	Lt-Th	N/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	432	1	146	0		432	1	146	27%	4	436	1	148	0	436	1	148
	Shared			0	0				0	0	0%			0	0			0	0
Southbound	Left		0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	S/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0
Eastbound	Left		0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	E/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	630	1	630	0		630	1	630	8%	1	631	1	631	0	631	1	631
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	830	1	622	0		830	1	622	0%	0	830	1	622	0	830	1	622
	Shared			0	0				0	0	0%			0	0			0	0
Westbound	Left		571	1	571	0		571	1	571	0%	4	575	1	575	0	575	1	575
	Lt-Th	W/B RTOR:		0	0				0	0	27%			0	0			0	0
	Thru	Existing: 50%	428	2	214	0		428	2	214	0%	1	429	2	215	0	429	2	215
	Th-Rt	Projected: 50%		0	0				0	0	8%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0

Critical Volumes:	2008, Existing	Projected Cumulative Base	With Project	With Traffic Mitigation
North-South:	229	229	229	229
East-West:	1201	1201	1206	1206
Total:	1430	1430	1435	1435
Volume/capacity (*v/c*) ratio:	1.003	1.003	1.007	1.007
v/c less ATSAC adjustment:	0.903	0.903	0.907	0.907
Level of Service (LOS):	E	E	E	E

PROJECT IMPACT

Change in *v/c* due to project:	0.004	Δ*v/c* after mitigation:	0.004
Significantly impacted?	NO	Fully mitigated?	N/A

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CMACalc - Critical Movement Analysis Calculator

Upper Stone Canyon Reservoir - Existing (2008) plus Project

Intersection No. 3	2008, EXISTING		, PROJECTED CUMULATIVE BASE			, WITH PROJECT				, WITH TRAFFIC MITIGATION	
North/South Street:	Critical Phases:	3	Ambient Growth	Critical Phases:	3	☐ Adjacent		In / Out	Total	Critical Phases:	3
Skirball Center Drive	Capacity:	1425	from: 2008	Capacity:	1425	Trip Gen 1	AM	13 / 13	26	Capacity:	1425
East/West Street:	Signal System:	3	to: 0	Signal System:	3	Trip Gen 1	PM	13 / 13	26	☐ Use Dist 2? Signal System:	3
Mulholland Drive	v/c reduction:	10%	at: 0.0%	v/c reduction:	10%	Trip Gen 2	AM	0 / 0	0	v/c reduction:	10%
Analysis Date: 05/09/2011	Opposed Phasing:	0		Opposed Phasing:	0	Trip Gen 2	PM	0 / 0	0	Opposed Phasing:	0
PM Peak: 3:00 PM											

Direction	Movement	RTOR	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume	%	+ Project Volume	Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left		334	2	184	0		334	2	184	0%	0	334	2	184	0	334	2	184
	Lt-Th	N/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	336	1	52	0		336	1	52	27%	4	340	1	54	0	340	1	54
	Shared			0	0				0	0	0%			0	0			0	0
Southbound	Left		0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	S/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0
Eastbound	Left		0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	E/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	297	1	297	0		297	1	297	8%	1	298	1	298	0	298	1	298
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	484	1	317	0		484	1	317	0%	0	484	1	317	0	484	1	317
	Shared			0	0				0	0	0%			0	0			0	0
Westbound	Left		569	1	569	0		569	1	569	0%	4	573	1	573	0	573	1	573
	Lt-Th	W/B RTOR:		0	0				0	0	27%			0	0			0	0
	Thru	Existing: 50%	352	2	176	0		352	2	176	0%	1	353	2	177	0	353	2	177
	Th-Rt	Projected: 50%		0	0				0	0	8%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0

	2008, Existing	Projected Cumulative Base	With Project	With Traffic Mitigation
Critical Volumes: North-South:	184	184	184	184
East-West:	886	886	890	890
Total:	1070	1070	1074	1074
Volume/capacity (*v/c*) ratio:	0.751	0.751	0.753	0.753
v/c less ATSAC adjustment:	0.651	0.651	0.653	0.653
Level of Service (LOS):	**B**	**B**	**B**	**B**

PROJECT IMPACT

Change in *v/c* due to project:	0.002	Δ*v/c* after mitigation:	0.002
Significantly impacted?	NO	Fully mitigated?	N/A

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CMACalc - Critical Movement Analysis Calculator

