ADDENDUM TO THE FINAL ENVIRONMENTAL IMPACT REPORT FOR THE UPPER STONE CANYON RESERVOIR WATER QUALITY IMPROVEMENT PROJECT

State Clearinghouse No. 2008061110
EIR Certified February 7, 2012

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June 2016

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ACRONYMS AND ABBREVIATIONS

Acronym/Abbreviation	Definition
AQMP	Air Quality Management Plan
CARB	California Air Resources Board
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CHRIS	California Historical Resources Information System
City	City of Los Angeles
CMP	Congestion Management Program
CO	carbon monoxide
CO_2	carbon dioxide
CO_2E	carbon dioxide equivalent
CY	cubic yards
dBA	A-weighted decibel
EIR	Environmental Impact Report
GHG	greenhouse gas
GWP	global warming potential
hp	horsepower
HRA	health risk assessment
I-	Interstate
LADWP	Los Angeles Department of Water and Power
LOS	Level of Service
LST	localized significance threshold
MBTA	Migratory Bird Treaty Act
MT	metric tons
NO_2	nitrogen dioxide
NO_x	oxides of nitrogen
O_3	ozone
PCE	passenger car equivalent
$PM_{2.5}$	fine particulate matter
PM_{10}	coarse particulate matter
RWQCB	Regional Water Quality Control Board
SCAB	South Coast Air Basin
SCAQMD	South Coast Air Quality Management District
SCRC	Stone Canyon Reservoir Complex
SO_2	sulfur dioxide
SO_x	sulfur oxides
TAC	toxic air contaminant
USACE	United States Army Corps of Engineers
USFWS	United States Fish and Wildlife Service
VOCs	volatile organic compounds

1 INTRODUCTION

On February 7, 2012, the City of Los Angeles Board of Water and Power Commissioners (LADWP Board) certified the Final Environmental Impact Report (EIR) for the Upper Stone Canyon Reservoir Water Quality Improvement Project. The EIR contained a disclosure and analysis of potential environmental effects associated with implementation of various alternatives to cover the reservoir in order to comply with updated Federal and State drinking water regulations. The proposed project as presented in the EIR consisted of a buried concrete reservoir. In addition, the EIR also contained an analysis of the potential environmental effects associated with two alternatives to the buried concrete reservoir: the Floating Cover Alternative and the Aluminum Cover Alternative. Based on the analysis contained in the EIR and other considerations, the LADWP Board approved the Floating Cover Alternative (hereinafter referred to as the approved project) for implementation. The purpose of this addendum is to discuss proposed changes to the approved project and to provide explanation supported by substantial evidence as to why these changes would not result in any new significant environmental impacts or an increase in the severity of significant impacts as previously identified in the Final EIR.

2 CEQA REQUIREMENTS

The California Code of Regulations, Title 14, Section 15000 et seq. (State CEQA Guidelines) discuss a lead agency's responsibilities in handling new information that was not included in a project's final EIR.

Section 15162 of the State CEQA Guidelines provides:

(a) When an EIR has been certified or a negative declaration adopted for a project, no subsequent EIR shall be prepared for that project unless the lead agency determines, on the basis of substantial evidence in the light of the whole record, one or more of the following:

> (1) Substantial changes are proposed in the project which will require major revisions of the previous EIR or Negative Declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;
>
> (2) Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or Negative Declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or

(3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the Negative Declaration was adopted, shows any of the following:

(A) The project will have one or more significant effects not discussed in the previous EIR or negative declaration;

(B) Significant effects previously examined will be substantially more severe than shown in the previous EIR;

(C) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or

(D) Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

Alternatively, where some changes or additions are necessary to the previously approved Final EIR, but none of the changes or additions meets the standards as provided for the preparation of a subsequent EIR pursuant to CEQA Guidelines Section 15162, then the lead agency should prepare an addendum to the Final EIR (CEQA Guidelines, Section 15164). The addendum should include a "brief explanation of the decision not to prepare a subsequent EIR pursuant to Section 15162," and that "explanation must be supported by substantial evidence" (CEQA Guidelines, Section 15164(e)). The addendum need not be circulated for public review, but may simply be attached to the Final EIR (CEQA Guidelines, Section 15164(c)). As further discussed below, although changes have occurred to the approved Upper Stone Canyon Reservoir Water Quality Improvement Project since certification of the Final EIR, these changes would not result in either new significant impacts or substantial increases in previously identified significant impacts. Therefore, an addendum, rather than a subsequent EIR, is appropriate

3 PROJECT LOCATION AND SETTING

Upper Stone Canyon Reservoir (hereinafter referred to as Upper Stone Reservoir or the Upper Reservoir) is located approximately 0.5 miles south of Mulholland Drive between Roscomare Road and Beverly Glen Boulevard in the Bel Air community of the City of Los Angeles (City). Upper Stone Reservoir is part of the larger Stone Canyon Reservoir Complex (SCRC) property,

which is owned and maintained by LADWP. This property consists of approximately 750 acres and includes Upper Stone Reservoir and Stone Canyon Reservoir (hereinafter referred to as Lower Stone Reservoir or the Lower Reservoir) as well as appurtenant facilities related to drinking water treatment and distribution. The approved project would be contained entirely within the boundaries of the SCRC property.

Upper Stone Reservoir is accessed from Mulholland Drive via a non-public Stone Canyon Road, which is located approximately 1.5 miles east of the San Diego Freeway (Interstate [I] 405). Several critical water treatment and distribution facilities are located within or immediately adjacent to Upper Stone Reservoir. These include a chlorination station located on the southwest side of the reservoir and two buried water bypass lines located west of the Upper Reservoir. The chlorination station is a critical facility for maintaining the quality of the drinking water that passes through the SCRC, either via the Upper Reservoir or pipelines, to the distribution network in the west side of Los Angeles. The bypass lines divert drinking water around the Upper Stone Reservoir in the event that the reservoir becomes unavailable for drinking water storage and distribution due to scheduled maintenance, a temporary shutdown, or an emergency.

4 DESCRIPTION OF ORIGINALLY PROPOSED PROJECT

The originally proposed project would have involved placing Upper Stone Reservoir underground in a buried concrete reservoir and installing shallow-rooted native vegetation atop the buried reservoir. The construction process was anticipated to take four years and would have included the complete demolition of the existing reservoir, landslide stabilization at several sites located around the reservoir, excavation and reshaping of the reservoir sides and bottom, installation of the concrete reservoir structure, and landscaping above the new structure. The project also entailed opening the currently closed SCRC property to public access for passive recreation activities after completion of construction of the buried concrete reservoir.

5 DESCRIPTION OF APPROVED PROJECT

The approved project (i.e., the Floating Cover Alternative) was analyzed and identified in the EIR as the environmentally superior alternative and was ultimately approved by the LADWP Board for implementation at the project site. The approved project involves installation of an approximately 700,000 square foot flexible membrane floating cover over the entire water surface of Upper Stone Reservoir. The floating cover would be anchored to the edge of the reservoir basin above the top of the water elevation. The approved project included removal and replacement of the existing reservoir liner and appurtenant facilities. However, in contrast to the originally proposed project, landscaping on top of the reservoir is not part of the approved project, since the reservoir would not have a concrete cover capable of supporting soil. Landslide

stabilization on the slopes surrounding the reservoir was not a component of the approved project nor was the opening of the SCRC to public access.

6 DESCRIPTION OF PROPOSED CHANGES TO THE PROJECT

The primary changes to the approved project include (1) a substantial reduction in scope for the demolition and relining of Upper Stone Reservoir, (2) the reconstruction of the road immediately east of the reservoir, and (3) the stabilization of an existing landslide area located west of the reservoir. These proposed changes (also referred to as the "modified project") are further discussed below.

Reservoir Demolition and Relining

As described in the EIR, the Floating Cover Alternative included the complete demolition and relining of the existing reservoir. This would require the demolition of the existing 4-inch thick asphalt liner as well as the inlet structure, overflow spillway, outlet tower, and outlet tower footbridge. The demolition would generate about 9,000 cubic yards (CY) of debris, which would be hauled off site, requiring approximately 1,800 truck round trips. Relining the reservoir would entail the importation and placement of about 13,000 CY of crushed aggregate base and 9,000 CY of asphalt, requiring approximately 2,000 truck round trips.

Since the certification of the Final EIR, the reconstruction of the reservoir has been reconsidered based on further evaluation of the condition of the existing liner. It has been determined that the majority of the liner is in adequate condition to support continued operations of the reservoir during the lifetime of the floating cover (generally 20 or more years). Only the lower half of the side slopes requires replacement; the upper half has a shotcrete liner that is in adequate condition. Furthermore, it has been determined that only the outer layer (approximately 1-inch thick) of this portion of the liner requires removal and repaving, rather than the full 4-inch thickness of the liner.

Therefore, based on these changes to the reservoir reconstruction, demolition would generate about 2,500 CY of debris (versus the 9,000 CY identified under the EIR approved project), which would require about 500 haul truck trips (versus the 1,800 trips identified under the approved project). In addition, since only the outer 1-inch layer of the reservoir slope would be removed, no crushed aggregate base (13,000 CY as identified under the approved project) and only about 2,000 CY of asphalt (rather than the 9,000 CY identified under the approved project) would be required. This would reduce the number of truck trips necessary to import material associated with the reservoir relining from 2,000 truck trips as identified under the approved project to about 175 truck trips.

In addition to the changes related to the construction of the reservoir liner, more refined design analyses have indicated the need to extend the outlet line within the reservoir bottom and the requirement for a new 800-square foot control building adjacent to the existing chlorination station. Neither of these items was identified in the EIR as part of the approved project. This work and other minor activity not specifically identified in the EIR would require the importation of about 3,800 CY of material to the site, requiring approximately 500 truck trips. Nonetheless, based on the proposed changes, over the entire construction period, the work associated with the reservoir reconstruction and other appurtenant facilities would involve about 22,700 CY less of exported and imported material than the amount indicated in the EIR (8,300 CY versus 31,000 CY) and about 2,625 fewer off-site truck trips (1,175 trips versus 3,800 trips).

Based on the more refined design analysis and the work required on appurtenant facilities (e.g., the outlet line and control building) not previously identified, the schedule for the reservoir construction would increase from about 18 months as identified in the EIR to about 24 months. Consistent with the EIR approved project, this would include approximately 4 months for the installation of the cover and 1 month for refilling the reservoir.

East Roadway Reconstruction

Based on the existing condition of the east roadway (i.e., the portion of the reservoir perimeter road along the east side of the Upper Reservoir) and a portion of the dam crest roadway (along the southeast edge of the reservoir) and based on further damage to the roadways expected to result during the work on the reservoir, it has now been determined that these roadways must be reconstructed. The reconstruction would entail the removal of the existing pavement and the base material and the installation of 6 inches of asphalt over 6 inches of crushed aggregate base on 12 inches of compacted fill. This road reconstruction work would generate about 300 CY of demolition debris, which would require about 60 off-site haul truck trips. It would also require about 1,400 CY of imported material (aggregate base and asphalt), which would require about 130 truck trips. This work is anticipated to occur simultaneously with the installation of the floating cover near the end of the project construction schedule. This work would be in addition to what was included in the approved project as described in the EIR since the road reconstruction was not anticipated when the Final EIR was certified.

Landslide Stabilization

At the time of the EIR, no landslide stabilization work at the SCRC was anticipated in relation to the approved project (the Floating Cover Alternative). However, based on updated seismic evaluation guidance from the State of California establishing criteria for Maximum Credible Earthquake events, which require the consideration of lower probability earthquakes that entail

higher levels of ground motion, further evaluations of potential landslide areas at the SCRC have been undertaken since the EIR. Based on these evaluations under the updated criteria, it was determined that a small landslide area located west of the Upper Reservoir could experience large displacements with the potential to severely damage the chlorination station and bypass line, which are located west of the reservoir and at the base of the landslide area. The chlorination station and the bypass line are critical facilities in relation to providing reliable drinking water supplies to large areas of west Los Angeles. Therefore, it was determined that this landslide area must be stabilized and, to minimize to the reoccurrence and duration of construction activities at the SCRC, it should be conducted concurrently with the Upper Reservoir floating cover project.

The landslide stabilization would consist of removing about 70,000 CY of material from an approximately 2.5-acre area on the hillside west of the chlorination station. The hillside would then be graded at a 2:1 horizontal to vertical finished slope with 10-foot wide construction benches located every 30 feet vertically. The limits of the grading area based on geotechnical investigations are shown on Figure 1. The landslide stabilization activities would take approximately 9 months to complete and would generally overlap with the reservoir reconstruction and floating cover installation activities. It would include the following sequence of activities:

- **Pre-Construction Activities**. Prior to commencement of any ground disturbing activities, construction fencing would be installed to identify the limits of grading/disturbance at the 2.5-acre landslide stabilization site.
- **Clearing and Grubbing**. Existing vegetation, stumps, roots, and other debris would be removed from the landslide area. The total area that would be cleared is approximately 2.5 acres. (To avoid bird nesting and breeding season, clearing and grubbing, which would take approximately 1 month to complete, would occur between September 15 and February 15.)
- **Topsoil Stripping and Stockpiling**. After vegetation and debris are cleared from the landslide area, approximately 2,000 CY of topsoil would be removed and stockpiled on site. After the landslide excavation and grading are completed, this topsoil would be returned to disturbed areas to provide a medium for revegetation.
- **Hillside Grading and Soil Disposal**. Approximately 70,000 CY of earth material would be excavated from the hillside. Once this material is removed from its natural location on the hillside, where it has been in a compacted state, and is loaded onto trucks, it would expand. Based on this expansion, approximately 90,000 CY of material would need to be transported from the hillside in trucks. However, to avoid off-site haul trips and to avoid

impacts to habitat that would result from a disposal site within the canyons of the SCRC, the excavated material would be disposed of in Lower Stone Reservoir. The Lower Reservoir no longer provides storage for potable water because it was removed from service in the early part of the previous decade due to water quality concerns related to uncontrolled runoff from the adjacent hillsides. However, it is still considered part of the LADWP drinking water system and would be utilized as a source of water as necessary in the event of an emergency when other supplies were unavailable. In addition, the level of the reservoir can be regulated as necessary by releases from a small water filtration plant, which is located at the south end of the reservoir and which releases treated water to the water distribution system. The excavated material would be transported by truck from the landslide area south along the existing paved road located west of the Lower Reservoir. Two potential disposal sites adjacent to the west side of the reservoir have been identified. However, for the purpose of environmental impact analysis in this Addendum, a disposal site located approximately 1 mile from the landslide area via the road has been considered because it would create the highest level of impact related to distance traveled by haul trucks and to the amount of post-construction road repair. At the disposal site, the material would be loaded onto a truck-mounted conveyor belt and/or a small barge and placed into the reservoir, where it would settle within the reservoir below the surface. The location of the disposal site is shown on Figure 1.

