



INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

SUNSET UPPER DEBRIS BASIN DAM MODIFICATION PROJECT COUNTY OF LOS ANGELES, CALIFORNIA

Prepared for | County of Los Angeles
Department of Public Works
Water Resources Division
900 South Fremont Avenue, Second Floor
Alhambra, California 91803

Prepared by | BonTerra Consulting
225 South Lake Avenue, Suite 1000
Pasadena, California 91101
T: (626) 351-2000 F: (626) 351-2030

February 2013

TABLE OF CONTENTS

<u>Section</u>		<u>Page</u>
Section 1.0	Introduction.....	1-1
1.1	Purpose of the Initial Study	1-1
1.2	Summary of Impacts and Mitigation	1-2
1.3	Project Approvals.....	1-5
1.4	Organization of IS/MND	1-5
Section 2.0	Environmental Setting	2-1
2.1	Project Location	2-1
2.2	Sunset Upper Debris Basin Dam History	2-1
2.3	Project Site Characteristics	2-2
Section 3.0	Project Description	3-1
3.1	Project Objectives	3-1
3.2	Project Components	3-1
3.3	Discretionary Actions	3-5
Section 4.0	Environmental Analysis	4-1
4.1	Aesthetics	4-3
4.2	Agriculture and Forest Resources.....	4-5
4.3	Air Quality	4-7
4.4	Biological Resources	4-14
4.5	Cultural Resources	4-25
4.6	Geology and Soils.....	4-29
4.7	Greenhouse Gas Emissions	4-32
4.8	Hazards/Hazardous Materials	4-36
4.9	Hydrology and Water Quality	4-39
4.10	Land Use and Planning.....	4-43
4.11	Mineral Resources	4-45
4.12	Noise	4-46
4.13	Population and Housing.....	4-50
4.14	Public Services	4-52
4.15	Recreation	4-54
4.16	Transportation/Traffic.....	4-55
4.17	Utilities and Service Systems.....	4-59
4.18	Mandatory Findings of Significance	4-62
Section 5.0	References	5-1
Section 6.0	Report Preparers.....	6-1

LIST OF TABLES

<u>Table</u>	<u>Page</u>
1-1 Summary of Impacts and Mitigation.....	1-3
3-1 Proposed Project Data Summary	3-1
4-1 California and National Ambient Air Quality Standards	4-8
4-2 Designations of Criteria Pollutants in the South Coast Air Basin.....	4-9
4-3 Estimated Maximum Daily Construction Emissions (Pounds/Day)	4-10
4-4 Vegetation Types within Expanded 25% and 100% Contact Lines	4-17
4-5 Summary of Jurisdictional Resource Impacts from Project Construction (Acres)	4-19
4-6 Summary of Jurisdictional Resources Within the Expanded 100% and 25% Contact Lines (Acres)	4-20
4-7 Comparison of Worldwide GHG Emissions	4-32

LIST OF EXHIBITS

<u>Exhibit</u>	<u>Page</u>
2-1 Regional Location and Local Vicinity	2-1
2-2 Aerial Photograph.....	2-1
2-3 Sunset Canyon Watershed.....	2-1
2-4 Sunset Upper Debris Basin Dam Site Photographs	2-2
2-5 Existing Sunset Upper Debris Basin	2-3
3-1 Proposed Access Road Modifications.....	3-2
3-2 Proposed Dam Modifications.....	3-2
3-3 Construction Impact Footprint.....	3-2
3-4 Proposed Sunset Upper Debris Basin	3-4
4-1 Existing Vegetation at Sunset Upper Debris Basin Dam	4-15
4-2 Flood Zones	4-40

APPENDICES

Appendix

- A Air Quality and Greenhouse Gas Analysis: CalEEMod Data
- B Biological Resources Report
- C Cultural Resources Assessment Memorandum

SECTION 1.0 INTRODUCTION

1.1 PURPOSE OF THE INITIAL STUDY

In accordance with the California Environmental Quality Act (CEQA) (*California Public Resources Code* §21000 et seq.) and the CEQA Guidelines (*California Code of Regulations*, Title 14, §15000 et seq.), this Initial Study (IS) has been prepared to support the adoption of a Mitigated Negative Declaration (MND) for the proposed Sunset Upper Debris Basin Dam Modification Project (Project). This IS/MND evaluates the potential environmental impacts of Project implementation and recommends mitigation measures to lessen or avoid the Project's significant adverse impacts on the environment.

Section 15367 of the CEQA Guidelines defines the Lead Agency as the public agency with the principal responsibility for carrying out or approving a project. The Los Angeles County Flood Control District (LACFCD), now administered by the County of Los Angeles Department of Public Works (LACDPW), will be responsible for approval and construction of the Project, as well as for long-term maintenance. Thus, the LACFCD serves as the Lead Agency for the Project and is responsible for complying with CEQA and the CEQA Guidelines.

Section 15063(c) of the CEQA Guidelines identifies the purposes of an Initial Study as follows:

- (1) To provide the Lead Agency with information to use as the basis for deciding whether to prepare an EIR or a Negative Declaration;
- (2) To enable an applicant or Lead Agency to modify a project, mitigating adverse impacts before an EIR is prepared, thereby enabling the project to qualify for a Negative Declaration;
- (3) To assist in the preparation of an EIR, if one is required, by focusing the EIR on the effects determined to be significant, identifying the effects determined not to be significant, explaining the reasons for determining that potentially significant effects would not be significant, and identifying whether a program EIR, tiering, or another appropriate process can be used for analysis of the project's environmental effects;
- (4) To facilitate environmental assessment early in the design of a project;
- (5) To provide documentation of the factual basis for the finding in a Negative Declaration that a project will not have a significant effect on the environment;
- (6) To eliminate unnecessary EIRs; and
- (7) To determine whether a previously prepared EIR could be used with the project.

This IS for the proposed Project serves these purposes.

In accordance with Section 21082.1 (c) of CEQA and Section 15074 (b) of the CEQA Guidelines, the LACFCD authorized the preparation of this IS/MND and has reviewed and revised, as necessary, all submitted drafts and technical studies to reflect its own independent judgment, including (1) reliance on applicable LACFCD technical personnel and (2) review of all technical reports. Data for this IS/MND was obtained from on-site field observations; discussions with affected agencies; review of available technical studies, reports, guidelines, and data; and other studies prepared for the Project (including air quality and greenhouse gas construction emissions modeling, a biological resources assessment, a jurisdictional delineation, and a cultural resources record search and field survey).

1.2 **SUMMARY OF IMPACTS AND MITIGATION**

The proposed Project would raise the spillway height by five feet through the construction of a five-foot-high parapet wall on top of the existing dam. The existing access road crossing the southern end of the dam would be raised by varying amounts up to 4.8 feet to match the increased dam elevation. The proposed Project would provide an additional 8,000 cubic yards (cy) of storage capacity to the Sunset Upper Debris Basin, located behind the Sunset Upper Dam. The Project site is located on County of Los Angeles-owned property within the City of Burbank, in the upper section of Sunset Canyon in the Verdugo Mountains.

As detailed in Section 4.0 of this IS/MND, the proposed Project would result in environmental impacts during short-term construction activities and long-term maintenance of the Project. There are existing local, State, and federal regulations or laws that need to be implemented by the proposed Project and are independent of CEQA review. These regulations are considered regulatory requirements (RRs) and serve to offset or prevent certain environmental impacts. Because RRs are incorporated into the Project, either in the design or as part of Project implementation, they do not constitute mitigation measures (MMs). According to Section 15370 of the CEQA Guidelines, “mitigation” includes the following:

- Avoiding the impact altogether by not taking a certain action or parts of an action.
- Minimizing impacts by limiting the degree or magnitude of the action and its implementation.
- Rectifying the impact by repairing, rehabilitating, or restoring the impacted environment.
- Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action.
- Compensating for the impact by replacing or providing substitute resources or environments.

The proposed Project would be required to comply with all applicable RRs, as outlined in Section 4.0. In addition, the Project would be required to implement identified MMs to avoid or reduce potentially significant adverse impacts to Biological Resources. The following MMs have been developed to reduce the significant impacts of the proposed Project to a less than significant level:

**TABLE 1-1
SUMMARY OF IMPACTS AND MITIGATION**

Potential Impact	Mitigation Measure
<p>Although no coastal California gnatcatchers were observed during 2008 focused surveys, the species could have moved into the biological study area due to the presence of suitable habitat. If the coastal California gnatcatcher were to occur at the Project site in the future, increased noise and human activity could indirectly impact coastal California gnatcatchers (if present).</p>	<p>MM 4.4-1 Prior to construction of the dam modifications, the County of Los Angeles Flood Control District (LACFCD) or their consultant will contact the U.S. Fish and Wildlife Service (USFWS) to determine the appropriate pre-construction survey methodology (e.g., full protocol survey or a reduced-visit modified survey protocol) for the coastal California gnatcatcher and discuss and obtain approval on pre-nesting season exclusionary measures and avoidance and minimization measures if a nesting coastal California gnatcatcher is observed during the pre-construction survey. The LACFCD will implement the approved exclusionary measures prior to the coastal California gnatcatcher's breeding season. A permitted gnatcatcher Biologist (i.e., one holding a 10[a][1][A] permit to conduct surveys for the coastal California gnatcatcher) shall conduct a pre-construction survey for coastal California gnatcatcher following the methodology approved by the USFWS to determine the presence or absence of this species in the coastal sage scrub in and adjacent to the Project site. If no coastal California gnatcatchers are observed, no further avoidance or mitigation would be required. If the coastal California gnatcatcher is observed during the pre-construction survey, the LACFCD (and/or its consultant Biologist) will implement the approved avoidance and minimization measures. These measures may include biological monitoring by a permitted gnatcatcher Biologist during construction or maintenance activities; construction or maintenance activities restricted to occur outside the breeding season (February 14 to August 15); or noise restrictions near the occupied area.</p> <p>Prior to any maintenance activities within the expanded maintenance areas during the breeding season, the LACFCD will follow the same pre-construction survey as described above. This approach is consistent with the LACFCD's existing debris basin maintenance permits.</p>
<p>The proposed Project would impact an estimated 0.233 acre of "Waters of the United States", including 0.009 acre of wetlands under the jurisdiction of the U.S. Army Corps of Engineers, and 0.258 acre of resources under the jurisdiction of the California Department of Fish and Wildlife* that are not covered by the existing permits for routine maintenance of the Sunset Upper Debris Basin.</p>	<p>MM 4.4-2 Prior to construction, the LACFCD will obtain permits/agreements from the U.S. Army Corps of Engineers (USACE), the California Regional Water Quality Control Board (RWQCB), and the California Department of Fish and Wildlife (CDFW) to authorize impacts to "waters of the United States", including wetlands, and resources under the jurisdiction of the CDFW that are outside the impacts already authorized under the LACFCD's existing permits/agreement for maintenance of the debris basin. (These maintenance authorizations are comprised of: USACE Regional Permit File No. SPL-2003-00411-KW; RWQCB File No. 02-144-2008 Renewal; and CDFG Streambed Alteration Agreement No. 1600-2008-0290-R5.) No Project-related discharge or fill material will be allowed to impact any drainages in the Project impact area until the new permits/agreement are obtained. Compliance with the conditions of the new permits/agreement and applicable conditions of the existing maintenance permits/agreement will be made part of the Project construction. Based on LACFCD's experience, these conditions may include biological monitoring during the initiation of construction; use of Best Management Practices (BMPs) to protect water quality; flagging of the boundaries of the construction site; measures to protect trees; other measures to protect sensitive species; mitigation for construction impacts outside those already authorized in the existing maintenance permits/agreement; and mitigation for ongoing impacts within the expanded maintenance area. Such mitigation may include on-site or off-site preservation or restoration of impacted habitat.</p>

**TABLE 1-1 (CONTINUED)
SUMMARY OF IMPACTS AND MITIGATION**

Potential Impact	Mitigation Measure
	<p>It is anticipated that the permits/agreement for the construction of the Project will also cover the first several years of maintenance within the expanded maintenance area, until the LACFCD and the permitting agencies can coordinate to amend the existing maintenance permits/agreement to incorporate the additional maintenance footprint.</p>
<p>If a raptor is nesting in the woodlands adjacent to the Project site during construction activities (including geotechnical testing), the increased noise and human activity could disturb the raptor and consequently the success of its nest.</p>	<p>MM 4.4-3 The LACFCD will work with the CDFW during the preparation of the Project's Streambed Alteration Agreement to incorporate into the Agreement CDFW-approved temporary exclusionary measures to prevent raptor nesting within the established buffer distance from the Project construction areas. The LACFCD will employ approved exclusionary measures prior to February 1 (start of raptor breeding season) and remove them upon completion of construction activities. Prior to construction of the proposed Project, a pre-construction survey for active raptor nests shall be conducted by a qualified Biologist prior to the commencement of any construction activities, as directed in the CDFW Streambed Alteration Agreement. If an active nest is observed, it shall be mapped and a buffer zone designated per CDFW's direction to protect the nest. Construction activities will be excluded from this buffer zone until the nest is no longer active.</p> <p>Prior to any maintenance activities within the expanded maintenance areas during the breeding season (February 1 to July 30), the LACFCD will follow the same pre-construction survey procedure and restrictions as described above. This approach is consistent with the LACFCD's existing debris basin maintenance permits.</p>
<p>Construction of the proposed Project could directly or indirectly (through increased noise and human activity) impact nesting birds that are protected under the Migratory Bird Treaty Act.</p>	<p>MM 4.4-4 The LACFCD will work with the CDFW during the preparation of the Project's Streambed Alteration Agreement to incorporate into the Agreement CDFW-approved temporary exclusionary measures to prevent migratory bird nesting within the established buffer distance from the Project construction areas. The LACFCD will employ approved exclusionary measures prior to March 1 (start of nesting season) and remove them upon completion of construction activities. Prior to commencement of construction of the proposed Project, a pre-construction survey for active bird nests shall be conducted by a qualified Biologist, as directed in the CDFW Streambed Alteration Agreement. The survey shall include all potential nesting areas, including dam structures and bare ground. If an active nest is observed, it shall be mapped and a buffer zone designated per CDFW's direction to protect the nest; the size of the buffer will be determined by the Biologist based on the sensitivity of the species and CDFW requirements. Construction/maintenance activities will be excluded from this buffer zone until the nest is no longer active.</p> <p>Prior to any maintenance activities within the expanded maintenance areas during the nesting season (March 1 to August 31), the LACFCD will follow the same pre-construction survey procedure and restrictions as described above. This approach is consistent with LACFCD's existing debris basin maintenance permits.</p>
<p>* The California Department of Fish and Game (CDFG) changed its name to the California Department of Fish and Wildlife (CDFW) effective January 1, 2013.</p>	

1.3 PROJECT APPROVALS

The IS/MND was provided to the State Clearinghouse, responsible and trustee agencies and other interested agencies for review and comment. A Notice of Intent to Adopt the IS/MND has also been published in the *Los Angeles Times*; was directly mailed to the 135 residences located downstream of the Sunset Upper Debris Basin Dam on Country Club Drive/Olive Avenue to its intersection with Kenneth Road and has been filed with the County of Los Angeles County Clerk/Registrar-Recorder. The IS/MND and associated technical reports were made available for public review online at the LACDPW's website at <http://dpw.lacounty.gov/wrd/CEQA/Sunset/> and at the following three locations during normal business hours:

County of Los Angeles
Department of Public Works
Water Resources Division
900 South Fremont Avenue, 2nd Floor
Alhambra, California 91803

Burbank Central Library
110 North Glenoaks Boulevard
Burbank, California 91502

Buena Vista Branch Library
300 North Buena Vista Street
Burbank, California 91505

There will be a 30-day public review and comment period for the IS/MND, in accordance with Section 15073 of the CEQA Guidelines. During this time, the LACFCD (via the LACDPW) will accept written comments from the public and agencies on the IS/MND. In reviewing the IS/MND, the reviewer should focus on the sufficiency of the document in identifying and analyzing the Project's potential impacts on the environment and ways in which the potentially significant effects of the proposed Project are avoided or mitigated. Comments on the IS/MND may be sent, with the subject line "Sunset Upper Debris Basin Dam Modification Project IS/MND", to:

Grace Yu, PE, LEED AP
County of Los Angeles Department of Public Works
Water Resources Division
900 South Fremont Avenue, 2nd Floor
Alhambra, California 91803
gyu@dpw.lacounty.gov

In accordance with Section 15074 of the CEQA Guidelines, prior to approving the Project, the County of Los Angeles Board of Supervisors (Board) must consider the IS/MND together with any comments received during the public review process. The Board will adopt the IS/MND only if it finds that there is no substantial evidence that the Project will have a significant effect on the environment.

1.4 ORGANIZATION OF IS/MND

This IS/MND is organized into the following sections:

Section 1.0 – Introduction: This section provides an introduction to the IS/MND process and a brief overview of the findings of the environmental analysis.

Section 2.0 – Environmental Setting: This section describes the Project location and the existing environmental setting of the Project area.

Section 3.0 – Project Description: This section provides the Project objectives and Project description; it also identifies the approvals needed for Project implementation.

Section 4.0 – Environmental Checklist Form: The completed CEQA checklist form provides the analysis of the potential impacts that may result from Project implementation. The environmental checklist form also includes “Mandatory Findings of Significance”, per CEQA requirements.

This section contains the analysis of environmental impacts identified in the environmental checklist and identifies the RRs that the Project would need to comply with, as well as the mitigation measures (MMs) that would eliminate potentially significant adverse effects or reduce them to less than significant levels, where applicable.

Section 5.0 – References: This section identifies the references used in preparation of the IS/MND.

Section 6.0 – Report Preparers and Contributors: This section identifies the individuals responsible for preparing the IS/MND.

SECTION 2.0 ENVIRONMENTAL SETTING

2.1 PROJECT LOCATION

Sunset Canyon is located in the Verdugo Mountains in Los Angeles County, as shown in Exhibit 2-1, Regional Location and Local Vicinity. The debris dam and debris basin are located on County of Los Angeles owned property within the City of Burbank. The location and surrounding natural setting of the Sunset Upper Debris Basin Dam are shown in Exhibit 2-2, Aerial Photograph.

2.2 SUNSET UPPER DEBRIS BASIN DAM HISTORY

The Sunset Upper Debris Basin Dam was built to create a debris basin at the upper portion of Sunset Canyon, within the City of Burbank and north of the terminus of Country Club Drive (which runs along the canyon bottom downstream of the Sunset Upper Debris Basin Dam). The dam was constructed in 1929 by the Los Angeles County Flood Control District (LACFCD; administration of LACFCD facilities is now vested with the County of Los Angeles Department of Public Works [LACDPW]). The dam and debris basin reduce the volume of debris (comprising of dirt, rocks, and displaced vegetation) making its way to the neighborhood below the Sunset Upper Watershed of Sunset Canyon.

The Sunset Upper Watershed flows into the Sunset Lower Watershed, which also collects flows from the Sunset Deer Watershed as shown on Exhibit 2-3, Sunset Canyon Watershed. Accordingly, nearby debris basins include the Sunset Lower Debris Basin constructed in 1963 by the U.S. Army Corps of Engineers (USACE) at the mouth of the canyon, and the Sunset Canyon Deer Debris Basin constructed in 1982 by the LACFCD at the location where Deer Canyon joins Sunset Canyon. These facilities, now owned by the LACFCD and maintained by the LACDPW, would not be impacted by the proposed Project.

The capacity of the Sunset Upper Debris Basin Dam is significantly less than the potential debris runoff volume generated by its tributary watershed. Wildfires in the Verdugo Mountains in 1964, 1980, and 2005 led to heavy mudflows in Sunset Canyon and on Country Club Drive during subsequent rain events. Following the October 2005 Harvard Fire, a temporary “rail and timber structure”¹ with an estimated storage capacity of 1,000 cubic yards (cy) was placed across Country Club Drive (just upstream of the street’s terminus) to collect debris from Sunset Upper Debris Basin overflow and from a side canyon, which does not have a debris basin. Also subsequent to the Harvard Fire, the County made a commitment to the City of Burbank to address mudflow hazards from the Sunset Upper Canyon and surrounding sub-watersheds. In 2007, the County presented the results of a feasibility study that included five alternatives for controlling the debris flows within Sunset Canyon and on Country Club Drive. The feasibility study recommended the construction of a temporary rail and timber structure at the terminus of Country Club Drive (which was already completed) and a permanent five-foot high parapet wall on top of the existing Sunset Upper Debris Basin Dam, to increase the capacity of the debris basin, along with an investigation of potential landslide locations within the Upper Sunset Canyon Watershed.

¹ A debris collection device constructed of timber and metal rail.

2.3 PROJECT SITE CHARACTERISTICS

Unless otherwise specified, “Project site” refers to the Sunset Upper Debris Basin Dam site, and “proposed Project” refers to implementation of the proposed improvements at the Sunset Upper Debris Basin Dam.

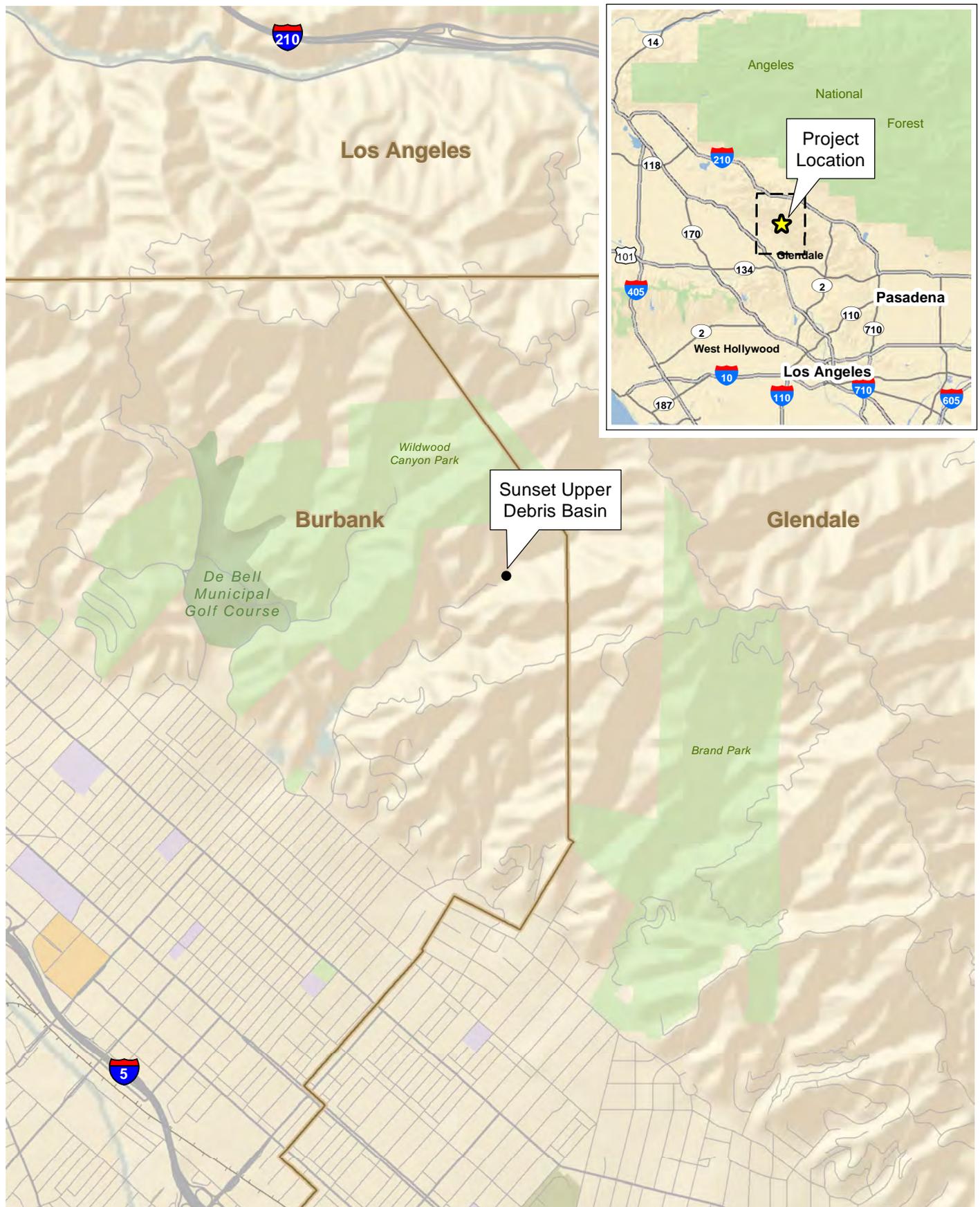
Sunset Upper Debris Basin Dam

Sunset Canyon is defined by steep side slopes and a narrow canyon bottom. The Sunset Upper Debris Basin Dam is located at the upper section of the canyon, and retains debris runoff from a 0.44-square-mile watershed. Exhibit 2-4, Sunset Upper Debris Basin Dam Site Photographs, shows the existing conditions of the Sunset Upper Debris Basin Dam and surrounding area and each viewpoint is described below.

- **View 1 – View of Sunset Canyon Dam, Looking East.** This view is seen from the downstream access road looking east at the dam as it spans Sunset Canyon, with the maintenance shed at the northern end of the dam. Steep slopes on both sides of the canyon and the distant hills supporting scrub and woodland vegetation are visible within the viewshed.
- **View 2 – View of Sunset Canyon Debris Basin, Looking East.** This is a view of the debris basin located just upstream of the dam. The photograph is taken from the edge of the debris basin, looking east. As shown, the basin bottom is relatively flat, but features steep slopes and heavy vegetation farther upstream.
- **View 3 – View of Sunset Canyon Dam, Looking South.** This view is from the western slopes of Sunset Canyon looking south at the dam. The dam structure is highly visible in this view, with the debris basin in the foreground. The access road runs to the top of the southern end of the dam, and is defined by the gunite² slopes that were created by slope cuts along the eastern/southern sides of the road.
- **View 4 – View of Sunset Canyon Dam, Looking West.** This is a view of the Sunset Canyon Dam as seen from the debris basin, looking west. The concrete dam spans the narrow canyon bottom and extends up the steep slopes of the canyon.

The concrete arch dam that forms the debris basin is 28.7 feet high and 181 feet wide, and its spillway (in the center of the dam) is 75 feet wide. The spillway is flanked by crest walls that are 5.8 and 6.8 feet higher than the spillway. The left and right parapet walls extend 25 feet on each side, step up by 1 foot, and extend for another 28 feet. The northern end of the dam features a protection fence barrier on top of the parapet wall. A protection fence is also present on the parapet wall at the southern section of the dam. A concrete walkway and steps lead up to the northern end of the dam, where a maintenance shed is located. This shed was originally used by County staff for monitoring the dam, but is no longer in use. A paved access road serves the debris basin and extends northeasterly from the terminus of Country Club Drive, where an access gate/barrier is located (approximately 1,000 feet downstream of the dam). From the debris basin, the access road is approximately 15 to 20 feet wide, with a concrete gutter and gunite slope along the south side and an existing metal beam guard railing on the north side, and becomes a dirt road farther to the east.