Upper Stone Canyon Reservoir - Existing (2008) plus Project

LADOT Bureau of Planning and Land Use Development

Intersection No. 4	2008, EXISTING	, PROJECTED CUMULATIVE BASE	, WITH PROJECT	, WITH TRAFFIC MITIGATION
North/South Street: **Skirball Center Drive**	Critical Phases: 2	Ambient Growth from: 2008 to: 0 at: 0.0%	☐ Adjacent	Critical Phases: 2
East/West Street: **I-405 NB on/off Ramps**	Capacity: 1500	Critical Phases: 2	Trip Gen 1: AM In 13, Out 13, Total 26; PM In 13, Out 13, Total 26	Capacity: 1500
Analysis Date: 05/09/2011	Signal System: 3	Capacity: 1500	Trip Gen 2: AM In 0, Out 0, Total 0; PM In 0, Out 0, Total 0	☐ Use Dist 2? Signal System: 3
AM Peak: 7:15 AM	v/c reduction: 10%	Signal System: 3		v/c reduction: 10%
	Opposed Phasing: 0	v/c reduction: 10%		Opposed Phasing: 0
		Opposed Phasing: 0		

Direction	Movement	RTOR	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume	%	+ Project Volume	= Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left		62	1	62	0		62	1	62	0%	0	62	1	62	0	62	1	62
	Lt-Th	N/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	274	1	274	0		274	1	274	14%	2	276	1	276	0	276	1	276
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0
Southbound	Left		0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	S/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	971	1	971	0		971	1	971	0%	2	973	1	973	0	973	1	973
	Th-Rt	Projected: 50%		0	0				0	0	13%			0	0			0	0
	Right	Mitigated: 50%	372	1	66	0		372	1	66	0%	2	374	1	68	0	374	1	68
	Shared			0	0				0	0	14%			0	0			0	0
Eastbound	Left		611	2	336	0		611	2	336	13%	2	613	2	337	0	613	2	337
	Lt-Th	E/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	68	1	37	0		68	1	37	0%	0	68	1	37	0	68	1	37
	Shared			0	0				0	0	0%			0	0			0	0
Westbound	Left		0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	W/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0

Critical Volumes:	2008, Existing	Projected Cumulative Base	With Project	With Traffic Mitigation
North-South:	1033	1033	1035	1035
East-West:	336	336	337	337
Total:	1369	1369	1372	1372
Volume/capacity (*v/c*) ratio:	0.913	0.913	0.915	0.915
v/c less ATSAC adjustment:	0.813	0.813	0.815	0.815
Level of Service (LOS):	D	D	D	D

PROJECT IMPACT

Change in *v/c* due to project: 0.002 | Δ*v/c* after mitigation: 0.002

Significantly impacted? NO | Fully mitigated? N/A

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Upper Stone Canyon Reservoir - Existing (2008) plus Project

Intersection No. 4	2008, EXISTING	, PROJECTED CUMULATIVE BASE	, WITH PROJECT	, WITH TRAFFIC MITIGATION
North/South Street: **Skirball Center Drive**	Critical Phases: 2	Ambient Growth from: 2008 to: 0 at: 0.0%	☐ Adjacent	Critical Phases: 2
East/West Street: **I-405 NB on/off Ramps**	Capacity: 1500	Critical Phases: 2	Trip Gen 1 AM: In 13, Out 13, Total 26	Capacity: 1500
Analysis Date: 05/09/2011	Signal System: 3	Capacity: 1500	Trip Gen 1 PM: In 13, Out 13, Total 26	☐ Use Dist 2? Signal System: 3
PM Peak: 3:00 PM	v/c reduction: 10%	Signal System: 3	Trip Gen 2 AM: In 0, Out 0, Total 0	v/c reduction: 10%
	Opposed Phasing: 0	v/c reduction: 10%	Trip Gen 2 PM: In 0, Out 0, Total 0	Opposed Phasing: 0
		Opposed Phasing: 0		

Approach	Movement	RTOR	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume	%	+ Project Volume	Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left		254	1	254	0		254	1	254	0%	0	254	1	254	0	254	1	254
	Lt-Th	N/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	420	1	420	0		420	1	420	14%	2	422	1	422	0	422	1	422
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0
Southbound	Left		0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	S/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	590	1	590	0		590	1	590	0%	2	592	1	592	0	592	1	592
	Th-Rt	Projected: 50%		0	0				0	0	13%			0	0			0	0
	Right	Mitigated: 50%	454	1	328	0		454	1	328	0%	2	456	1	328	0	456	1	328
	Shared			0	0				0	0	14%			0	0			0	0
Eastbound	Left		253	2	139	0		253	2	139	13%	2	255	2	140	0	255	2	140
	Lt-Th	E/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	56	1	0	0		56	1	0	0%	0	56	1	0	0	56	1	0
	Shared			0	0				0	0	0%			0	0			0	0
Westbound	Left		0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	W/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0

Critical Volumes:	2008, Existing	Projected Cumulative Base	With Project	With Traffic Mitigation
North-South:	844	844	846	846
East-West:	139	139	140	140
Total:	983	983	986	986
Volume/capacity (*v/c*) ratio:	0.655	0.655	0.658	0.658
v/c less ATSAC adjustment:	0.555	0.555	0.558	0.558
Level of Service (LOS):	**A**	**A**	**A**	**A**