- **Finish Grading**. Once the unstable material has been excavated, the landslide area would be regraded to a 2:1 slope to establish stability. The finish grading would include the replacement of the topsoil that had been stockpiled on site.
- **Surface Drainage and Hydroseeding**. After finish grading of the slope, concrete diversion channels (which run across the slope) and slope drains (which run downslope) would be installed to intercept and direct flows to minimize erosion. The areas exposed by the excavation and grading would be hydroseeded with a native seed mix (see Appendix A).
- **Tree Planting.** Hillside grading activities would result in the removal of 48 trees and 11 planted trees that fall under the Los Angeles City Tree Protection Ordinance (Ordinance No. 177404). To comply with the City's ordinance requirements, 107 trees would be replanted within the SCRC as a part of this project, including 52 California black walnuts, 11 western (California) sycamores, and 44 coast live oaks. A tree planting and irrigation plan has been prepared and is provided in Appendix B.
- **Reservoir Road Repair.** Due to the existing condition of the Lower Reservoir road and based on further damage to the roadway expected to result from the transport of the excavated landslide material to the disposal site, the road would require repair after

completion of the landslide stabilization. This would entail grinding 1-inch off the existing road surface and repaving with 2 inches of asphalt.

The landslide stabilization work requires relatively few off-site truck trips, including 40 trips to haul debris from clearing and grubbing, 10 trips to deliver concrete for surface drainage structures, and 60 trips to deliver asphalt for the Lower Reservoir road repair. Numerous pieces of equipment would be required, including bulldozers, loaders, graders, dump trucks, and water trucks. An equivalent of about 10 pieces of construction equipment operating throughout the day would be required on average during the landslide stabilization work (that is, while more than 10 pieces of equipment would actually be on site related to the landslide stabilization, they would not each be operating simultaneously throughout the 8-hour workday).

Best Management Practices

The same Best Management Practices included in the Draft EIR would be implemented for the modified project, including implementation of the South Coast Air Quality Management District's Rule 403 dust control measures, implementation of a Storm Water Pollution Prevention Plan, compliance with the City Noise Ordinance, notification of surrounding residences and businesses, and the implementation of fire prevention procedures during construction (see Section 2.6.3 of the Draft EIR for details).

Summary of Construction Schedule and Quantities

Although the overall schedule for the modified project construction is estimated to take about 24 months (versus the 18 months identified in the EIR for the approved project) and although additional phases of work (i.e., the east roadway reconstruction and the landslide stabilization) have been added to the project, the scope of the construction effort in terms of the volume of imported and exported material, total off-site truck trips, peak daily truck trips, and peak daily equipment operations has decreased. This decrease is attributable to the substantial reduction in the scope of work and volume of material associated with the demolition and relining of Upper Stone Reservoir, as discussed above. Table 1 provides approximate quantities for various aspects of the approved and modified projects, indicating this general reduction in construction activity.

Table 1
Comparison of Project Scope

Units	EIR (Approved Project)	Modified Project
Construction duration, months	18	24
Volume of exported material (debris), CY	9,000	3,200
Total number of haul truck trips	1,800	600
Volume of imported material, CY	22,000	7,200
Total number of import truck trips (material and equipment)	2,000	875
Peak daily number of off-site truck trips	34	7
Peak daily equivalent pieces of equipment	27	23
Peak on-site personnel	34	51

7 SUMMARY OF ENVIRONMENTAL EFFECTS, MITIGATION MEASURES, AND LEVEL OF SIGNIFICANCE AFTER MITIGATION FOR THE APPROVED PROJECT

The certified Final EIR identified that impacts associated with the approved project would be less than significant for the following environmental issues:

- Agriculture and Forestry Resources
- Biological Resources
- Cultural Resources
- Geology and Soils
- Greenhouse Gas (GHG) Emissions
- Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Mineral Resources
- Population and Housing
- Public Services
- Recreation
- Utilities and Service Systems
- Wildland Fire

Impacts related to air quality, noise, and transportation and traffic were determined to be potentially significant during the construction phase for the approved project. The following mitigation measures were provided to reduce these impacts; however, impacts remained significant and unavoidable for air quality, noise, and transportation and traffic:

- **AIR-A** Heavy-duty equipment operations shall be suspended during first and second stage smog alerts.

- **AIR-B** Equipment and vehicle engines shall be maintained in good condition and in proper tune per manufacturers' specifications.

- **AIR-C** Based on a 2015 start of construction, all off-road construction diesel engines not registered under the California Air Resources Board's (CARB) Statewide Portable Equipment Registration Program and that have a rating of 50 horsepower (hp) or more shall meet, at a minimum, the Tier 4 California Emission Standards for Off-Road Compression-Ignition Engines as specified in California Code of Regulations, Title 13, Section 2423(b)(1) unless such engine is not available for a particular item of equipment. In the event a Tier 4 engine is not available for any off-road equipment larger than 100 hp, that equipment shall be equipped with a Tier 3 engine. Equipment properly registered under and in compliance with CARB's Statewide Portable Equipment Registration Program shall be considered in compliance with this mitigation measure.

- **AIR-D** Electricity shall be utilized from power supply sources rather than temporary gasoline or diesel power generators, as feasible.

- **AIR-E** Heavy-duty trucks shall be prohibited from idling in excess of 5 minutes, both on and off site, except as follows:

    - When verifying that the vehicle is in safe operating condition, or
    - When the vehicle is positioning or providing a power source for equipment or operations, or
    - While operating defrosters, heaters, air conditioning, or any other device to prevent a health or safety emergency.

- **NOISE-A** Traffic speeds on the interior site road shall be limited to 15 miles per hour or less.

- **NOISE-B** Delivery and haul truck activity, with the exception of concrete deliveries, shall be limited to between the hours of 8:00 a.m. and 5:00 p.m. to minimize disruption to sensitive uses.

- **TRANS-B** Prior to construction, a construction traffic control plan shall be prepared for review and approval by the Los Angeles Department of Transportation. The plan may include such elements as advanced signage alerting motorists to construction and an increase in construction vehicle movements; installation of signage for left-turn prohibition from westbound Mulholland Drive into the SCRC driveway; construction speed limit signage along the haul route; and flag persons to control vehicle traffic at the SCRC Mulholland Drive gate entrance.

- **TRANS-D** Prior to the start of construction, and periodically during construction, as necessary, the construction contractor shall provide all construction drivers with safety training to minimize conflicts between construction activities and vehicles using Mulholland Drive. Training shall include adherence to posted speed limits, discussion of haul routes, and explanation of the construction traffic control plan.

8 ENVIRONMENTAL IMPACT ANALYSIS FOR THE MODIFIED PROJECT

As described in Table 1, the modified project would result in an overall reduction in the scope and intensity of construction activities compared to the proposed project. Although some new construction activities would occur that were not evaluated in the certified Final EIR (i.e., the east roadway reconstruction and the landslide stabilization activities), the overall number of off-site truck trips and daily construction equipment on site would be significantly reduced. The following section demonstrates that the modified project would not result in any new significant environmental impacts or result in a substantial increase in the severity of previously identified significant impacts beyond those covered in the certified Final EIR for the approved project. Additionally, no substantial changes have occurred with respect to the circumstances under which the project is being undertaken and no new information has become available which would require major revisions in the EIR.

The potential environmental impacts associated with the modified project relative to those identified in the certified Final EIR for the approved project are discussed below. None of the impact determinations would change relative to the certified Final EIR, and the same mitigation measures identified for the approved project and listed in Section 6 of this Addendum would be required for the modified project. Following implementation of these mitigation measures, the modified project would continue to result in temporary but significant and unavoidable impacts

related to air quality, noise, and transportation and traffic. Pursuant to LADWP Board Resolution No. 012 166 (approved on February 7, 2012), LADWP adopted a Mitigation Monitoring and Reporting Program and a Statement of Overriding Considerations finding that the approved project's economic, legal, and health benefits would outweigh these temporary but significant and unavoidable environmental impacts. The benefits provided by the modified project would be equivalent to those of the approved project.

Ten environmental issue areas examined in the Initial Study for the originally proposed project were dismissed from further analysis in the EIR because the project would have no impact or a less than significant impact for these ten issue areas (see Draft EIR, Appendix A). The approval of the Floating Cover Alternative (the approved project) did not alter the impact conclusions for these ten issue areas (i.e., the impacts remained below a level of significance, and no mitigation was required). In light of the proposed project changes, these ten environmental issue areas are addressed below to substantiate that no new significant impacts would occur in any of these categories.

- **Agriculture and Forestry Resources.** The modified project would still occur within the SCRC property, within and adjacent to Upper Stone Reservoir. As originally determined in the Initial Study, no impacts would occur to agriculture and forestry resources because no such resources are present. No changes have occurred in circumstances or information relative to agriculture and forestry at the SCRC property that would affect the EIR conclusions.
- **Geology and Soils.** The modified project would still occur within the SCRC property, within and adjacent to Upper Stone Reservoir. The same seismic and geologic conditions would apply. Building codes, seismic safety codes, and regulations involving erosion would continue to apply to the project. Aside from the determination of a potential landslide area requiring stabilization, which is being addressed by the proposed project modifications, no changes have occurred in circumstances or information relative to geology and soils at the SCRC property that would affect the EIR conclusions of a less than significant impact. Upon completion of the proposed landslide stabilization activities, impacts related to geology and soils would remain less than significant.
- **Hazards and Hazardous Materials.** As with the approved project, the modified project would still involve the transport, storage, use, and disposal of hazardous materials during construction. Construction activities involving these materials would continue to be subject to federal, state, and local health and safety requirements. Water treatment operations at the site under the modified project would also continue to be subject to federal, state, and local health and safety requirements. As with the approved project, the modified project would not substantially alter current operations relative to drinking

water treatment at SCRC. No changes would occur in the project area or in the modified project construction activities such that emergency response plans would be impaired or emergency access hindered. Furthermore, no hazardous materials sites on lists compiled pursuant to Government Code Section 65962.5 were identified on the project site at the time of the Initial Study (2011). An updated search of these lists was conducted in 2015, substantiating that no hazardous materials sites exist on the project site, including the landslide stabilization site (Appendix C). Impacts would remain less than significant. No changes have occurred in circumstances or information relative to hazards and hazardous materials that would affect the EIR conclusions.

- **Hydrology and Water Quality.** Similar to the approved project, the modified project would be subject to applicable erosion control regulations and water quality regulations, which would reduce impacts related to erosion and water quality to a less than significant level. Because the amount of impervious surfaces would remain the same under the proposed project modifications, impacts to stormwater runoff and drainage would not change and would therefore remain less than significant. While the landslide stabilization portion of the modified project would involve additional areas of disturbance as compared with the approved project, revegetation of this area is included as part of the modified project. Revegetation would minimize the amount of runoff and erosion during project operation, and impacts would remain less than significant. Furthermore, adding the landslide stabilization component to the project would reduce the potential for increased loss of soil and/or erosion caused by a potential landslide at Upper Stone Reservoir. Placement of approximately 90,000 CY of soil within Lower Stone Reservoir would result in temporary localized turbidity at the sediment placement site; however, no downstream water quality impacts would occur since Lower Stone Reservoir is disconnected from and independent of natural waters such as streams and creeks. Impacts related to flooding and inundation would not change because the project would still occur in the same area. As with the approved project, impacts would be less than significant relative to flooding and inundation. No changes have occurred in circumstances or information relative to hydrology and water quality that would affect the EIR conclusions.
- **Land Use and Planning.** The project location would not change under the modified project. Furthermore, the land use designations on the site and the surrounding land uses have not changed since the EIR was certified. As with the approved project, the impact to land use from the modified project would be less than significant with a zoning variance to allow for the floating cover (see Draft EIR, Section 5.3.1, for details regarding the zoning variance). No changes have occurred in circumstances or information relative to land use that would affect the EIR conclusions.

- **Mineral Resources.** As with the approved project, the modified project would result in no impact to mineral resources, which are not present at the SCRC. No changes have occurred in circumstances or information relative to mineral resources that would affect the EIR conclusions.
- **Population and Housing.** None of the proposed project modifications would trigger substantial population growth in the area or the requirement for replacement housing. As with the approved project, no impact would occur. No changes have occurred in circumstances or information relative to population and housing that would affect the EIR conclusions.
- **Public Services.** None of the proposed project modifications would result in demand for additional fire or police protection services. As with the approved project, the modified project would not result in a population increase in the project area, and no impact would occur to local schools, parks, and other public facilities. No changes have occurred in circumstances or information relative to public services that would affect the EIR conclusions.
- **Recreation.** None of the proposed project modifications would induce population growth or would otherwise result in increased use of recreational facilities and/or the creation of new recreational facilities. No impacts would occur. No changes have occurred in circumstances or information relative to recreation that would affect the EIR conclusions.
- **Utilities and Service Systems.** As with the approved project, the modified project would not result in changes to facilities or operations at wastewater treatment facilities and would only generate minor amounts of wastewater. The proposed project modifications would not affect the capacity of the reservoir. While the construction period would increase under the modified project, as discussed in the EIR, water supply during project construction would continue to be maintained via existing LADWP supplies supplemented with purchased water, as needed, from the Metropolitan Water District. While these supplies may be relied upon for a slightly longer period of time under the modified project, no shortage of water supply is expected. The modified project would involve temporary irrigation of tree planting areas, while the approved project did not involve irrigation. However, this temporary and minor increase in water use would be minimal in relation to the total available supply, and no new significant impacts would occur. Regarding solid waste, the modified project would result in a reduction in construction waste relative to the approved project (refer to the comparison of exported material volume in Table 1). For these reasons, impacts to utilities and service systems would remain less than significant. No changes have occurred in circumstances or information relative to utilities and service systems that would affect the EIR conclusions.