² A mixture of cement, sand or crushed slag and water, sprayed over reinforcement as lightweight concrete construction (Dictionary.com, unabridged, 2013).



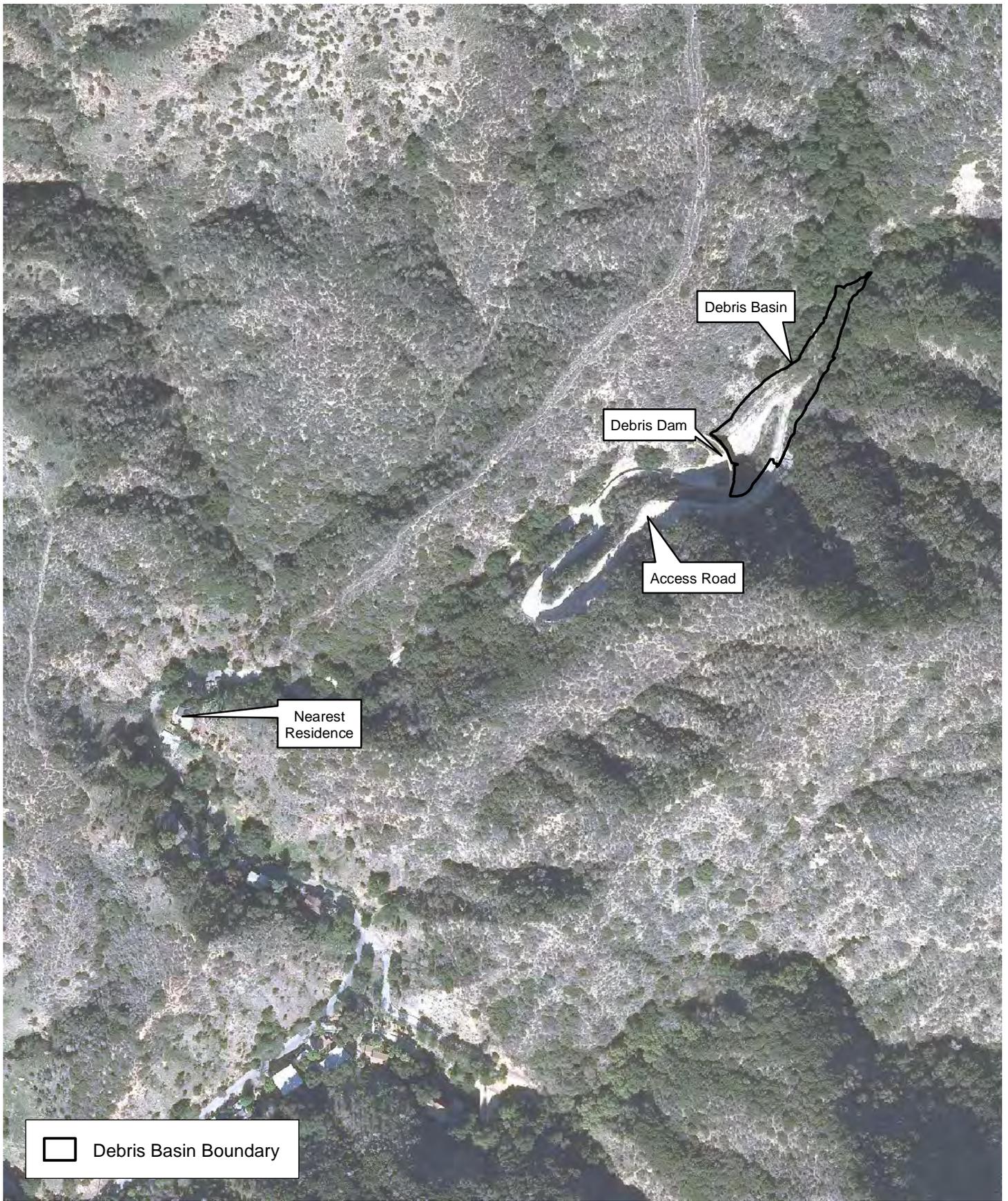
D:\Projects\CoLADPWU144\mxd\Ex_RL_LV.mxd

Regional Location and Local Vicinity
Sunset Upper Debris Basin Dam Modification Project

Exhibit 2-1



D:\Projects\ColADPWU144\mxd\ex_aerial.mxd



Aerial Photograph

Sunset Upper Debris Basin Dam Modification Project

Exhibit 2-2

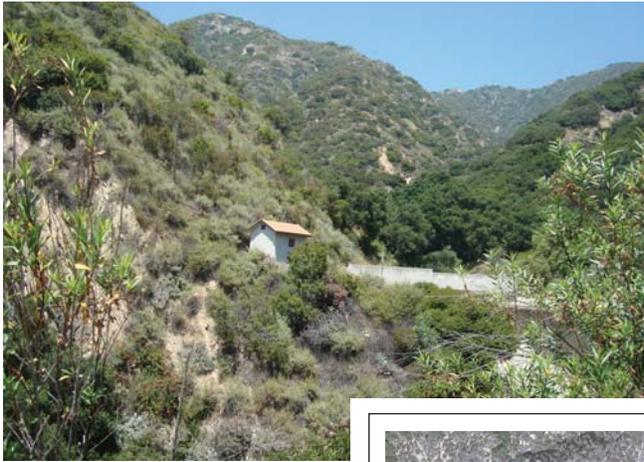


300 150 0 300
Feet

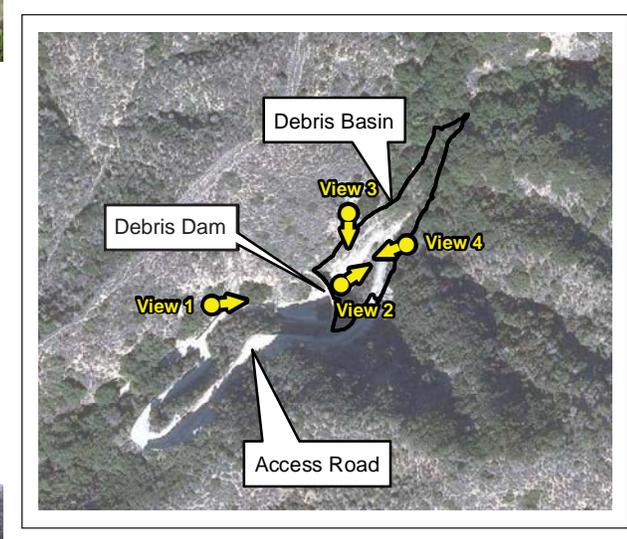
Bonterra
CONSULTING

(Rev: 2-13-2013 CJS) R:\PASI\Projects\ColADPWU144\Graphics\IS-MND\Ex_aerial.pdf

View 1 – Looking east at the dam face and maintenance shed from the downstream access road.



View 2 – Looking east at the debris basin from just upstream of the dam.



View 3 – Looking south at the dam and access road from the west slope of Sunset Canyon.



View 4 – Looking west at the dam face from the upstream debris basin.

D:\Projects\CoLADPWJ154\Graphics\Ex_sitephotos.ai

Photographs of the Site

Exhibit 2-4

Sunset Upper Debris Basin Dam Modification Project



Sunset Upper Debris Basin

The Design Debris Event (DDE)³ for the Sunset Canyon watershed as a whole has been calculated to produce as much as 63,100 cy of debris, requiring additional basin storage of 47,200 cy to contain the DDE. LACFCD records indicate an average annual debris production of approximately 1,975 cy, although the 1964–1965 storm season produced 31,413 cy of debris (excluding the volume that passed over the spillway) and involved several sediment removals during this season. This major debris flow followed the Whiting Woods Fire in March 1964 that burned the entire Sunset Canyon Watershed. The Sunset Upper Debris Basin currently has a total (100%) storage capacity of 20,000 cy.

The most recent removal of sediment and debris from this debris basin occurred in December 2005 following the Harvard Fire. Debris removal is scheduled only when the basin capacity is 25 percent full or more under unburned conditions or when a sediment entrapment basin has reached 5 percent or more of the basin's capacity and more than 20 percent of the sediment entrapment basin's watershed has burned within the previous 5 years.

The LACFCD defines two subareas within each debris basin to describe the limits of the basin and interior work areas/capacity: (1) 25% contact line/mowing contact line (i.e., 25 percent of design capacity), and (2) the 100% contact line (i.e., the design capacity). The 25% contact line delineates the portion of the debris basin that receives periodic sediment removal as needed to maintain the capacity of the basin at or below this contact line and is the portion of the debris basin that receives annual vegetation trimming and/or mowing (i.e., annual maintenance). The boundary of the County-owned property containing the debris basin generally extends outside the basin limit contact line and often includes an access road for maintenance vehicles, such as at the Project site. Exhibit 2-5, Existing Sunset Upper Debris Basin, illustrates the footprints of the existing 25% and 100% contact lines.

Topography and Drainage

As shown on Exhibit 2-3, Sunset Canyon Watershed, above, the Sunset Canyon Watershed covers approximately 1.1 square miles of steep terrain and includes four sub-watersheds: Sunset Upper, Sunset Upper SPS, Sunset Lower, and Sunset Canyon Deer Watersheds. Sunset Canyon is a northeast-to-southwest trending canyon, which starts at the ridge of the Verdugo Mountains in the City of Glendale and ends near Sunset Canyon Drive in the City of Burbank. The Sunset Upper Debris Basin Dam is located at the upper end of the canyon, with the lower segment of the canyon generally aligning with Country Club Drive and the Sunset Lower Debris Basin, located at the mouth of the canyon.

Storm water runoff in the Sunset Upper Debris Basin Watershed typically percolates into the soils behind the dam, entering an inlet pipe that conveys water past the dam for downstream release into a trapezoidal channel, then into a rectangular channel, then onto the access road, and then onto Country Club Drive as sheet flow. High flows go over the dam's spillway, along Country Club Drive, and toward the Sunset Lower Debris Basin, which is located west of the intersection of Country Club Drive and Via Montana.

Elevations in the Sunset Canyon watershed range from 3,120 feet above mean sea level (msl) in the northeastern portion of the watershed to 1,430–1,080 feet above msl at the terminus of Country Club Drive. The Sunset Upper Debris Basin Dam is located across the canyon at a ground elevation of approximately 1,575.0 feet above msl. The height of the dam is defined by

³ A DDE is defined as a debris volume caused by a 50-year rainfall frequency event that occurs over a saturated watershed with a 4-year recovery from a watershed burn.

the invert of the spillway (1,603.7 feet above msl) and the ground elevation (1,575 feet above msl). The crest parapet elevations are 1,609.5 feet above msl and 1,610.5 feet above msl.

Land Use

The Sunset Upper Debris Basin Dam is surrounded by undeveloped land, with steep side slopes to the north and south; the debris basin to the east of the dam; and the access road/Country Club Drive to the southwest of the dam. Country Club Drive serves as the drainage channel, via sheet flow, for the lower segment of the canyon and provides direct access to 44 single-family residences along this road, south of the Project site and north of Sunset Canyon Drive. A small grouping of single-family residences along the south side of Country Club Drive (which are the northernmost of the 44 residences on the access road) are the nearest sensitive receptors to the Project site. These residences are located approximately 1,200 feet southwest of the Sunset Upper Debris Basin Dam. In addition, 2 water tanks are located approximately 200 feet east of the terminus of Country Club Drive. These tanks are owned by City of Burbank Water and Power.

The Project area is designated as Mountain Reserve in the Burbank Land Use Map and is zoned Open Space in the City's Zoning Map (Burbank 2007, 1998). The Project area is proposed to be designated as Open Space under the *Burbank 2035 General Plan*, an update to the existing General Plan that is currently in progress (Burbank 2012).

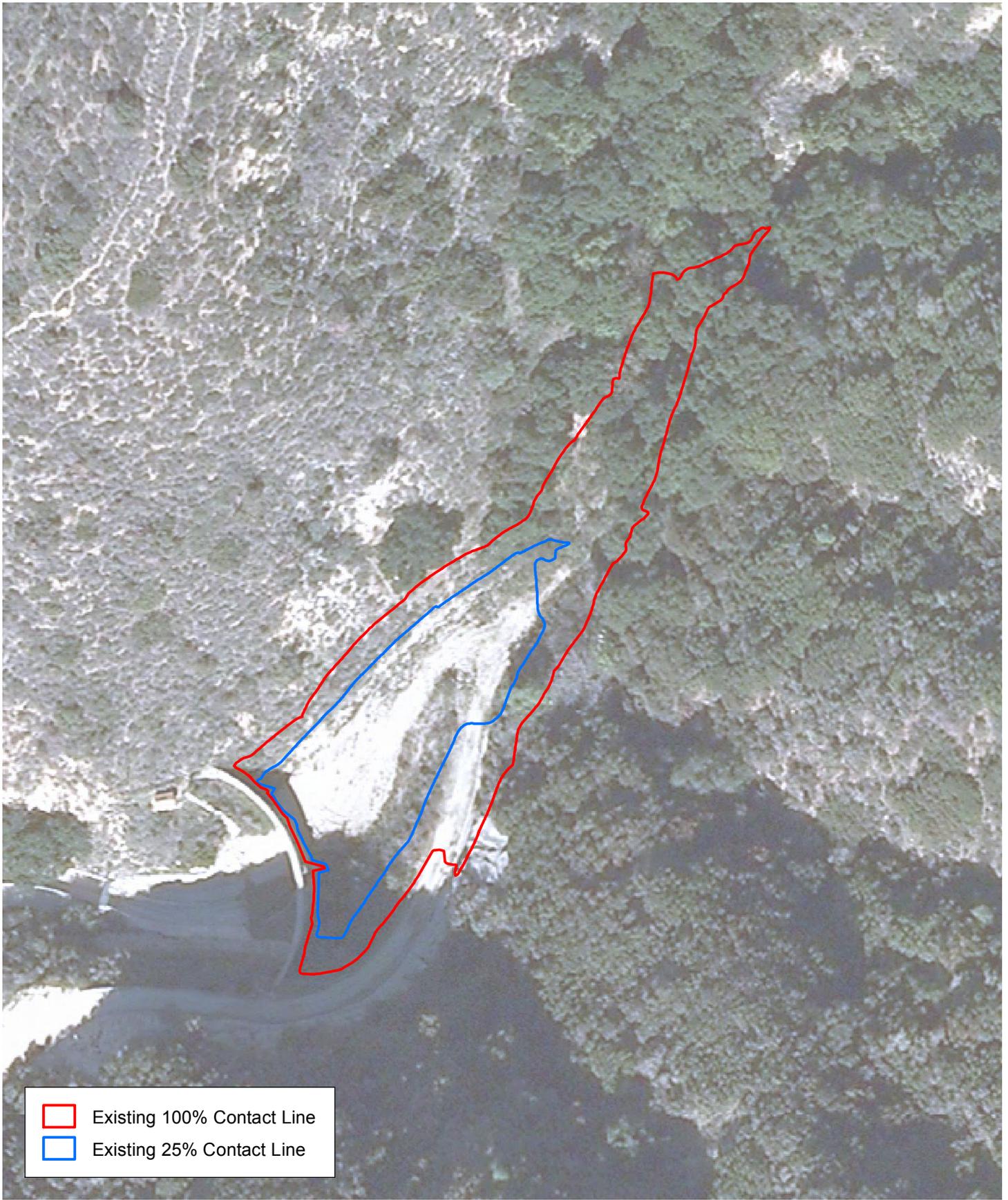
Biological Resources

Vegetation types within the Project site and surrounding areas include California sagebrush scrub, mixed chaparral, and coast live oak woodland, with disturbed and developed areas present within and near the dam and debris basin. California sagebrush scrub is found on the steep slopes adjacent to the debris basin. Coast live oak woodland occurs along the drainage below the dam and above the debris basin. Developed and disturbed areas include the debris basin bottom (subject to annual mowing); the dam structure; trapezoidal and rectangular drainage channels; gunite slopes; and existing paved and dirt access roads.

An ephemeral drainage⁴ flows from the east and northeast into the earth-bottom debris basin upstream of the dam, and follows a channel below the dam. Limited areas of vegetation and natural open space are present directly below (downstream) the dam; however, most of the channel below the dam is made of concrete.

⁴ Ephemeral drainages are typically dry, but carry runoff during rain events.

D:\Projects\CoLADPWJ144\mxd\ex_contours_exist.mxd



- Existing 100% Contact Line
- Existing 25% Contact Line

Existing Sunset Upper Debris Basin

Sunset Upper Debris Basin Dam Modification Project

Exhibit 2-5



(Rev: 1-16-2013 CJS) R:\PAS\Projects\CoLADPWJ144\Graphics\IS-MND\Ex_contours_existing.pdf

SECTION 3.0 PROJECT DESCRIPTION

The proposed Sunset Upper Debris Basin Dam Modification Project (Project) involves increasing the height of the dam, which, in turn, would increase the capacity of the associated debris basin to provide enhanced flood and debris protection to downstream land uses. No improvements to the Sunset Lower Debris Basin, Sunset Canyon Deer Debris Basin, side canyons, or other flood-control facilities within the Sunset Canyon Watershed are planned as part of the Project.

3.1 PROJECT OBJECTIVES

The LACFCD's main goal is to provide additional flood and debris protection to downstream properties and residents within the Sunset Canyon Watershed. To accomplish this goal, the LACFCD is seeking to implement the following objectives with the proposed Project:

- Increase the height of the Sunset Upper Debris Basin Dam by five feet to accommodate moderate and larger size storm events,
- Reduce the amount of debris flows on Country Club Drive, and
- Decrease the potential for major property damage and personal injury within Sunset Canyon.

Therefore, the proposed Project would increase the capacity of the Sunset Upper Debris Basin and reduce, by up to 8,000 cy, the amount of debris moving from the Sunset Upper into the Sunset Lower Watershed and eventually into the Sunset Lower Debris Basin.

3.2 PROJECT COMPONENTS

3.2.1 SUNSET UPPER DEBRIS BASIN DAM MODIFICATION

Table 3-1 provides a summary of the existing and proposed conditions of the dam and debris basin, which are discussed further below.

**TABLE 3-1
PROPOSED PROJECT DATA SUMMARY**

Component	Existing	Proposed	Net Increase
Sunset Upper Debris Basin Dam			
Spillway Elevation	1,603.7 ft above msl	1,608.7 ft above msl	5.0 ft
Crest Elevations	1,609.5 and 1,610.5 ft above msl	1,614.5 ft above msl	5.0 and 4.0 ft
Sunset Upper Debris Basin (Upstream of the Dam)			
100% Contact Line Area	37,023 sf	46,025 sf	9,002 sf
100% Contact Line Volume	20,000 cy	28,000 cy	8,000 cy
25% Contact Line Area	16,168 sf	19,447 sf	3,279 sf
25% Contact Line Volume	5,000 cy	7,000 cy	2,000 cy
ft: feet; msl: mean sea level; cy: cubic yards; sf: square feet			

The Project consists of reconstructing the existing dam spillway to raise the invert elevation by 5 feet to 1,608.7 feet above msl. The crest of the dam would also be raised by 5 feet to an elevation of 1,614.5 feet above msl by constructing a parapet wall on top of the existing dam crest. The existing protective fences would be removed during construction and reinstalled, and the trash rack cage behind the spillway would be extended by five feet.

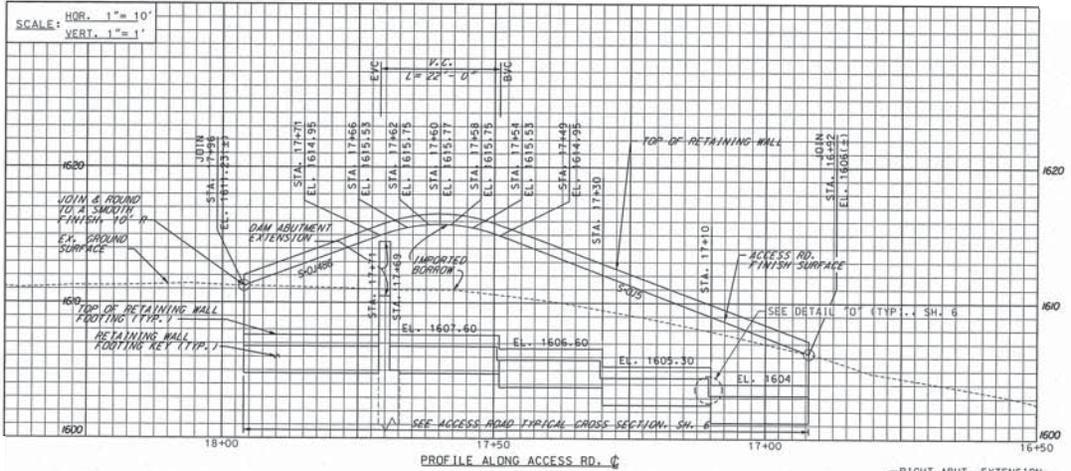
In addition, the existing access road running along the southern end of the dam would be raised by varying amounts up to 4.8 feet over a distance of approximately 104 linear feet, corresponding to an elevation increase from 1,611.0 feet above msl to up to 1,615.8 feet above msl, to match the new dam elevation. The access road modification would be attained by constructing a retaining wall to support the road embankment from its existing ground elevation up to the proposed grade. Exhibit 3-1, Proposed Access Road Modifications, and Exhibit 3-2, Proposed Dam Modifications, identifies the proposed alterations to the Sunset Upper Debris Basin Dam. The changes to the Sunset Upper Debris Basin, through increased capacity, that would result from the proposed dam modifications, are discussed further below in Section 3.2.2, Sunset Upper Debris Basin Operation with Proposed Project.

Construction and Operation of the Dam Modification

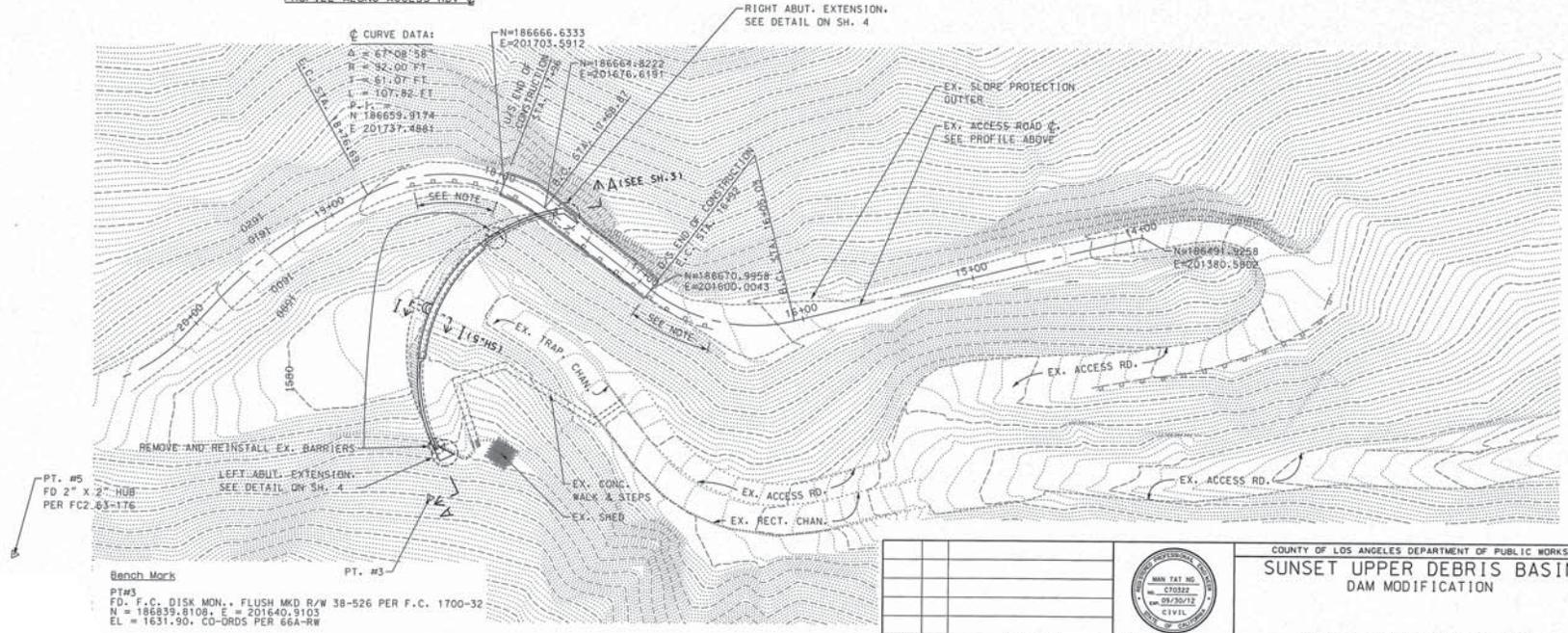
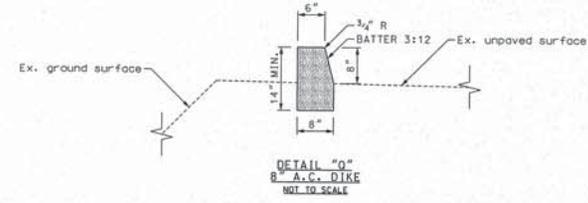
The tentative construction schedule for the proposed Project has an anticipated start date in mid-April 2014 and completion by October 2014, for an approximate 6- to 7-month construction period. Project construction would be scheduled to occur during the dry season, either in 2014 or a subsequent year if construction is delayed.

Exhibit 3-3, Construction Impact Footprint, illustrates the 29,115-square-foot (sf) (approximately 0.7 acre) footprint of potential ground disturbance during construction of the proposed dam modifications. Some construction equipment would need to be staged within the debris basin and would be limited to areas within the 25% contact line, already permitted for disturbance via annual maintenance activities. The equipment would therefore need to be driven across the bottom of the debris basin to the dam when needed. Due to the soft nature of the soil on the bottom of the basin, the equipment would likely need to be on caterpillar tracks rather than rubber tires. To accommodate the staging and movement of construction equipment, the area within the construction impact footprint would need to be mowed at the start of construction activity. As such, the initial construction phase would be site preparation, which would last approximately 1 month and result in approximately 50 cy of both alluvial debris and mowing clippings that would be removed from the Project site.

Site preparation would be followed by construction of the new spillway and parapet walls as well as slope grading for the raised access road and retaining wall. Construction of the retaining wall and access road is expected to take two to three months, and requires prior completion of the right (south) side parapet wall extension. Compacted fill would be used to raise the access road and a concrete gutter would be installed along the southern edge of the road (at the foot of the existing gunite slope). Excavated material from the site-preparation and grading operations would be stockpiled on site to be used as backfill for the access road retaining wall. Therefore, the need for imported fill, if any, would be minimal and is not expected to exceed 60 cy. The reinforced concrete retaining wall would be constructed along the northern edge of the access road. The 12- to 14-foot-wide access road would be asphalt-paved from the outer edge of the retaining wall to the gutter. Both the temporary and permanent environmental impacts associated with construction of the proposed modifications to the Sunset Upper Debris Basin Dam are addressed in this IS/MND.