PROJECT IMPACT

Change in *v/c* due to project:	0.003	Δ*v/c* after mitigation:	0.003
Significantly impacted?	NO	Fully mitigated?	N/A

Filename: J:\2008\JA81142 LADWP Reservoirs EIR\Upper Stone Canyon - Task 1\Analysis\UpperStoneCyn - Proposed Park.xls

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LADOT
Bureau of Planning and Land Use Development

CMACalc - Critical Movement Analysis Calculator

Upper Stone Canyon Reservoir - Existing (2008) plus Project

Intersection No. 5	2008, EXISTING	, PROJECTED CUMULATIVE BASE	, WITH PROJECT	, WITH TRAFFIC MITIGATION
North/South Street: **I-405 SB on/off Ramps**	Critical Phases: 3	Ambient Growth from: 2008 to: 0 at: 0.0%	☐ Adjacent	Critical Phases: 3
East/West Street: **Skirball Center Drive**	Capacity: 1425	Critical Phases: 3	Trip Gen 1: AM In 13, Out 13, Total 26; PM In 13, Out 13, Total 26	Capacity: 1425
Analysis Date: 05/09/2011	Signal System: 3	Capacity: 1425	Trip Gen 2: AM In 0, Out 0, Total 0; PM In 0, Out 0, Total 0	☐ Use Dist 2? Signal System: 3
AM Peak: 7:30 AM	v/c reduction: 10%	Signal System: 3; v/c reduction: 10%		v/c reduction: 10%
	Opposed Phasing: 0	Opposed Phasing: 0		Opposed Phasing: 0

Approach	Movement	RTOR	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume	%	+ Project Volume	= Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left		0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	N/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0
Southbound	Left		131	0	0	0		131	0	0	14%	2	133	0	0	0	133	0	0
	Lt-Th	S/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	3	0	0	0		3	0	0	0%	0	3	0	0	0	3	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	216	1	119	0		216	1	119	0%	0	216	1	119	0	216	1	119
	Shared			1	231				1	231	0%			1	233			1	233
Eastbound	Left		0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	E/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	208	1	160	0		208	1	160	0%	0	208	1	160	0	208	1	160
	Th-Rt	Projected: 50%		1	160				1	160	0%			1	160			1	160
	Right	Mitigated: 50%	111	0	0	0		111	0	0	0%	0	111	0	0	0	111	0	0
	Shared			0	0				0	0	0%			0	0			0	0
Westbound	Left		652	1	652	0		652	1	652	0%	2	654	1	654	0	654	1	654
	Lt-Th	W/B RTOR:		0	0				0	0	13%			0	0			0	0
	Thru	Existing: 50%	434	2	217	0		434	2	217	0%	0	434	2	217	0	434	2	217
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0

Critical Volumes:	2008, Existing	Projected Cumulative Base	With Project	With Traffic Mitigation
North-South:	231	231	233	233
East-West:	812	812	814	814
Total:	1043	1043	1047	1047
Volume/capacity (*v/c*) ratio:	0.732	0.732	0.735	0.735
v/c less ATSAC adjustment:	0.632	0.632	0.635	0.635
Level of Service (LOS):	**B**	**B**	**B**	**B**

PROJECT IMPACT

Change in *v/c* due to project:	0.003	Δ*v/c* after mitigation:	0.003
Significantly impacted?	NO	Fully mitigated?	N/A

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LADOT
Bureau of Planning and Land Use Development

CMACalc - Critical Movement Analysis Calculator

Upper Stone Canyon Reservoir - Existing (2008) plus Project

Intersection No. 5	2008, EXISTING	, PROJECTED CUMULATIVE BASE	, WITH PROJECT	, WITH TRAFFIC MITIGATION
North/South Street: **I-405 SB on/off Ramps**	Critical Phases: 3	Ambient Growth from: 2008 to: 0 at: 0.0% ; Critical Phases: 3	☐ Adjacent — In / Out / Total	Critical Phases: 3
	Capacity: 1425	Capacity: 1425	Trip Gen 1 AM: 13 / 13 / 26	Capacity: 1425
East/West Street: **Skirball Center Drive**	Signal System: 3	Signal System: 3	Trip Gen 1 PM: 13 / 13 / 26	☐ Use Dist 2? Signal System: 3
	v/c reduction: 10%	v/c reduction: 10%	Trip Gen 2 AM: 0 / 0 / 0	v/c reduction: 10%
Analysis Date: 05/09/2011	Opposed Phasing: 0	Opposed Phasing: 0	Trip Gen 2 PM: 0 / 0 / 0	Opposed Phasing: 0
PM Peak: 3:00 PM				