As discussed above, the modifications to the approved project would not cause new significant impacts in any of the ten issue areas that were originally dismissed in the Initial Study from further analysis in the EIR. Furthermore, there are no changed circumstances or new information relative to the modified project for these ten categories that would change the impact conclusions. Therefore, regarding the ten environmental categories listed above, the modifications to the approved project do not meet the standards for a subsequent or supplemental EIR pursuant to CEQA Guidelines Section 15162.

The remaining seven environmental impact categories, which were carried forward for analysis in the Draft EIR (see Section 5.3.1 of the Draft EIR), are discussed in Section 8.1 through Section 8.7 below. The analysis provided in these sections supports a determination that implementation of the changes to the Floating Cover Alternative identified in Section 6 would not result in any new significant environmental impacts or a substantial increase in the severity of a previously identified significant impact. An analysis of the modified project for each impact category is provided, as is a discussion regarding changed circumstances or new information relative to the modified project.

8.1 Aesthetics

The approved project would result in less than significant impacts to aesthetics. As described in the EIR, there is a public overlook with a partial view of Upper Stone Reservoir located approximately 0.75 miles east of the SCRC entry on Mulholland Drive. Private views of the Upper Reservoir are primarily from residential properties located west of the reservoir, although some views from the north, northeast, and southwest are also available. No individual private property surrounding the SCRC has an unobstructed view of the entire reservoir due to intervening terrain, vegetation, and structures. Upper Stone Reservoir itself, within the context of the canyon, does not represent a dominant visual element as observed from the public overlook or from private properties.

As determined in the EIR, the approved project would not represent a substantial change to the visual environment and, therefore, would not have a substantial adverse effect on a scenic vista or substantially degrade the existing visual character or quality of the site and its surroundings.

Analysis of the Modified Project

The appearance of the project site for the modified project would be similar to that of the approved project. The most noticeable visible change resulting from the modified project would occur at the landslide stabilization site, where grading and revegetation activities would occur. However, as discussed below, the project changes would not result in new significant

environmental effects or a substantial increase in the severity of a previously identified significant effect relative to aesthetics.

Reservoir Demolition and Relining

Under the modified project, upon completion of the floating cover, views of the reservoir would remain essentially the same as shown in Figures 5-3 and 5-5 of the Draft EIR, since the general design of the floating cover has not changed. Therefore, the proposed project modifications related to reservoir demolition and relining would not result in a new significant impact.

East Roadway Reconstruction

The east roadway is not a visually dominant or significant element in the context of Stone Canyon. Furthermore, once construction activities are complete, the visual appearance of the roadway would be similar to existing conditions. Therefore, the project modifications related to the east roadway reconstruction would not result in a new significant impact.

Landslide Stabilization

The approved project did not involve the landslide stabilization activities included in the modified project. However, the visual changes to the landslide stabilization site that would occur under the modified project would not change the EIR conclusion that impacts are less than significant. Upon implementation of the modified project, portions of the hillside at the landslide stabilization site would be removed, and the area would be revegetated. The 2.5-acre landslide stabilization site would be partially visible from Key Viewpoint 1 and Key Viewpoint 2 identified in the Draft EIR. Although the landslide site may appear more uniformly sloped relative to existing conditions, the hillside would still retain a generally natural appearance. As part of modified project, a native seed mix would be applied to the stabilized slopes. Upon establishment of this vegetation (normally within three to five years of installation), the appearance of the site would not be substantially degraded relative to existing conditions. Furthermore, the landslide stabilization site is not a visually dominant or significant element in the context of Stone Canyon from viewpoints outside the SCRC. For these reasons, the proposed project modifications related to landslide stabilization would not result in a new significant impact.

Changes in Circumstance/New Information

No substantial changes in the aesthetic or visual environment at the SCRC have occurred since certification of the Final EIR. A comparison of aerial images from 2012 (when the Final EIR was approved) and 2016 confirms that minimal development has occurred along the boundaries of

the SCRC during this time. Similarly, no topographical changes or other landform alterations have occurred that would fundamentally change the approach or conclusions of the aesthetics analysis in the EIR. The same visual resource guidelines that were referenced in the EIR would still apply to the modified project and the standards for evaluating aesthetic impacts have not fundamentally changed since the EIR was approved. There are no substantial changes with respect to circumstances under which the project will be undertaken, and there is no new information of substantial importance that has become available relative to visual or aesthetic resources that would change the impact conclusions in the EIR.

8.2 Air Quality and Greenhouse Gas Emissions

The Draft EIR for the approved project estimated emissions of volatile organic compounds (VOCs), oxides of nitrogen (NO_x), carbon monoxide (CO), sulfur oxides (SO_x), particulate matter with an aerodynamic diameter less than or equal to 10 microns (PM_{10}), particulate matter with an aerodynamic diameter less than or equal to 2.5 microns ($PM_{2.5}$) generated during construction of the approved project. The project site is located within the South Coast Air Basin (SCAB) and is within the jurisdictional boundaries of the South Coast Air Quality Management District (SCAQMD). The SCAB is designated as a nonattainment area for federal and state ozone (O_3) standards, state PM_{10} standards, and federal and state $PM_{2.5}$ standards. The SCAB is designated as an attainment area for federal and state nitrogen dioxide (NO_2) standards, federal and state CO standards, federal and state sulfur dioxide (SO_2) standards, federal PM_{10} standards.[1]

In addition, the Draft EIR evaluated the potential for project construction to generate toxic air contaminant (TAC) emissions, specifically diesel particulate matter, which would result in associated health risk impacts. Construction GHG emissions were also estimated, which were estimated as metric tons of carbon dioxide equivalent (CO_2E)[2] per year.

Construction of the approved project would generate localized and regional criteria air pollutant emissions, TACs, and GHG emissions. No new vehicle trips to the site would occur following completion of construction and the approved project would not result in operational emissions. The impact determinations provided for the approved project, as evaluated in the Draft EIR and modified in the Final EIR, are summarized below:

[1] SCAQMD. 2016. National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) Attainment Status for South Coast Air Basin. February 2016. http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/naaqs-caaqs-feb2016.pdf?sfvrsn=2.

[2] The CO_2E for a gas is derived by multiplying the mass of the gas by the associated global warming potential (GWP), such that metric tons (MT) of CO_2E = (MT of a GHG) × (GWP of the GHG).

- **AIR-1**: During the construction phase, NO_x, PM_{10}, $PM_{2.5}$ emissions would exceed the SCAQMD regional significance threshold, and therefore, the approved project would contribute to an existing or projected air quality violation. Mitigation measures AIR-A through AIR-E were identified to reduce construction criteria air pollutant emissions; however, impacts were determined to be significant and unavoidable even with implementation of mitigation.

- **AIR-2**: The approved project would expose sensitive receptors to substantial localized pollutant concentrations of particulate matter (PM_{10} and $PM_{2.5}$) during construction. Implementation of mitigation measures AIR-A through AIR-E (identified to reduce impacts evaluated in Impact AIR-1) would similarly reduce localized concentrations of construction criteria air pollutant emissions; however, impacts were determined to be significant and unavoidable even with implementation of mitigation.

- **AIR-3**: The approved project would not generate GHG emissions, either directly or indirectly, that would have a significant impact on the environment or conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. As impacts would be less than significant, mitigation was not required.

The Draft EIR determined that the project would not interfere with implementation of the SCAQMD 2007 Air Quality Management Plan (AQMP), which was the current AQMP at the time of preparation, because it would not increase regional population, housing, or employment, and would not generate operational emissions. As such, impacts related to the approved project's potential to conflict with or obstruct implementation of the applicable air quality plan would be less than significant.

The approved project would not generate traffic that would reduce the level of service operation or increase in volume to capacity ratio at any project study area intersection that would exceed the screening criteria established by the SCAQMD to perform a formal CO hotspot assessment. As such, the Draft EIR determined that impact associated with localized CO concentrations was determined to be less than significant.

In regards to potential odor impacts, the Draft EIR determined that construction of the approved project would result in temporary, localized odors, which would not cause an odor nuisance. Operation of the approved project would not result in activities that create objectionable odors. As such, approved project-generated odors would result in a less-than-significant impact.

A key difference between the Draft EIR and Final EIR regarding air quality was the refinement of truck trip estimates and associated calculations of emissions and TACs. In particular, the estimated concentrations of diesel particulate matter generated by truck trips, as assumed in the

health risk assessment (HRA), was substantially less (approximately 50% less) in the Final EIR than presented in the Draft EIR, and the calculated cancer risk was reduced respectively. An operational HRA was not required for the approved project because no operational emissions would occur.

On-site and off-site emissions for each evaluated construction phase associated with the approved project are presented in Table 2. As evaluated in the Draft EIR, the first phase of construction for the approved project would consist of reservoir draining, mobilization, and reservoir demolition. The second phase would consist of the construction of the reservoir improvements and asphalt reservoir liner, and the third phase would consist of the installation of the floating cover. Table 2 presents emissions of NO_x, PM_{10}, and $PM_{2.5}$, which were the only criteria air pollutants that were determined to exceed the SCAQMD mass daily construction thresholds in the Draft EIR.

Table 2
Draft EIR Approved Project (Floating Cover) Maximum Daily Unmitigated Emissions

	NO_x (pounds/day)	**PM_{10} (pounds/day)**	**$PM_{2.5}$ (pounds/day)**
Phase 1			
Site Preparation and Grading	N/A	231	48
Equipment Operation	130	5	5
On-site Total	*130*	*236*	*53*
Haul Trucks	49	2	2
Worker Trips	1	<1	<1
Off-site Total	*50*	*3*	*2*
Phase 1 Total	**180**	**239**	**55**
Phase 2			
Site Preparation and Grading	N/A	231	48
Equipment Operation	130	6	6
On-site Total	*130*	*237*	*54*
Haul Trucks	20	1	1
Worker Trips	1	<1	<1
Off-site Total	*22*	*1*	*1*
Phase 2 Total	**152**	**238**	**55**
Phase 3			
Site Preparation and Grading	N/A	2	<1
Equipment Operation	35	2	1
On-site Total	*35*	*4*	*2*
Haul Trucks	1	<1	<1
Worker Trips	1	<1	<1
Off-site Total	*2*	*0*	*0*
Phase 3 Total	**37**	**4**	**2**
Maximum Daily Emissions	**180**	**239**	**55**

Source: Draft EIR Air Quality and Noise Impact Report, Section 3.0 Air Quality Table 3-6 Alternative 2 (Floating Cover) Estimated Daily Construction Emissions (Unmitigated) and appendix files.
Notes: N/A = not applicable

As shown in Table 2, the greatest source of NO_x emissions would be construction equipment operation, with haul trucks generating the second greatest source of NO_x emissions for each phase. Site preparation and grading in phases 1 and 2 would result in the greatest source of PM_{10} and $PM_{2.5}$ emissions; as shown, fugitive dust PM emissions were estimated to be substantially greater than exhaust PM emissions.

Analysis of the Modified Project

As with the approved project, construction activities that have the potential to generate emissions and result in associated air quality impacts include operation of heavy-duty construction equipment, earth-moving activities and soil disturbance, off-site haul truck trips, and construction workers' vehicle trips traveling to and from the project site. Exhaust from internal combustion engines used by construction equipment, haul trucks (dump trucks), delivery trucks, and worker vehicles result in emissions of VOC, NO_x, CO, SO_x, PM_{10}, and $PM_{2.5}$. Entrained dust results from the exposure of earth surfaces to wind from the direct disturbance and movement of soil, resulting in PM_{10} and $PM_{2.5}$ emissions. As such, PM_{10} and $PM_{2.5}$ emissions include both exhaust and fugitive dust emissions. VOC off-gassing emissions are associated paving of the asphalt surfaces. Table 2, which summarizes construction emissions by source as estimated in the Draft EIR for the approved project, demonstrates the relative magnitude of emissions potentially associated with activities proposed on the project site.

Although the phases of the project have been modified since the Final EIR was approved and the duration of construction has been extended by approximately 6 months, the overall intensity of daily construction activities within the SCRC is expected to diminish as a result of the modified project. The reduction in scope for the demolition and relining of Upper Stone Reservoir would result in a substantial decrease in off-site haul trips (1,000 fewer export round trips and 1,200 fewer import round trips) and an associated decrease in emissions. Reconstruction of the road east of the reservoir and stabilization of the landslide area would introduce new construction activities to the project; however, the number and type of equipment to be used on a daily basis would not change substantially. Accordingly, the analysis provided herein assesses the total proposed construction activities and the potential maximum daily and annual emissions associated with implementation of the project over the entire construction period.

To assess the significance of potential air quality impacts in CEQA evaluations, the SCAQMD has established numeric thresholds for mass (regional) maximum daily emissions and localized maximum daily emissions called localized significance thresholds (LSTs). As such, the anticipated maximum intensity of the proposed daily activities (e.g., hours of construction equipment operation, acres of disturbed area, number of haul truck trips, and number of workers) is an appropriate measure for comparison between the approved and modified projects.