NOTE:
1. REMOVE THE EX. GUARD RAIL ONLY AND PROTECT THE EX. RAIL POSTS IN PLACE. INSTALL TWO BACK TO BACK 6" x 12" YELLOW RETROREFLECTIVE SHEETINGS TO EACH OF THE RAIL POSTS PER CALTRANS STD. PLAN A73A, TYPE L-2. ALSO, INSTALL 8" A.C. DIKE PER DETAIL "D".



DATE		NO.	DESCRIPTION		COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS SUNSET UPPER DEBRIS BASIN DAM MODIFICATION PLAN & ACCESS ROAD PROFILE		
REVISIONS					FCC0001163 JOB X5009701 DWG 66A-026.2 SHEET 2 OF 6		

Source: County of Los Angeles 2011

Proposed Access Road Modifications

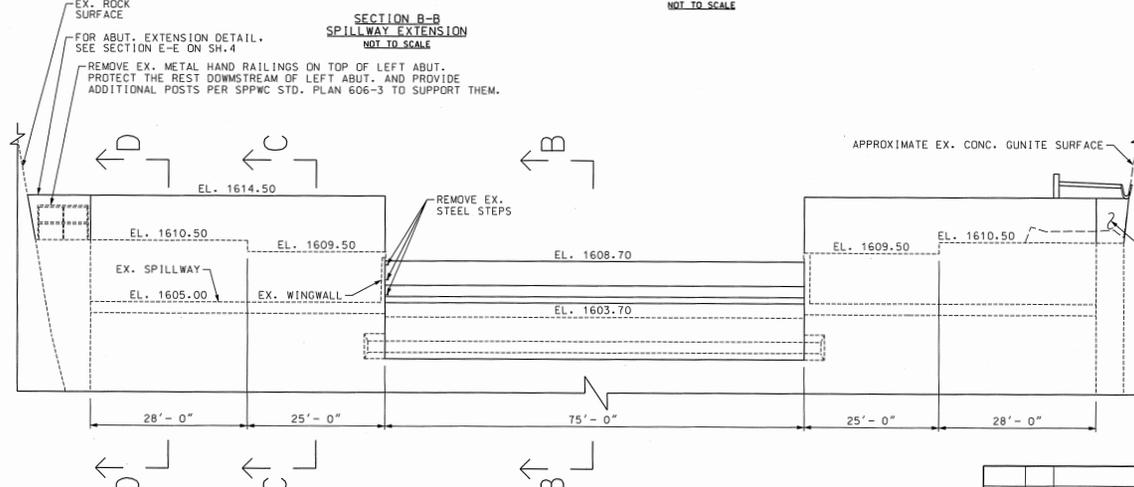
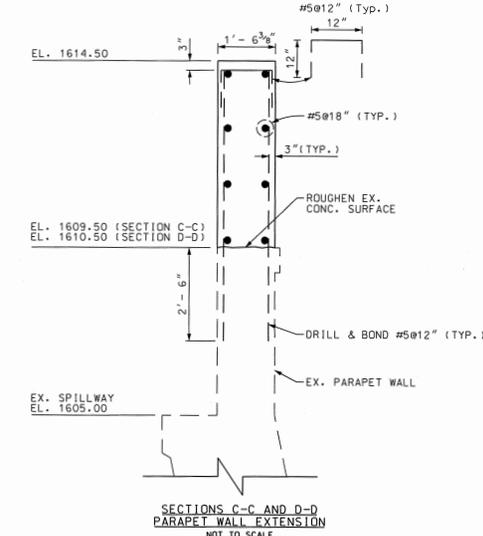
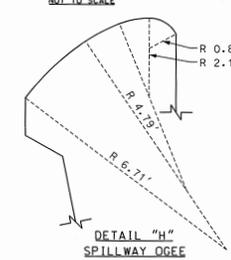
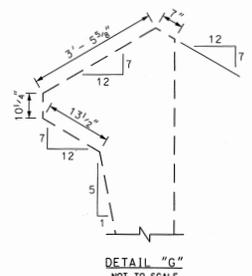
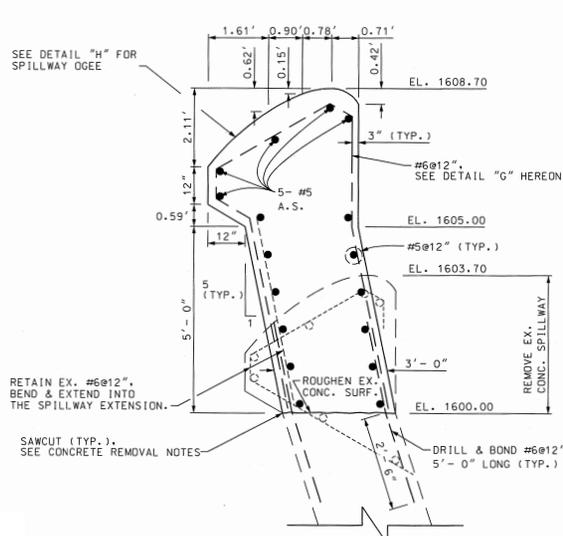
Sunset Upper Debris Basin Dam Modification Project

Exhibit 3-1



D:\Projects\COLADPWJ144\Graphics\ImpPlans.ai

D:\Projects\COLADPW\J144\Graphics\DamMods.ai



SECTION A-A
SPILLWAY & PARAPET WALL EXTENSION
DOWNSTREAM FACE (LOOKING UPSTREAM)
NOT TO SCALE

- CONCRETE REMOVAL NOTES**
- WHERE REINFORCEMENT IS REQUIRED TO EXTEND THROUGH THE NEW JOINT, CONCRETE SHALL BE REMOVED IN THE FOLLOWING SEQUENCE.
1. A SAWCUT SHALL BE MADE ONE AND ONE-HALF INCHES DEEP AT THE REMOVAL LIMITS. CARE SHALL BE EXERCISED IN SAWING AT THE REMOVAL LIMITS SO AS NOT TO CUT THE REINFORCING STEEL IN THE REMAINING SLAB. THE EXISTING REINFORCING STEEL SHALL BE RETAINED AND EXTENDED INTO THE NEW CONSTRUCTION AS INDICATED ON THE PLANS.
 2. USING HANDHELD EQUIPMENT, THE CONCRETE SHALL BE CAREFULLY REMOVED FOR THE FULL DEPTH OF THE WALL OR SLAB AND FOR A MINIMUM DISTANCE FROM THE SAWCUT EQUAL TO THE LONGEST EXTENSION OF THE EXISTING BARS TO BE EXTENDED INTO THE NEW CONSTRUCTION. THIS EXTENSION SHALL BE 30 BAR DIAMETERS, UNLESS OTHERWISE SHOWN.
 3. EXISTING REINFORCEMENT SHALL BE CUT TO THE REQUIRED BAR EXTENSION. IT SHOULD BE THOROUGHLY PREPARED BY APPROVED MECHANICAL MEANS TO CLEAN, BRIGHT METAL.
 4. THE REMAINING CONCRETE MAY BE REMOVED BY ANY SUITABLE METHOD UPON APPROVAL OF THE ENGINEER, WHO SHALL BE THE SOLE JUDGE OF THE USE OF ANY CONCRETE REMOVAL EQUIPMENT, EXPLOSIVES, WRECKING BALL, OR OTHER SIMILAR DEVICES, WHICH ARE LIKELY TO DAMAGE THE CONCRETE TO BE LEFT IN PLACE, SHALL NOT BE USED.

		COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS SUNSET UPPER DEBRIS BASIN DAM MODIFICATION	
DATE: 09-05-2012 PROJECT ENGINEER: Man Tat Ng		CROSS SECTIONS AND DETAILS SHEET 3 OF 6	

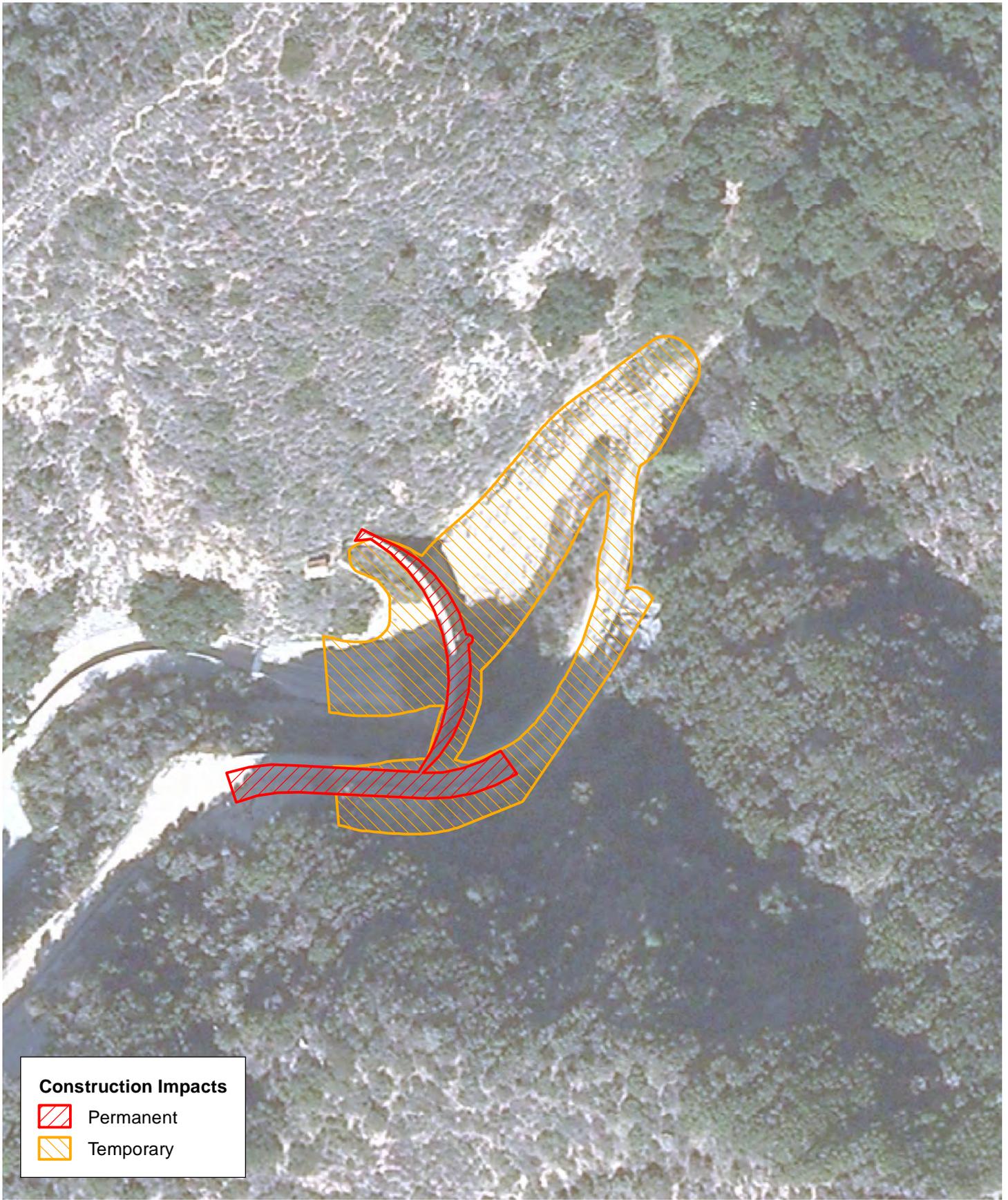
Source: County of Los Angeles Department of Public Works 2012

Proposed Dam Modifications

Sunset Upper Debris Basin Dam Modification Project

Exhibit 3-2





Construction Impact Footprint

Exhibit 3-3

Sunset Upper Debris Basin Dam Modification Project



Operation and maintenance of the modified dam would be the same as the existing condition, as the alterations relate solely to its existing functions—increasing the dam’s capacity and related flood control capability—and would not add new functions or features. Therefore, there are no direct impacts associated with operation of the modified Sunset Upper Debris Basin Dam. However, implementation of the proposed dam modifications would indirectly result in modification of the Sunset Upper Debris Basin, that would, in turn, alter the maintenance and permitting requirements of the debris basin, as discussed further below.

3.2.2 SUNSET UPPER DEBRIS BASIN CAPACITY INCREASE

With proposed Project implementation, the Sunset Upper Debris Basin would provide the same function but would have an increased capacity of 8,000 cy, including 2,000 cy increased capacity within the 25% contact line. Any accumulated debris that exceeds the increased total (100%) capacity of 28,000 cy would flow over the dam, via the spillway, and downstream into the Sunset Lower Watershed, as it occurs in the existing condition. However, a debris overflow with the expanded debris basin capacity is only expected during large, extended storm events occurring after a wildfire has burned the entire watershed, and this combination of events occurs very infrequently. As discussed below, since the dam was constructed over 80 years ago (1929), it has overtopped only once. The proposed Project would reduce the frequency of such events even further. The long-term maintenance and permitting (i.e., operation) of the Sunset Upper Debris Basin with implementation of the proposed Project is discussed further below.

Background of Sunset Upper Debris Basin Maintenance and Permitting

Routine maintenance activities, including periodic sediment removal, have been ongoing at the Sunset Upper Debris Basin for many years. Sediment removal at the Sunset Upper Debris Basin has occurred intermittently (documented to range from once every 6 to 20 years at the 162 debris basins throughout the LACFCD). As with other debris basins, the LACFCD’s routine maintenance program for the Sunset Upper Debris Basin includes (1) annual brush clearing, tree trimming, and vegetation mowing; (2) annual entrainment channel and outlet tower clearing; (3) sediment removal; (4) access road maintenance and other appurtenances; (6) storm damage repair and restoration projects; and/or (7) exotic species eradication/control.

Resource agency permits for the ongoing maintenance of debris basins throughout the LACFCD have been obtained or are being renewed by the LACFCD under a number of master permits/agreement from the USACE, the Regional Water Quality Control Board (RWQCB), and the California Department of Fish and Wildlife (CDFW).⁵ These authorizations imposed LACFCD’s cleanout policies as cleanout initiation limits. These authorizations also set the annual mowing limits to coincide with those of the 25% contact line limits. The Regional General Permit (No. SPL-2003-00411-KW) with the USACE was signed on October 15, 2009. The 401 Water Quality Certification (File No. 02-144-2008 Renewal) with the RWQCB, Los Angeles Region, was signed on October 24, 2008.

The impacts associated with ongoing maintenance activities at the Sunset Upper Debris Basin (and other debris basins in the LACFCD system) were further analyzed in the IS/MND for the Section 1605 Long-Term Streambed Alteration Agreement for the Debris Basin Maintenance Program (SCH No. 2010121010) that was prepared by the LACFCD. This IS/MND for debris basin maintenance activities was adopted by the County of Los Angeles Board of Supervisors, acting as the Board of the LACFCD, on June 14, 2011. The CDFG Section 1605 Long-Term Streambed Alteration Agreement (No. 1600-2008-0290-R5)(Section 1605 Agreement) with the

⁵ The California Department of Fish and Game (CDFG) changed its name to the California Department of Fish and Wildlife (CDFW) effective January 1, 2013.

was signed on August 15, 2011. The Section 1605 Agreement is intended to be a living document and be amended periodically to reflect new debris basins coming under LACFCD jurisdiction as well as alterations to existing debris basins.

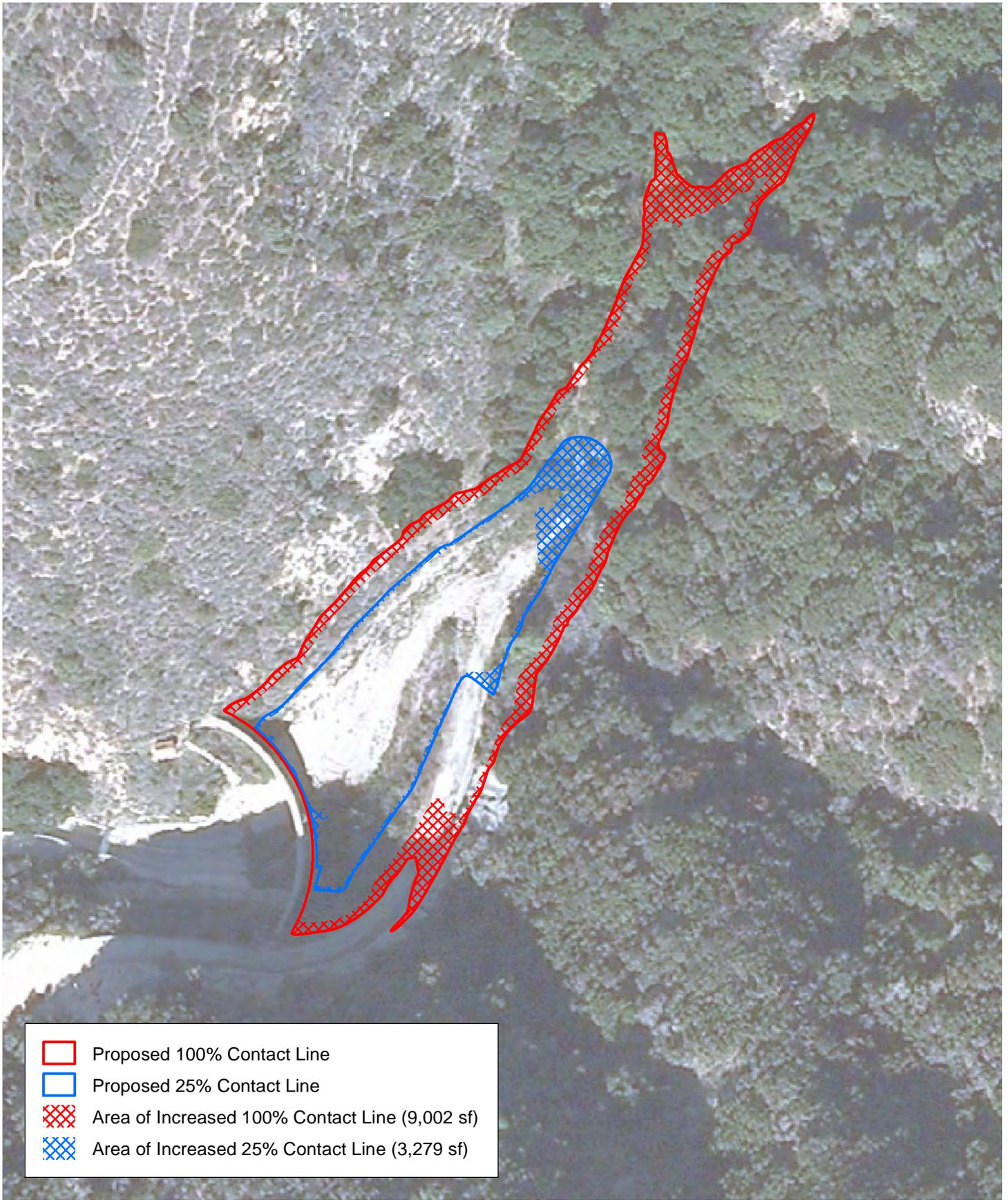
As discussed previously, the LACFCD has also adopted a general policy that sediment removal occurs whenever a debris basin is 25 percent full or more (under unburned watershed conditions) or when it is 5 percent full or more (when 20 percent or more of the watershed has been burned in the previous five years).

Sunset Upper Debris Basin Operation with Proposed Project

Routine maintenance activities that occur within the footprints authorized by the Section 1605 Agreement and other existing permits, as described above, will continue with the implementation of the proposed Project. Environmental impacts resulting from maintenance activities within the 25% and 100% contact line footprints authorized in the Section 1605 Agreement, as amended, will not be discussed in this IS/MND as they are not attributable to the proposed Project. Likewise, since the LACFCD has mitigated for these impacts, no further mitigation for these activities and footprints is required under the proposed Project. However, as discussed above, implementation of the Sunset Upper Debris Basin Dam's increased height would increase the capacity of the debris basin's 25%, and 100% contact lines. The increment of change in these footprints is attributable to the proposed Project and, as such, the expanded footprint is addressed in this IS/MND. Exhibit 3-4, Proposed Sunset Upper Debris Basin, illustrates the expanded 25% and 100% contact lines. It is noted that the maintenance permits focus on the "footprint" area of each debris basin's contact lines, which includes the land area encompassed by each contact line and is measured in square feet/acres, as this reflects the biological and/or jurisdictional resources on the ground (a two-dimensional area). In contrast, the volume of debris that can be contained within each debris basin's 25% and 100% contact lines includes consideration of both the footprint and the height of the debris cone (a three-dimensional area), and is therefore measured in cubic yards.

As shown in Table 3-1 above, the 100% contact line encompasses a 37,023-sf area of land behind the dam, and the 25% contact line encompasses 16,168 sf of this footprint. With proposed Project implementation, the 100% contact line would increase by 9,002 sf to 46,025 sf, along the edges of the existing contact line. Therefore, during a storm event that produces storm water and/or debris flows that are greater than the existing debris basin capacity of 20,000 cy, some or all of the additional land area of 9,002 sf would be subject to potential inundation. However, the average annual debris production at the Sunset Upper Debris Basin is 1,975 cy, or approximately 18 percent of the existing capacity of 20,000 cy (LACDPW 2007). Rain intensity and frequency, which define the flow regime upstream and downstream of the dam, would not change with the proposed Project. Therefore, in theory, the debris basin may fill to the greater engineered capacity (28,000 cy) during the largest storm events. While existing maintenance permits authorize annual maintenance activities and periodic sediment removal only within a debris basin's contact lines, they authorize entrainment channel and exotic species eradication/control up to LACFCD's property lines. This larger area (i.e., LACFCD's property) includes the increased 100% contact line area. Therefore, the only activity within the expanded 100% contact line area that is not covered in the existing permits is the highly infrequent, to unanticipated, removal of storm debris.

Similarly, with Project implementation, the 25% contact line would increase by 3,279 sf to 19,447 sf, along the edges of the existing contact line. The increase in the debris basin's 25% contact line has an associated capacity increase of 2,000 cy, and the additional 3,279 sf of land area would be subject to potential inundation. However, in contrast to the 100% contact line discussion above, it is expected that the expanded 25% contact line would eventually fill



-  Proposed 100% Contact Line
-  Proposed 25% Contact Line
-  Area of Increased 100% Contact Line (9,002 sf)
-  Area of Increased 25% Contact Line (3,279 sf)

Proposed Sunset Upper Debris Basin

Exhibit 3-4

Sunset Upper Debris Basin Dam Modification Project



with sediment. As discussed for the 100% contact line, periodic sediment removal within the expanded 25% contact line is not covered in the existing permits. The Section 1605 Agreement and other permits related to long-term maintenance activities would require amendments subsequent to proposed Project implementation to reflect the expanded 25% and 100% contact lines.

3.3 DISCRETIONARY ACTIONS

Approval of the proposed Sunset Upper Debris Basin Dam Modification Project, including environmental clearance and the use of LACFCD funds, would be needed from the County of Los Angeles Board of Supervisors (acting as the Board of the LACFCD) prior to Project implementation. In addition, construction of the proposed Project would require the following permits from various agencies, as identified:

- A new Section 404 permit from the USACE for disturbance of “waters of the U.S.”, including riparian areas.
- A new Section 401 Water Quality Certification from the RWQCB for disturbance of “waters of the U.S.”.
- A new Section 1600 Streambed Alteration Agreement from the CDFW for disturbance of “waters of the State” and streambed.

In addition, the existing debris basin maintenance permits, listed above, would require an amendment to incorporate the expansion of the 100% contact line that may be subject to inundation and debris deposition during major storm events and the expansion of the 25% contact line in which occasional sediment removal occur. In turn, the County would need to abide with the conditions of approval of the permits, as in the existing condition.

Since the Sunset Upper Debris Basin Dam has less than 15 acre-feet (af) of existing capacity (9.9 af) and future capacity (14.8 af) with the proposed Project, it is not considered a dam that is subject to the regulations and permit requirements of the California Department of Water Resources (DWR) Division of Safety of Dams (DSOD), which specifies the 15 af capacity for dams that are subject to its requirements. Also, while the Sunset Upper Debris Basin facility is located within the jurisdictional boundaries of the City of Burbank, the dam, the debris basin, and portion of the access road south of the dam are located on County-owned land. As such, no permits are required from the City of Burbank for activities on LACFCD property. The LACFCD retains an ingress/egress easement from the City for the paved access road from Country Club Drive to LACFCD’s property. No further permits are needed from the City of Burbank for LACFCD’s use of this road. Also, although the Sunset Upper Debris Basin Dam is located within a Significant Ecological Area (SEA), the facility is not subject to jurisdiction by the County of Los Angeles Department of Regional Planning because the agency has no jurisdiction within the City of Burbank. The City of Burbank has no regulations or ordinances regarding SEAs.

This page intentionally left blank

SECTION 4.0 ENVIRONMENTAL ANALYSIS

This section includes the completed environmental checklist form, which is used to assist in evaluating the potential environmental impacts of the proposed Project. The checklist form identifies the degree of impacts from the proposed Project on various environmental issues; substantiation and clarification for each checklist response is provided under each issue.

1. **Project Title:** Sunset Upper Debris Basin Dam Modification
2. **Lead Agency Name and Address:** Los Angeles County
Flood Control District
900 South Fremont Avenue, 2nd Floor
Alhambra, California 91803
3. **Contact Person:** Ms. Grace Yu
gyu@dpw.lacounty.gov
4. **Project Location:** Sunset Upper Debris Basin Dam, Sunset Canyon,
City of Burbank, County of Los Angeles
5. **Project Sponsor's Name and Address:** County of Los Angeles
Department of Public Works
900 South Fremont Avenue, 2nd Floor
Alhambra, California 91803
6. **General Plan Designation:** Mountain Reserve
7. **Zoning:** Open Space (OS)
8. **Description of the Project:** The County of Los Angeles Department of Public Works (the administrating entity for the Los Angeles County Flood Control District [LACFCD]) is proposing to increase the height of the parapet walls and spillway of the Sunset Upper Debris Basin Dam and to raise the elevation of LACFCD's access road running across the southern end of the dam. Implementation of the dam modifications would increase the capacity of the Sunset Upper Debris Basin.
9. **Surrounding Land Uses and Setting:** The Sunset Upper Debris Basin Dam is located northeast of the northern terminus of Country Club Drive, and is surrounded by undeveloped hillside areas. A small grouping of single-family residences along the south side of Country Club Drive, the nearest sensitive receptors, is located approximately 1,200 feet southwest of the Sunset Upper Debris Basin Dam. There are additional homes downstream of the site, with a total of 44 homes along Country Club Drive between Sunset Upper Debris Basin and Sunset Lower Debris Basin.
10. **Other Public Agencies whose Approval is Required:**
 - U.S. Army Corps of Engineers (USACE)
 - Los Angeles Regional Water Quality Control Board (RWQCB)
 - California Department of Fish and Wildlife (CDFW)

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 on the following pages.