Approach	Movement	RTOR	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume	%	+ Project Volume	Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left		0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	N/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0
Southbound	Left		244	0	0	0		244	0	0	14%	2	246	0	0	0	246	0	0
	Lt-Th	S/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	3	0	0	0		3	0	0	0%	0	3	0	0	0	3	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	87	1	48	0		87	1	48	0%	0	87	1	48	0	87	1	48
	Shared			1	**286**				1	**286**	0%			1	**288**			1	**288**
Eastbound	Left		0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	E/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	441	1	**244**	0		441	1	**244**	0%	0	441	1	**244**	0	441	1	**244**
	Th-Rt	Projected: 50%		1	**244**				1	**244**	0%			1	**244**			1	**244**
	Right	Mitigated: 50%	47	0	0	0		47	0	0	0%	0	47	0	0	0	47	0	0
	Shared			0	0				0	0	0%			0	0			0	0
Westbound	Left		342	1	**342**	0		342	1	**342**	0%	2	344	1	**344**	0	344	1	**344**
	Lt-Th	W/B RTOR:		0	0				0	0	13%			0	0			0	0
	Thru	Existing: 50%	288	2	144	0		288	2	144	0%	0	288	2	144	0	288	2	144
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0

Critical Volumes:	2008, Existing	Projected Cumulative Base	With Project	With Traffic Mitigation
North-South:	286	286	288	288
East-West:	586	586	588	588
Total:	872	872	876	876
Volume/capacity (*v/c*) ratio:	0.612	0.612	0.615	0.615
v/c less ATSAC adjustment:	0.512	0.512	0.515	0.515
Level of Service (LOS):	**A**	**A**	**A**	**A**

PROJECT IMPACT

Change in *v/c* due to project:	0.003	Δ*v/c* after mitigation:	0.003
Significantly impacted?	NO	Fully mitigated?	N/A

Filename: J:\2008\JA81142 LADWP Reservoirs EIR\Upper Stone Canyon - Task 1\Analysis\UpperStoneCyn - Proposed Park.xls

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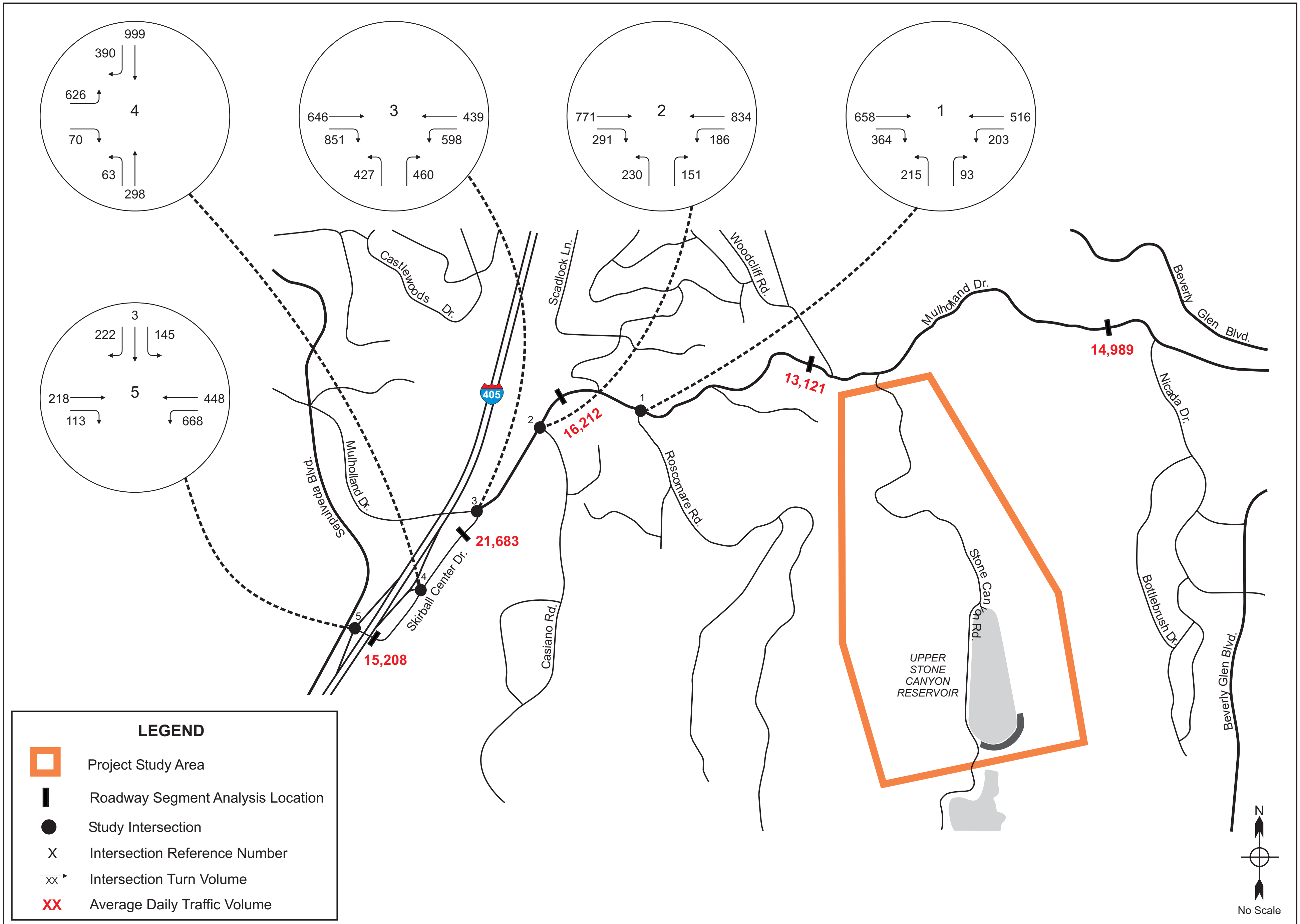
Appendix K
Additional-Year Future Pre-Project Volume Figures