In regards to the assessment of GHG emissions in CEQA evaluations, the SCAQMD has not formally adopted GHG emissions thresholds that would apply to the proposed construction-only project. Consistent with SCAQMD guidelines for industrial projects, the Draft EIR applied a threshold of 10,000 MT CO_2E per year to determine if the project would result in a potential impact related to the generation of GHG emissions and potential contribution to climate change. Consistent with the SCAQMD guidance, total construction emissions were amortized (i.e., annualized) over 30 years in the Draft EIR and were then compared to the 10,000 MT CO_2E per year threshold.

The methodology and emissions modeling programs available to calculate emissions are continuously being updated to more accurately estimate emissions based on new test data and survey information, scientific and technological advances, implementation of regulatory measures and standards, recent trends and external influences, and model improvements. The key relevant models that have been updated or replaced since the Draft EIR was prepared include the California Air Resources Board (CARB) EMFAC emissions inventory model, which was used to estimate mobile source emissions, and the CARB OFFROAD model, which was used to estimate equipment emissions. Due to the incorporation of more stringent standards, it is common for model updates to result in decreases in emissions factors, which in turn result in a direct decrease in estimated emissions when all other factors are held constant. The changes to the emissions modeling programs calculations and assumptions are briefly discussed under Changes in Circumstance/New Information, below. The potential reduction in emission factors for the selected model years is also discussed.

The modified project is evaluated below in regards to reservoir demolition and relining, east roadway reconstruction, and landslide stabilization activities. For each modified project element, on- and off-site activities are evaluated. On-site sources of criteria air pollutant emissions include off-road equipment and fugitive dust, and off-site sources include hauling and delivery trucks and worker vehicles. On-site sources of GHG emissions include off-road equipment, and off-site sources include truck and vehicle trips.

Reservoir Demolition and Relining

This component of the modified project would consist of demolition and relining of the lower extent of the existing Upper Stone Reservoir sidewalls, as well as the construction of an outlet line extension within the reservoir and a new control building. Demolition and relining activities would result in on-site emissions from construction equipment operation and soil disturbance and off-site emissions from vehicle trips, primarily haul truck trips exporting demolition debris and delivery trips importing construction material.

As described in Section 6, the approved project included the complete demolition and relining of the existing reservoir. This would require the demolition of the existing 4-inch thick asphalt liner as well as the inlet structure, overflow spillway, outlet tower, and outlet tower footbridge. The approved project included the following construction assumptions:

- Export of approximately 9,000 CY of demolition debris, requiring approximately 1,800 truck round trips.
- Import of approximately 13,000 CY of crushed aggregate base and 9,000 CY of asphalt, requiring approximately 2,000 truck round trips, for relining of the reservoir.

As part of the modified project design process, reconstruction of the reservoir has been reconsidered based on further evaluation of the condition of the existing liner. As a result of the proposed changes to the reservoir reconstruction, the modified project would entail the following:

- Export of approximately 2,500 CY of demolition debris, requiring approximately 500 truck round trips.
- Import of approximately 2,000 CY of asphalt, requiring approximately 175 truck round trips, for relining of the reservoir. Crushed aggregate base would not be required.

In addition to the changes related to the construction of the reservoir liner, more refined design analyses have indicated the need to extend the outlet line within the reservoir bottom and the requirement for a new control building adjacent to the reservoir. Neither of these modified project items was identified in the Final EIR as part of the approved project. They would require the following:

- Import of approximately 3,800 CY of material to the site, requiring approximately 500 truck round trips.

Therefore, based on the proposed changes, the work associated with the modified project reservoir reconstruction and appurtenant facilities would result in:

- Export of approximately 6,500 CY less demolition debris, requiring approximately 1,300 fewer truck round trips.
- Import of approximately 16,200 CY less material, requiring approximately 1,325 fewer truck round trips.

Based on the more refined design analysis and the work required on appurtenant facilities (e.g., the outlet line and control building) not previously identified, the schedule for the reservoir construction would increase from about 18 months as identified in the Final EIR to about 24 months. Consistent with the approved project, this would include approximately 4 months for the installation of the cover and 1 month for refilling the reservoir. The increase in construction duration would result in reduced maximum daily emissions.

The reduction in haul truck trips and associated haul truck vehicle miles traveled would result in a direct reduction in vehicle exhaust emissions, including emissions of VOC, NO_x, CO, SO_x, PM_{10}, and $PM_{2.5}$, as well as CO_2E. The reduction in demolition debris would reduce the total equipment operation hours required to complete the demolition activity. As with the reduction in vehicle miles traveled, the reduction in equipment usage would result in a direct reduction in equipment exhaust emissions, including emissions of VOC, NO_x, CO, SO_x, PM_{10}, $PM_{2.5}$, and CO_2E. The reduction in operation of grading and earth moving equipment would also reduce potential soil disturbance and associated fugitive dust (PM_{10} and $PM_{2.5}$) emissions. In addition to fugitive dust generated by earth moving equipment, processes such as truck dumping or loading could also cause fugitive dust emissions. Accordingly, when demolition and/or excavated material and associated export volumes are reduced, fugitive dust (PM_{10} and $PM_{2.5}$) from truck loading would also reduce.

East Roadway Reconstruction

This component of the modified project would entail the removal of existing pavement and base material along the eastern and southern portions of the Upper Stone Reservoir perimeter road. The roadway reconstruction would entail the removal of the existing pavement and the base material and the installation of 6 inches of asphalt over 6 inches of crushed aggregate base on 12 inches of compacted fill, and would require the following:

- Export of approximately 300 CY of demolition debris, requiring approximately 60 off-site truck round trips.
- Import of approximately 1,400 CY of material (aggregate base and asphalt), requiring approximately 130 off-site truck round trips.

This work is anticipated to occur simultaneously with the installation of the floating cover near the end of the project construction schedule. This work would be in addition to what was included in the approved project as described in the Final EIR since the road reconstruction was not anticipated when the Final EIR was certified.

East roadway reconstruction would result in VOC, NO_x, CO, SO_x, PM_{10}, $PM_{2.5}$, and CO_2E emissions associated with on-site equipment operation, off-site haul trucks exporting demolition debris, off-site delivery trucks importing material, and off-site worker vehicle trips. Fugitive dust emissions would result from demolition activities and loading of material to be exported on trucks. However, the addition of 190 truck round trips would be offset by the reduction in 2,625 truck round trips that would occur as a result of refinements to the reservoir demolition and relining phase.

Landslide Stabilization

This component of the modified project would involve construction activities that were not analyzed as part of the approved project. Landslide stabilization would include the following activities and associated anticipated construction requirements:

- Pre-construction activities, including installation of construction fencing to identify the limits of grading/disturbance at the 2.5-acre landslide stabilization site.
- Clearing and grubbing, including removal of existing vegetation, stumps, roots, and other debris.
- Topsoil stripping and stockpiling within the SCRC.
- Hillside excavation and grading, including soil disposal in the Lower Reservoir.
- The finish grading phase of the slope to ensure stability.
- Installation of concrete diversion channels and slope drains to intercept and direct flows to minimize erosion
- Repair of the reservoir road following completion of the landslide stabilization.

Overall, an equivalent of about 10 pieces of construction equipment operating throughout the day would be required on average during the landslide stabilization work. The landslide stabilization activities would take approximately 9 months to complete and would generally overlap with the reservoir reconstruction and floating cover installation activities.

Analysis Conclusions

As discussed in Section 6 and shown in Table 1, the overall schedule for the project construction is now estimated to take about 24 months (versus the 18 months identified in the EIR), and additional phases of work (i.e., the east roadway reconstruction and the landslide stabilization)

have been added to the project. However, regardless of these changes, the overall scope of the construction effort in terms of the volume of imported and exported material, total off-site truck trips, peak daily truck trips, and peak daily equipment operations has decreased substantially.

In particular, there would be a substantial reduction in the scope of work and volume of material associated with the demolition and relining of Upper Stone Reservoir. Compared to the approved project, under the modified project, the overall volume of exported material would decrease from 9,000 CY to 3,200 CY (net reduction of 5,800 CY) and the overall volume of imported material would decrease from 22,000 CY to 7,200 CY (net reduction of 14,800 CY). The reduction of export and import material, as well as the reduction in equipment transport trips, would result in an associated reduction in truck trips. Export haul truck round trips would reduce from 1,800 to 600 round trips (net reduction of 1,200 trips) and import truck round trips would reduce from 2,000 to 875 round trips (net reduction of 1,125 trips). In addition, the peak number of daily truck trips would reduce from 34 to 7 trips and the peak number of daily equivalent pieces of equipment would reduce from 27 to 23 pieces. Peak on-site personnel are anticipated to increase from 34 to 51 persons; however, passenger vehicles and light duty trucks driven by workers to the site generate substantially less emissions than construction equipment operation and heavy-duty trucks.

As shown in Table 2, the primary source of NOx emissions during construction of the approved project was construction equipment, and the primary source of PM_{10} and $PM_{2.5}$ emissions was fugitive dust generated during site preparation and grading phases. The reduction in the scope of work under the modified project, primarily the volume of material to be demolished, would result in a reduction of NO_x, PM_{10}, and $PM_{2.5}$ emissions from equipment operation and a reduction of PM_{10} and $PM_{2.5}$ emissions from earth moving activities. Worker trips contributed a small portion of the total approved-project-generated emissions (less than 2% of maximum daily emissions for NO_x, PM_{10} and $PM_{2.5}$); as such, the modified project's minor increase in peak worker trips and associated emissions would be offset by the substantially greater reduction in equipment use and fugitive dust generation.

Therefore, the modified project would not cause new impacts or increase the severity of the previously disclosed significant impacts in regards to Draft EIR Impact AIR-1. Mitigation measures AIR-A through AIR-E were identified to reduce construction criteria air pollutant emissions generated by the approved project, and would continue to be required during construction of the modified project.

In addition, the modified project would not cause new impacts or increase the severity of the previously disclosed significant impacts in regards to Draft EIR Impact AIR-2. Implementation of mitigation measures AIR-A through AIR-E would reduce localized PM_{10} and $PM_{2.5}$

concentrations, which would reduce potential exposure of sensitive receptors to substantial pollutant concentrations during construction.

Similar to the approved project, the modified project would not result in GHG emissions impacts evaluated under Draft EIR Impact AIR-3. The approved project was estimated to generate amortized GHG emissions of 96 MT CO_2E per year, which is substantially below the threshold of 10,000 MT CO_2E per year. As such, the intensity of proposed construction activities would need to increase considerably for the modified project to exceed the applied GHG emissions threshold. Such an increase would not occur under the modified project.

Similar to the approved project, the modified project would not conflict with or interfere with implementation of the applicable AQMP, which is currently the SCAQMD 2012 AQMP, because it would not generate operational emissions or population growth not accounted for in the underlying AQMP projections. Because the modified project would reduce off-site truck trips compared to the approved project, it would reduce the potential for project-generated construction traffic to affect the level of service operation at an intersection in the project's study area that may cause a high concentration of localized CO. As such, the modified project would not result in a potential CO hotspot impact, similar to the approved project as evaluated in the Draft EIR. Since the types of construction activities under the modified project would be similar to the approved project, the modified project would not result in odor impacts, and any odors (e.g., odors from construction vehicle emissions) would be controlled in accordance with SCAQMD Rule 402 (Nuisance Emissions).

Changes in Circumstance/New Information

There are no changes with respect to circumstances under which the project will be undertaken that would change the air quality and GHG emissions impact conclusions in the EIR. Because air quality and GHG emissions issue areas are constantly evolving, new information has become available since the Draft EIR was prepared (as described below); however, this new information is not of substantial importance and would not change the impact conclusions in the EIR.

For air quality, over time, ambient air quality standards and area attainment designations are updated, lead agencies revise guidance and thresholds, state and local agencies revise and adopt new regulations and rules, and air districts update AQMPs. Although important, these changes are standard practice and do not represent a change of substantial importance and rarely affect the significance conclusions where an impact that was previously determined to be less than significant would be significant under new guidance and thresholds.

For GHG emissions, the scientific background on climate change continues to grow; inventories on local, regional and statewide levels are developed or updated; federal and state governments

adopt regulatory measures; regional and local agencies develop plans to reduce GHG emissions, such as sustainable communities strategies as components of regional transportation plans and climate action plans; and lead agencies revise and adopt new guidance and thresholds. As with air quality, these changes are standard practice and do not represent a change of substantial importance and rarely affect significance conclusions.

In general, emission factors for equipment and vehicles decrease over time because more stringent standards for in-use off-road equipment and heavy-duty trucks are implemented, and fleet turnover occurs, which replaces older equipment and vehicles in later years. As briefly discussed in the analysis of the modified project, models that have been updated or replaced since the Draft EIR was prepared include the EMFAC and OFFROAD models, which were used to estimate mobile source and construction equipment emissions. These model updates include incorporation of revised EPA and CARB regulations and standards into the emission factors, which generally result in reduced emission factors.

EMFAC2007 (used in the Draft EIR) was replaced by EMFAC2011, which was then replaced by EMFAC2014. State and federal regulations and standards aimed at lowering fleet average emission rates and were designed to improve air quality and reduce GHG emissions are reflected in EMFAC2014. The regulations and standards include, but are not limited to, Advanced Clean Cars, Truck and Bus Rule, the Tractor-Trailer GHG Regulation and federal Heavy-Duty GHG regulations, and Pavley Regulations.[3] As standards are implemented overtime, vehicle emission factors reduce, which is more accurately reflected in EMFAC2014 as it captures regulations that have been enacted since the EMFAC2007 model was developed.