- | | |
|--|--|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Agriculture and Forest Resources |
| <input type="checkbox"/> Air Quality | <input checked="" type="checkbox"/> Biological Resources |
| <input type="checkbox"/> Cultural Resources | <input type="checkbox"/> Geology and Soils |
| <input type="checkbox"/> Greenhouse Gas Emissions | <input type="checkbox"/> Hazards and Hazardous Materials |
| <input type="checkbox"/> Hydrology and Water Quality | <input type="checkbox"/> Land Use and Planning |
| <input type="checkbox"/> Mineral Resources | <input type="checkbox"/> Noise |
| <input type="checkbox"/> Population and Housing | <input type="checkbox"/> Public Services |
| <input type="checkbox"/> Recreation | <input type="checkbox"/> Transportation/Traffic |
| <input type="checkbox"/> Utilities and Service Systems | <input checked="" type="checkbox"/> 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 to 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 or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed Project, nothing further is required.

Christopher Stone
Signature of Lead Agency Representative
Christopher Stone
Printed name

March 4, 2013
Date
LACDPW
Agency

4.1 <u>AESTHETICS</u>	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
Would the project:				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

4.1.1 ENVIRONMENTAL SETTING

The Sunset Upper Debris Basin Dam is located in the City of Burbank, within the Verdugo Mountains. A concrete arch dam has been constructed across the upper section of Sunset Canyon, with a trapezoidal channel, drainage channel, access road, and a maintenance shed downstream of the dam. The access road also winds up to cross the southern end of the dam and allows vehicles to reach the debris basin upstream of the dam. The existing dam, access road, and debris basin are shown in Exhibit 2-3, Sunset Upper Debris Basin Dam Site Photographs. The Project site is bound by the steep side slopes of Sunset Canyon and other canyons and undeveloped land to the north, west, south, and east. Single-family residences are located approximately 1,200 feet downstream of the dam along Country Club Drive. The Verdugo Mountains define the northeastern section of Burbank and provide scenic views from the City’s urban areas. However, the debris basin and dam are not visible to adjacent developments due to their location at the canyon bottom.

The nearest eligible State Scenic Highway is the State Route (SR) 210 freeway, located approximately 2.5 miles north of the dam (Caltrans 2007). This freeway is located on the other side of the Verdugo Mountains and does not have views of Sunset Canyon.

4.1.2 IMPACT ANALYSIS

a, c) Less Than Significant Impact

The proposed Project would raise the height of the dam spillway and parapet walls; it would also raise a section of the access road. The raised spillway and parapet walls would be visible from the access road but not from Country Club Drive or other nearby public roadways.

The existing visual character of the Project site would be affected by construction activities, including views of construction equipment and vehicles, staging areas, and disturbed slopes. These construction impacts would be short-term and temporary. Changes in views due to the higher spillway and parapet walls and the raised roadway at the dam would not be visible to people, except for maintenance personnel. Similarly, the deposition of sediment and debris within the expanded 25% contact line would only be visible to LACFCD and City maintenance personnel. Water and sediment within the expanded debris basin limits would also not be visible to the public during the time when the debris basin is filled to capacity after a major storm.

b) No Impact

Sunset Canyon is not adjacent to or visible from any officially designated or eligible State Scenic Highway. Therefore, the proposed Project would not affect scenic resources along a scenic highway and no impact would occur.

d) No Impact

The proposed Project would not include the installation of lighting. No structures would be created that would generate new sources of light or glare; therefore, Project would have no impact on lighting levels in the area.

4.1.3 MITIGATION PROGRAM

Regulatory Requirements

None

Mitigation Measures

The proposed Project would not result in potentially significant adverse impacts related to aesthetics; therefore, no mitigation is required.

4.2	<u>AGRICULTURE AND FOREST RESOURCES</u>	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b)	Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c)	Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220[g]), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104[g])?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d)	Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e)	Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

4.2.1 ENVIRONMENTAL SETTING

The Sunset Upper Debris Basin Dam is located in the Verdugo Mountains and is not in agricultural use. Also, there are no agricultural uses surrounding the Project site. The California Department of Conservation administers the Farmland Mapping and Monitoring Program (FMMP) pursuant to Section 65570 of the *California Government Code*. Due to the predominance of urban development in the southern and central sections of Los Angeles County, this area was not included in the mapping effort by the FMMP (FMMP 2009).

The Sunset Upper Debris Basin supports native trees, but the area is not used for growing or harvesting timber. Therefore, the Project site is not considered timberland. The Project site is not designated as Forests in the California Department of Forestry and Fire Protection's Fire and Resource Assessment Program (CALFIRE 2003). The Angeles National Forest is located approximately eight miles north of the site.

4.2.2 IMPACT ANALYSIS

a, b, e) No Impact

The proposed Project would not convert agricultural land to non-agricultural uses because there are no agricultural activities or FMMP-designated Farmland on or near the Sunset Upper Debris Basin Dam. Additionally, Sunset Canyon and the surrounding areas are not under a Williamson Act Contract. The proposed Project would not cause changes in the environment that could indirectly result in the conversion of farmland to non-agricultural use because the Project would not be growth-inducing, nor would it hinder any future agricultural use of adjacent lands.

c, d) No Impact

Since the Project area is not designated as forest land or zoned for timberland production, no impact on forest land or timberland would occur with the proposed Project. The proposed Project would not affect the Angeles National Forest, which is located eight miles to the north. No conversion of forest land or on forest resources would occur with the Project, and there would be no impact.

4.2.3 MITIGATION PROGRAM

Regulatory Requirements

None

Mitigation Measures

No adverse impacts related to agricultural or forest resources would occur; therefore, no mitigation is required.

4.3 AIR QUALITY	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

4.3.1 ENVIRONMENTAL SETTING

The Project site is located within the Los Angeles County portion of the South Coast Air Basin (SoCAB) and is under the jurisdiction of the South Coast Air Quality Management District (SCAQMD). Both the State of California (State) and the U.S. Environmental Protection Agency (USEPA) have established health-based Ambient Air Quality Standards (AAQS) for air pollutants, which are known as “criteria pollutants”. The AAQS are designed to protect the health and welfare of the populace within a reasonable margin of safety.

The AAQS for ozone (O₃), carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), inhalable particulate matter with a diameter of 10 microns or less (PM₁₀), fine particulate matter with a diameter of 2.5 microns or less (PM_{2.5}), and lead are shown in Table 4-1.

Regional air quality is defined by whether the area has attained or not attained State and federal air quality standards, as determined by air quality data from various monitoring stations. Areas that are considered “nonattainment” are required to prepare plans and implement measures that will bring the region into “attainment”. When an area has been reclassified from nonattainment to attainment for a federal standard, the status is identified as “maintenance”, and there must be a plan and measures established that will keep the region in attainment for the following ten years.

For the California Air Resources Board (CARB), an “Unclassified” designation indicates that the air quality data for the area are incomplete and do not support a designation of attainment or nonattainment. Table 4-2 summarizes the attainment status of the SoCAB for the criteria pollutants.

**TABLE 4-1
CALIFORNIA AND NATIONAL AMBIENT AIR QUALITY STANDARDS**

Pollutant	Averaging Time	California Standards	Federal Standards	
			Primary ^a	Secondary ^b
O ₃	1 Hour	0.09 ppm (180 µg/m ³)	–	–
	8 Hour	0.070 ppm (137 µg/m ³)	0.075 ppm (147 µg/m ³)	Same as Primary
PM ₁₀	24 Hour	50 µg/m ³	150 µg/m ³	Same as Primary
	AAM	20 µg/m ³	–	Same as Primary
PM _{2.5}	24 Hour	–	35 µg/m ³	Same as Primary
	AAM	12 µg/m ³	15.0 µg/m ³	Same as Primary
CO	1 Hour	20 ppm (23 mg/m ³)	35 ppm (40 mg/m ³)	–
	8 Hour	9.0 ppm (10 mg/m ³)	9 ppm (10 mg/m ³)	–
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m ³)	–	–
NO ₂	AAM	0.030 ppm (57 µg/m ³)	0.053 ppm (100 µg/m ³)	Same as Primary
	1 Hour	0.18 ppm (339 µg/m ³)	0.100 ppm (188 µg/m ³)	–
SO ₂	24 Hour	0.04 ppm (105 µg/m ³)	–	–
	3 Hour	–	–	0.5 ppm (1,300 µg/m ³)
	1 Hour	0.25 ppm (655 µg/m ³)	0.075 ppm (196 µg/m ³)	–
Lead	30-day Avg.	1.5 µg/m ³	–	–
	Calendar Quarter	–	1.5 µg/m ³	Same as Primary
	Rolling 3-month Avg.	–	0.15 µg/m ³	
Visibility Reducing Particles	8 hour	Extinction coefficient of 0.23 per km – visibility ≥ 10 miles (0.07 per km – ≥30 miles for Lake Tahoe)	No Federal Standards	
Sulfates	24 Hour	25 µg/m ³		
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m ³)		
Vinyl Chloride	24 Hour	0.01 ppm (26 µg/m ³)		

O₃: ozone; ppm: parts per million; µg/m³: micrograms per cubic meter; PM₁₀: large particulate matter; AAM: Annual Arithmetic Mean; PM_{2.5}: fine particulate matter; CO: carbon monoxide; mg/m³: milligrams per cubic meter; NO₂: nitrogen dioxide; SO₂: sulfur dioxide; km: kilometer. –: No Standard;

^a *National Primary Standards*: The levels of air quality necessary, within an adequate margin of safety, to protect the public health.

^b *National Secondary Standards*: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

Note: More detailed information in the data presented in this table can be found at the CARB website (www.arb.ca.gov).

Source: CARB 2012a.

**TABLE 4-2
DESIGNATIONS OF CRITERIA POLLUTANTS IN THE SOUTH COAST AIR BASIN**

Pollutant	State	Federal
O ₃ (1-hour)	Nonattainment	No Standard
O ₃ (8-hour)		Extreme Nonattainment
PM ₁₀	Nonattainment	Serious Nonattainment
PM _{2.5}	Nonattainment	Nonattainment
CO	Attainment	Attainment/Maintenance
NO ₂	Nonattainment	Attainment/Maintenance
SO ₂	Attainment	Attainment
Lead	Nonattainment/Attainment ^a	Nonattainment/Attainment ^d
All others	Attainment/Unclassified	No Standards
O ₃ : ozone; PM ₁₀ : respirable particulate matter with a diameter of 10 microns or less; PM _{2.5} : fine particulate matter with a diameter of 2.5 microns or less; CO: carbon monoxide; NO ₂ : nitrogen dioxide; SO ₂ : sulfur dioxide. ^a Los Angeles County was reclassified from attainment to nonattainment for lead in 2010; the remainder of the SoCAB is in attainment of the State and federal standards. Source: CARB 2012b.		

Existing emissions from Sunset Upper Debris Basin Dam operations are generated by vehicles traveling to and from the site for maintenance and inspection activities, and the construction equipment used for occasional sediment removal activities.

4.3.2 IMPACT ANALYSIS

With project implementation, the Sunset Upper Debris Basin Dam will have the same flood-control functions as in the existing condition, but the debris basin would have a greater capacity for sediment retention. As previously discussed, changes in operational activities due to Project implementation, including maintenance and sediment removal, would be negligible and potentially reduced (i.e., less frequent cleanouts) due to the increase in the capacity within the 25% contact line. The less frequent cleanouts would take a greater number of days to complete, commensurate with a capacity increase of 2,000 cy, but not a greater number of trucks per day. The number of trucks exporting sediment per day during a debris basin cleanout is essentially static, as it is constrained by the rate at which each queued haul truck can be filled with sediment, arrive at the designated sediment placement site, be emptied, and return to that basin. The maximum capacity increase of 2,000 cy within the 25% contact line equates to an additional 100 truck trips with 20-cy trucks or 200 truck trips with 10-cy trucks over the course of a single sediment-removal event. However, the air quality impacts are assessed based on maximum daily emissions. As noted above, the daily operations, and therefore daily emissions, would remain the same with the proposed Project. Therefore, potential air quality impacts of the proposed Project would be confined to the construction phase of the proposed dam modifications, and are quantified below.

a) No Impact

The SCAQMD *Final 2007 Air Quality Management Plan* (AQMP) is the air quality plan adopted by the SCAQMD on June 1, 2007. The 2007 AQMP is an update to the 2003 AQMP and incorporates new scientific data, primarily in the form of updated emissions inventories, ambient measurements, new meteorological episodes, and new air quality modeling tools. CARB approved the plan when the State Strategy for the State Implementation Plan (SIP) was adopted on September 27, 2007. The Draft SIP has been submitted to the USEPA for

review and approval. Until such time that the USEPA approves the SIP, the 2003 AQMP will remain in effect for federal Clean Air Act (CAA) conformity analysis. However, for CEQA analysis, projects must also be considered consistent with the requirements of the 2007 AQMP.

The main purpose of an AQMP is to bring an area into compliance with the requirements of federal and State air quality standards. For a project to be consistent with the AQMP, the pollutants emitted from the project should not exceed the SCAQMD CEQA air quality significance thresholds or cause a significant impact on air quality. As shown in Response 4.3.2 (b) below, pollutant emissions from the proposed Project would be substantially less than the SCAQMD thresholds and would not result in a significant impact. Further, the proposed Project would not result in development that may have not been anticipated in the AQMP. No conflict with the AQMP would occur with the proposed Project.

b) Less Than Significant Impact

Criteria pollutant emissions would occur during construction from the operation of construction equipment; the generation of fugitive dust from grading and earth-moving activities; and from the operation of vehicles driven to and from the site by construction workers and for the removal of debris and import of construction materials.

Project-generated construction emissions were estimated using the California Emission Estimator Model (CalEEMod) Version 2011.1.1 computer program (SCAQMD 2011b). CalEEMod is designed to model construction emissions for land development projects and allows for the input of project- and County-specific information. The CalEEMod model input was based on construction assumptions described above and in Section 3.2.1, Sunset Upper Debris Basin Dam Modification.

Where specific information was not known, engineering judgment and default CalEEMod settings and parameters were used. The model inputs include estimated equipment use (such as dozers and loaders) for each construction phase and the duration of each phase. The model also includes dust-control measures corresponding to the requirements of SCAQMD Rule 403, Fugitive Dust (SCAQMD 1976) (RR 4.3-1).

Table 4-3 presents the estimated maximum daily emissions for the proposed Project construction, and compares the estimated emissions with the SCAQMD daily mass emission thresholds. CalEEMod model input and output data is included in Appendix A.

**TABLE 4-3
ESTIMATED MAXIMUM DAILY CONSTRUCTION EMISSIONS
(POUNDS/DAY)**

Year	VOC	NOx	CO	SOx	PM10	PM2.5
2012	4	34	21	<0.5	4	3
<i>SCAQMD Thresholds</i>	<i>75</i>	<i>100</i>	<i>550</i>	<i>150</i>	<i>150</i>	<i>55</i>
<i>Exceeds Threshold?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>
VOC: volatile organic compounds; NOx: nitrogen oxides; CO: carbon monoxide; SOx: sulfur oxides; PM ₁₀ : respirable particulate matter with a diameter of 10 microns or less; PM _{2.5} : fine particulate matter with a diameter of 2.5 microns or less. Source: SCAQMD 2011a (thresholds). CalEEMod data in Appendix A.						

As shown in Table 4-3, construction-related emissions generated by the proposed Project would be less than the SCAQMD regional thresholds of significance. Therefore, construction emissions would be less than significant and Project-specific mitigation is not required.

As discussed above, the rate of sediment deposition in the debris basin would not change with the Project. While the debris basin would have a larger volume of sediment that would require removal due to the increased capacity of the 25% contact line, the time period between sediment removal activities would be longer. Therefore, the frequency of sediment removal would decrease, but greater amounts of sediment would be removed each time (approximately 2,000 cy more within the 25% contact line). As discussed above, the daily rate of sediment removal would not change; that is, the same numbers of equipment and truck trips would be used daily, but would be required for more days. Therefore, no increase, or decrease, in daily pollutant emissions associated with periodic sediment removal at the debris basin would occur.

Subsequent to an infrequent large storm event, sediment removal would also occur within the larger 100% full limit, with up to 8,000 cy of additional capacity. Routine sediment removal is completed by a backhoe or excavator transferring the sediment into a dump truck, which is used to transport the sediment from the debris basin to a designated sediment placement site (SPS). Sediment removal following large storm events may require more construction equipment than for routine sediment removals. It would be speculative to assume that debris removal from the 100% contact line would result in more or less pollutant emissions than removal of the same debris that, without the proposed Project, would have to be removed from roads and properties that would have otherwise been inundated from overflow of the existing basin. Also, based on the average annual debris production at the Sunset Upper Debris Basin of 1,975 cy and the fact there has been a single overflow event since the dam's construction in 1929, the possibility of a major storm event capable of inundating the expanded 100% contact line would be a highly infrequent occurrence. Therefore, the impact to regional air quality would be less than significant.

c) Less than Significant Impact

The South Coast Air Basin is a nonattainment area for lead,⁶ O₃, NO₂, PM₁₀, and PM_{2.5}. With the exception of lead, the proposed Project would generate these pollutants during construction. However, as shown in Table 4-3 above, construction emissions would not approach the SCAQMD CEQA significance thresholds. A potential for short-term cumulative impacts related to air quality could occur if Project construction and nearby construction activities were to occur simultaneously. In particular, with respect to local impacts, cumulative construction particulate impacts are considered when projects are located within a few hundred yards of each other. There are no anticipated construction projects within a few hundred yards of the Project site, since the surrounding area consists of undeveloped land and open space in the Verdugo Mountains. Therefore, construction emissions of nonattainment pollutants would not be cumulatively considerable and Project impacts would be less than significant.

As stated above, sediment removal would occur with decreased frequency but with greater amounts of sediment, and the daily rate of removal is not anticipated to change. Therefore, there would be no impact of Project's long-term cumulative contribution to the air quality violations in the South Coast Air Basin.

d) Less than Significant Impact

Exposure of sensitive receptors is addressed for three situations: CO hotspots; diesel exhaust emissions; and local emissions of NO_x, CO, PM₁₀ and PM_{2.5}. The proposed Project would raise the elevation of the access road crossing the dam, but would not permanently affect access on public roadways. Vehicle trips to the Project site during construction would be limited to worker

⁶ In general, an analysis of lead is limited to projects that emit significant quantities of the pollutant (e.g., battery manufacturers and lead smelters) and is not undertaken for infrastructure development projects.

trips and trucks. These vehicle trips would be limited in number and would occur over a short-term, finite period, and therefore, would not cause or exacerbate severe congestion at major signalized intersections that could result in CO concentrations exceeding State or federal standards at nearby sensitive receptors.

Construction of the Project would result in short-term diesel exhaust emissions from on-site heavy-duty equipment. CARB identified particulate exhaust emissions from diesel-fueled engines (diesel PM) as a toxic air contaminant (TAC) in 1998. Additionally, construction of the Project would result in the generation of diesel PM emissions from the use of on-road diesel equipment used to bring building materials to and from the Project site.

Exposure is a combination of the emissions rate and the exposure time, with exposures calculated over periods of 9 to 70 years. The proposed Project would utilize a limited number of diesel equipment, and construction would occur for only six months, rather than years. Also, the use of off-road, heavy-duty diesel equipment would be temporary, and diesel PM has highly dispersive properties. The nearest receptors to the Sunset Upper Debris Basin Dam site are residences located approximately 1,200 feet to the southwest. Therefore, construction-related emissions of TACs from the proposed Project would not expose sensitive receptors to substantial emissions of TACs. Table 4-3 above shows that the maximum daily construction emissions would be substantially less than the SCAQMD thresholds. As pollutant concentrations dissipate with distance, the relatively low emission levels during Project construction would not result in significant adverse impacts.

As discussed above, the periodic removal of accumulated sediment within the expanded 25% contact line would occur less frequently, but would take a greater number of days to complete, commensurate with a capacity increase of 2,000 cy. However, as discussed, the daily rate of sediment removal would not change; that is, the same numbers of equipment and truck trips would be used. Therefore, daily emissions would remain the same with the proposed Project, including diesel exhaust emissions; local emissions of NO_x, CO, PM₁₀, and PM_{2.5}; and contribution to CO hotspots. There would be less than significant impacts related to substantial pollutant concentrations during construction of the proposed Project, and no increase or decrease in emissions during long-term operation of the debris basin.

e) Less than Significant Impact

The debris basin and dam do not generate objectionable odors generally associated with agricultural activities; the handling of trash; the generation or treatment of sewage; or the use or generation of chemicals, food processing, or other activities that generate odors.

Diesel exhaust fumes would be generated by equipment during construction site preparation; construction activities; continued debris basin maintenance activities; and associated truck passbys along Country Club Drive. Diesel fumes from equipment working on the debris dam and in the debris basin would result in odors that may be perceptible in the immediate vicinity of the Project site, but there are no employees stationed at or near the site and no residences are located adjacent to the site. Due to the majority of diesel equipment staying at the Project site during construction of the proposed dam modifications, diesel odors during construction would not be objectionable because of the relatively small magnitude and short duration of construction. Asphalt paving of the access road would also not cause any objectionable odors due to the small magnitude and short duration, as well as distance to the nearest residents. Therefore, odor impacts related to Project construction would be less than significant. Since the Project would not result in a greater number of trucks per day for periodic sediment removal, odor from diesel exhaust fumes associated with the greater debris volumes within the 25% contact line would be less than significant.

4.3.3 MITIGATION PROGRAM

Regulatory Requirements

RR 4.3-1 The South Coast Air Quality Management District's (SCAQMD's) Rule 403, Fugitive Dust, requires the implementation of best available control measures (BACM) for any activity or man-made condition 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. The BACMs include soil stabilization; watering of surface soils and crushed materials; covering hauls or provision of freeboard; track-out prevention; and limits on vehicle speeds and wind barriers, among others. Compliance with this Rule will result in a reduction in short-term particulate pollutant emissions. During construction and sediment-removal activities, Project contractors shall comply with SCAQMD Rule 403. The Los Angeles County Flood Control District (LACFCD) shall include this RR as notes in the Contractor Specifications. Because the Project area is less than 50 acres and the volume of debris removal is less than 5,000 cubic yards (cy), construction activities are not considered a "large operation" under Rule 403. Therefore, submittal of a Large Operation Notification to the SCAQMD or implementation of contingency control measures for large operations are not required.

Mitigation Measures

Project implementation would not result in significant impacts related to air quality; therefore, no mitigation is required. Compliance with SCAQMD Rule 403 is required, but is not necessary to avoid a potentially significant adverse impact.

4.4 <u>BIOLOGICAL RESOURCES</u>	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modification, 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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

4.4.1 ENVIRONMENTAL SETTING

A Biological Reconnaissance Survey was conducted by BonTerra Consulting for Sunset Canyon in late 2007 for use in the Sunset Canyon Debris Control Study (January 2008). A Jurisdictional Delineation was then prepared by BonTerra Consulting to identify jurisdictional resources and the possible need for permits (February 2008). In addition, a Coastal California Gnatcatcher Survey was performed in March and April 2008 (June 2008), and Special Status Plant Surveys were conducted in 2008 (September 2008). An updated reconnaissance survey was performed in June 2011 to determine if existing conditions at the Sunset Upper Debris Basin Dam were similar to the conditions previously observed during the 2008 surveys. The findings of the most recent reconnaissance survey (January 2013) are provided in Appendix B and are summarized below.

Vegetation

Vegetation types in the Sunset Upper Debris Basin Dam and surrounding areas include California sagebrush scrub, mixed chaparral, and coast live oak woodland with disturbed and developed areas present within and near the dam and debris basin (see Exhibit 4-1, Existing Vegetation at Sunset Upper Debris Basin Dam).

California sagebrush scrub is found on the steep slopes adjacent to the debris basin. It also intergrades, in a patchy distribution, with chaparral throughout the rest of the Project area. This vegetation type is dominated by California sagebrush (*Artemisia californica*); other common species present include California buckwheat (*Eriogonum fasciculatum*), deerweed (*Lotus scoparius*), white sage (*Salvia apiana*), Our Lord's candle (*Yucca whipplei*), and laurel sumac (*Malosma laurina*).

Mixed chaparral covers the majority of the survey area, varying in density based on aspect and topography. This vegetation type is dominated by chamise (*Adenostoma fasciculatum*), toyon (*Heteromeles arbutifolia*), California coffeeberry (*Rhamnus californica*), and laurel sumac. Other common species present include elderberry (*Sambucus mexicana*), holly-leaf cherry (*Prunus ilicifolia*), lemonadeberry (*Rhus integrifolia*), hoaryleaf ceanothus (*Ceanothus crassifolius*), mountain mahogany (*Cercocarpus betuloides*), and black sage (*Salvia mellifera*).

Coast live oak woodland occurs above the debris basin and along the drainage below the dam; it is dominated by coast live oak (*Quercus agrifolia*). Other common species present include red willow (*Salix laevigata*), mule fat (*Baccharis salicifolia*), western poison oak (*Toxicodendron diversilobum*), mugwort (*Artemisia douglasiana*), and California blackberry (*Rubus ursinus*). Additional occasional species include western sycamore (*Platanus racemosa*), bush monkeyflower (*Mimulus aurantiacus*), Southern California black walnut (*Juglans californica*), California brickellbush (*Brickellia californica*), and the scrub and chaparral species listed above.

Already developed areas include all paved surfaces, concrete-lined channels, and other structures associated with the access road, drainage channels, gunite slopes, dam, stairs, and maintenance shed. Already disturbed areas include the debris basin bottom, dirt roads, fire breaks, and other mechanically disturbed areas that generally lack vegetation.

Wildlife

Amphibians require moisture for at least a portion of their life cycle and many require standing or flowing water for reproduction. Although no amphibians were observed during the 2011 survey, native amphibian species such as the western toad (*Bufo boreas*) and Pacific treefrog (*Hyla regilla*) are expected to occur. Other native amphibian species that may occur include the black-bellied slender salamander (*Batrachoseps nigriventris*) and California treefrog (*Hyla cadaverina*).

Diversity and abundance of reptiles typically varies with vegetation type and substrate characteristics. The western fence lizard (*Sceloporus occidentalis*) and side-blotched lizard (*Uta stansburiana*) were observed during the survey. Other native reptile species that are expected to occur include western skink (*Eumeces skiltonianus*), southern alligator lizard (*Eigaria multicarinata*), gopher snake (*Pituophis catenifer*), coachwhip (*Masticophis flagellum*), common kingsnake (*Lampropeltis getula*), and western rattlesnake (*Crotalus viridis*).