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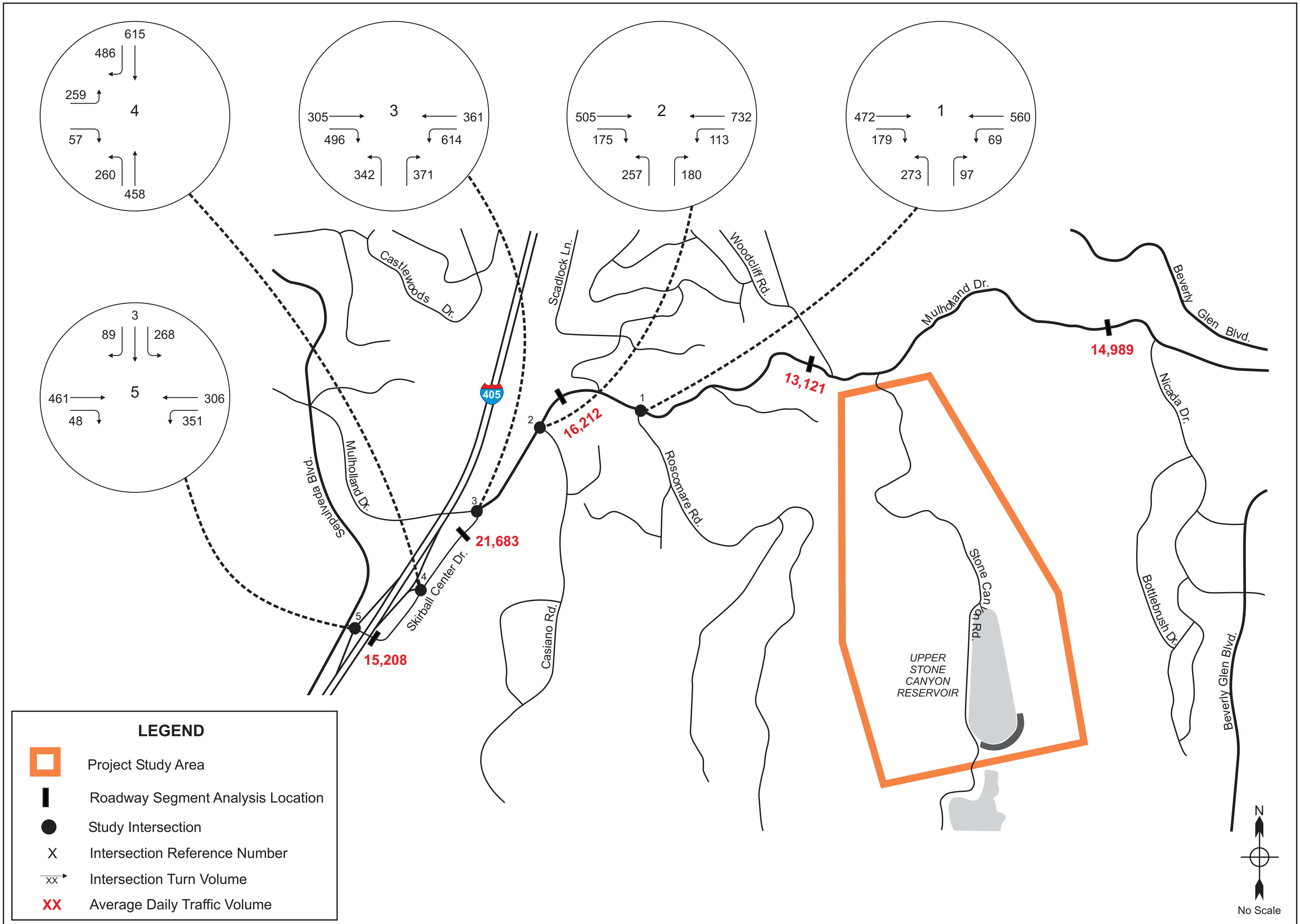
PLANNING & ENGINEERING