The OFFROAD2007 model was replaced by category specific methods and inventory models developed for specific regulatory support projects. For off-road diesel equipment, CARB developed an In-Use Off-Road Equipment (Construction, Industrial, Ground Support and Oil Drilling) inventory model. Based on new data from 2009 academic studies and from engine manufacturers, load factors in OFFROAD2007 were reduced by 33% in 2011 In-Use Off-Road Equipment model, which results in a direct reduction in emissions. Although mitigation measure AIR-C requires use of Tier 3 equipment, equipment that meet higher Tier standards (e.g., Tier 4

[3] EMFAC2014 includes reductions associated with Advanced Clean Cars, which included controls on precursors of smog, soot, and global warming compounds, as well as mandated requirements for the incorporation of greater numbers of zero-emission vehicles, and the Truck and Bus Rule, which requires heavy-duty vehicles to be retrofitted with diesel particulate filters or replaced with trucks having 2007 or 2010 standard engines. In addition, EMFAC2014 incorporates the Tractor-Trailer GHG Regulation and federal Heavy-Duty GHG regulations, which require lower GHG emissions through retrofit aerodynamic improvements, low rolling resistant tires, and fuel-efficient new engine designs, as well as the Federal Pavley standards, which result in improvement to fleet average fuel economy and reduce emissions as cleaner vehicles increase their penetration rates into the fleet.

Interim and Tier 4 Final) are more readily available now than were at the time the Draft EIR was prepared.

Although the reduction in emission factors was not considered in the comparison of the modified and proposed project's potential the generate criteria air pollutant and GHG emissions that would result in a significant impact, the application of updated emission factors would be anticipated to reduce construction emissions generated by the modified project compared to the emissions presented in the Draft EIR.

8.3 Biological Resources

The approved project would result in less than significant impacts to biological resources. The approved project would not remove or disturb sensitive plant species or vegetation communities located within the vicinity of Upper Stone Reservoir. Since no tree removal was required for the approved project, no impacts to trees protected by the City's Tree Protection Ordinance would occur. Because the approved project required no native vegetation removal, no impacts to migratory birds or sensitive wildlife species were identified.

Analysis of the Modified Project

While the modified project would result in new areas of ground disturbance, as discussed below these project changes would not result in new significant environmental effects relative to biological resources.

Reservoir Demolition and Relining

This component of the modified project would consist of demolition and relining of the lower extent of the existing Upper Stone Reservoir sidewalls, as well as the construction of a new outlet line within the reservoir and a new control building adjacent to the existing chlorination station. As described in the EIR, no significant biological resources have been previously identified within the Upper Stone Reservoir or adjacent developed areas. The approved project, which involved more extensive reservoir demolition and relining activities as compared with the modified project, was determined to have a less than significant impact to biological resources. As such, the proposed modifications to reservoir demolition and relining activities would not result in a new significant impact to biological resources.

East Roadway Reconstruction

This component of the modified project would entail the removal of existing pavement and base material along the eastern and southern portions of the Upper Stone Reservoir perimeter road and

the repaving of the road. While construction on this roadway is a new component of the project, this roadway was included in the originally proposed project area that was analyzed for biological resources impacts in the EIR. As indicated in the EIR, there are no known biological resources within or adjacent to this roadway. Therefore, the proposed east roadway reconstruction activities would not result in a new significant impact to biological resources.

Landslide Stabilization

This component of the modified project would involve construction activities that were not analyzed as part of the approved project. Specifically, the proposed landslide excavation and stabilization activities would disturb approximately 2.5 acres of vegetated slopes and graded areas as shown on Figure 1. The excavated material would be disposed of in Lower Stone Reservoir, where it would be loaded onto a truck-mounted conveyor belt and/or a small barge placed into the reservoir to settle below the surface. As discussed below, impacts to biological resources would occur as a result of these new project components; however, impacts would remain less than significant, and no new significant impacts would occur.

As part of this addendum, biological surveys were conducted at the landslide stabilization site to determine if any sensitive biological resources would be affected by the modified project, including a general reconnaissance survey, a tree inventory and assessment, and protocol surveys for California gnatcatcher. The survey results are discussed below.

Vegetation

A biological survey was conducted in the landslide area on October 30, 2015. A total of 26 plant species were positively identified during the field survey (see Appendix D for a complete list of species observed during the survey). The majority of the landslide area and the surrounding area consists of California sagebrush scrub, with the dominant species being black sage. Oak woodland also makes up a portion of the landslide area. Non-native grasses and forbs were present in the areas closest to the chlorination facility. As with the surveys conducted for the EIR, one sensitive plant species, Southern California black walnut (*Juglans californica*), was identified during the October 30, 2015, biological survey.

A tree inventory and assessment of the landslide stabilization area was performed by qualified arborists on August 3, 2015, pursuant to City Ordinance No. 177404. All trees on the project site were assessed, tagged, inventoried, mapped, and plotted on a tree location exhibit (see Appendix E). The health, aesthetics, size, and balance/symmetry of the trees were assessed and graded per City Municipal Code requirements. A total of 48 living and 4 dead protected species trees were identified during the survey, along with 11 planted non-protected trees. The site's 59 living trees are composed of 26 Southern California black walnut, 22 California live oak trees (*Quercus*

agrifolia), and 11 (planted) western (California) sycamore (*Platanus racemosa*). The trees range from single- to multi-stemmed and have individual stem caliper measurements at 4.5 feet above natural grade that range from 4 inches to 29.7 inches. The trees range in approximate height from 10 feet to 45 feet, with canopies that range between 12 feet and 45 feet at their widest point. Tree health ranged from very poor to fair, and tree structure ranged from very poor to good. Individual tree characteristics for the protected trees are presented in Appendix E.

As discussed in Section 6, the limits of grading would be identified with construction fencing prior to commencement of clearing and grubbing activities for the project. This would limit direct impacts associated with the landslide stabilization activities to the 2.5-acre site and would minimize impacts to adjacent habitat. Additionally, as part of the modified project, the landslide stabilization area would be revegetated via hydroseeding with a native seed mix (see Appendix A) upon completion of the grading activities. Additionally, as part of the modified project, 107 trees would be replanted within the SCRC to comply with the City's Tree Protection Ordinance. Trees to be replanted include 52 California black walnuts, 11 western (California) sycamores, and 44 coast live oaks. A tree planting and irrigation plan has been prepared and is provided in Appendix B. As shown, the tree planting area would occupy approximately 9 acres in the vicinity of the landslide stabilization site. Implementation of the hydroseeding component of the project and compliance with the City's Tree Protection Ordinance and associated tree planting requirements would avoid any impacts related to loss of California sagebrush scrub, oak woodland, and Southern California black walnut trees. As such, the proposed landslide stabilization activities would not result in a new significant impact to sensitive vegetation.

Sediment placement activities in the Lower Stone Reservoir would not result in direct impacts to any native vegetation. The truck-mounted conveyor belt would be parked along the existing access road and would extend over the chaparral slopes between the road and the reservoir. Any sediment stockpiling would occur along the edge of the access road within existing graded areas. As such, the proposed sediment placement activities would not result in a new significant impact to sensitive vegetation.

Regulated Waters

As discussed in Section 6, the modified project would result in the placement of approximately 90,000 CY of soil debris within Lower Stone Reservoir. Soil disposal would be accomplished by hauling debris from the landslide stabilization site to a disposal site(s) on the western perimeter of the Lower Stone Reservoir. Bathymetric data was used to determine an appropriate location for the potential disposal sites, which would allow sediment to accumulate entirely underwater.

During sediment placement activities, temporary localized turbidity would occur in the vicinity of the sediment placement site. Lower Stone Reservoir is a man-made drinking supply reservoir that has been removed from service other than for emergency use or for releases from a small filtration plant located at the south end of the reservoir used to regulate as necessary the water level in the reservoir. The reservoir is disconnected from and independent of natural waters such as streams and creeks. As such, the reservoir does not intercept waters of the U.S. or waters of the State, nor does it convey flows to any downstream waters. The reservoir is not part of a natural system, is not considered sensitive habitat, and provides no biological resource functions or values that would be permanently impacted or removed (directly or indirectly) by the soil disposal activities. The reservoir is part of a closed water storage/delivery system that was operated as such for nearly a century. The United States Army Corps of Engineers (USACE) does not typically assert jurisdiction over constructed features that are part of a man-made system (33 CFR 328.3). No regulatory authorizations from the agencies (USACE, United States Fish and Wildlife Service [USFWS], Regional Water Quality Control Board [RWQCB], or California Department of Fish and Wildlife [CDFW]) have been required for operations and maintenance activities associated with the reservoir. For these reasons, no regulatory permits would be required. No impacts to jurisdictional waters would occur as a result of the modified project.

Wildlife

No sensitive wildlife species were observed in the project area during the surveys conducted for this addendum or for the Draft or Final EIR. Focused surveys for California gnatcatcher were performed within the study area between October 16, 2015, and February 8, 2016, by permitted biologists. The surveys were conducted in accordance with the currently accepted methods of the USFWS: Coastal California gnatcatcher (*Polioptila californica californica*) Presence/Absence Survey Protocol (USFWS 1997) for the non-breeding season. The survey consisted of nine visits at a minimum of 14-day intervals. Survey routes, shown in Appendix F, Figure 3, covered all areas of suitable California gnatcatcher habitat in areas that might be directly or indirectly affected by project construction. There were no California gnatcatcher individuals observed during these focused surveys. The 10-day pre-survey notification letter was sent to the USFWS on March 20, 2015, and the survey results were transmitted to the USFWS on April 12, 2016.

A total of 62 wildlife species were observed during the nine California gnatcatcher surveys. Species observed included one reptile, 54 birds, three invertebrates, and four mammals. A full list of wildlife species observed within the study area during the surveys is provided in Appendix F. As with previous surveys of the project area conducted for the EIR, no sensitive wildlife species were observed. As such, the proposed landslide stabilization activities would not result in a new significant impact to sensitive wildlife resources.

As discussed in the EIR, the SCRC contains suitable conditions to support nesting migratory native birds protected under the MBTA. The MBTA makes it unlawful, unless permitted by regulations, to "pursue; hunt; take; capture; kill; attempt to take, capture or kill; possess; offer for sale; sell; offer to purchase; purchase; deliver for shipment; ship; cause to be shipped; deliver for transportation; transport; cause to be transported; carry or cause to be carried by any means whatever; receive for shipment, transportation, or carriage; or export, at any time, or in any manner, any migratory bird, included in the terms of this Convention …for the protection of migratory birds … or any part, nest, or egg of any such bird" (16 USC 703). In the case of the modified project, such impacts would be avoided because clearing and grubbing activity, which would take approximately 1 month to complete, would occur between September 15 and February 15, outside the nesting/breeding season. As such, the proposed landslide stabilization activities would not result in a new significant impact to nesting birds.

As described above, no vegetation would be removed to operate the truck-mounted conveyor belt; therefore, no terrestrial species would be directly affected by the sediment placement activities within the Lower Stone Reservoir. Sediment placement activities would create temporary localized turbidity in the vicinity of the sediment placement site; however, no impacts to sensitive wildlife species would be expected to occur within the reservoir. No sensitive species have been documented within the reservoir and none are expected to occur, given that the reservoir is a man-made drinking water facility which is not connected to any natural waters. The reservoir does provide open water habitat for migratory and breeding waterfowl; however, the sediment disposal activities would not reduce the amount of surface water within the reservoir, as all of the sediment would settle underwater. The water body is not considered sensitive habitat and provides no biological resource functions or values that would be permanently impacted or removed by the soil disposal activities. For these reasons, the proposed sediment placement activities would not result in a new significant impact to sensitive wildlife.

Changes in Circumstance/New Information

No substantial changes in the biological environment at the SCRC have occurred since certification of the Final EIR. A comparison of aerial images from 2012 (when the Final EIR was approved) and 2016 indicates that the vegetation coverage and development footprint within the SCRC remained relatively unchanged during this time. Biological surveys were conducted in 2015 for this addendum, which confirmed that no changes in circumstances have occurred within the SCRC relative to sensitive biological resources. No regulatory changes have occurred since the Final EIR was certified that would require substantial revisions to the EIR, such as new species becoming listed that were known to occur within the project area. As such, there are no substantial changes with respect to circumstances under which the project will be undertaken,

and there is no new information of substantial importance that has become available relative to biological resources that would change the impact conclusions in the EIR.

8.4 Cultural Resources

In the support of the environmental analysis in the Draft EIR, a Phase I Cultural Resources Assessment was conducted (see Appendix F of the Draft EIR). This study covered the originally proposed project area, which is inclusive of the approved project site.

As part of this Phase I Cultural Resources Assessment, Upper Stone Reservoir was evaluated for its eligibility for the California Register and the National Register. It was determined that Upper Stone Reservoir is not eligible for listing as a historic resource. Thus, the approved project would have a less than significant impact on historic resources. A California Historical Resources Information System (CHRIS) records search was conducted at the South Central Coastal Information Center for the originally proposed project area and surrounding one-mile radius (see Appendix F of the Draft EIR for details). The search revealed that a total of five previous investigations covered portions of or the entire project area. The records search indicated that one historic isolated artifact was previously recorded within the one-mile records search study area. This isolated artifact was recorded in a location approximately 0.5 miles north of the approved project site. However, no cultural resources have been previously recorded within or adjacent to the approved project site itself. Additionally, the California Native American Heritage Commission provided a Sacred Lands File search of previously documented sacred lands in the vicinity of the project, which yielded negative results. Cultural resources field surveys of the originally proposed project area were also conducted in support of the environmental analysis in the Draft EIR. No new archaeological resources were identified as a result of the surveys.

Ground-disturbing activities for the approved project would have included demolishing and replacing the existing asphalt liner in Upper Stone Reservoir. Minimal ground disturbing activities outside the footprint of Upper Stone Reservoir would have occurred under the approved project. The EIR determined it unlikely that the approved project would disturb previously unearthed archeological resources, and impacts were determined to be less than significant. The impacts to paleontological resources were also determined to be less than significant.

Analysis of the Modified Project

While the modified project would result in new areas of ground disturbance, as discussed below these project changes would not result in new significant environmental effects relative to cultural resources.

Reservoir Demolition and Relining

This component of the modified project would consist of demolition and relining of the lower extent of the existing Upper Stone Reservoir sidewalls, as well as the construction of a new outlet line within the reservoir and a new control building adjacent to the existing chlorination station. As described in the EIR and as summarized above, no significant cultural resources have been previously identified at Upper Stone Reservoir. The approved project, which involved more extensive reservoir demolition and relining activities as compared with the modified project, was determined to have a less than significant impact to cultural resources. As such, the proposed modifications to reservoir demolition and relining activities would not result in a new significant impact to cultural resources.