Birds utilize nearly all vegetation types with greater variety and higher densities occurring in particularly valuable vegetation types. Riparian habitats provide food, water, and cover for birds throughout the year. These habitats also provide breeding habitat for a wide variety of species. Bird species, both native and non-native, observed during the survey include the red-tailed hawk (*Buteo jamaicensis*), Anna's hummingbird (*Calypte anna*), western scrub-jay (*Aphelocoma californica*), wren (Chamaea fasciata), northern rough-winged swallow (*Stelgidopteryx serripennis*), spotted towhee (*Pipilo maculatus*), California towhee (*Melospiza [Pipilo] crissalis*), house finch (*Carpodacus mexicanus*), and American goldfinch (*Spinus [Carduelis] tristis*). Bird species observed during previous surveys (in 2008) that would be expected to occur include the mourning dove (*Zenaidura macroura*), northern flicker (*Colaptes auratus*), black phoebe (*Sayornis nigricans*), common raven (*Corvus corax*), oak titmouse (*Baeolophus inornatus*), bushtit (*Psaltirius minimus*), Bewick's wren (*Thryomanes bewickii*), common yellowthroat (*Geothlypis trichas*), song sparrow (*Melospiza melodia*), and lesser goldfinch (*Spinus [Carduelis] psaltria*).

Mammal species, both native and non-native, expected to occur include the following small mammal species: desert cottontail (*Sylvilagus audubonii*), California ground squirrel (*Spermophilus beecheyi*), and Botta's pocket gopher (*Thomomys bottae*). A variety of bat species are expected to occur as well, including the long-legged myotis (*Myotis volans*), California myotis (*Myotis californicus*), western pipistrelle (*Pipistrellus hesperus*), big brown bat (*Eptesicus fuscus*), hoary bat (*Lasiurus cinereus*), and Brazilian free-tailed bat (*Tadarida brasiliensis*). Medium and large-sized mammals expected to occur include the raccoon (*Procyon lotor*), Virginia opossum (*Didelphis virginiana*), striped skunk (*Mephitis mephitis*), coyote (*Canis latrans*), bobcat (*Lynx rufous*), and mountain lion (*Puma [Felis] concolor*).

Significant Ecological Area No. 40 – Verdugo Mountains

The Project is located in an area designated by the County of Los Angeles as the Verdugo Hills Significant Ecological Area (SEA), established in 1976. However, the SEA is entirely within the cities of Glendale, Burbank, and Los Angeles. Therefore, the County's SEA program, and associated Significant Ecological Area Technical Advisory Committee (SEATAC) review process, is not applicable to the Verdugo Hills SEA.

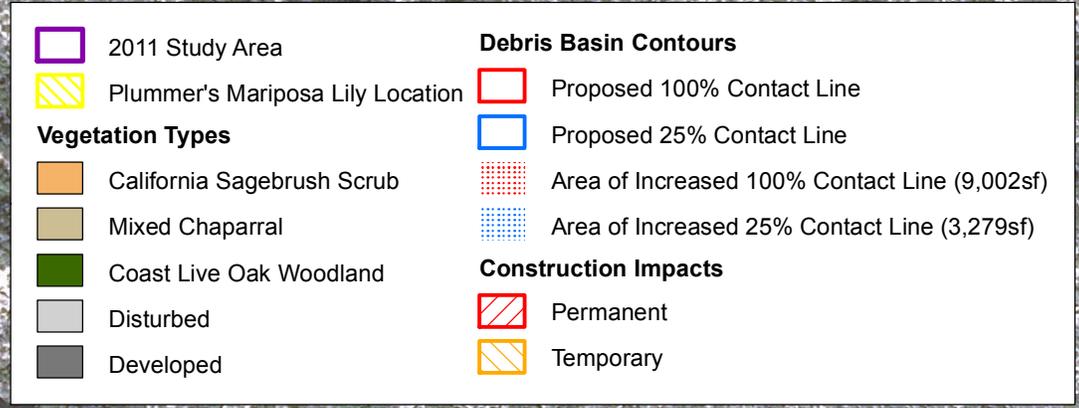
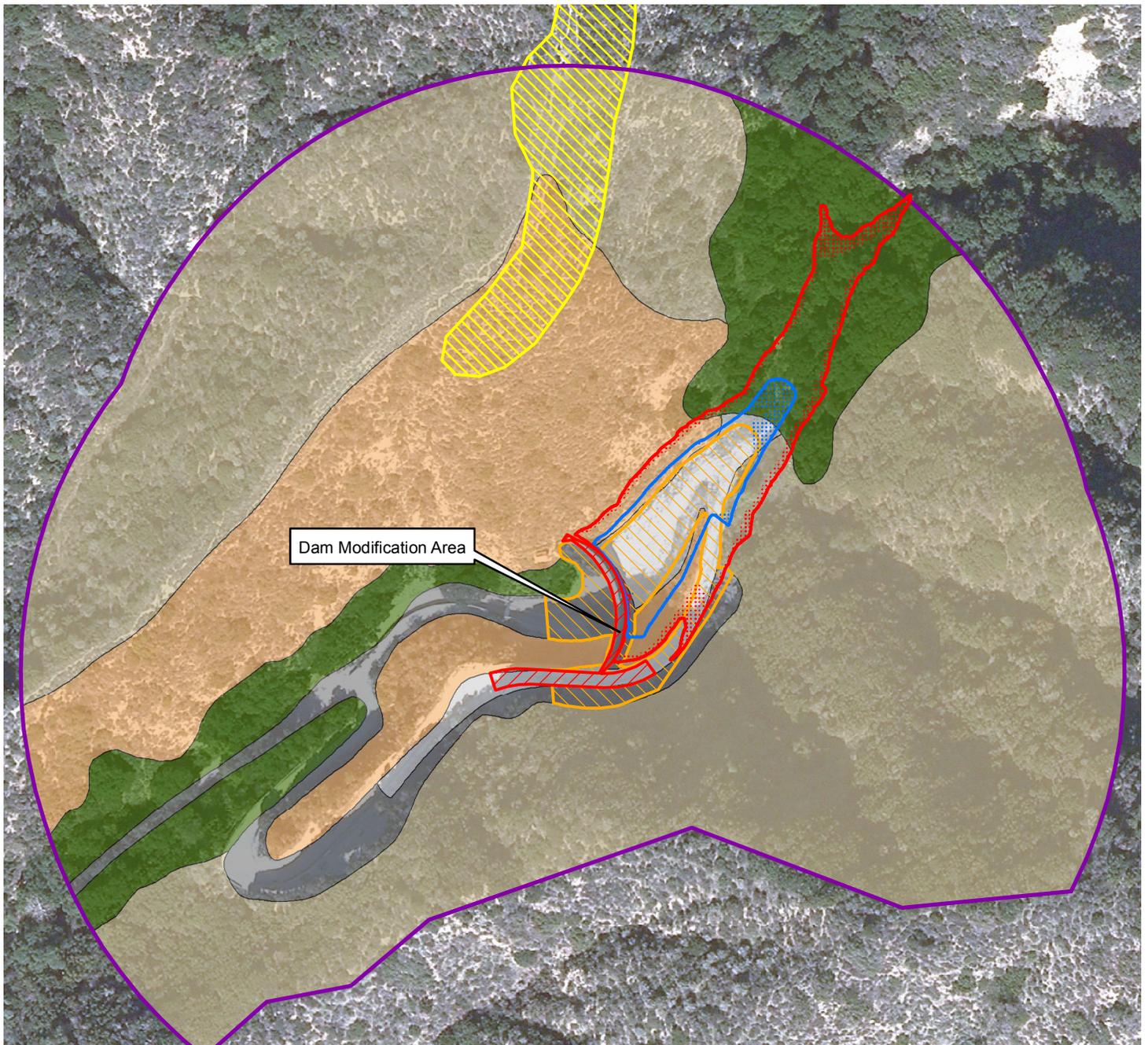
4.4.2 IMPACT ANALYSIS

a, b) Less than Significant with Mitigation

Vegetation

Construction of the proposed dam modifications will occur on existing disturbed and developed areas (i.e., dam, access road, and gunite slopes) and within the 16,168-sf area (approximately 0.37 acre) below the 25% contact line, which is permitted for disturbance via an existing long-term maintenance agreement. Specifically, construction of the proposed dam modifications would involve a total impact footprint of 29,115 sf (approximately 0.7 acre). The construction footprint includes 24,579 sf of temporary impact areas (e.g., construction staging, equipment operations) and 4,536 sf of permanent impact areas (e.g., footprint of additional dam and access road features). Disturbed and developed areas are considered to have no to low biological value to wildlife and, as such, impacts on these areas would be considered less than significant. Vegetation types mapped below the 25% contact line are considered impacted via ongoing annual debris basin maintenance activities, and have been mitigated under the 2011 Section 1605 Agreement with CDFG. There would be no vegetation removal outside the 25% contact line as part of project construction. Therefore, there would be no additional impacts to vegetation resulting from construction of the proposed dam modifications and no mitigation would be required.

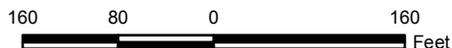
D:\Projects\ColADPW\144\mxd\Ex_veg_20121116.mxd



Existing Vegetation at Sunset Upper Debris Basin Dam

Exhibit 4-1

Sunset Upper Debris Basin Dam Modification Project



Long-term operation of the modified Sunset Upper Debris Basin Dam would lead to potential inundation and/or debris deposition within the expanded 25% and 100% contact lines. Table 4-4 summarizes the vegetation types within the expanded 25% and 100% contact lines. As shown, California sagebrush scrub, coast live oak woodland, mixed chaparral, developed, and disturbed areas occur within the post-Project (i.e., expanded) contact lines. Among these, California sagebrush scrub and coast live oak woodland are considered sensitive natural vegetation communities.

**TABLE 4-4
VEGETATION TYPES WITHIN EXPANDED 25% AND 100% CONTACT LINES**

Vegetation Type	Expanded 25% Contact Line sf (acre)	Expanded 100% Contact Line sf (acre)
California sagebrush scrub	611.4 (0.01)	1,696.6 (0.04)
Coast live oak woodland	1,483.6 (0.03)	5,174.8 (0.12)
Mixed chaparral	298.9 (0.007)	1,041.8 (0.02)
Developed	26.7 (0.0006)	230.0 (0.005)
Disturbed	858.5 (0.02)	858.5 (0.02)
Totals	3,279.1 sf (0.08)	9,001.7 sf (0.21)
sf: square feet. Note: Totals may not add due to rounding.		
Source: BonTerra Consulting 2013a (Appendix B).		

As shown in Table 4-4, the change in elevation of the 100% contact line will result in an inundation area increase of approximately 9,002 sf (0.21 acre) between the existing and post-Project contact lines. The additional area includes California sagebrush scrub, coast live oak woodland, and mixed chaparral, as well as developed and disturbed areas. During a storm event that produces storm water and/or debris flows that are greater than the existing debris basin capacity of 20,000 cy, some or all of the additional area of 9,002 sf would be subject to potential inundation.

It should be noted that, while heightening the dam will increase the debris basin capacity by 8,000 cy allowing for the detainment of flows of larger storm events without overtopping, the change in dam height would not be expected to change the inundation frequency, inundation duration, or the flow regime upstream or downstream of the dam. The debris basin typically fills to an average of approximately 18 percent capacity (i.e., 18% of the existing 100% capacity contact line) each season; during larger storm events, the post-project basin may fill to a greater capacity than currently. However, this occurrence is expected to be extremely infrequent. Regardless, the Section 1605 Long-Term Streambed Alteration Agreement for the Debris Basin Maintenance Program (No. 1600-2008-0290-R5)(Section 1605 Agreement) with the CDFG that was signed on August 15, 2011 and other permits related to long-term maintenance activities, would require amendments subsequent to proposed Project implementation to reflect the expanded 25% and 100% contour lines. This requirement has been included as part of MM 4.4-2, which addresses impact to jurisdictional resources (see Response 4.4[c] below). Because the flood regime would remain the same as the existing conditions and with implementation of MM 4.4-2, impacts to vegetation within the post-Project 100% contour line, including the minimal amount of 0.16 acre of sensitive vegetation types (i.e., 0.04 acre California sagebrush scrub and 0.12 acre coast live oak woodland), is considered a less than significant impact of the proposed Project and no additional mitigation is required.

As shown in Table 4-4, the inundation area of the 25% contact line would be increased by approximately 3,279 sf (0.08 acre) between the existing and post-Project contact lines. The expanded 25% contact line would encompass areas of California sagebrush scrub, coast live

oak woodland, and mixed chaparral, as well as developed and disturbed areas. The change in the debris basin's post-Project 25% contact line has an associated capacity increase of 2,000 cy (for a proposed total capacity of 7,000 cy), and the additional 3,279 sf of area would be subject to potential inundation. The post-project 25% contact line inundation area would contain 0.04 acre of sensitive vegetation types (i.e., 0.01 acre of California sagebrush scrub and 0.03 acre of coast live oak woodland). Because of the minimal amount of sensitive vegetation within the post-Project inundation area of the 25% contact line (0.04 acre), the potential inundation of this vegetation would be considered a less than significant impact. Regardless, as discussed above, the Section 1605 Agreement and other permits related to long-term maintenance activities would require amendments subsequent to proposed Project implementation to reflect the expansion of the inundation area of the 25% contact line subsequent to proposed Project implementation, which has been included as part of MM 4.4-2.

Special Status Plant Species

The biological study area was surveyed for special status plant species in spring/summer 2008 (BonTerra Consulting 2008a, 2008b). Plummer's mariposa lily (*Calochortus plummerae*) (which has a California Rare Plant Rank [CRPR] of 1B.2) was observed on the ridge above the debris basin in the area where of Project activities would occur. This ridge area is not within the Project construction footprint and therefore would not be impacted by the Project. Southern California black walnut trees (*Juglans californica*) (which has a CRPR of 4.2) were observed scattered within the coast live oak woodland, and ocellated lily (*Lilium humboldtii* ssp. *ocellatum*) (which has a CRPR of 4.2) was observed in the understory of oak woodland.

No walnut trees would be removed as part of the proposed Project during construction; therefore, the walnut trees would not be impacted by the proposed Project. As discussed above, approximately 0.12 acre of coast live oak woodland within the 100% contact line and approximately 0.03 acre of oak woodland would be potentially impacted by inundation subsequent to construction of the dam modifications. The total of 0.15 acre of oak woodland is a minimal amount of this vegetation type within which scattered ocellated lilies were observed in the larger study area. Therefore, while some ocellated lilies may be impacted by inundation where present within the small area of oak woodland within the expanded contact lines, the majority of lilies would be avoided as only a minimal portion of the oak woodland in the survey area is within the expanded contact lines. Seeds of the lily species may wash down into the debris basin or channel from upstream locations, and a few individuals may occur in the impact area during construction. Impacts on species with a CRPR of 4.2 are typically considered less than significant since this species is not considered to meet the criteria of Section 15380 of the CEQA Guidelines.⁷ Therefore, less than significant impacts would occur to special status plant species, and no mitigation would be required.

Special Status Wildlife Species

Focused surveys in the biological study area following the U.S. Fish and Wildlife Service (USFWS) protocol for the federally Threatened coastal California gnatcatcher (*Poliioptila californica californica*) were conducted in spring/summer 2008, and no coastal California gnatcatchers were observed (BonTerra Consulting 2008c). Therefore, the coastal California gnatcatcher is presumed to be absent from the biological study area. Several years have elapsed since the survey has been conducted and gnatcatchers could have moved into the biological study area since the protocol survey was conducted. Although coastal sage scrub habitat is located adjacent to Project site, raising the dam would not directly impact coastal sage

⁷ Section 15380 of the CEQA Guidelines states that, if a species can be shown to meet the definition of Rare, Threatened, or Endangered, it can be treated as such even if it is not formally listed by the resource agencies.

scrub, which serves as habitat for the coastal California gnatcatcher. If the coastal California gnatcatcher were to occur at the Project site in the future, increased noise (during sediment removal and other maintenance activities involving heavy equipment) and human activity could indirectly impact coastal California gnatcatchers (if present). Pre-construction surveys and informal consultation with the USFWS, as required by MM 4.4-1, would reduce this potential adverse impact to a less than significant level.

Other Species of Special Concern have potential to occur, including western spadefoot (*Spea hammondi*), coast (San Diego) horned lizard (*Phrynosoma coronatum* [blainvillii population]), silvery legless lizard (*Anniella pulchra pulchra*), loggerhead shrike (*Lanius ludovicianus*), sharp-shinned hawk (*Accipiter striatus*), Cooper's hawk (*Accipiter cooperii*), and yellow warber (*Dedroica petechia*); however, Project impacts are limited to developed and disturbed areas at the Sunset Upper Debris Basin Dam, as discussed above, and would have a limited impact on these Species of Special Concern. Therefore, impacts would be less than significant and no mitigation is required.

Prior to any maintenance activities within the expanded maintenance areas during the breeding season, the LACFCD will follow the pre-construction coastal California gnatcatcher survey procedures (as described in MM 4.4-1). This approach is consistent with LACFCD's existing debris basin maintenance permits.

c) Less than Significant with Mitigation

During a survey conducted in 2008, it was determined that drainages within Sunset Canyon are under the jurisdiction of the U.S. Army Corps of Engineers (USACE) and California Department of Fish and Wildlife (CDFW; formerly California Department of Fish and Game) (BonTerra Consulting 2008d). An updated reconnaissance survey was performed in June 2011 to determine whether existing conditions at the Sunset Upper Debris Basin Dam are similar to the conditions previously observed during the 2008 surveys. As summarized in Table 4-5, construction of the proposed dam modifications and access road improvements would impact an estimated 0.233 acre of "waters of the U.S.", including 0.009 acre of wetlands under the jurisdiction of the USACE, and 0.258 acre of resources under the jurisdiction of CDFW, when considering both temporary and permanent impact areas as shown on Exhibit 4-1.

**TABLE 4-5
SUMMARY OF JURISDICTIONAL RESOURCE IMPACTS FROM PROJECT
CONSTRUCTION**

	Permanent Impacts (acres)			Temporary Impacts (acres)			Total Impacts (acres)
	Within 25% Contact Line	Outside 25% Contact Line	Total	Within 25% Contact Line	Outside 25% Contact Line	Total	
<i>USACE (Total)</i>	0.000	0.001	0.001	0.205	0.027	0.232	0.233
Non-wetland "Waters of the U.S."	0.000	0.000	0.000	0.205	0.019	0.224	0.224
Wetlands	0.000	0.001	0.001	0.000	0.008	0.008	0.009
<i>CDFW (Total)</i>	0.000	0.002	0.002	0.201	0.055	0.256	0.258

USACE: U.S. Army Corps of Engineers; CDFW: California Department of Fish and Wildlife.
Source: BonTerra Consulting, 2013a (January). *Biological Resources Report for the Sunset Upper Debris Basin Dam Modification Project, City of Burbank, Los Angeles County, California*. Pasadena, CA: BonTerra Consulting (Appendix B).

As discussed in Section 3.0, Project Description, the LACFCD currently holds USACE, CDFG, and Regional Water Quality Control Board (RWQCB) permits/agreements authorizing maintenance activities at the dam structure and associated debris basin, including disturbance of areas within the existing 25% contact line. Under these permits/agreements, areas within the 25% contact line of the Sunset Upper Debris Basin can be repeatedly impacted by maintenance activities (USACE Regional General Permit File No. SPL-2003-00411-KW; CDFG Streambed Alteration Agreement No. 1600-2008-0290-R5; RWQCB File No. 02-144-2008 Renewal).

**TABLE 4-6
SUMMARY OF JURISDICTIONAL RESOURCES WITHIN THE EXPANDED
100% AND 25% CONTACT LINES**

	Within Expanded 100% Contact Line (acres)	Within Expanded 25% Contact Line (acres)
<i>USACE (Total)</i>	<i>0.019</i>	<i>0.002^a</i>
Non-wetland "Waters of the U.S."	0.019	0.002
Wetlands	0.000	0.001
<i>CDFW (Total)</i>	<i>0.120</i>	<i>0.037</i>
^a Total USACE acres do not add due to rounding USACE: U.S. Army Corps of Engineers; CDFW: California Department of Fish and Wildlife. Source: BonTerra Consulting. 2013a (January). <i>Biological Resources Report for the Sunset Upper Debris Basin Dam Modification Project, City of Burbank, Los Angeles County, California</i> . Pasadena, CA: BonTerra Consulting (Appendix B).		

Regarding the expanded debris basin contact lines that would result from long-term operation of the proposed dam modifications, Table 4-6 summarizes the jurisdictional resources present within the expanded 100% and 25% contact lines. The 9,002-sf expansion of the 100% contact line contains 0.019 acre of "Waters of the U.S." and 0.120 acre of resources under the jurisdiction of CDFW. The existing maintenance permits already authorize an entrainment channel and exotic species eradication/control within this area because these activities are permitted to the limits of the County-owned property. Therefore, the only additional impact associated with the proposed Project is highly infrequent removal of debris as the result of large storm events. With implementation of permit conditions associated with the existing maintenance permits for the current 100% contact line, impacts to vegetation due to highly infrequent inundation and associated debris removal would be considered less than significant and would not require additional mitigation.

The 3,279-sf expansion of the 25% contact line contains 0.002 acre of "Waters of the U.S." and 0.037 acre of resources under the jurisdiction of CDFW. As noted above, the existing maintenance permits already authorize an entrainment channel and exotic species eradication/control within this area. However, periodic debris removal would occur within the expanded 25% contact line area. MM 4.4-2 calls for the reduction of the impacts to jurisdictional resources in the expanded 25% contact line above those already authorized by the existing maintenance permits by preservation or restoration of riparian habitat at a ratio that shall be specified in the amended USACE/CDFW/RWQCB permits/agreements in support of long-term debris basin maintenance for the Project. The LACFCD must obtain the necessary permits and approvals for potential additional impacts to riparian resources in the Project area and must implement all required permit conditions. Therefore, implementation of MM 4.4-2 would reduce Project impacts to less than significant levels.

d) Less than Significant with Mitigation

Wildlife Movement

Wildlife is expected to move along both the ridgelines and drainages in and around the Project area, Sunset Canyon, and the Verdugo Mountains. The proposed Project would modify an existing dam structure and access road, but would not create a new structure or modify the contact lines of the debris basin in a way that would constitute a barrier to wildlife movement. Therefore, the proposed Project would not be expected to disrupt or discourage long-term wildlife movement and migration.

Non-avian wildlife in the Project area may avoid the immediate area during the days when construction/maintenance is occurring, but would still be expected to use these areas at nights. The temporary impacts on non-avian wildlife movement and migration would be considered short-term in nature, and would therefore be considered less than significant. No mitigation is required.

Nesting Raptors

The red-tailed hawk (*Buteo jamaicensis*) is suspected to be breeding in the oak trees adjacent to the debris basin based on behavior observed during the June 2011 survey. Additionally, several other hawk and owl species have potential to nest in the woodlands adjacent to the Project site. The *California Fish and Game Code* prohibits activities that have the potential to disturb active raptor nests. This protection generally ceases once nesting activity is complete. Construction is tentatively scheduled from April to September, which includes the raptor nesting season from between February 1 and July 30. If a raptor is nesting in the woodlands adjacent to the Project site during construction activities (including geotechnical testing) or occasional debris removal, the increased noise and human activity could disturb the raptor and may impact its behavior and ultimately the success of its nest. Implementation of MM 4.4-3 would ensure that indirect noise and human activity impacts on nesting raptors are avoided or minimized. If a raptor nest is observed during the survey, it would have to be protected by a CDFW-approved buffer where no construction activity would be allowed until the nest had failed or the nestlings have fledged.

Nesting Birds

The federal Migratory Bird Treaty Act (MBTA) protects the nests of all native bird species, including common species, such as the mourning dove (*Zenaida macroura*), Anna's hummingbird (*Calypte anna*), and house finch (*Carpodacus mexicanus*). In addition to protecting nests located in native trees and shrubs, the MBTA also protects nests located on bare ground and on structures. Construction is tentatively scheduled from April to September, which includes the bird nesting season (i.e., between March 15 and September 15). Any nests located on the existing dam structure (e.g., cliff swallow [*Petrochelidon pyrrhonota*], house finch, black phoebe [*Sayornis nigricans*]) or on the bare ground within the Project site (e.g., killdeer [*Charadrius vociferus*]) could be directly impacted if construction harms their nests. If birds are nesting in the California sagebrush scrub, mixed chaparral, or coast live oak woodlands adjacent to the Sunset Upper Debris Basin Dam modification area, the increased noise and human activity could also disturb the birds and may impact their behavior and ultimately the success of their nests. Implementation of MM 4.4-4 would be required to ensure that direct and indirect noise and human activity impacts on nesting birds are avoided or minimized. Each nest observed during the survey would have to be protected by a buffer (size varies by species) where no construction/maintenance activity would be allowed until the nest has failed or until the nestlings have fledged.

e) Less than Significant Impact

Significant Ecological Area

The Project is located within an area designated by the County of Los Angeles as the SEA, established in 1976. However, the SEA is entirely within the cities of Glendale, Burbank, and Los Angeles. Therefore, the County's SEA program, and associated SEATAC review process, is not applicable to the Verdugo Hills SEA. There would be no impact related to conflict with the County's SEA program and no mitigation is required.

Trees

No trees would be removed or require trimming during project construction; therefore, there would be no impact on coast live oak or Southern California black walnut trees and no permits would be needed. Therefore, there would be no impacts related to conflict with any tree protection ordinance and no mitigation is required.

f) No Impact

No Habitat Conservation Plans (HCPs) or Natural Community Conservation Plans (NCCPs) have been adopted for the Project area. Thus, no impact related to an HCP or NCCP would occur.

4.4.3 MITIGATION PROGRAM

Regulatory Requirements

While several regulations protect sensitive biological resources in the region, the measures that the LACFCD would need to implement to comply with these regulations are outlined as specific mitigation measures below.

Mitigation Measures

MM 4.4-1 Prior to construction of the dam modifications, the County of Los Angeles Flood Control District (LACFCD) or their consultant shall contact the USFWS to determine the appropriate pre-construction survey methodology (e.g., full protocol survey or a reduced-visit modified survey protocol) for the coastal California gnatcatcher and discuss and obtain approval on: pre-nesting season exclusionary measures; and avoidance and minimization measures if a nesting coastal California gnatcatcher is observed during the pre-construction survey. The LACFCD will implement the approved exclusionary measures prior to the coastal California gnatcatcher's breeding season. Prior to construction a permitted gnatcatcher Biologist (i.e., one holding a 10[a][1][A] permit to conduct surveys for the coastal California gnatcatcher) shall conduct a pre-construction survey for coastal California gnatcatcher following the methodology approved by the USFWS to determine the presence or absence of this species in the coastal sage scrub in and adjacent to the Project site. If no coastal California gnatcatchers are observed, no further avoidance or mitigation would be required. If the coastal California gnatcatcher is observed during the pre-construction survey, the LACFCD (and/or their consultant) shall contact the USFWS to discuss and obtain approval on avoidance and minimization measures recommended by the qualified gnatcatcher Biologist. These may include, but would not be limited to, biological monitoring by a permitted gnatcatcher Biologist

during construction or maintenance activities; construction or maintenance activities restricted to occur outside the breeding season (February 14 to August 15); or noise restrictions near the occupied area.