Upper Stone Canyon Reservoir Water Quality Improvement Project

Appendix G-1

Future (2014) No Project - AM Peak Hour Intersection Volumes

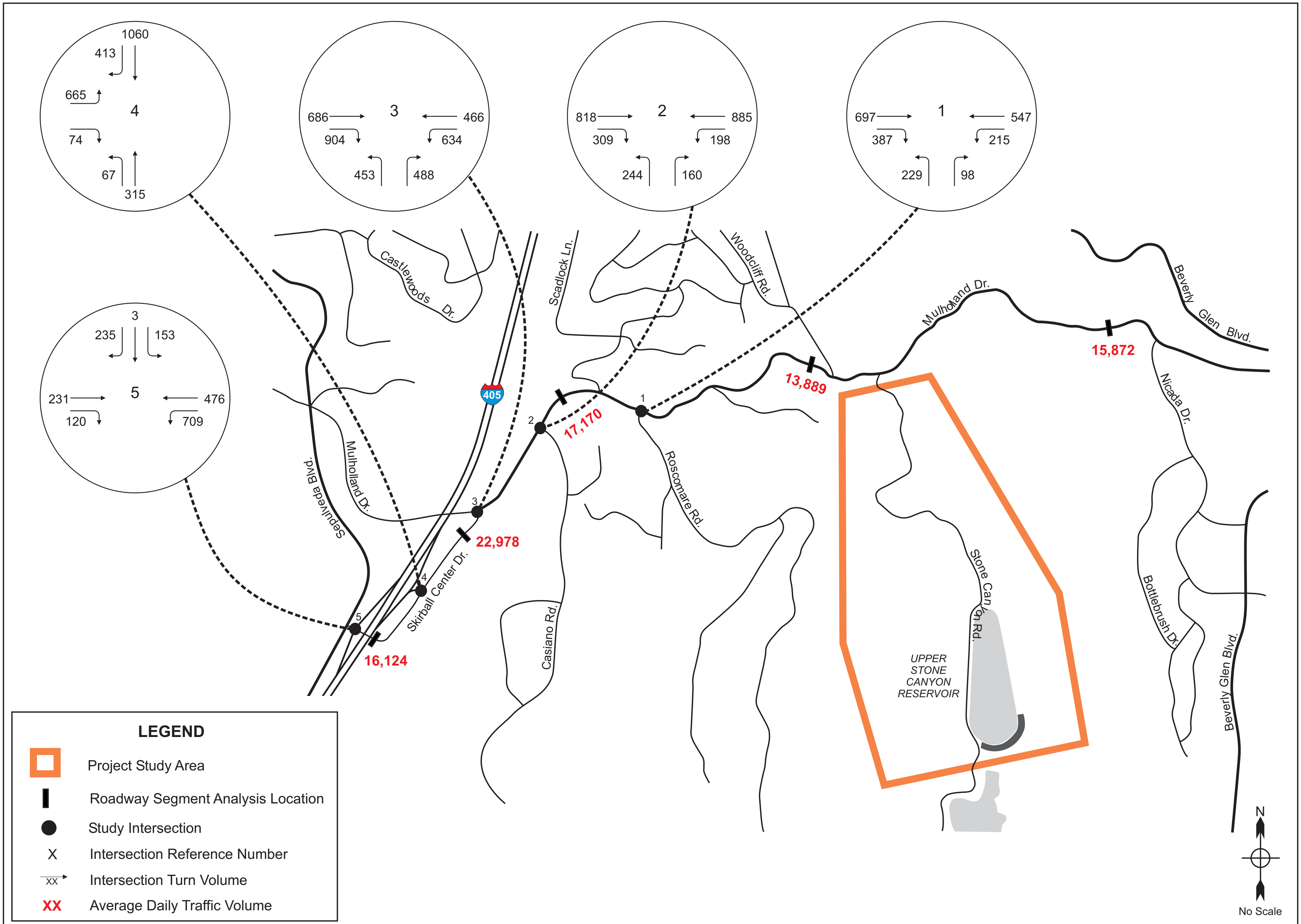


KOA CORPORATION
PLANNING & ENGINEERING

Upper Stone Canyon Reservoir Water Quality Improvement Project

Appendix G-2

Future (2014) No Project - PM Peak Hour Intersection Volumes



LEGEND

- Project Study Area
- Roadway Segment Analysis Location
- Study Intersection
- X Intersection Reference Number
- xx Intersection Turn Volume
- XX Average Daily Traffic Volume