Consistent with conditions outlined in the EIR, in the unlikely event that unanticipated archaeological or paleontological materials are encountered during earthmoving activities involved with the reservoir demolition and relining activities, the construction contractor would be required to cease activity in the affected area until the discovery could be evaluated by a qualified cultural resources specialist (archaeologist or paleontologist, depending on the resource) in accordance with the provisions of CEQA Guidelines Section 15064.5. Because the site of the Upper Stone Reservoir has been previously disturbed, human remains are not anticipated to be present. Though unlikely, it is possible that construction activity could unearth previously unknown and unanticipated human remains. If this were to occur during construction, the contractor would implement the process specified by the California Health and Safety Code, Section 7050.5 for the proper handling of human remains discovered outside of a dedicated cemetery. Impacts would remain less than significant.

East Roadway Reconstruction

This component of the modified project would entail the removal of existing pavement and base material along the eastern and southern portions of the Upper Stone Reservoir perimeter road and the repaving of the road. While construction on this roadway is a new component of the project, this roadway was included in the originally proposed project area that was analyzed for cultural resources impacts in the Phase I Cultural Resources Assessment, and there are no known cultural resources within or adjacent to this roadway.

As stated above, Upper Stone Reservoir is not considered a historic resource; as such, reconstructing a portion of the roadways that surround it would not significantly affect a historic resource. Regarding archaeological and paleontological resources, consistent with conditions outlined in the EIR, in the unlikely event that unanticipated resources are encountered during roadway reconstruction activities, the construction contractor would follow the procedures

outlined above in accordance with the provisions of CEQA Guidelines Section 15064.5. Though it is unlikely that human remains are present along the reservoir's perimeter roadway, if previously unknown and unanticipated human remains were encountered, the contractor would implement the process specified by the California Health and Safety Code, Section 7050.5 for the proper handling of human remains discovered outside of a dedicated cemetery. Impacts would remain less than significant.

Landslide Stabilization

This component of the modified project would involve ground-disturbing activities in an undeveloped portion of the SCRC that falls outside of the originally proposed project area that was analyzed in the Phase I Cultural Resources Assessment. However, it is directly adjacent to the boundaries of the originally proposed project area and therefore falls well within the one-mile radius encompassed by the records search conducted for the Draft EIR. No previously recorded cultural resources are located in this area. To confirm that no new impacts would occur, an intensive-level pedestrian survey of the landslide stabilization area was conducted to determine whether the landslide stabilization component of the modified project would result in any new significant environmental impacts pertaining to cultural resources. No surface evidence of cultural and/or built-environment resources was encountered during the survey.

As stated above, Upper Stone Reservoir is not considered a historic resource; as such, grading and revegetation activities adjacent to the reservoir would not significantly affect a historic resource. Regarding archaeological and paleontological resources, consistent with conditions outlined in the EIR, in the unlikely event that unanticipated resources are encountered during earth-moving activities at the landslide stabilization site, the construction contractor would follow the procedures outlined above in accordance with the provisions of CEQA Guidelines Section 15064.5. Though it is also unlikely that human remains are present on the landslide grading site, if previously unknown and unanticipated human remains were encountered, the contractor would implement the process specified by the California Health and Safety Code, Section 7050.5 for the proper handling of human remains discovered outside of a dedicated cemetery. Impacts would remain less than significant.

Changes in Circumstance/New Information

No substantial changes in the cultural resources setting of the SCRC have occurred since certification of the Final EIR, and no substantial new cultural resources have been identified within the vicinity of the project site. The only new areas of ground disturbance associated with the modified project are the 2.5-acre landslide stabilization area and the east roadway reconstruction area, both of which are adjacent to the Upper Stone Reservoir and well within the

property boundary of the SCRC and the one-mile CHRIS records search area for the approved project. According to LADWP records, no new cultural resources surveys have occurred within the SCRC boundaries since the EIR was approved, and no new information has been identified relative to historic or archaeological resources. Although some regulatory changes have occurred with respect to tribal cultural resources since the Final EIR was approved (Assembly Bill 52), these new rules only apply to projects that have a notice of preparation for an EIR filed on or after July 1, 2015. As such, there are no substantial changes with respect to circumstances under which the project will be undertaken, and there is no new information of substantial importance that has become available relative to cultural resources that would change the impact conclusions in the EIR.

8.5 Wildland Fire

Unlike the originally proposed project, the approved project would not include provision of public access to the SCRC. Operations at SCRC would be similar to existing conditions; as such, the EIR determined that there would not be an increased risk of loss from wildland fire as a result of the Floating Cover Alternative (i.e., the approved project). With the implementation of Best Management Practices related to fire prevention, the impact related to wildfire during construction would be less than significant.

Analysis of the Modified Project

As described above, the wildland fire impacts that were evaluated in the EIR pertained to the originally proposed project's provision of public access to the SCRC for recreational activities. As with the approved project, the modified project would not include the provision of public access to the SCRC. As such, the modified project would not cause new significant environmental effects relative to wildland fire risk.

Changes in Circumstance/New Information

A comparison of aerial images from 2012 (when the Final EIR was approved) and 2016 confirms that no new sources of wildfire potential have been introduced into the project area. No new regulations or design standards have been implemented that would alter the conclusions of the wildland fire analysis for the approved project. As such, there are no substantial changes with respect to circumstances under which the project will be undertaken, and there is no new information of substantial importance that has become available relative to wildland fire in the area that would change the impact conclusions in the EIR.

8.6 Noise

The Draft EIR included an analysis of the following categories of noise: on-site construction equipment noise, on-site construction mobile noise, off-site construction mobile noise, operational noise, construction vibration, and operational vibration. The impact determinations provided for the approved project are summarized below:

- On-site construction equipment noise would not exceed the 5-dBA (A-weighted decibel) significance threshold at nearby sensitive receptors, and impacts would be less than significant.
- On-site construction mobile noise would exceed the 5-dBA significance threshold at nearby sensitive receptors, thereby causing a significant impact. Haul trucks would travel along the interior paved access road that runs from Upper Stone Reservoir to Mulholland Drive. The nearest sensitive receptors to this roadway are residences located on Antelo Place and Roscomare Road, the closest of which are approximately 650 feet from the road. As described in Section 3.6 of the Draft EIR, haul trucks typically generate a noise level of 89 dBA at 50 feet. Truck noise experienced at the closest residence was calculated to be approximately 59.2 dBA, which equates to an increase over the existing ambient noise level of more than 5 dBA. Implementation of mitigation measures NOISE-A and NOISE-B would be required; however, even with implementation of these measures, the noise levels would remain above the City's significance threshold, and the impact from on-site haul truck noise would be significant and unavoidable.
- Off-site construction mobile noise would not exceed the 5-dBA significance threshold, and off-site construction noise impacts would be less than significant.
- Operational noise impacts would not occur because there would be no substantial increases in vehicle trips to and from the site under the approved project. For this reason, there would be no incremental increase in noise levels associated with project operation.
- Construction vibration would be generated by the use of heavy equipment (e.g., a large bulldozer), which would generate vibration levels of 0.089 inches per second at a distance of 25 feet. Truck traffic along the haul route would also have the potential to cause vibration. However, vibration levels at the nearest sensitive receptors would not exceed the potential building damage threshold of 0.3 inches per second. Therefore, construction vibration impacts would be less than significant.
- Operational vibration would be limited to vehicular travel on the local roadways. However, similar to existing conditions, project-related traffic vibration levels would not be perceptible by sensitive receptors. Operational vibration impacts would be less than significant.

Analysis of the Modified Project

The modified project includes changes to the construction scenario that would result in changes to construction noise and vibration. The operations of the modified project would be similar to those of the approved project; as with the approved project, once construction is complete, the operational activities would be similar to those of existing conditions. While the modified project would result in changes to the construction scenario, as discussed below, these project changes would not result in any new significant environmental impacts or result in a substantial increase in the severity of previously identified significant impacts beyond those identified in the EIR for the approved project.

Reservoir Demolition and Relining

This component of the modified project would consist of demolition and relining of the lower extent of the existing Upper Stone Reservoir sidewalls, as well as the construction of a new outlet line within the reservoir and a new control building adjacent to the existing chlorination station. The approved project would have involved more extensive reservoir demolition and relining activities as compared with those of the modified project. Although the intensity of reservoir demolition and relining activities would be reduced, the approved project and the modified project would use similar types and numbers of equipment for these activities. Therefore, maximum construction noise attributable to equipment would be generally the same. On-site construction equipment noise impacts would be similar to the approved project and would thus remain less than significant.

The reservoir demolition and relining modifications would not substantially increase the severity of the significant and unavoidable impact that was identified for the approved project related to haul trucks traveling along the interior access road (on-site construction mobile noise). While the number of trips would be substantially reduced by modifications to reservoir demolition and relining activities, the noise produced by each haul truck would not change, nor would the distance between the trucks and the nearest sensitive receptors. As such, haul trucks would still cause temporary and intermittent exceedances of noise thresholds at nearby sensitive receptors. Specifically, truck noise experienced at the closest residences (located on Antelo Place and Roscomare Road) would be approximately 59.2 dBA, which equates to an increase over the existing ambient noise level of more than 5 dBA. Implementation of NOISE-A and NOISE-B would continue to be required. The impact would remain significant and unavoidable, but there would not be any changes that would increase the severity of this impact, such as a sensitive receptor being located closer to the access road or trucks that produce substantially greater noise levels than those analyzed in the EIR.

The number of off-site haul truck trips attributable to reservoir demolition and relining would be substantially reduced under the modified project. As with the approved project, impacts would be less than significant. As with the approved project, construction vibration would be generated by the use of heavy equipment and by truck traffic along the haul routes. However, no new vibration-causing activities would be introduced by the reservoir demolition and relining modifications. As such, impacts would remain the same (i.e., less than significant). As with the approved project, operational noise and vibration would be limited to vehicular traffic associated with maintenance activities. The project modifications related to reservoir demolition and relining would not change the operational scenario of the approved project, and no new operational noise or vibration impacts would occur.

East Roadway Reconstruction

This component of the modified project would entail the removal of existing pavement and base material along the eastern and southern portions of the Upper Stone Reservoir perimeter road and the repaving of the road. This task would take approximately two months to complete. The approved project did not include this component; as such, the construction activities associated with this task would represent new noise-generating construction activities that were not analyzed as part of the approved project. However, the noise generated by the east roadway reconstruction would not differ substantially from the noise that would have been generated under the approved project from the demolition and relining of the entire reservoir. (Generally, similar equipment and construction activities would be involved for the east roadway reconstruction, such as demolition of pavement and repaving activities.) The east roadway runs directly adjacent to the reservoir; as such, it is not substantially closer to the residential sensitive receptors on the east side of the reservoir such that new significant impacts would occur at these receptors (the nearest residences to the east are 1,400 feet from the Upper Stone Reservoir). As such, the construction activities along the east roadway would not change the EIR conclusion that on-site construction equipment noise impacts would be less than significant.

Project modifications related to the east roadway reconstruction would not increase the severity of the significant and unavoidable impact that was identified for the approved project due to haul trucks traveling along the interior access road (on-site construction mobile noise). The east roadway reconstruction would not cause an increase in the severity of this previously identified significant impact because the distance between the interior site access road and the nearest sensitive receptors has not changed, and the haul trucks used for the modified project would not produce increased noise levels relative to the levels analyzed in the EIR. Mitigation measures NOISE-A and NOISE-B would continue to apply, and the impact would continue to remain significant and unavoidable.

The east roadway reconstruction component of the modified project would not change the EIR determination that off-site construction mobile noise is less than significant. While the east roadway reconstruction is a new component of the project, the modified project as a whole results in fewer off-site haul truck trips relative to the approved project (see Table 1). As with the approved project, impacts would be less than significant. No new vibration-causing activities would be introduced by the east roadway reconstruction since these activities are anticipated to be generally similar to the construction activities that would have occurred at Upper Stone Reservoir under the approved project. As such, impacts would remain the same or similar (i.e., less than significant). The project modifications related to east roadway reconstruction would not change the operational scenario of the approved project, and no new operational noise or vibration impacts would occur.

Landslide Stabilization

This component of the modified project would involve construction activities in an area that was not previously analyzed as part of the approved project. However, the types of construction activities and equipment that would be used at the landslide stabilization site would be generally similar to those that were analyzed under the approved project (i.e., clearing, grading, excavating). During landslide stabilization, construction equipment would be operated slightly closer to residential sensitive receptors on the west side of Upper Stone Reservoir as compared with the approved project. However, the noise produced by construction equipment at the landslide stabilization site is anticipated to remain less than significant. The originally proposed project included landslide stabilization activities on the east side of the Upper Stone Reservoir (see Figure 2-5 of the Draft EIR). These activities would have been located within approximately 1,400 feet of the residential sensitive receptors to the east of Upper Stone Reservoir (see Table 3.6-5 in the Draft EIR). The temporary noise increase at these receptors was anticipated to be approximately 2.5 dBA. This falls below the threshold of significance, which is an increase of 5 dBA. The residential sensitive receptors located to the west of the Upper Stone Reservoir are more than 1,400 feet from the landslide stabilization site. As such, the impact conclusions that were applied to the originally proposed project are applicable to the landslide stabilization component of the modified project. For these reasons, on-site construction noise associated with use of construction equipment at the landslide stabilization site would remain less than significant.