Prior to any maintenance activities within the expanded maintenance areas during the breeding season, the LACFCD will follow the same pre-construction coastal California gnatcatcher survey as described above. This approach is consistent with the LACFCD's existing debris basin maintenance permits.

MM 4.4-2 Prior to construction, the LACFCD will obtain permits/agreements from the U.S. Army Corps of Engineers (USACE), the California Regional Water Quality Control Board (RWQCB), and the California Department of Fish and Wildlife (CDFW) to authorize impacts to "Waters of the United States", including wetlands, and resources under the jurisdiction of the CDFW that are outside the impacts already authorized under the LACFCD's existing permits/agreement for maintenance of the debris basin. (These maintenance authorizations are comprised of: USACE Regional Permit File No. SPL-2003-00411-KW; RWQCB File No. 02-144-2008 Renewal; and CDFG Streambed Alteration Agreement No. 1600-2008-0290-R5.) No Project-related discharge or fill material will be allowed to impact any drainages in the Project impact area until the new permits/agreement are obtained. Compliance with the conditions of the new permits/agreement and applicable conditions of the existing maintenance permits/agreement will be made part of the Project construction. Based on LACFCD's experience, these conditions may include biological monitoring during the initiation of construction; use of Best Management Practices (BMPs) to protect water quality; flagging of the boundaries of the construction site; measures to protect trees; other measures to protect sensitive species; mitigation for construction impacts outside those already authorized in the existing maintenance permits/agreement; and mitigation for ongoing impacts within the expanded maintenance area. Such mitigation may include onsite or off-site preservation or restoration of impacted habitat.

It is anticipated that the permits/agreement for the construction of the Project will also cover the first several years of maintenance within the expanded maintenance areas, until the LACFCD and the permitting agencies can coordinate to amend the existing maintenance permits/agreement to incorporate the additional maintenance footprint.

MM 4.4-3 The LACFCD will work with the CDFW during the preparation of the Project's Streambed Alteration Agreement to incorporate into the Agreement CDFW-approved temporary exclusionary measures to prevent raptor nesting within the established buffer distance from the Project construction areas. The LACFCD will employ approved exclusionary measures prior to February 1 (start of raptor breeding season) and remove them upon completion of construction activities. Prior to construction of the proposed Project, a pre-construction survey for active raptor nests shall be conducted by a qualified Biologist prior to the commencement of any construction activities as directed in the CDFW Streambed Alteration Agreement. If an active nest is observed, it shall be mapped and a buffer zone designated per CDFW's direction to protect the nest. Construction activities will be excluded from this buffer zone until the nest is no longer active.

Prior to any maintenance activities within the expanded maintenance areas during the breeding season (February 1 to July 30), the LACFCD will follow the same pre-construction raptor nesting survey procedure and restrictions as described above. This approach is consistent with the LACFCD's existing debris basin maintenance permits.

MM 4.4-4 The LACFCD will work with the CDFW during the preparation of the Project's Streambed Alteration Agreement to incorporate into the Agreement CDFW-approved temporary exclusionary measures to prevent migratory bird nesting within the established buffer distance from the Project construction areas. The LACFCD will employ approved exclusionary measures prior to March 1 (start of nesting season) and remove them upon completion of construction activities. Prior to commencement of construction activities of the proposed Project, a pre-construction survey for active bird nests shall be conducted by a qualified Biologist (or as otherwise directed in the CDFW Streambed Alteration Agreement). The survey shall include all potential nesting areas, including dam structures and bare ground. If an active nest is observed, it shall be mapped and a buffer zone designated per CDFW's direction to protect the nest; the size of the buffer will be determined by the Biologist based on the sensitivity of the species and CDFW requirements. Construction activities will be excluded from this buffer zone until the nest is no longer active.

Prior to any maintenance activities within the expanded maintenance areas during the nesting season (March 1 to August 31), the LACFCD will follow the same pre-construction nesting bird survey procedure and restrictions as described above. This approach is consistent with LACFCD's existing debris basin maintenance permits.

4.5 CULTURAL RESOURCES	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

4.5.1 ENVIRONMENTAL SETTING

Archaeological and Historic Inventory

BonTerra Consulting Archaeologist Patrick Maxon, a Registered Professional Archaeologist (RPA), conducted an archaeological/historical resources records search and literature review for the Project at the South Central Coastal Information Center (SCCIC)⁸ at the California State University, Fullerton, on June 6, 2011. In addition to the archaeological inventory records, reports and historic maps, an examination was made of the Historic Property Data File (HPDF) maintained by the Office of Historic Preservation. The HPDF is a listing of buildings and structures within a specified city that have been evaluated for listing on the National Register of Historic Places (NRHP) and/or the California Register of Historical Resources (CRHR). Each property is assigned a status code after a determination has been made.

The records review at the SCCIC indicates that no cultural resources sites have been previously recorded and/or evaluated on the Project site, and no cultural resources studies have been previously completed on the Project site. One site, the Starlight Theater (19-186991), is located within 1 mile of the Project site; two sites are located 1.2 miles southwest of the Project site: (1) City of Burbank City Hall (19-180746) and (2) the U.S. Post Office – Burbank Downtown Station (19-180751). These latter two sites are listed in the NRHP. The Glendale (1928; reprinted 1948) and La Crescenta (1939) historic U.S. Geological Survey (USGS) quadrangles show numerous structures along Sunset Canyon Road within the Sunset Lower Watershed. Many of these same structures are still depicted on the current quadrangle.

Native American consultation was initiated with the Native American Heritage Commission (NAHC) through a request for a Sacred Lands File Search and contact list. A response was received from the NAHC on June 21, 2011, and informational letters were mailed to tribes and individuals on the NAHC list soon after. The results of the California Historical Resources Information System records search and Native American consultation are provided in Appendix C.

⁸ The SCCIC houses records for archaeological and historical resources in Orange, Los Angeles, and Ventura Counties.

Native American Scoping

The Sacred Lands File Search that was required of the Native American Heritage Commission (NAHC) did not identify the presence of Native American cultural resources within the Project area. The NAHC suggested early consultation with local Native American tribes, providing a list of Native American individuals/organizations that may have knowledge of cultural resources in the Project area. The list included the following individuals:

- Charlie Cook – Chumash, Fernandeno, Tataviam, and Kitanemuk Tirbe;
- Ron Andrade – Director, Native American Indian Commission;
- John Tommy Rosas – Tribal Administrator Gabrielino Tongva Territorial Tribal Nation;
- John Valenzuela – Chairperson, San Fernando Band of Mission Indians;
- Anthony Morales – Chairperson, Gabrielino/Tongva San Gabriel Band of Mission Indians;
- Sam Dunlap – Tribal Secretary, Gabrielino Tongva Nation;
- Robert Dorame – Tribal Chair/Cultural Resources Gabrielino Tongva Indians of California Tribal Council;
- Bernie Acuña – Gabrielino-Tongva Tribe;
- Andy Salas – Chairperson, Shoshoneon Gabrieleno Band of Mission Indians; and
- Linda Candelaria – Chairwoman, Gabrielino-Tongva Tribe.

A letter was mailed on June 28, 2011, to these individuals to inform them about the Project and allow them to share any knowledge they have of cultural resources in the Project vicinity. However, no responses to the inquiry letters have been received to date.

Cultural Resources Field Survey

BonTerra Consulting conducted a field visit to the Project site to examine the area for the presence of cultural resources. On October 27, 2011, BonTerra Consulting archaeologist Brady Long completed a survey of the debris basin area. Mr. Long examined all accessible areas around the dam itself and viewed the expanded contact line areas where possible. No cultural resources were discovered and, because of the steep terrain at the margins of the dam, no resources are expected in those areas. No archaeological materials or possible archaeological materials, either prehistoric or historic, were observed.

4.5.2 IMPACT ANALYSIS

a) No Impact

Since the Sunset Upper Debris Basin Dam exceeds 50 years of age and would be modified as part of the proposed Project, Ms. Pam Daly of Daly and Associates conducted a Historic Resources Assessment Report of the dam and its associated structures. The Historic Resources Assessment Report for the Project is provided in Attachment A of the Cultural Resources Memorandum provided in Appendix C of this Initial Study. The Sunset Upper Debris Basin Dam and associated structures were evaluated for eligibility for listing in the NRHP, CRHR, or as a Designated Historic Resource (DHR) in the City of Burbank. Ms. Daly conducted records research, completed a field survey, and produced a Department of Parks and Recreation (DPR) 523 Series Site Record and evaluation report for the dam. In summary, the

dam and associated features were found ineligible for listing in the NAHC, CRHR, or as a DHR. It does not meet any of the significance criteria (A/1/A, B/2/B, C/3/C, or D/4/D) described in the NRHP (A, B, C, or D), CRHR (1, 2, 3, or 4), or DHR (A, B, C, or D). Therefore, no further consideration need be given to the Sunset Upper Debris Basin and associated structures as a cultural resource; there would be no impact to historic resources with implementation of the proposed Project.

b) Less than Significant Impact

As discussed above, there are no known archaeological resources at the Sunset Upper Debris Basin Dam, and the cultural resources investigation concludes that archaeological resources are not expected to be encountered. The proposed dam modifications, including raising the access road, would occur within already disturbed areas. Inundation of the expanded 100% contact line during or after a highly infrequent major storm or periodic removal of sediment within the expanded 25% contact line are not expected to uncover or impact unknown archaeological resources, as sediment removal involves only disturbance of the accumulated sediment and not native soils. Therefore, construction of the proposed Project would involve no, to limited, disturbance of native soils. The proposed Project would have a less than significant impact to archaeological resources.

c) Less than Significant Impact

As discussed under Response 4.5(b) above, implementation of the proposed Project would involve no, to limited, disturbance of native soils that have the potential to contain unknown paleontological resources. Also, the Project site does not include any unique geologic features. Therefore, impacts to paleontological resources would be less than significant.

d) Less than Significant Impact

Previous construction activities for the Sunset Upper Debris Basin Dam and access road have disturbed the natural ground (i.e., native soils) and there is no indication that human remains are present on or near the Sunset Upper Debris Basin Dam. These previously disturbed areas are not expected to uncover human remains. Also, inundation of the expanded 100% contact line during or after a major storm or periodic removal of sediment within the expanded 25% contact line are not expected to uncover or impact human remains or burials, as sediment removal involves only disturbance of the accumulated sediment and not native soils. No impact on any known human remains would occur. However, should grading and excavation for construction of the proposed Project unearth human remains or unknown burials, compliance with existing regulatory requirements under the *California Health and Safety Code* and the *California Public Resources Code*, as discussed under RR 4.5-1 below, would ensure that potential impacts to human remains would be less than significant.

4.5.3 MITIGATION PROGRAM

Regulatory Requirements

RR 4.5-1 In the event of the discovery of human remains, compliance with Section 7050.5 of the *California Health and Safety Code* is required. This regulation states that if human remains are found during ground-disturbing activities, no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains shall occur until the County Coroner has determined, within two working days of notification of the discovery, the appropriate treatment

and disposition of the human remains. The County Coroner shall be notified within 24 hours of the discovery.

If the County Coroner determines that the remains are or are believed to be Native American, s/he shall notify the Native American Heritage Commission (NAHC) in Sacramento within 24 hours of the discovery. In addition, Section 5097.98 of the *California Public Resources Code* states that the NAHC must immediately notify those persons it believes to be the most likely descended from the deceased Native American. The descendents shall complete their inspection within 48 hours of being granted access to the site by the property owner. The property owner would then determine, in consultation with a designated Native American representative, the final disposition of the human remains (14 *California Code of Regulations* §15064.5[e]).

The contractor would need to comply with these regulations upon the discovery of human remains during ground-disturbance activities. This RR shall be included by the County as notes in the Contractor Specifications.

Mitigation Measures

Project implementation would result in less than significant impacts; therefore, no mitigation is required.

4.6	<u>GEOLOGY AND SOILS</u>	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
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.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	ii. Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	iii. Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	iv. Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b)	Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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 onsite or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e)	Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

4.6.1 ENVIRONMENTAL SETTING

Sunset Canyon features the steep slopes of the Verdugo Mountains, which are underlain by crystalline or metamorphic bedrock. Elevations at the Sunset Canyon watershed range from 3,080 feet above msl in the northeastern portion of the watershed to 1,080 feet above msl at the southwestern end. There are no potentially active or active faults traversing the Project site. The nearest known active fault is the Verdugo Fault, located at the southern base of the Verdugo Mountains and approximately 1 mile south of the dam (LACDRP 1990). The California Division of Mines and Geology has not designated an Alquist-Priolo Earthquake Fault Zone (Alquist-Priolo Zone) on the Verdugo Fault or any area within the Verdugo Mountains. The nearest Alquist-Priolo Zone is along the Mount Lukens Fault, located approximately 4.5 miles northeast of the dam (CDMG 1979).

4.6.2 IMPACT ANALYSIS

a) i. and iii. No Impact

There are no known faults traversing the Sunset Upper Debris Basin Dam project site. The California Geological Survey Hazards Mapping Program does not identify liquefaction hazards within the Verdugo Mountains, including Sunset Canyon (CDMG 1999). Therefore, the proposed Project would not be exposed to surface rupture or liquefaction hazards, and there would be no impact.

a) ii. and iv. Less Than Significant Impact

As with all of Southern California, the Project area is within a seismically active region. Also, according to the California Geological Survey Hazards Mapping Program, the Verdugo Mountains, including Sunset Canyon, are susceptible to earthquake-induced landslides (CDMG 1999). The proposed Project does not involve the construction or occupancy of habitable structures that could expose people to seismic ground shaking. However, the Sunset Upper Debris Basin Dam would likely be subject to strong seismic ground shaking within the life of the Project, and the canyon slopes have the potential for seismically induced landslides. Ground disturbance associated with construction of the proposed Project could also affect the stability of the canyon's side slopes and its potential for landslides.

Prior to Project implementation, the LACDPW's Geotechnical and Materials Engineering Division (GMED), on behalf of the LACFCD, would investigate the Project site and conduct a visual observation of existing conditions. The GMED may also evaluate the potential geotechnical constraints related to construction and operation of the proposed Project and determine any specific engineering measures to be implemented. Also, the expanded 25% and 100% contact lines would not exacerbate ground shaking or landslide hazards. Rather, implementation of the proposed Project would reduce the potential for downstream erosion and landslides and consequently reduce associated threats to people and structures. Because the proposed Project would reduce the potential for landslides to adversely affect downstream populations and because the Project would not construct habitable structures that could expose people to risks from landslides or seismic events, impacts would be less than significant.

b) Less Than Significant Impact

The proposed Project involves raising the spillway height and parapet walls of an existing dam and raising the elevation of an existing access road. As stated earlier, the Project would increase the storage capacity of the debris basin and provide additional debris storage upstream of the dam, reducing the velocity and the debris content of the flood waters that could cause downstream erosion. Therefore, the proposed Project would reduce downstream erosion potential and loss of topsoil within the canyon during storm events. In the short term, ground disturbance associated with constructing the Project may lead to the erosion of disturbed slopes. However, the proposed Project would be constructed outside the rainy season and excavated areas would be backfilled with concrete backfill as soon as feasible to prevent erosion or loss of topsoil. Removal of sediment within the expanded 25% and 100% contact lines, when necessary, involves only disturbance of the collected sediment and not native soils. Impacts would be less than significant.

c, d) Less Than Significant Impact

As discussed above, Sunset Canyon is not located in an area with liquefaction hazards. The potential for landslides and other geologic hazards and expansive soils in the areas that would be disturbed as part of the proposed Project would be evaluated by the LACDPW (GMED), on behalf of the LACFCD, prior to Project implementation. Implementation of the engineering measures specified for the proposed Project by the GMED would ensure the structural stability of the proposed improvements and it would prevent the creation or exacerbation of geologic hazards (such as landslides, lateral spreading, subsidence, liquefaction, or collapse) in Sunset Canyon. The expanded 25% and 100% contact lines would not create or exacerbate geologic hazards or be affected by local geologic conditions. Impacts would be less than significant.

e) No Impact

The proposed Project would not generate any wastewater or require septic tanks or alternative wastewater disposal systems. Thus, no impacts associated with soils that are incapable of supporting septic tanks or alternative wastewater disposal systems would occur.

4.6.3 MITIGATION PROGRAM

Regulatory Requirements

None.

Mitigation Measures

Project implementation would result in less than significant impacts; therefore, no mitigation is required.

4.7 GREENHOUSE GAS EMISSIONS	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

4.7.1 ENVIRONMENTAL SETTING

Climate change refers to any significant change in climate (e.g., the average temperature, precipitation, or wind patterns) over a period of time. Climate change may result from natural factors, natural processes, and human activities that change the composition of the atmosphere and alter the surface and features of the land. Significant changes in global climate patterns have been associated with global warming, which is an average increase in the temperature of the atmosphere near the Earth’s surface; this is attributed to an accumulation of greenhouse gas (GHG) emissions in the atmosphere. GHGs trap heat in the atmosphere which, in turn, increases the Earth’s surface temperature. Some GHGs occur naturally and are emitted to the atmosphere through natural processes, while others are created and emitted solely through human activities. The emission of GHGs through fossil fuel combustion, in conjunction with other human activities, appears to be closely associated with global warming (OPR 2008). Table 4-7 shows the magnitude of GHG emissions on the global, national, State, and regional scales.⁹

**TABLE 4-7
COMPARISON OF WORLDWIDE GHG EMISSIONS**

Area and Data Year	Annual GHG Emissions (MMTCO ₂ e)
World (2006)	29,000
United States (2008)	6,950
California (2008)	478
Los Angeles County (2008)	93
MMTCO ₂ e: million metric tons of carbon dioxide equivalent; GHG: greenhouse gas(es)	
Source: WRI 2009; USEPA 2010a; CARB 2010; SCAG 2008.	

GHGs, as defined under California’s Assembly Bill (AB) 32, include carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆). General discussions on climate change often include water vapor, ozone, and aerosols in the GHG category. Water vapor and atmospheric ozone are not gases

⁹ GHG emissions are commonly expressed in metric tons of carbon dioxide equivalent (MTCO₂e). Larger quantities of emissions, such as on the State or world scale, are expressed in million metric tons of carbon dioxide equivalent (MMTCO₂e). (Metric tons may also be stated as “tonnes”.) The CO₂e for a gas is derived by multiplying the tons of the gas by the associated GWP such that MMTCO₂e = (million metric tons of a GHG) x (GWP of the GHG). For example, the GWP for methane (CH₄) is 21. This means that emissions of 1 million metric tons of CH₄ are equivalent to the emissions of 21 million metric tons of carbon dioxide (CO₂).

that are formed directly in the construction or operation of development projects, nor can they be controlled in these projects. Aerosols are not gases. While these elements have a role in climate change, they are not considered by regulatory bodies, such as CARB, or climate change groups, such as the California Climate Action Registry (CCAR), as gases to be reported or analyzed for control. Therefore, no further discussion of water vapor, ozone, or aerosols is provided.

GHGs vary widely in the power of their climatic effects; therefore, climate scientists have established a unit called global warming potential (GWP). The GWP of a gas is a measure of both its potency and lifespan in the atmosphere as compared to CO₂. For example, since CH₄ and N₂O are approximately 21 and 310 times more powerful than CO₂, respectively, in their ability to trap heat in the atmosphere, they have GWPs of 21 and 310, respectively (CO₂ has a GWP of 1). Carbon dioxide equivalent (CO₂e) is a quantity that enables all GHG emissions to be considered as a group despite their varying GWP. The GWP of each GHG is multiplied by the emission rate of that gas to produce the CO₂e emissions.

AB 32, the California Global Warming Solutions Act of 2006, recognizes that California is the source of substantial amounts of GHG emissions. The statute states that:

Global warming poses a serious threat to the economic well being, public health, natural resources, and the environment of California. The potential adverse impacts of global warming include the exacerbation of air quality problems, a reduction in the quality and supply of water to the state from the Sierra snowpack, a rise in sea levels resulting in the displacement of thousands of coastal businesses and residences, damage to marine ecosystems and the natural environment, and an increase in the incidences of infectious diseases, asthma, and other human health-related problems.

In order to avert these consequences, AB 32 establishes a State goal of reducing GHG emissions to 1990 levels by the year 2020, which is a reduction of approximately 28 percent from forecasted emission levels, with further reductions to follow.

The Sunset Upper Debris Basin Dam generates GHG emissions from vehicles coming to and from the site for maintenance, inspection, and construction activities and occasional sediment removal activities.

4.7.2 IMPACT ANALYSIS

a) Less than Significant Impact

The County has not adopted or established any quantitative significance criteria for GHG emissions. In April 2008, the SCAQMD convened a working group to provide guidance to local lead agencies on determining the significance for GHG emissions in their CEQA documents. The working group adopted a philosophy similar to recommendations made by other agencies in California to identify Significance Screening Levels, or thresholds, for GHG emissions. Projects with GHG emissions less than these levels or thresholds would be determined to have less than significant impacts. Projects with GHG emissions greater than the Significance Screening Level would be required to implement specific performance standards or purchase offsets to reduce their climate change impact to less than significant levels. In December 5, 2008, the SCAQMD Governing Board adopted an interim screening threshold for industrial projects where SCAQMD is the lead agency of 10,000 MTCO₂e/year. In September 2010, the working group proposed to expand this 10,000 MTCO₂e/year threshold to other lead agency industrial projects (SCAQMD 2010). Although the SCAQMD Governing Board has yet to

consider this proposal, the SCAQMD threshold is the most applicable to the Project and is used in the analysis below.

The principal source of GHG emissions during the construction of the proposed Project would be the internal combustion engines of demolition and construction equipment, on-road construction vehicles, and workers' commuting vehicles. Construction emissions of CO₂e were calculated by using CalEEMod Version 2011.1.1 (SCAQMD 2011b), as described in Section 4.3, Air Quality. CalEEMod incorporates local energy emission factors and mitigation measures based on the California Air Pollution Control Officers Association (CAPCOA) publication entitled *Quantifying Greenhouse Gas Mitigation Measures: A Resource for Local Government to Assess Emission Reductions from Greenhouse Gas Mitigation Measures* (CAPCOA 2010) and the *California Climate Action Registry General Reporting Protocol* (CCAR 2009). The CalEEMod model computes GHG from construction and operations. Construction assumptions are described in Section 4.3, Air Quality. Construction emissions would be associated with vehicle engine exhaust from construction equipment, vendor trips, and worker commuting trips. For the proposed Project, GHG emissions during construction of the proposed dam modifications are estimated at 152 MTCO₂e (Calculation data are included in Appendix A).

Because construction impacts are relatively short-term (approximately 6 to 7 months), they would contribute a relatively small portion of the overall lifetime Project GHG emissions. In addition, GHG emission reduction measures for construction equipment are relatively limited. In its *Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Thresholds*, the SCAQMD recommends that construction emissions be amortized over a 30-year Project lifetime so that GHG reduction measures will address construction GHG emissions as part of the operational GHG reduction strategies (SCAQMD 2008).

The increase in GHG emissions for the Project, based on the 30-year amortization of construction emissions, is estimated at 5 MTCO₂e per year, which is substantially less than the 10,000 MTCO₂e per year threshold recommended by SCAQMD. GHG emissions from the Project would not be cumulatively considerable; the Project would not generate GHG emissions that, either directly or indirectly, may have a significant impact on the environment. Impacts from construction GHG emissions would be less than significant and no mitigation is required.

As discussed in Section 4.3, Air Quality, subsequent to infrequent major storms events, sediment removal would occur within the expanded 100% contact line, which would provide a total of 8,000 cy of additional capacity. Sediment removal is typically completed by a backhoe or excavator transferring the sediment into a dump truck, which is used to transport the sediment from the debris basin to a designated SPS. It would be speculative to assume that debris removal from the larger debris cone would result in more or less GHG emissions than removal of the same debris that, without the proposed Project, would otherwise have to be removed from roads and properties that would be inundated from overflow of the existing basin.

Periodic sediment removal would occur within the expanded 25% contact line. As discussed in Section 4.3, Air Quality, the frequency of sediment removal would decrease due to the debris basin's larger capacity, but greater amounts of sediment (up to 2,000 cy more than the existing condition) would be removed each time. Since the cumulative amount of sediment removal would not change and the number of equipment and trucks used daily for sediment removal would not change, there would be no increase or decrease in GHG emissions related to long-term debris basin maintenance. Therefore, the impact to global GHG emissions would be less than significant.

b) No Impact

As discussed above, the principal State plan and policy adopted for the purpose of reducing GHG emissions is AB 32. The quantitative goal of AB 32 is to reduce GHG emissions to 1990 levels by 2020. Statewide plans and regulations, such as GHG emissions standards for vehicles and the Low Carbon Fuel Standard, are being implemented at the statewide level, and compliance at the specific plan or project level is not addressed.

As described in Section 4.17, Utilities and Service Systems, RR 4.17-1 requires at least 50 percent of all construction and demolition (C&D) debris, soil, rock, and gravel removed from a Project site to be recycled or reused, unless a lower percentage is approved by the Director of the LACDPW. By complying with this RR, construction activities associated with Project implementation would be consistent with one of the goals of AB 32, which is to reduce GHG emissions through increased recycling.

As shown in Response 4.7(a) above, the increase in GHG emissions would be limited when compared to SCAQMD's recommended significance threshold. Implementation of the proposed Project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions.

4.7.3 MITIGATION PROGRAM

Regulatory Requirements

None

Mitigation Measures

Project implementation would not result in significant impacts related to GHG emissions; therefore, no mitigation is required.

4.8 HAZARDS/HAZARDOUS MATERIALS	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter-mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

4.8.1 ENVIRONMENTAL SETTING

Review of the California Department of Toxic Substances Control's (DTSC) Envirostor database and the USEPA's Envirofacts database show that hazardous material users and hazardous waste generators are generally located in the City of Burbank's commercial and industrial areas, with the nearest hazardous waste generator (Eagle Disposal Systems) located approximately 1.0 mile southwest of the Sunset Upper Debris Basin Dam (DTSC 2007; USEPA 2011).

The nearest airport to the Project site is Bob Hope Airport, located at 2627 Hollywood Way in Burbank, which is located approximately 3.7 miles west of the site. The Airport Influence Area for this airport does not include the Sunset Upper Debris Basin Dam or immediately surrounding areas (ALUC 2004).

There are no hazardous liquid or high-pressure gas transmission lines on or near the Sunset Upper Debris Dam. The nearest hazardous material pipeline is a crude oil pipeline running beneath Sixth Street, approximately 1.7 miles south of the dam (PHMSA 2010). The Project area is designated as a Very High Fire Hazard Severity Zone, as mapped by the California Department of Forestry and Fire Protection (CAL FIRE 2007).