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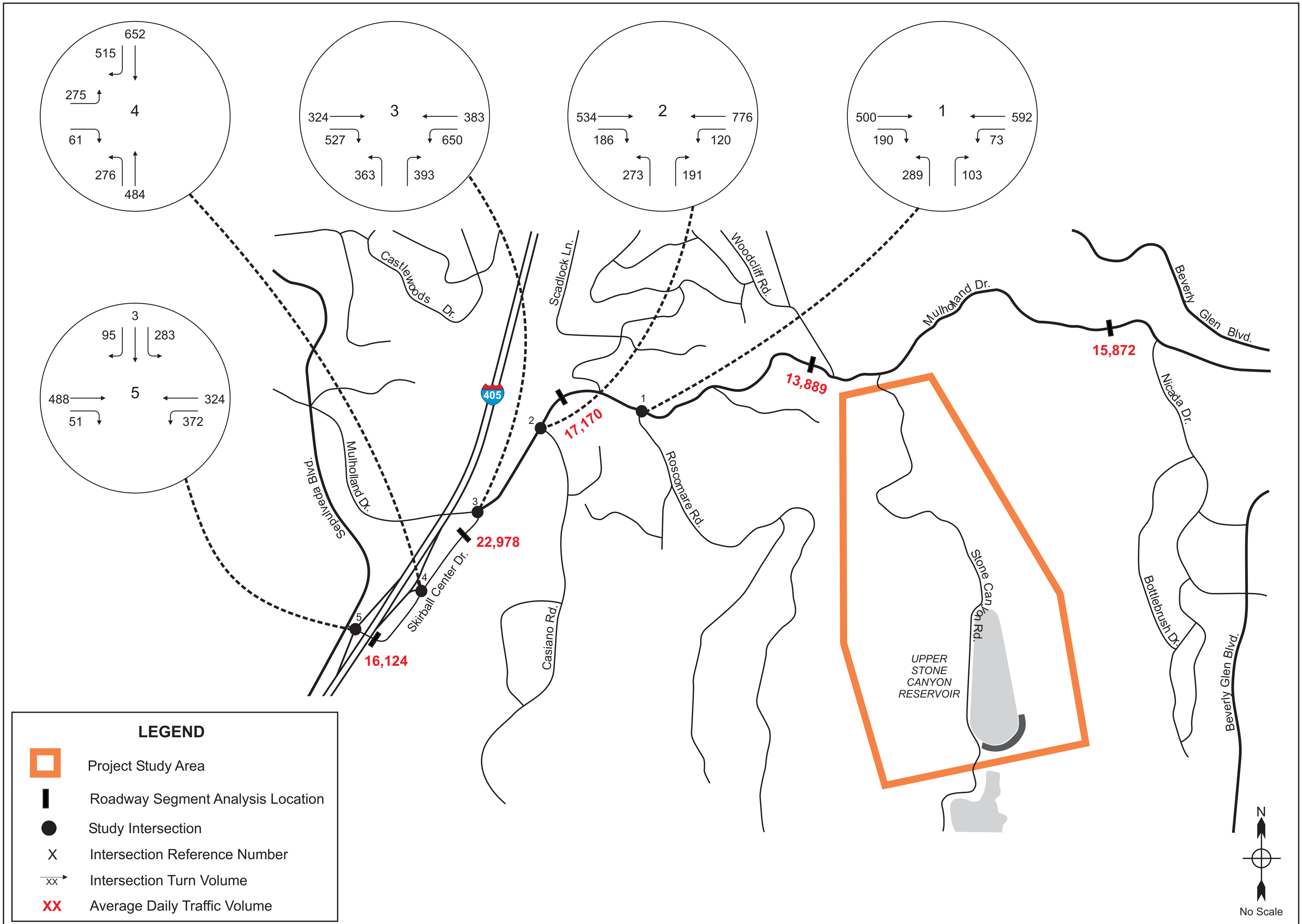
Upper Stone Canyon Reservoir Water Quality Improvement Project — Appendix G-3

Future (2020) No-Project - AM Peak-Hour Intersection Volumes



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PLANNING & ENGINEERING

Upper Stone Canyon Reservoir Water Quality Improvement Project

Appendix G-4

Future (2020) No-Project - PM Peak-Hour Intersection Volumes

Appendix L
Traffic Study Memorandum of Understanding with LADOT

To provide for recreation use at the site, pedestrian trails would be designated in the lower elevations of the canyon. Public access would be provided from the existing Mulholland gate at the north end of the property, which would be open for public entry during daylight hours only. Parking would be provided for approximately 80 vehicles, including 50 spaces in a consolidated lot and 30 overflow spaces distributed within smaller satellite parking areas.

The project site location is illustrated in Attachment A.

Geographic Distribution: Truck distribution would be oriented to the location of the closest freeway interchange at Mulholland Highway and the I-405 freeway. Employee trips would be distributed eastward and westward on Mulholland Drive, with a majority of trips distributed to the I-405. The study intersections and roadway segments are illustrated on the Attachment A figure.

Trip Generation Rate(s) (Source): Daily construction truck trip estimates and number of construction employees during the peak period of construction. Truck volumes would be multiplied by a factor of 2.5, consistent with the SCAG *Heavy Duty Truck Model* analysis.

Trip generation of the new park area would be calculated using ITE *Trip Generation (8th edition)* rates for regional parks, based on acreage.

Project Analysis Year: 2020 **Ambient Growth Rate:** 1%
(2020 chosen as it would be the final year of the multi-year construction period)

Area Projects: A list of pending projects and the associated trip generation will be included in the analysis.