The landslide stabilization component of the modified project would involve new on-site haul truck trips along the interior access road. As described above, the modified project would not change the noise that would be produced by haul trucks. However, unlike the two other components of the modified project (reservoir demolition and relining & east roadway reconstruction), the landslide stabilization component would result in haul truck trips along an

interior access road that was not addressed in EIR noise analysis. As shown in Figure 1 and as described in Section 6, the landslide stabilization component of the modified project would involve trucks traveling from the landslide stabilization site to the sediment disposal site at the Lower Reservoir, as well as the operation of a truck-mounted conveyor belt at the disposal site. The closest residential receptors to the disposal site and the access road connecting the Upper and Lower reservoirs are located along Stradella Road. These receptors are approximately 1,200 feet west of the disposal site and access road. As described above, construction activities for residential sensitive receptors located 1,400 feet east of the originally proposed landslide stabilization activities would have experienced increased noise levels of approximately 2.5 dBA during construction. Using the same assumptions as the EIR noise analysis, sensitive receptors located 1,200 feet east of the sediment disposal site would experience increased noise levels of approximately 3.5 dBA during construction. The noise produced by haul trucks and the truck-mounted conveyor belt would fall below the 5 dBA threshold. Furthermore, noise from all on-site mobile sources would be reduced by mitigation measures NOISE-A and NOISE-B, which limit traffic speeds on the site interior to 15 miles per hour and which limit haul truck activity to the hours of 8:00 a.m. through 5:00 p.m. For these reasons, the haul truck trips along the access road connecting the two reservoirs and the operation of the truck-mounted conveyor belt adjacent to Lower Stone Reservoir would not cause new impacts or increase the severity of the previously identified significant impacts related to interior haul truck trips at the SCRC.

The landslide stabilization component would result in relatively few new off-site haul trips. However, the modified project as a whole would result in an overall decrease on off-site haul trips, and impacts would remain less than significant. No new vibration-causing activities would be introduced by the landslide stabilization processes. While activities would occur slightly closer to residential sensitive receptors at the landslide stabilization site, vibration attenuates quickly with distance (typically on the order of 25 feet), and impacts would remain the same or similar (i.e., less than significant). While some long-term maintenance activities may be required, the number of vehicular trips and activities involved would not differ substantially from existing conditions at the SCRC to the extent that operational noise impacts would be created.

Changes in Circumstance/New Information

A comparison of aerial images from 2012 (when the Final EIR was approved) and 2016 confirms that no new or additional substantial sources of noise or noise receptors have been introduced within the area potentially affected by the project since the certification of the Final EIR. The City of Los Angeles Noise Ordinance has not been substantially revised or amended since the EIR was certified, and the standards for measuring and analyzing noise impacts have not fundamentally changed during this time. As such, there are no substantial changes with respect to circumstances under which the project will be undertaken, and there is no information of

substantial importance that has become available relative to noise that would affect the EIR conclusions.

8.7 Transportation and Traffic

As described in the EIR, the approved project would have a less than significant impact related to level of service (LOS) at study area intersections during construction. However, a significant impact was identified to level of service (LOS) on the study area roadway segments during construction. Implementation of mitigation measures TRANS-A and TRANS-B would reduce impacts; however, impacts to study area roadway segments would remain significant and unavoidable. A significant impact was also identified related to potential safety hazards to vehicles traveling on Mulholland Drive near the SCRC gate, primarily from trucks exiting the site. Mitigation measures TRANS-B and TRANS-D would reduce these impacts to a less than significant level. Impacts to Congestion Management Program (CMP) facilities during construction would be less than significant. During post-construction operations, the analysis in the EIR determined that no impact would occur related to traffic and parking because the approved project would not generate substantial additional traffic or maintenance activity at the SCRC.

Analysis of the Modified Project

As shown in Table 1, the modified project would represent a decrease in the peak daily off-site truck trips and an increase in worker commute trips during construction. Under the approved project, 34 peak daily off-site truck trips were anticipated, and 34 peak daily worker commute trips were anticipated. Under the modified project, 7 peak daily off-site truck trips are anticipated, and 51 peak daily worker commute trips are anticipated. The increase in worker commute trips would be offset by the decrease in off-site truck trips, equating to an overall decrease in construction trip generation. As such, traffic and transportation impacts are anticipated to be the same or less relative to the approved project. While the modified project would result in changes to the construction scenario, these project changes would not result in any new significant environmental impacts or result in a substantial increase in the severity of the previously identified significant impacts beyond those identified in the EIR for the approved project. The same mitigation measures (TRANS-A, TRANS-B, and TRANS-D) would be applied to the project.

As with the approved project, the modified project would not substantially alter the operational conditions of the SCRC relative to existing conditions. No operational traffic impacts would result.

Changes in Circumstance/New Information

It is expected that the amount of background traffic has increased since the time of Final EIR certification (a 1% ambient growth rate is assumed per year). However, the impact analysis in the EIR covered both baseline traffic in the study area and the increase in background traffic that would have occurred with or without the project. Background traffic assumptions were projected to 2014 for the approved project and to 2019 for the originally proposed project. The only changes to intersection LOS projected to occur between 2014 and 2019 were increases from LOS B to LOS C at Study Intersection 4 (Skirball Center Drive/I-405 Northbound Ramps) and from LOS A to LOS B at Study Intersection 5 (Skirball Center Drive/I-405 Southbound Ramps). Both of these intersections would continue to operate at acceptable levels (i.e., LOS D or better) under the 2019 future without project scenario. Construction of the modified project would commence in early 2017 and continue for about 2 years; therefore, the modest increase in background traffic conditions is not expected to alter any of the significance determinations for the approved project relative to traffic. More importantly, the overall number of passenger car equivalent (PCE) trips associated with the modified would decrease relative to the approved project due to the changes in the construction process for the reservoir liner as described in Section 6. Specifically, the approved project would result in 34 peak off-site truck trips and 34 peak commute trips, totaling 119 PCE trips (1 truck trip represents 2.5 PCE trips). The modified project would result in 7 peak off-site truck trips and 51 peak commute trips, totaling 69 PCE trips. The reduction in project related peak traffic associated with the modified project would offset the minor increase in background traffic described above. Because no increase in operational traffic would occur, future projections beyond the construction period are not necessary. As such, increase in background traffic would not substantially alter the significance conclusions for the modified project. There are no other substantial changes with respect to circumstances under which the project will be undertaken, and there is no information of substantial importance that has become available relative to traffic that would affect the EIR conclusions.

APPENDICES

APPENDIX A

Landslide Hydroseed Mix

Landslide Area Hydroseed Mix

SCIENTIFIC NAME	COMMON NAME	PLS	LBS/ACRE	TOTAL LBS
Artemisia californica	California sagebrush	10	4.0	5.2
Baccharis pilularis	Coyote bush	1	0.5	0.7
*Bromus carinatus**	California brome	85	1.0	1.3
*Casteilleja exerta**	Owl's clover	25	2.5	3.3
Ceanothus cuneatus	Buckbrush	75	1.5	2.0
Elymus condensatus	Giant wildrye	70	3.0	4.0
Encelia californica	California sunflower	25	2.5	3.3
Eriogonum fasciculatum	California buckwheat	10	2.0	2.6
Hesperoyucca whipplei	Chaparral yucca	60	1.5	2.0
Isocoma menziesii	Menzie's goldenbush	15	1.5	2.0
*Lasthenia californica**	Coast goldenfield	50	2.0	2.6
*Lupinus bicolor**	Bicolored lupine	90	2.0	2.6
Malacothamnus fasciculatus	Chaparral mallow	10	2.5	3.3
Malosma laurina	Laurel sumac	70	1.0	1.3
Mimulus aurantiacus	Orange bush monkeyflower	2	2.0	2.6
Rhus ovata	Sugar sumac	75	2.5	3.3
Ribes speciosum	Fuchsiaflower gooseberry	**	2.5	3.3
Salvia mellifera	Black sage	40	5.0	6.5
Stipa lepida	Foothill needlegrass	65	1.5	2.0
Total			41.0	53.9

Notes: PLS = pure live seeds; LBS/ACRE = pounds per ace; LBS = pounds

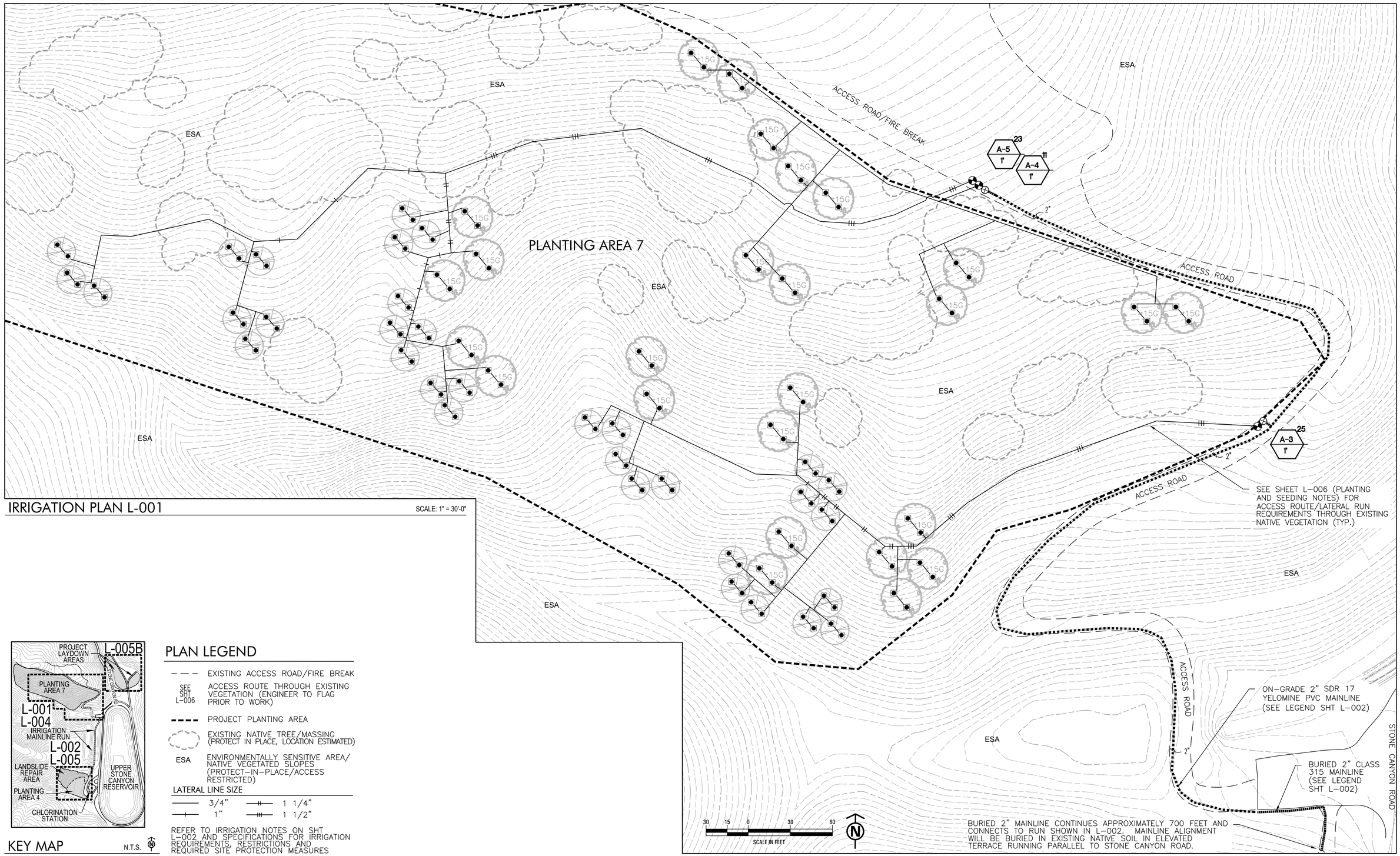
***** Nurse crop species to provide quick cover and slope stability.

****** Not likely to be available in seed but will be available in containers or liners.

APPENDIX B

Tree Planting and Irrigation Plan

D05744-L-001



IRRIGATION PLAN L-001

SCALE: 1" = 30'-0"

KEY MAP

N.T.S.

PLAN LEGEND

- EXISTING ACCESS ROAD/FIRE BREAK
- SEE SHT L-006 — ACCESS ROUTE THROUGH EXISTING VEGETATION (ENGINEER TO FLAG PRIOR TO WORK)
- PROJECT PLANTING AREA
- EXISTING NATIVE TREE/MASSING (PROTECT IN PLACE, LOCATION ESTIMATED)
- ESA — ENVIRONMENTALLY SENSITIVE AREA/ NATIVE VEGETATED SLOPES (PROTECT-IN-PLACE/ACCESS RESTRICTED)

LATERAL LINE SIZE

- 3/4" — 1 1/4"
- 1" — 1 1/2"

REFER TO IRRIGATION NOTES ON SHT L-002 AND SPECIFICATIONS FOR IRRIGATION REQUIREMENTS, RESTRICTIONS AND REQUIRED SITE PROTECTION MEASURES

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LICENSED LANDSCAPE ARCHITECT — SHARI F. FRASER — 5611 — Signature — Date — Renewal Date 6-21-16 — STATE OF CALIFORNIA

REVISIONS					
Number	Date	Initials	Location	Description	Approved

REFERENCES

File Name D05744-L-001.DWG

Scale	AS SHOWN	
Designer	S. FRASER	02/15/16
Assistant		
Drawn By	S. FRASER	2/15/16
Checked By	L. MICHL	2/15/16
Last Update	SFF	06/17/16
Recommended J. RESONG		
ANDREW L. LINARD		6/16