4.8.2 IMPACT ANALYSIS

a, d) No Impact

There is no existing long-term hazardous materials use or storage at the debris basin and dam, and no hazardous materials use or storage would occur with the proposed Project. The Sunset Upper Debris Basin Dam is not listed in government databases as a hazardous materials user or hazardous waste generator. Also, the site is not located near a site listed in government databases as a hazardous materials user or hazardous waste generator (DTSC 2013; USEPA 2013). Therefore, no impact associated with hazardous materials users or hazardous waste generators would occur with the proposed Project.

b) Less Than Significant Impact

During the construction phase of the proposed Project, there is a limited risk of accidental release of hazardous materials such as gasoline, oil, or other fluids in the operation and maintenance of construction equipment. These materials are common to typical construction activities and do not pose a significant risk of upset or hazard to the public or environment. Also, the LACFCD has specified Best Management Practices (BMPs) to be implemented by its contractors and maintenance personnel related to construction and maintenance vehicle cleaning, fueling, and maintenance to minimize risk of spills or other material discharges. There would be a less than significant impact.

c) No Impact

There are no schools located within approximately ¼ mile of the Sunset Upper Debris Basin Dam. The nearest schools are Ralph Emerson Elementary School and John Muir Middle School, both located off North Kenneth Road approximately 1.6 miles to the southwest of the Project site. Because the proposed Project would not involve the routine use of hazardous materials and because construction-period use of common hazardous materials, as discussed above, would be limited to the Project site, there would be no impacts to schools related to potential hazardous materials release.

e, f) No Impact

As discussed above, the nearest airport to the Project site is Bob Hope Airport, which is located approximately 3.7 miles west of the site. The Sunset Upper Debris Basin Dam is not located within the airport influence area of Bob Hope Airport. Therefore, the proposed Project would not adversely affect aircraft or airport operations, and there would be no impact.

g) Less than Significant Impact

The Project site is not located on a public roadway used for emergency response or evacuation. The access road across the dam may serve as an emergency access or evacuation route for LACFCD employees or contractors working at the Project site. During construction activities, this road could be partially blocked by construction equipment but would remain available to serve as an evacuation route for construction personnel. Country Club Drive would be used

to access the Project site during both construction and maintenance activities. This road could be partially blocked by construction and/or maintenance equipment (e.g., pick up trucks and dump trucks) for short periods of time, but would remain available to serve as an evacuation route for workers. The proposed Project would implement RR 4.16-1 from Section 4.16, Traffic and Transportation, which requires traffic-control actions to ensure the safe flow of traffic during construction and sediment-removal activities and is described fully in Section 4.16. The nearest residences are located to the south along Country Club Drive and, as such, the periodic partial blocking of Country Club Drive would not impede their access. Impacts would be less than significant and no mitigation is required.

h) Less than Significant Impact

The Sunset Upper Debris Basin Dam is located in the Mountain Fire Zone, as designated in the Public Safety Element of the *City of Burbank's General Plan* (Burbank 2012). The debris basin is also located within a Very High Fire Hazard Severity Zone, as designated by CAL FIRE. The debris basin site includes undeveloped land where wildfire may potentially occur. However, the Sunset Upper Debris Basin Dam is not manned and employee visits for long-term maintenance would be intermittent at an average of two to three times per year, the same as the existing condition. Therefore, wildfire hazards would be confined to the on-site structures at the dam (i.e., parapet wall, spillway, abutments, retaining wall, fencing, and access road), which are not combustible. Therefore, the proposed Project would not result in a significant risk of loss, injury, or death involving wildland fires and there would be a less than significant impact.

4.8.3 MITIGATION PROGRAM

Regulatory Requirements

None.

Mitigation Measures

The proposed Project would result in less than significant impacts related to hazards and hazardous materials; therefore, no mitigation is required.

4.9 <u>HYDROLOGY AND WATER QUALITY</u>	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
Would the project:				
a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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 that would result in substantial erosion or siltation onsite or offsite?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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 onsite or offsite?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of pollutant runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j) Inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

4.9.1 ENVIRONMENTAL SETTING

The Sunset Upper Debris Basin Dam is located in the upper section of Sunset Canyon in the Verdugo Mountains, where steep canyon walls and channel slopes rapidly concentrate storm water runoff. The Sunset Upper Debris Basin Dam helps to slow the velocity of runoff and collects and traps sediment-laden storm water that could lead to erosion of the canyon slopes and end up damaging downstream properties. Storm water runoff in the Sunset Upper Debris Basin typically percolates into the soils behind the dam, with low flows passing through an inlet pipe that releases water into a trapezoidal channel downstream of the dam. High flows in the debris basin go over the dam's spillway and continue downstream as sheet flow via Country Club Drive and eventually flow to the Sunset Lower Debris Basin. Country Club Drive serves as the drainage channel for the lower segment of the canyon. In addition, 2 water tanks, owned by Burbank Water and Power, are located approximately 200 feet east of the terminus of Country Club Drive.

The Federal Emergency Management Agency (FEMA) has identified flood hazards in the City of Burbank, which includes a segment of Country Club Drive downstream of the Sunset Upper Debris Basin Dam. This area is designated as Zone AO – areas within the 100-year floodplain with flood depths of 3 feet (FEMA 2008) and is shown in Exhibit 4-3, Flood Zones.

4.9.2 IMPACT ANALYSIS

a, f) Less Than Significant Impact

No change in storm frequency or intensity would occur with the proposed Project. The proposed dam modifications and the resulting expanded debris basin contact lines would not generate discharges that would affect water quality.

The proposed Project's construction and debris basin maintenance activities would have the potential to contribute additional sediment into existing flows in the canyon. Construction of the proposed Project and debris basin maintenance activities in the expanded 25% and 100% contact lines would disturb less than one acre and would not be subject to the Statewide Construction General Permit Order 2009-0009-DWQ. However, the Project would need to comply with the City of Burbank's regulations for storm water discharges (as contained in Title 8, Chapter 2, Article 10 of the City's Municipal Code) and for refuse or contaminating substances in channels (as contained in Chapter 20.94 of the Los Angeles County Code; see RRs 4.9-1 and 4.9-2). Therefore, any C&D debris and other construction-related substances would not be released into Sunset Canyon. Compliance with these regulations may require that construction areas be surrounded by sand bags and/or silt fences; construction activities be scheduled outside the rainy season (as proposed); vehicle washing and equipment repair be conducted off site; and/or off-site disposal of all demolition and construction wastes. Compliance with these regulations would reduce potential water quality impacts during construction and debris basin maintenance to a less than significant level.

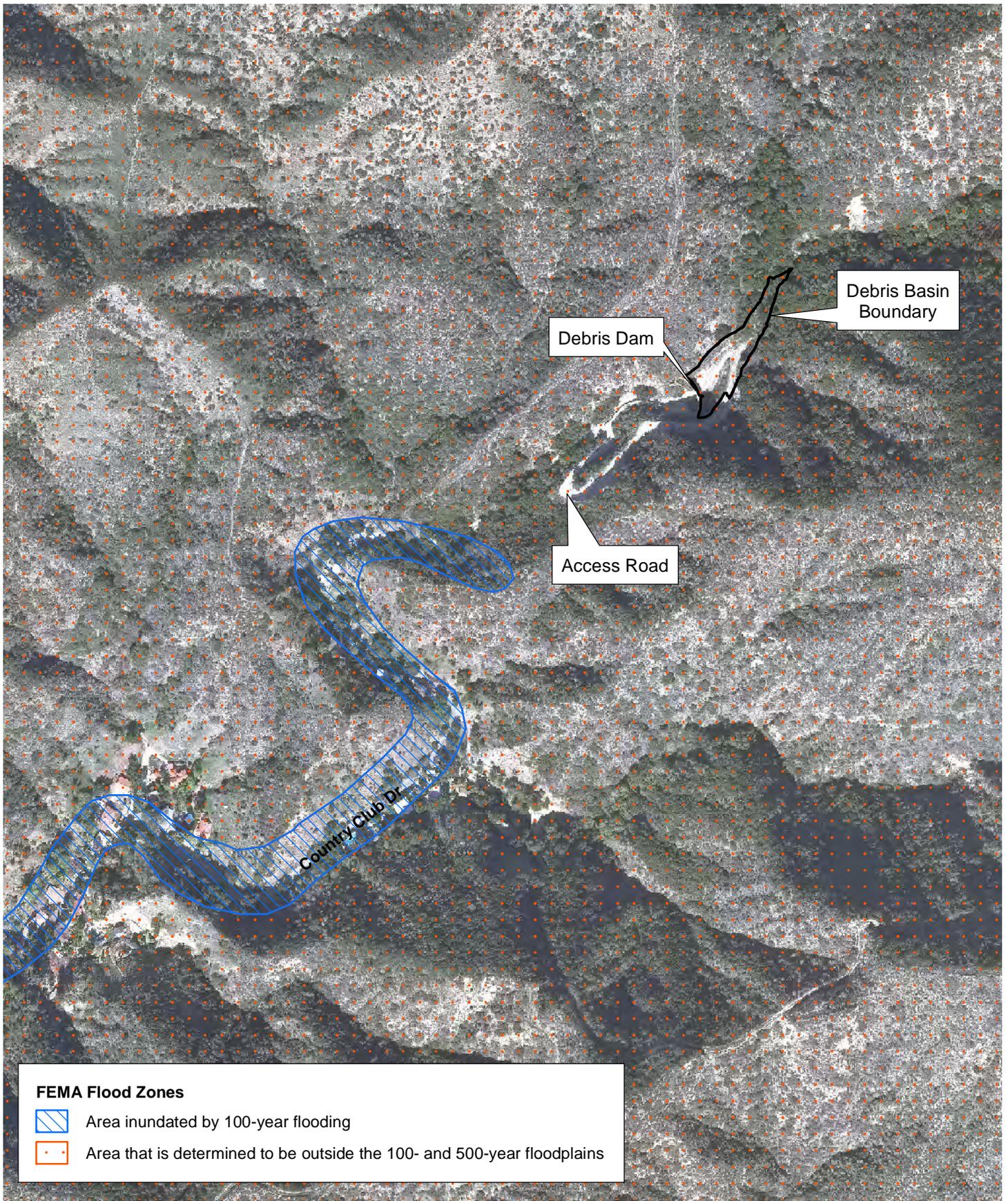
b) No Impact

The Verdugo Mountains, including Sunset Canyon, do not overlie a groundwater basin. The proposed Project would not impact groundwater supplies or interfere with groundwater recharge. The Project would not generate a long-term demand for potable water or groundwater supplies. Water for construction activities would be brought to the site by a water truck, as needed. The minor increase in impervious surfaces from the dam abutments and retaining wall would not affect groundwater recharge since these improvements are located on the side slopes and ground percolation at the canyon bottom would remain the same. There would be no impact.

c, d, e) No Impact

The proposed Project would not change the course of water flows through Sunset Canyon. Instead, the proposed Project would increase the capture of floodwaters, sediment, floating debris, boulders, and mudflow during major storms. Implementation of the proposed Project would reduce the potential for flooding, erosion, and landslides during major storms. The Project would not provide additional sources of pollutant runoff, but would decrease sediment and debris in floodwaters that flow downstream of the dam. The proposed Project would have a beneficial impact on downstream erosion and water quality. There would be no impact.

D:\Projects\CoLADPW\J144\mxd\Ex_flood_hazards.mxd



FEMA Flood Zones

-  Area inundated by 100-year flooding
-  Area that is determined to be outside the 100- and 500-year floodplains

Flood Zones

Sunset Upper Debris Basin Dam Modification Project

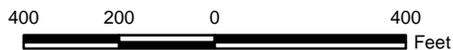


Exhibit 4-2



g, h, i) No Impact

The proposed dam modifications would not place structures or housing within a 100-year flood hazard area, as mapped on FEMA's Flood Insurance Rate Maps (FEMA 2008). As discussed above, the proposed Project would increase the capacity of the Sunset Upper Debris Basin, thereby further reducing the potential to expose downstream populations to risks from flooding. The proposed Project would have a beneficial impact in terms of flood protection. There would be no impact.

j) No Impact

There are no open bodies of water upstream of the Sunset Upper Debris Basin Dam, and Sunset Canyon is not located within the inundation areas of upstream dams and reservoirs (LACDRP 1990). Failure of the water tanks on Country Club Drive would flow south into lower areas and would not affect the dam, which is at a higher elevation. The dam is more than 18 miles from the ocean, and is outside the tsunami inundation areas along the coast (DOC 2013). The larger inundation area in the debris basin that would be created by the proposed Project would not create inundation hazards or potentially lead to personal injury or property damage since the existing and future debris cone limit consists of undeveloped open space and since, as discussed above, would have a beneficial impact in terms of flood protection.

Sunset Canyon is subject to mudflows during heavy rains, which the Sunset Upper Debris Basin Dam currently helps to manage by retaining water and sediment. The proposed Project would increase the capacity of the debris basin, allowing for greater amounts of flood waters, debris, and sediment to be retained. Therefore, the proposed Project would provide greater protection for downstream properties from this mudflow. There would be no impact.

4.9.3 MITIGATION PROGRAM

Regulatory Requirements

RR 4.9-1 The *Burbank Municipal Code* (Title 8, Chapter 2, Article 10) contains the City's regulations for storm water and runoff pollution control. The regulations prohibit illicit discharges; illicit connections to the storm drain system; and littering and other discharge of polluting or damaging substances. Storm water and runoff pollution mitigation measures are required for construction activities and National Pollutant Discharge Elimination System (NPDES) permits, and registration is required for industrial, commercial, and public facility sources. Runoff management requirements include good housekeeping provisions; installation of structural Best Management Practices (BMPs) and BMPs that are consistent with environmental goals.

The LACFCD's contractors and maintenance personnel will be required to comply with the City's regulations during construction and maintenance activities for the proposed Project. This RR shall be included by the LACFCD as notes in its Contractors' Specifications.

RR 4.9-2 Chapter 20.94.040 of the *Los Angeles County Code* states that it is unlawful to place within a floodway, channel, river, stream, wash, arroyo, reservoir, debris basin, spreading ground, or other flood-control facility, any refuse, rubbish, tin cans or other matter that may impede, retard, or change the normal direction of the flow of the flood, storm, and other waters, or that may be carried downstream

by such waters to the damage and detriment of downstream properties. It also prohibits material, either solid or liquid, from being placed in a river, stream, wash, arroyo, floodway, floodplain, flood-control channel, reservoir, debris basin, or spreading ground that will deteriorate the quality of water flowing or stored therein.

The LACFCD's contractors and maintenance personnel will be required to comply with this regulation during construction and maintenance activities for the proposed Project. This RR shall be included by the LACFCD as notes in its Contractors' Specifications.

Mitigation Measures

With compliance with existing City and County regulations, proposed Project construction and maintenance would not result in significant adverse impacts related to hydrology and water quality; therefore, no mitigation is required.

4.10 LAND USE AND PLANNING	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
Would the project:				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

4.10.1 ENVIRONMENTAL SETTING

The Sunset Upper Debris Basin Dam is surrounded by undeveloped land, with steep side slopes to the north and south of the dam; the debris basin to the east of the dam; and the access road/Country Club Drive to the southwest of the dam. Country Club Drive serves as the drainage channel, via sheet flow, for the lower segment of the canyon and provides direct access to 44 single-family residences along this road, north of Sunset Canyon Drive.

4.10.2 IMPACT ANALYSIS

a) No Impact

The Sunset Upper Debris Basin Dam is not located within a residential area or surrounded by residential uses that make up an established community. As noted above, the nearest residential uses are single-family homes located approximately 1,200 feet southwest of the Sunset Upper Debris Basin Dam. Implementation of the proposed Project would not displace or divide these residential uses located to the south. Therefore, the Project would not divide an established neighborhood and no impact would occur.

b) No Impact

The proposed Project would not change the current land use at the Sunset Upper Debris Basin Dam. The proposed Project is consistent with the current and proposed land use and zoning designations and would not require a City General Plan amendment or zone change. The proposed Project would also not conflict with regional plans, policies, or regulations related to land use, including the Southern California Association of Governments' (SCAG's) Regional Comprehensive Plan (RCP), the Regional Housing Needs Assessment (RHNA), or the Regional Transportation Plan (RTP), nor would it conflict with other regional plans since the proposed Project would not lead to or require a land use change and would not generate additional population, housing, or employment for the area. There would be no impact.

c) No Impact

No Habitat Conservation Plans (HCP) or Natural Community Conservation Plans (NCCP) have been adopted for the Project area. Therefore, no impact related to an HCP or NCCP would occur.

4.10.3 MITIGATION PROGRAM

Regulatory Requirements

None.

Mitigation Measures

No significant impacts related to land use and planning would occur; therefore, no mitigation is required.

4.11 MINERAL RESOURCES	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

4.11.1 ENVIRONMENTAL SETTING

Sunset Canyon is not located near known oil, gas, or geothermal fields (DOGGR 2001). The nearest well is a dry hole located approximately 2.5 miles south of the Sunset Upper Debris Basin Dam (DOGGR 2010). There are no designated sand and gravel resource areas at Sunset Canyon or the surrounding area, as designated by the California Department of Conservation (DOC 1981). There are no mining activities in or near the Project site.

4.11.2 IMPACT ANALYSIS

a, b) No Impact

Sunset Canyon has not been used for mineral recovery or mining activities and no designated, regionally significant mineral resources are present on or near the Sunset Upper Debris Basin and Dam (DOC 1981). Thus, the proposed Project would not result in the loss of availability of locally important mineral resources. No impacts would occur.

4.11.3 MITIGATION PROGRAM

Regulatory Requirements

None

Mitigation Measures

No significant impacts related to mineral resources would occur; therefore, no mitigation is required.

4.12 NOISE	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

4.12.1 ENVIRONMENTAL SETTING

The Project site is located within Sunset Canyon, on County-owned land within the City of Burbank. Noise-sensitive receptors generally refer to humans who are engaged in activities or who are utilizing land uses that may be subject to the stress of significant interference from noise. Residential dwellings are the primary noise-sensitive land uses because of the potential for increased and prolonged exposure to excessive, disturbing, or offensive interior or exterior noise levels that could interfere with sleeping, relaxation, and other daily activities. Hospitals, schools, places of worship, hotels, libraries, and other places where low interior noise levels are essential are also considered noise-sensitive land uses. The nearest existing noise and vibration-sensitive receptors to the Sunset Upper Debris Basin Dam site are single-family residences on Country Club Drive, approximately 1,200 feet southwest of the Project site.

The Sunset Upper Debris Basin Dam does not generate noise. Intermittent noise is generated by vehicles coming to and from the site for maintenance and inspection activities and construction equipment used for occasional sediment removal activities.

Applicable Regulations

The Burbank Municipal Code (Title 9, Article 2) contains the City's Noise Ordinance, which is designed to control unnecessary, excessive, and annoying sounds by setting limits that cannot be exceeded at adjacent properties. Section 9-3-208 of the City Code prohibits daytime (7:00 AM to 10:00 PM) machinery operation in residential areas from exceeding the established 55 A-weighted decibel (dBA) ambient noise level by more than 5 dBA.

Section 9-3-204 of the Code, includes the following exemption from the Noise Ordinance:

This article shall not apply to emergency work necessary to restore property to a safe condition following a public calamity, or work required to protect persons or property from an imminent exposure to danger, or work by a private or public utility when restoring utility service.

Section 9-1-1-105.8 of the City of Burbank Municipal Code, the City limits construction activities to the hours between 7:00 AM and 7:00 PM on Mondays through Fridays and between 8:00 AM and 5:00 PM on Saturdays. However, this restriction only applies to construction that is regulated by City building permits. The proposed Project's construction and maintenance activities are not subject to City building permits and are therefore not subject to this noise restriction.

4.12.2 IMPACT ANALYSIS

a, d) Less Than Significant Impact

Construction and routine maintenance activities at the Sunset Upper Debris Basin would be confined to the machinery operation hours defined by the City of Burbank (RR 4.12-1).

Construction noise generation would be related primarily to the use of heavy equipment at the site. Noise levels generated by heavy equipment can range from approximately 68 dBA to an excess of 100 dBA when measured at 50 feet. During construction at the Sunset Upper Debris Basin Dam site, the highest noise levels would occur with the operation of heavy construction equipment such as loaders and backhoes, which can generate maximum noise levels (L_{\max}^{10}) of up to 85 dBA at 50 feet. However, due to ground absorption conditions from scattered bushes and trees and geometric spreading, these noise levels would diminish with distance from the construction site at a rate of approximately 7.5 dBA per doubling of distance. For example, a noise level of 85 dBA measured at 50 feet from the source to the receptor would be reduced to 77.5 dBA at 100 feet, 70 dBA at 200 feet, 62.5 dBA at 400 feet, and 55 dBA at 800 feet.

Because noise is attenuated by geometric spreading, the distance from the noise source to a receptor is a primary consideration in determining the actual noise level experienced at the receptor. For the Project, when two pieces of equipment operating concurrently at full power would be operating at the Sunset Upper Debris Basin Dam site, noise levels at the nearest homes located approximately 1,200 feet away would be less than 55 dBA L_{\max} . Noise levels would likely be lower, as the calculation does not take into consideration attenuation due to local topography. A typical rural noise environment, such as the Project area, is in the 35 to 45 dBA range. In terms of increases in ambient noise, the operation of heavy construction equipment at the Sunset Upper Debris Basin Dam site would have the potential to be occasionally heard when the equipment is operating at maximum loads and power, but would not substantially increase ambient noise levels at the noise-sensitive receptors. These noise levels would be less than the City's 60 dBA L_{\max} daytime limit for machinery operation, and no mitigation would be required for construction activities at the dam site.

¹⁰ L_{\max} means the maximum dBA during a stated time period.

In addition, construction-related truck traffic would travel on Country Club Drive passing by single-family homes located along the road. Noise from construction-related truck traffic would be sporadic and would not cause significant noise increases to surrounding uses, creating a less than significant impact.

Noise generation related to mowing is even lower than that described above for construction equipment. Noise levels would thus be less than the City's daytime limit, so there would be no significant impact and no mitigation for noise would be required for maintenance mowing at the debris basin.

According to established practice with the City, cleanouts of the debris basin would be exempt from the City's Noise Ordinance as their purpose is to accomplish work required to protect persons or property from an imminent exposure to danger.

b) No Impact

Groundborne vibration generated by construction projects is usually highest during pile driving and rock blasting. There would be no pile driving or rock blasting needed to construct the Project. Construction activities at the Sunset Upper Debris Basin Dam site would involve the use of large construction equipment that may cause vibration, although this vibration is rarely perceived at distances greater than 25 feet due to attenuation with distance. Given the distance between the Project site and nearest sensitive uses located approximately 1,200 feet away, there would be no vibration impacts during construction activities.

Sediment removal within the expanded 25% and 100% contact lines would generate vibration from truck traffic similar to existing sediment removal operations. As discussed in Section 4.3, Air Quality, while a greater volume of sediment would be removed within the 25% contact line, periodic sediment removal would occur less frequently. Also, as discussed previously, the daily volume of trucks during sediment removal would remain the same. Therefore, there would be no additional vibration from truck traffic due to the increased debris basin capacity.

c) No Impact

Operation of the raised dam and access road would not generate noise. There would be no change in long-term maintenance and inspection activities associated with the proposed modifications at the Sunset Upper Debris Basin Dam. Sediment removal within the expanded 25% and 100% contact lines would generate noise similar to existing sediment removal operations. As discussed above, periodic sediment removal would occur less frequently, but would require a longer duration. Because there would be no change in daily equipment and truck traffic resulting from sediment-removal activities, there would be no noticeable increase in noise levels associated with sediment-removal activities. No permanent noise impacts would occur.

e, f) No Impact

The nearest airport to the site is the Bob Hope Airport, which is located approximately 3.7 miles west of the site. The Airport Influence Area for this airport does not include the Sunset Upper Debris Basin Dam or surrounding area (ALUC 2004). The proposed Project would not include the development of noise-sensitive uses. While aircraft overflights would be audible at the site, people working in the Project area would not be exposed to excessive aircraft noise levels. No impact would occur.

4.12.3 MITIGATION PROGRAM

Regulatory Requirements

RR 4.12-1 The LACFCD's contractors and maintenance personnel will comply with the City of Burbank's machinery operation hours during the construction of the proposed Project and mowing activities. This RR shall be included by the LACFCD as notes in its Contractors' Specifications.

Mitigation Measures

Project implementation would not result in significant impacts related to noise with implementation of RR 4.12-1; therefore, no mitigation is required.

4.13 POPULATION AND HOUSING	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
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 the extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

4.13.1 ENVIRONMENTAL SETTING

The Sunset Upper Debris Basin Dam is located in the Verdugo Mountains within the City of Burbank. The nearest residence is located on Country Club Drive, approximately 1,200 feet southwest of the Sunset Upper Debris Basin and Dam within the lower segment of Sunset Canyon. There are 44 single-family homes in Sunset Canyon on Country Club Drive.

4.13.2 IMPACT ANALYSIS

a) No Impact

The proposed Project would not involve housing or business development and would not lead to the introduction of permanent residents or employees into the site or the surrounding area. No change in the population or housing stock of the area would occur with the proposed Project. With proposed Project implementation, LACFCD employees and/or contractors would continue to provide inspection and maintenance services to the Sunset Upper Debris Basin Dam, including a visit approximately once a year for vegetation clearing and once a year for channel clearing. Site visits are irregular and would not increase with the proposed Project.

As with the existing condition, LACFCD staff and/or contractors at the debris basin and dam would not create permanent or substantial demand for housing, goods, or services in the area that could induce population growth. The construction and maintenance crew for the proposed Project would also not induce substantial or permanent population growth in the City of Burbank. Additionally, the proposed Project would not indirectly stimulate population growth by creating new public infrastructure, such as new roads or utility extensions. There would be no impacts related to direct or indirect population growth from the proposed Project.

b, c) No Impact

The nearest home is located approximately 1,200 feet (0.25 mile) from the dam. The proposed Project would not displace nearby homes or any other dwelling units on Country Club Drive. No impact would occur.

4.13.3 MITIGATION PROGRAM

Regulatory Requirements

None

Mitigation Measures

No significant impacts related to population or housing would occur; therefore, no mitigation is required.

4.14 PUBLIC SERVICES	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
Would the project:				
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities, need for new or physically altered government 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii. Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iii. Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv. Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
v. Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

4.14.1 ENVIRONMENTAL SETTING

The Burbank Police Department and the Burbank Fire Department provide police and fire protection services in the Project area, respectively. The Burbank Police and Fire Headquarters Facility is located at 200 North Third Street, approximately two miles southwest of the site (Burbank 2013c). The Sunset Upper Debris Basin Dam does not generate a demand for schools, parks, or libraries. There are no schools or libraries near the site.