Study Intersections (locations included within Attachment A): [1]

1. Roscomare Road / Mulholland Drive
2. Casiano Road / Mulholland Drive
3. Mulholland Drive / skirball Center Drive
4. Skirball Center Drive / I-405 NB on & off ramps
5. I-1405 SB on & off ramps / Skirball Center Drive

Study Roadway Segments (locations included within Attachment A): [1]

A. Mulholland Drive, west of Nicada Drive
B. Mulholland Drive, west of Woodcliff Road
C. Mulholland Drive, west of Roscomare Road
D. Skirball Center Drive, between Mulholland Drive and I-405 NB ramps
E. Skirball Center Drive, between I-405 SB ramps and Sepulveda Boulevard

Roadway segment counts would be conducted over the course of two weekday periods, totaling 48 hours. Daily results would be averaged to create one 24-hour total volume total for each analyzed location.

This Memorandum of Understanding (MOU) acknowledges Los Angeles Department of Transportation (LADOT) requirements of traffic impact analysis for the following project.

Project Name: Upper Stone Canyon Reservoir Water Quality Improvement Project - Stone Canyon Reservoir Complex (SCRC)

Project Location: Upper Stone Canyon Reservoir is located approximately 0.5 miles south of Mulholland Drive between Roscomare Road and Beverly Glen Boulevard. Upper Stone Canyon Reservoir itself is accessed from Mulholland Drive via a non-publicly accessible road, approximately 1.5 miles east of the I-405 (San Diego Freeway).

Project Description:

The project would provide for a buried storage structure as a replacement to the existing uncovered reservoir. The goal of the proposed project is to maintain and improve the quality, reliability, and stability of the local service area drinking water supply in order to continue to meet existing demand, while, consistent with these drinking water requirements, restoring the natural character in portions of Stone Canyon.

The SCRC property would remain under the ownership of LADWP, but the recreation function and the property maintenance would be the responsibility of LADRP and/or the Santa Monica Mountains Conservancy.

Construction of the proposed project, as described below, would take approximately 4.5 years to complete. Project scheduling contingencies provide for a construction schedule spanning up to 5.5 years. It is anticipated that project construction would begin in late 2015 and would be completed by mid-2020. Estimated off-site construction truck trips and employment levels would be as follows:

- <u>Phase 1 (Reservoir Draining, Mobilization, Reservoir Demolition, and Landslide Stabilization – 4 months)</u>: up to 48 construction employees, Up to 79 truck deliveries or haul trips per day
- <u>Phase 2 (Landslide Stabilization, Sub-Grade Preparation, Reservoir Rough Shaping – 12 months):</u> up to 48 construction employees, up to 79 truck deliveries or haul trips per day
- <u>Phase 3 (Covered Reservoir and Sub-Drain System Construction – 27 months)</u>: up to 107 construction employees, up to 57 truck deliveries or haul trips per day
- <u>Phase 4 (Backfilling and Landscaping – 2 months)</u>: up to 47 construction employees, up to 163 truck deliveries or haul trips per day
- <u>Phase 5 (Recreation Improvements – 6 months)</u>: up to 12construction employees, up to four truck deliveries or haul trips per day

Alternatives to be analyzed include a floating cover alternative and an aluminum cover alternative.

Public access to Stone Canyon is a component of the proposed project based on the public investment in the buried concrete-roof reservoir. Public access would not be a component of alternatives to the proposed project that would not provide some form of buried reservoir facility.

A parking area for trail users would be constructed on-site, and a support building would also be constructed that would contains restrooms, offices, informational displays, and maintenance storage.

Trip Credits: (Exact amount of credit subject to approval by LADOT)

Transportation Demand Management (TDM)	~~yes~~	**no**
Existing Active Land Use	~~yes~~	**no**
Previous Land Use	~~yes~~	**no**
Internal Trip	~~yes~~	**no**
Pass-By Trip	~~yes~~	**no**

This analysis will follow LADOT traffic study guidelines, dated August 2003 and updated January 2008, for the traffic impact analysis.

	Consultant:	**Applicant:**
Name:	KOA Corporation	LADWP
Address:	1055 Corporate Center Dr., Suite 300 Monterey Park, CA 91754-7642	Prime consultant is AECOM: 515 South Flower Street, 9th Floor Los Angeles, CA 90071
Contact:	Brian A. Marchetti – (323) 260-4703	Melissa Hatcher – (213) 368-1614

Approved by:

06/18/10
Consultant's Representative — Date
KOA Corporation

6/22/10
LADOT's Representative — Date

[1] ADDITIONAL STUDY LOCATIONS MAY BE REQUIRED SHOULD A SIGNIFICANT IMPACT BE IDENTIFIED AT ANY OF THE CURRENT STUDY LOCATIONS.

ATTACHMENT A
PROJECT SITE AND STUDY LOCATIONS