4.14.2 IMPACT ANALYSIS

a) i. and ii. No Impact

The proposed Project would not involve the construction of habitable structures, nor would the Project lead to population growth that could generate new demand for fire and police protection services. The proposed dam modification materials are not flammable, combustible, or explosive. Protective fences are present at the ends of the dam to prevent access to the top of the dam. In addition, vehicle access to the site is restricted by an access barrier at the end of Country Club Drive. The improvements to the Sunset Upper Debris Basin Dam would not generate increased demand for fire and police protection services, directly or indirectly. No new or physically altered fire or police protection facilities would be required to provide service to the dam and debris basin. There would be no impact.

a) iii. through v. No Impact

As discussed in Section 4.13, Population and Housing, the proposed Project would not generate population, either directly or indirectly. Thus, no additional demand for schools, libraries, or other public facilities would be generated by the proposed Project. There would be no impact.

4.14.3 MITIGATION PROGRAM

Regulatory Requirements

None.

Mitigation Measures

The proposed Project would not result in significant impacts related to public services; therefore, no mitigation is required.

4.15 RECREATION	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
Would/does the project:				
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

4.15.1 ENVIRONMENTAL SETTING

Wildwood Canyon Park, Stough Park, and De Bell Municipal Golf Course are located west of Sunset Canyon, and Brand Park is located to the east. These parks provide a variety of passive and active recreational features for local residents (Burbank 2013b).

4.15.2 IMPACT ANALYSIS

a, b) No Impact

As discussed in Section 4.13, Population and Housing, the proposed Project would not generate population, either directly or indirectly. Therefore, the proposed Project would not increase demand for local or regional recreational facilities. No recreational facilities are proposed as part of the Project. There would be no impact.

4.15.3 MITIGATION PROGRAM

Regulatory Requirements

None

Mitigation Measures

No significant impacts related to recreation would occur; therefore, no mitigation is required.

4.16 TRANSPORTATION/TRAFFIC	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
Would the project:				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system. Including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in a change in air traffic patterns, including either an increase in traffic levels or change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decreased the performance or safety of such facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

4.16.1 ENVIRONMENTAL SETTING

Regional access to the Sunset Upper Debris Basin Dam is provided by the Golden State Freeway (Interstate 5; I-5), which runs in a northwest-to-southwest direction through the City of Burbank and is part of the Highway and Roadway System in the County's Congestion Management Program (CMP) (Metro 2010). Local access to the site is provided by Country Club Drive, which extends northeasterly from Olive Avenue at Sunset Canyon Drive, and winds through the hillsides toward the Sunset Upper Debris Basin Dam. The access road from the terminus of Country Club Drive to the dam is closed to the public. There are no existing or proposed bicycle routes or trails on or near the Project site. There is no public transportation service near the site, although Metro Bus 183 runs on Bel Aire Drive, approximately 13 miles south of the Sunset Upper Debris Basin Dam (Metro 2011).

4.16.2 IMPACT ANALYSIS

a, b) Less Than Significant Impact

Construction Traffic

The proposed Project would generate new vehicle trips during construction associated with vehicle trips to and from the site; by the construction crew; by the transport of construction equipment that would be used at the site; and by trucks bringing in construction materials (i.e.,

concrete, asphalt, and reinforcement bars, among other materials) and disposing of construction debris during the six-month construction period. It is noted that proposed Project construction does not involve soil export or the high level of truck trips generally associated with sediment removal and placement. Vehicle trips during construction would add to existing traffic volumes on local and regional streets and freeways. While these vehicle trips would represent a small percentage of existing traffic volumes on freeways and major arterials and therefore, would be unlikely to cause or add to existing congestion levels, they would be adding some traffic onto Country Club Drive, which is a narrow, winding local residential street. Because Country Club Drive is only used by residents with homes along this road, the new vehicle trips during construction of the proposed Project would be a discernible increase in local traffic volumes compared to freeway traffic. Therefore, construction traffic would be limited to the daytime hours on weekdays and Saturdays, except federal holidays. Implementation of RR 4.12-1 would reduce this impact to a less than significant level. Construction of the proposed Project would comply with the Standard Specifications for Public Works Construction, 2012 Edition (Greenbook) which contains standards for traffic and access (i.e., maintenance of access, traffic control, and notification of emergency personnel) (RR 4.16-1).

Compliance with RR 4.12-1 from Section 4.12, Noise, and RR 4.16-1 would maintain traffic flow and access during the construction phase and impacts on existing traffic would be minimized, including traffic on Country Club Drive. Vehicle trips during construction would also be temporary and short-term. There would be a less than significant impact from construction traffic.

Operational Traffic

No change in operational inspection and maintenance trips, which involves approximately two to three visits per year, would occur with the proposed Project. However, the frequency of sediment removal at the debris basin would decrease since the debris basin's larger capacity would lead to longer time intervals before the 25% capacity is reached and sediment removal is required. Greater amounts of sediment would be removed each time (approximately 2,000 cy of increased sediment capacity). Since the cumulative amount of sediment removal would not change, the number of equipment and trucks used for sediment removal would also not change and no increase in daily truck trips associated with periodic sediment removal at the debris basin would occur. However, during major storms when the 100% contact line at the debris basin has the potential to be filled, sediment-removal activities would likely require more construction equipment and truck loads and more time to remove the additional up to 8,000 cy of sediment than what occurs in the existing condition. Increases in equipment and trucks during large cleanout events would add to local traffic volumes during the sediment removal, which would result in a discernible increase in local traffic volumes. Due to the narrow width of Country Club Drive, residents would be prohibited from parking on the street during the hours of cleanout operations.

The LACFCD has an established protocol to inform and coordinate with the jurisdiction in which a debris basin is located prior to any sediment removal that could involve heavy equipment and/or truck trips to maintain individual property access and to prevent the creation of traffic hazards. In accordance with standard practice, the LACFCD would contact the City of Burbank Manager and/or Public Works Director to coordinate the sediment-removal schedule and truck route; to discuss any additional constraints or requests; and to obtain a haul route permit (i.e., the same as in the existing condition). Residences and schools adjacent to truck haul routes (except freeways) are notified of the work schedules prior to the start of work and are provided contact information for complaint resolution. The County posts flyers in the community and along the haul routes to notify residents, schools, businesses, and City staff of the planned maintenance activities and haul routes and to incorporate any recommendations, conditions,

and/or alternatives and to obtain any necessary permits for the activities. Therefore, continued occasional traffic increases associated with periodic sediment-removal activities would be considered less than significant with implementation of the proposed Project.

The nearest CMP-designated highway to the site is I-5 (Metro 2010). Construction- and operation-generated trips are not expected to have a measurable impact (less than 0.1 percent) on the I-5, which carried over 200,000 vehicles per day near Burbank in 2009 (Caltrans 2010). Impacts would be less than significant and no mitigation is required.

c) No Impact

Sunset Canyon is not located within an airport land use plan. The nearest airport (Bob Hope Airport) is located 3.7 miles to the west of the Sunset Upper Debris Basin Dam. The proposed dam modifications would not generate air traffic or require air transportation. Thus, the proposed Project would not change air traffic levels at Bob Hope Airport and would not create safety risks or obstructions to air navigation. There would be no impact.

d) No Impact

The proposed Project would include raising the elevation of the access road at the eastern end of the dam, but would not permanently affect Country Club Drive or other public roadways. The alignment of the access road would remain the same, connecting to Country Club Drive south of the dam. There would be no impact.

e) Less than Significant Impact

The access road to the Sunset Upper Debris Basin Dam is used only by LACFCD personnel or contractors. The proposed Project would not be located on a public roadway used for emergency response or evacuation. The access road across the dam may serve as an emergency access or evacuation route for LACFCD employees or contractors. During construction activities, this road could be partially blocked by construction equipment but would remain available to serve as an evacuation route for the construction crew. The proposed Project construction and periodic sediment removal would require implementation of RR 4.16-1, and continued coordination with the City of Burbank shall occur to provide traffic-control devices and appropriate permitting for large equipment on Country Club Drive. Therefore, emergency access on Country Club Drive would remain available and impacts would be less than significant.

f) No Impact

New vehicle trips to the Project site would occur during the construction phase and during periodic sediment-removal activities. These construction- and operation-generated vehicle trips are unlikely to involve public transit due to the distance of the nearest bus line (as may be utilized by the construction crew) and the need for trucks for construction equipment, building materials, demolition debris, and sediment disposal. There are no bicycle routes, trails, or bus routes near the site, and Project-generated trips are unlikely to utilize bicycles or involve walking to and from the site. Therefore, no impact on alternative transportation systems or conflicts with alternative transportation policies, plans, or programs would occur with the Project.

4.16.3 MITIGATION PROGRAM

Regulatory Requirements

RR 4.16-1 The County's general construction requirements require the implementation of temporary traffic control in accordance with the Standard Specifications for Public Works Construction, 2012 Edition (Greenbook), which contains standards for traffic and access (i.e., maintenance of access, traffic control, and notification of emergency personnel). The contractor shall provide temporary traffic control in accordance with the Greenbook during construction activities. This RR shall be included by the LACFCD as notes in the Contractor Specifications.

Mitigation Measures

With compliance with RR 4.16-1 and the continued practice of inter-agency coordination prior to activities involving heavy equipment and/or truck trips, in this case with the City of Burbank, the proposed Project would not result in significant impacts related to transportation or traffic; therefore, no mitigation is required.

4.17 UTILITIES AND SERVICE SYSTEMS	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

4.17.1 ENVIRONMENTAL SETTING

There are no water, sewer, power, or natural gas services that serve the Sunset Upper Debris Basin Dam. The existing debris basin and dam do not generate solid wastes requiring collection and disposal. Storm water through Sunset Upper Debris Basin Dam flows into an inlet pipe (for low flows) or over the spillway (for high flows) that convey water past the dam and into the concrete channel and access road downstream of the dam and over onto Country Club Drive.

4.17.2 IMPACT ANALYSIS

a, b, d, e) No Impact

The proposed Project would not demand potable water, nor would it generate wastewater requiring disposal and treatment. Water needed during construction would be provided as necessary by water truck. Construction activities at the site and maintenance within the expanded 100% contact line area and the expanded 25% contact line area would not generate wastewater that would necessitate treatment from the Los Angeles County Sanitation Districts. There would be no impact to the area's water supplies, wastewater conveyance, or wastewater treatment facilities.

c) No Impact

With the proposed Project, the Sunset Upper Debris Basin Dam would continue to function as a debris basin for sediment/debris retention. No change in the storm water flows through Sunset Canyon would occur with the proposed Project. However, during major storms, greater amounts of debris would be retained behind the dam and within the debris basin. This would improve storm drainage in downstream areas.

A six-inch storm drain pipe along Country Club Drive currently conveys nuisance runoff flows and non-storm flows from natural springs within the canyon area to the City's storm drainage system. No change in the capacity of the pipe would accompany the proposed Project. The proposed Project would have no impact on storm drain facilities.

f, g) Less than Significant Impact

The proposed Project would result in the generation of minor amounts of construction wastes, which would require disposal at the Burbank Landfill Site No. 3 or other nearby landfills. The Burbank Landfill Site No. 3 is located about 1.5 miles west of the site and has over 5.1 million cubic yards of remaining capacity and an anticipated closure date of 2053 (CalRecycle 2011).

The County has adopted an ordinance that requires all construction projects to recycle or reuse at least 50 percent of all C&D debris, soil, rock, and gravel removed from a project site unless a lower percentage is approved by the LACDPW (RR 4.17-1). Excavated soils are proposed for reuse as backfill to reduce the need of soil import and export. All waste generated during construction of the proposed Project would also be handled and disposed of in compliance with all applicable federal, State, and local statutes and regulations related to solid waste, including the County's Construction Waste Ordinance (RR 4.17-1). Impacts on landfill capacity would be limited and temporary and are considered less than significant. No conflict with solid waste regulations would occur.

The expanded 25% and 100% contact lines would not create a demand for utility services. Sediment behind the dam would continue to be removed by the LACFCD when the debris basin is at or over 25 percent full under unburned watershed conditions or at or over 5 percent full after a wildfire within the watershed. Although the amount of debris removed from the Project site from cleanouts under the 25% full condition would increase due to the expanded 25% contact line, the frequency of such cleanouts would decrease. Therefore, the overall volume of debris from such cleanouts over time would likely not significantly increase with Project implementation. As previously discussed, it would be speculative to assume that debris removal from the expanded 100% contact line would result in more or less sediment removal requirements than removal of the same debris that, without the proposed Project, would have to be removed from roads and properties that would have otherwise been inundated from overflow of the existing basin. Disposal of debris would continue to be made at the same disposals sites as are currently used for cleanouts of the facility. Impacts are therefore less than significant.

4.17.3 MITIGATION PROGRAM

Regulatory Requirements

RR 4.17-1 Chapter 20.87, Construction and Demolition Debris Recycling and Reuse, of the Los Angeles County Code requires at least 50 percent of all construction and demolition debris, soil, rock, and gravel removed from a project site to be recycled or reused unless a lower percentage is approved by the LACDPW. A Recycling and Reuse Plan (RRP) must be submitted to the LACDPW, Environmental Programs Division, after an application for a permit has been filed

for a project. The RRP must contain a Project description and the estimated total weight of the Project's construction and demolition (C&D) debris, with separate estimates for (1) soil, rock, and gravel; (2) other inert materials; and (3) all other Project C&D debris. The ordinance also requires that annual progress reports be submitted to the LACDPW for review. The contractor shall comply with the County's regulations for construction and demolition debris recycling and reuse, as part of the Project construction. This RR shall be included by the County as notes in the Contractor Specifications.

Mitigation Measures

With compliance with RR 4.17-1, the proposed Project would not result in significant impacts related to utilities or service systems; therefore, no mitigation is required.

4.18 MANDATORY FINDINGS OF SIGNIFICANCE	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
Does the project:				
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 rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4.18.1 MANDATORY FINDINGS OF SIGNIFICANCE ANALYSIS

a) Less than Significant with Mitigation

As discussed in Section 4.4, Biological Resources, the proposed Project would have the potential to impact sensitive biological resources. With implementation of MMs 4.4-1 through 4.4-4, impacts to biological resources would be reduced to a less than significant level. Therefore, the proposed Project would not degrade the quality of the environment so as to 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; or reduce the number of or restrict the range of a rare or Endangered plants or animals.

As discussed in Section 4.5, Cultural Resources, impacts on human remains would be less than significant with compliance with existing regulations. Impacts on unknown archaeological or paleontological resources would be less than significant. The proposed Project would not eliminate important examples of the major periods of California history or prehistory.

b) Less than Significant with Mitigation

The impacts of the proposed Project would be limited in both intensity and geographic scope due to the size and type of improvements that would be built and its location at an elevation higher than any planned developments in the City of Burbank. Since Project impacts would be less than significant after mitigation (for biological resources only) and would be minimal in scale, impacts associated with the proposed Project are not considered cumulatively considerable.

c) Less than Significant with Mitigation

Project construction and operation would not have the potential to generate significant adverse impacts on human beings, either directly or indirectly. Mitigation measures have been developed for potentially significant impacts on biological resources. Compliance with existing regulations and implementation of mitigation measures would reduce potential environmental impacts to less than significant levels.

SECTION 5.0 REFERENCES

The following references were used in the preparation of this IS/MND and are available for review at the County of Los Angeles Department of Public Works, Water Resources Division at 900 South Fremont Avenue, Annex Building, Second Floor, Alhambra, California 91803 or at the offices of BonTerra Consulting at 225 South Lake Avenue, Suite 1000, Pasadena, California 91101 during normal business hours.

BonTerra Consulting. 2013a (January). *Biological Resources Report for the Sunset Upper Debris Basin Dam Modification Project, City of Burbank, Los Angeles County, California*. Pasadena, CA: BonTerra Consulting (Appendix B).

———. 2013b (January). *Cultural Resources Report for the Sunset Upper Debris Basin Dam Modification Project, City of Burbank, Los Angeles County, California*. Irvine, CA: BonTerra Consulting (Appendix C).

———. 2008a (January). *Results of Biological Reconnaissance Survey for Sunset Canyon Debris Control Study* (a Letter Report to C. Franco, County of Los Angeles Department of Public Works). Pasadena, CA: BonTerra Consulting.

———. 2008b (September). *Results of Special Status Plant Surveys for the Sunset Canyon Debris Control Study, Los Angeles County, California* (a Letter Report to V. De La Cruz, County of Los Angeles Department of Public Works). Pasadena, CA: BonTerra Consulting.

———. 2008c (June). *Results of Coastal California Gnatcatcher Survey for the Upper Sunset Canyon Debris Control Study Project Site, City of Burbank, Los Angeles County, California* (a Letter Report to S. Marquez, U.S. Fish and Wildlife Service). Pasadena, CA: BonTerra Consulting.

———. 2008d (February). *Sunset Canyon Debris Basin Control Study, Los Angeles County, California, Jurisdictional Delineation* (prepared for the County of Los Angeles Department of Public Works). Pasadena, CA: BonTerra Consulting.

Burbank, City of. 2013a (February 8, current through). *Burbank Municipal Code*. Burbank, CA: the City. <http://www.codepublishing.com/ca/burbank/>.

———. 2013b. Departments: Park, Recreation and Community Services. Burbank, CA: the City. <http://www.burbankca.gov/index.aspx?page=253>.

———. 2013c. Departments: Police: General Information. Burbank, CA: the City. <http://www.burbankca.gov/index.aspx?page=358>.

———. 2012 (July). *Public Review Draft: Burbank 2035 General Plan*. Burbank, CA: Burbank. <http://www.burbankusa.com/Modules/ShowDocument.aspx?documentid=16033>.

———. 2007 (April 24, Last amended). City of Burbank Zone Map. Burbank, CA: Burbank. <http://www.burbankca.gov/Modules/ShowDocument.aspx?documentid=2620>.

———. 1998. *City of Burbank General Plan: Land Use Element*. Burbank, CA: Burbank. <http://www.ci.burbank.ca.us/modules/ShowDocument.aspx?documentid=2634>.

- California Air Pollution Control Officers Association (CAPCOA). 2010 (August). *Quantifying Greenhouse Gas Mitigation Measures: A Resource for Local Government to Assess Emission Reductions from Greenhouse Gas Mitigation Measures*. Sacramento, CA: CAPCOA. <http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf>.
- California Air Resources Board (CARB). 2012a (February 7). Ambient Air Quality Standards. Sacramento, CA: CARB. <http://www.arb.ca.gov/research/aaqs/aaqs2.pdf>.
- . 2012b (January 13, last reviewed). Area Designation Maps/State and National. Sacramento, CA: CARB. www.arb.ca.gov/desig/adm/adm.htm/.
- . 2010 (May 12, last updated). California Greenhouse Gas Inventory for 2000-2008 – by Category as Defined in the Scoping Plan. Sacramento, CA: CARB. http://www.arb.ca.gov/cc/inventory/data/tables/ghg_inventory_scopingplan_00-08_2010-05-12.pdf.
- California Climate Action Registry (CCAR). 2009 (January). *California Climate Action Registry General Reporting Protocol (Version 3.1)*. Los Angeles, CA: CCAR.
- California Department of Conservation (DOC). 2013. Tsunami Inundation Maps. Database Search for Burbank, California. Sacramento, CA: DOC. http://www.quake.ca.gov/gmaps/tsunami/tsunami_maps.htm.
- . 1981 (January 7). *SMARA Designation Report No. 1 – Designation of Sand and Gravel Resources of Regional Significance in the San Fernando Valley Region, Los Angeles County, California*. Sacramento, CA: DOC.
- California Department of Conservation, Division of Mines and Geology (CDMG). 1999 (March 25). State of California Seismic Hazard Zones – Burbank Quadrangle. Sacramento, CA: CDMG. http://gmw.consrv.ca.gov/shmp/download/pdf/ozn_bur.pdf.
- . 1979 (January 1). State of California Special Studies Zones – Burbank Quadrangle. Sacramento, CA: CDMG. <http://gmw.consrv.ca.gov/shmp/download/ap/pdf/BURBANK.PDF>.
- California Department of Conservation, Division of Oil, Gas, and Geothermal Resources (DOGGR). 2010. DOGGR Online Mapping System. Database Search for City of Burbank. Sacramento, CA: DOGGR. <http://maps.conservation.ca.gov/doms/index.html>.
- . 2001. *Oil, Gas, and Geothermal Fields in California, 2001*. Sacramento, CA: DOGGR.
- California Department of Conservation, Farmland Mapping and Monitoring Program (FMMP). 2009 (September). Los Angeles County Important Farmland 2008. Sacramento, CA: FMMP.
- California Department of Forestry and Fire Protection (CAL FIRE). 2007 (September 24). *Los Angeles County – Draft Fire Hazard Severity Zones in LRA*. Sacramento, CA: CAL FIRE.

- . 2003 (March 11). *Land Cover – Multi-Source Data Compiled for Forest and Range 2003 Assessment*. Sacramento, CA: CALFIRE, Fire and Resources Assessment Program (FRAP).
- California Department of Resources Recycling and Recovery (CalRecycle). 2011. Active Landfills Profile for Burbank Landfill Site No. 3 (19-AA-0040). Sacramento, CA: CalRecycle. <http://www.calrecycle.ca.gov/profiles/Facility/Landfill/LFProfile1.asp?COID=19&FACID=19-AA-0040>.
- California Department of Toxic Substances Control (DTSC). 2013 (Last viewed February 21). Envirostor. Search Results for Burbank, California. Sacramento, CA: DTSC. <http://www.envirostor.dtsc.ca.gov/public/>.
- California Department of Transportation (Caltrans). 2010. 2009 Traffic and Vehicle Data Systems Unit. Sacramento, CA: Caltrans. <http://www.dot.ca.gov/hq/traffops/saferesr/trafdata/2009all/2009TrafficVolumes.htm>.
- . 2007 (December 7, updated). California Scenic Highway Mapping System. Sacramento, CA: Caltrans. http://www.dot.ca.gov/hq/LandArch/scenic_highways/index.htm.
- California Governor's Office of Planning and Research (OPR). 2008 (June 18). *CEQA and Climate Change: Addressing Climate Change through California Environmental Quality Act (CEQA) Review*. Sacramento, CA: OPR. <http://www.opr.ca.gov/ceqa/pdfs/june08-ceqa.pdf>.
- Federal Emergency Management Agency (FEMA). 2008 (September 26). Flood Insurance Rate Map – Panel 06037C1335F. Washington, D.C.: FEMA.
- Los Angeles, County of. 2011 (July 12). *Los Angeles, California County Code* (Title 22, Planning and Zoning). Tallahassee, FL: Municipal Code Corporation for the County of Los Angeles. <http://search.municode.com/html/16274/index.htm>.
- Los Angeles, County of, Department of Public Works (LACDPW). 2007 (December 10). *Sunset Canyon Debris Control Feasibility Study*. Los Angeles, CA: LACDPW.
- Los Angeles County Department of Regional Planning (LACDRP). 1990 (December 6). *Los Angeles County General Plan, Safety Element, Plates 1 through 8*. Los Angeles, CA: LACDRP. http://planning.lacounty.gov/assets/upl/project/gp_web80-tech-plates-01-to-08.pdf.
- Los Angeles County Airport Land Use Commission (ALUC). 2004 (December 1). *Los Angeles County Airport Land Use Plan*. Los Angeles, CA: ALUC.
- Los Angeles County Metropolitan Transportation Authority (Metro). 2011. Bus and Rail System. Los Angeles, CA: Metro. http://www.metro.net/riding_metro/maps/images/System_Map.pdf.
- . 2010 (October 28). *2010 Congestion Management Program*. Los Angeles, CA: Metro. http://www.metro.net/projects_studies/cmp/images/CMP_Final_2010.pdf.

- Pipeline and Hazardous Material Safety Administration (PHMSA). 2010. National Pipeline Mapping System. Search for Los Angeles County, California. Alexandria, VA: PHMSA. <https://www.npms.phmsa.dot.gov/>.
- South Coast Air Quality Management District (SCAQMD). 2011a (March). *SCAQMD Air Quality Significance Thresholds*. Diamond Bar, CA: SCAQMD. <http://www.aqmd.gov/ceqa/handbook/signthres.pdf>.
- . 2011b. California Emission Estimator Model (CalEEMod)TM Version 2011.1.1 Developed by Environ International Corporation in Collaboration with SCAQMD and other California Air Districts. Diamond Bar, CA: SCAQMD.
- . 2010 (September 28). Greenhouse Gas CEQA Significance Threshold Stakeholder Working Group #15 (slide presentation). Diamond Bar, CA. SCAQMD. <http://www.aqmd.gov/ceqa/handbook/GHG/2010/sept28mtg/ghgmtg15-web.pdf>.
- . 2008 (October). *Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Thresholds*. Diamond Bar, CA: SCAQMD.
- . 2007 (June 1, adopted). *Final 2007 Air Quality Management Plan*. Diamond Bar, CA: SCAQMD. http://www.aqmd.gov/aqmp/07aqmp/aqmp/Complete_Document.pdf.
- . 1976 (May, as amended through 2005). Rule 403: Fugitive Dust. Diamond Bar, CA: SCAQMD. <http://www.aqmd.gov/rules/reg04/r403.pdf>.
- Southern California Association of Governments (SCAG). 2008 (January). *Draft 2008 Regional Transportation Plan Program Environmental Report* (Chapter 3.2 Air Quality). Los Angeles, CA: SCAG. <http://www.scag.ca.gov/RTPpeir2008/draft/index.htm>.
- U.S. Environmental Protection Agency (USEPA). 2013 (Last updated February 21). EnviroFACTS. Search Results for Burbank, California. Washington, D.C.: USEPA. <http://www.epa.gov/envirofw/>.
- . 2010a (April). Inventory of US Greenhouse Gas Emissions and Sinks 1990–2008. Washington, D.C.: USEPA. <http://www.epa.gov/climatechange/emissions/usinventoryreport.html>.
- World Resources Institute (WRI). 2009. Climate Analysis Indicators Tool (CAIT) version 7.0. Washington, D.C.: WRI. <http://cait.wri.org/>.

SECTION 6.0 REPORT PREPARERS

County of Los Angeles Department of Public Works

Water Resources Division
900 South Fremont Avenue
Second Floor
Alhambra, California 91803

Project Engineer.....Mike Miranda, PE
Civil Engineer Assistant..... Melanie Morita
Associate Civil Engineer..... Grace Yu, PE, LEED AP

BonTerra Consulting

225 South Lake Avenue, Suite 1000
Pasadena, California 91101
(626) 351-2000

Principal-in-Charge.....Thomas E. Smith, Jr., AICP
Senior Project Manager..... Kristin Keeling
Assistant Project Manager..... Jillian Neary
Air Quality, GHG, and Noise Director James Kurtz
Biological Resources Manager..... Marc Blain
BiologistAmber Oneal
ArchaeologistPat Maxon, RPA
Word Processors..... Nicholas Neece, Sheryl Kristal
GIS Specialist..... Chris Starbird
Technical EditorJulia Black

This page intentionally left blank