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As to Design SUSAN ROWGHANI	6/16
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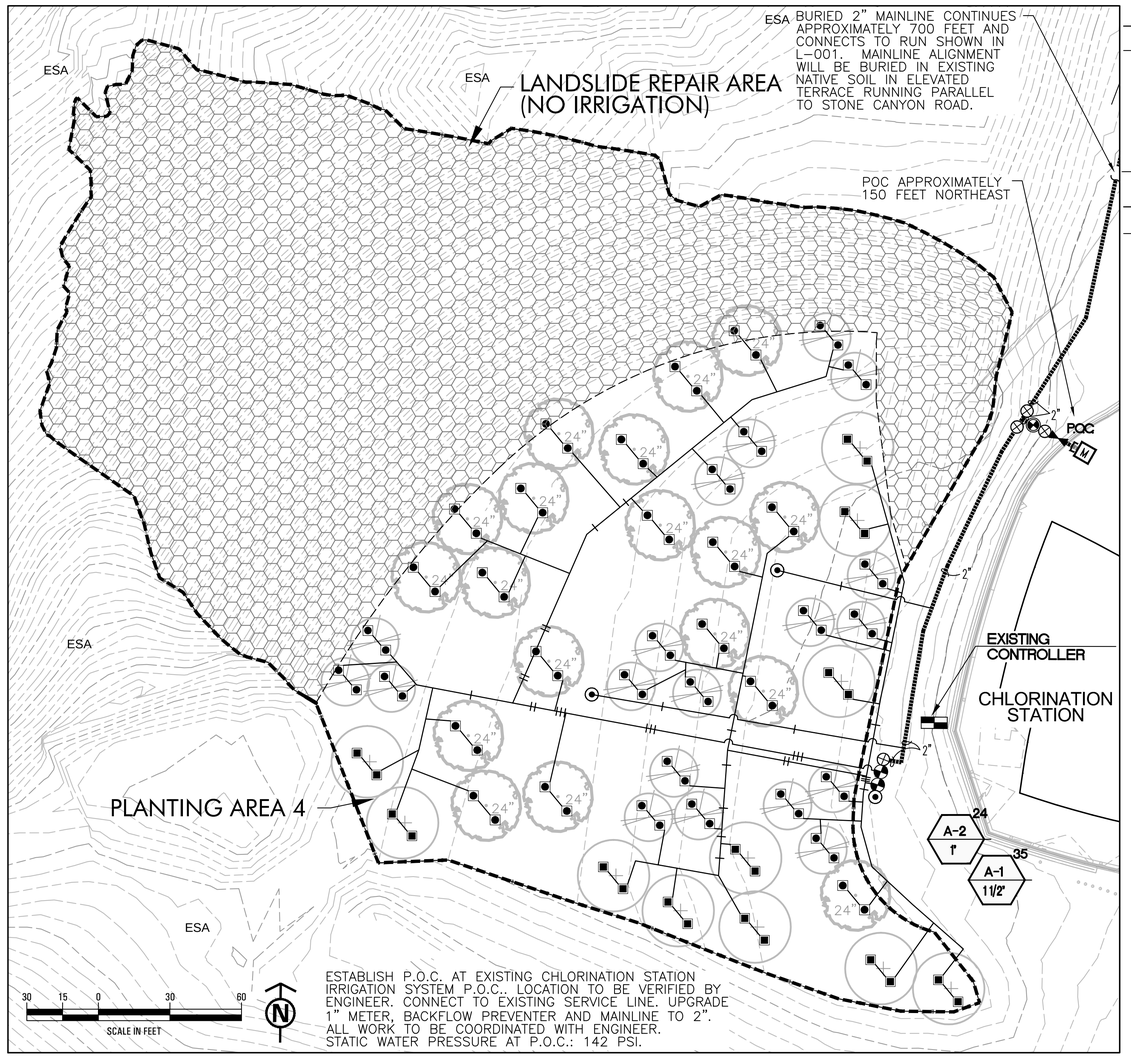
UPPER STONE CANYON RESERVOIR WQIP
LANDSLIDE REPAIR
IRRIGATION PLAN

DEPARTMENT OF WATER AND POWER
WATER SYSTEM — CITY OF LOS ANGELES

DRAWING NUMBER
D05744 -L-001

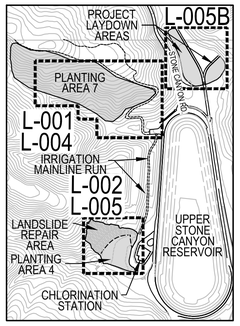
VERSION: 01.0

D05744-L-002



IRRIGATION PLAN L-002

SCALE: 1" = 30'-0"



KEY MAP N.T.S.

PLAN LEGEND

- LANDSLIDE REPAIR AREA (NO IRRIGATION)
- PROJECT PLANTING AREA

LATERAL LINE SIZE

- 3/4"
- 1"
- 1 1/4"
- 1 1/2"

REFER TO IRRIGATION LEGEND (THIS SHEET) AND SPECIFICATIONS FOR IRRIGATION COMPONENT SYMBOLS, AND ADDITIONAL IRRIGATION REQUIREMENTS, RESTRICTIONS AND REQUIRED SITE PROTECTION MEASURES

GENERAL IRRIGATION NOTES:

1. 140PSI MIN. STATIC PRESSURE REQUIRED AT P.O.C. TO OPERATE SYSTEM AT HIGHER ELEVATIONS. A SIGNIFICANT REDUCTION IN AVAILABLE PRESSURE MAY REQUIRE REDESIGN OF SYSTEM TO ADEQUATELY OPERATE IRRIGATION EMITTERS (AREA 7).
2. LATERAL RUNS THROUGH EXISTING NATIVE VEGETATION SHALL REQUIRE PRE-APPROVAL BY THE ENGINEER PRIOR TO WORK. THE ENGINEER SHALL REVIEW PROPOSED ALIGNMENT IN THE FIELD PRIOR TO INSTALLATION. LATERAL RUNS SHALL FOLLOW ESTABLISHED AND MAINTAINED TREE PLANTING AND MAINTENANCE ROUTES, AS PRACTICABLE. SEE SHEET L-006 FOR ACCESS ROUTE ESTABLISHMENT AND MAINTENANCE REQUIREMENTS.
3. TRENCH/ON-GRADE ALIGNMENT FOR MAINLINE IRRIGATION RUNS SHALL BE INSTALLED OUTSIDE OF NATIVE VEGETATION OR ESA. ON-GRADE ALIGNEMENT SHALL BE INSTALLED OUTSIDE OF EXISTING ACCESS ROADS. THE ENGINEER SHALL REVIEW PROPOSED ALIGNMENT IN THE FIELD PRIOR TO INSTALLATION.
4. SOIL DISTURBANCE FROM MAINLINE TRENCHING AND ON-GRADE INSTALLATION SHALL REQUIRE INSTALLATION AND MAINTENANCE OF BEST MANAGEMENT PRACTICES (BMP) TO PREVENT EROSION OR DOWNSTREAM SEDIMENTATION, PARTICULARLY ALONG THE EXISTING ACCESS ROAD (SHT L-001).
5. IRRIGATION SYSTEM IS SHOWN DIAGRAMMATICALLY, SYSTEM SHALL BE INSTALLED BASED ON A LAYOUT ADJUSTED TO GRADING WORK (PLANTING AREA 4), ACCESS ROAD ALIGNMENT AND THE FIELD VERIFIED LOCATIONS OF CONTAINER PLANT PLACEMENT IN PLANTING AREA 7.

IRRIGATION EMITTER LEGEND

SYMBOL	MANUF.	MODEL NO.	DESCRIPTION	DETAIL	PSI	GPM	NOTES
◉ ———	HUNTER	PCB-50 W/ HC-50F-50M	PRESSURE COMPENSATING BUBBLER W/ 1/2" DRAIN CHECK VALVE	Ⓐ	15-70	0.5	INSTALL 2 PER PLANTING BASIN FOR ALL JUGLANS CALIFORNICA AND QUERCUS AGRIFOLIA CONTAINER PLANTS, PER DETAIL AND SPECS. ADJUST DRAIN CHECK VALVE TO PREVENT LOW HEAD DRAINAGE
■ ———	HUNTER	PCB-10 W/ HC-50F-50M	PRESSURE COMPENSATING BUBBLER W/ 1/2" DRAIN CHECK VALVE	Ⓐ	15-70	1.0	INSTALL 2 PER PLANTING BASIN FOR ALL PLATANUS RACEMOSA CONTAINER PLANTS, PER DETAIL AND SPECS. ADJUST DRAIN CHECK VALVE TO PREVENT LOW HEAD DRAINAGE

IRRIGATION EQUIPMENT LEGEND

SYMBOL	MANUF.	MODEL NO	DESCRIPTION	DETAIL	NOTES
M	N/A	N/A	2" IRRIGATION METER	N.A.	N.A.
P.O.C.	N/A	N/A	POINT OF CONNECTION (P.O.C.) AT CHLORINATION STATION	N.A.	COORDINATE CONNECTION AT EXISTING CHLORINATION STATION IRRIGATION P.O.C. WITH LADWP. EST. PSI =142
	RAINMASTER (EXISTING)	EVOLUTION DX2	MOUNTED AT CHLORINATION STATION (EXISTING)	N.A.	CONNECT NEW VALVES TO EXISTING CONTROLLER AT AVAILABLE OPEN STATIONS. PROGRAM IN CONSULTATION W/ THE ENGINEER. ESTABLISH DEDICATED OUTPUT FOR NEW IRRIGATION VALVES AND NEW MASTER VALVE (NORMALLY CLOSED)
	WATTS	009-M2QT-1 1/2"	2" REDUCED PRESSURE BACKFLOW PREVENTER	Ⓔ	OR APPROVED EQUAL. REPLACE EXISTING 1" BACKFLOW PREVENTER AND UPSIZE INLET AND OUTLET PIPES TO 2". BACKFLOW PREVENTER MUST BE CERTIFIED BY A CITY OF LOS ANGELES APPROVED TESTER PRIOR TO ACTIVATION.
	WILKENS	500 HR-1 1/2"	2" PRESSURE REGULATOR	Ⓔ	PART OF BACKFLOW PREVENTER ASSEMBLY
	RAINBIRD	150 PEB-PRS-D	1 1/2" PLASTIC PRESSURE REGULATING REMOTE CONTROL MASTER VALVE	Ⓑ	BOLT VALVE BOX LID SHUT UPON INSTALLATION (STAMP MASTER VALVE ON TOP OF VALVE BOX). NORMALLY CLOSED.
	RAINBIRD	100 PEB-PRS-D	1" PLASTIC PRESSURE REGULATING REMOTE CONTROL VALVE	Ⓑ	SIZE PER PLAN. BOLT VALVE BOX LID SHUT UPON INSTALLATION (STAMP VALVE # ON TOP OF VALVE BOX). NORMALLY CLOSED. ADJUST PRESSURE TO PROVIDE PROPER OPERATION OF BUBBLER EMITTERS. PRESSURE AT EMITTERS SHALL MAINTAIN BETWEEN 20-60 PSI AT ALL TIMES
	RAINBIRD	33-RC WITH 33DK VALVE KEY	QUICK COUPLING WITH RUBBER CAP AND VALVE KEY	Ⓓ	INSTALL IN LOCKING VALVE BOX. LID SHUT AND LOCKED UPON INSTALLATION. USE MIN. 1 1/2" SCH 40 PVC STAKED ON GRADE TO CONNECT TO MAINLINE FOR ISOLATED RUNS
	KBI	BLOCKED TRUE UNION BALL VALVE	PVC SCH 80 BALL VALVE (SIZE PER PLAN)	Ⓒ	FOR ISOLATION OF VALVE MANIFOLDS, SET BELOW GRADE IN LOCKING VALVE BOX. (LINE SIZE, TYPICAL).
N.A.	KBI	KC SERIES	IN-LINE SPRING CHECK VALVE	N.A.	INSTALL DRAIN CHECK VALVE ON LATERAL LINES IF GREATER THAN 15 VERTICAL FEET BELOW VALVE. TO PREVENT LOW-HEAD DRAINAGE
———	LATERAL LINE	SCH 40 PVC-UV (ON GRADE)	UV RESISTANT PVC LATERAL LINE (SEE PLAN AND LEGEND FOR SIZE)	Ⓐ	STAKE ON GRADE AT 10' O.C. AND AT ALL CORNERS. STAKES SHALL EXTEND 12" (MIN.) INTO SUBGRADE. PLACE IN PVC SLEEVE 24" BELOW GRADE AT ALL TRAIL AND ROAD CROSSINGS. SIZE PER LATERAL PIPE SIZING TABLE. ENGINEER SHALL APPROVE ALL LATERAL RUNS THROUGH NATIVE VEGETATION PRIOR TO INSTALLATION.
▪▪▪▪▪▪	PRESSURE MAINLINE (BURIED)	2": CLASS 315 PVC 1 1/2": SCH 40	BURIED IRRIGATION MAINLINE	Ⓕ	SET IN 18" (MIN.) DEEP TRENCH FOR LENGTH DEPICTED ON PLANS. SLEEVE AT ALL ROAD CROSSINGS IN 2X DIA. PVC. INSTALL THRUST BLOCKS AT ALL VERTICES AND CHANGES OF DIRECTION (PER NOTES). SIZE PER PLAN.
▪▪▪▪▪▪	PRESSURE MAINLINE (ON GRADE)	2" SDR 17 CERTA-LOK YELOMINE PVC	ON-GRADE IRRIGATION MAINLINE	Ⓕ	INSTALL ON GRADE FOR LENGTH DEPICTED ON PLANS. INSTALL ON OUTSIDE OF EXISTING ACCESS ROAD. CONNECT WITH CERTA-LOK COUPLINGS, PER MANUFACTURER'S REQUIREMENTS. SLEEVE CONTROL WIRES IN 1 1/2" SCH 40 PVC AND ATTACH TO MAINLINE. STAKE ON GRADE AT MIN. 20' O.C. AND AT ALL ENDS. STAKES SHALL EXTEND 16" (MIN.) INTO SUBGRADE. INSTALL THRUST BLOCKS AT ALL VERTICES AND CHANGES OF DIRECTION (PER NOTES). SIZE PER PLAN.
N.A.	SLEEVING	SCH 40 PVC	SLEEVING AT ROAD AND TRAIL CROSSINGS. LINE TO BE 2X PIPE SIZE IT WILL CARRY	N.A.	STAKE SLEEVES TO BOTTOM OF TRENCHES. STAKES SHALL BE 48" O/C & EXTEND 18" INTO SOIL. SLEEVING SHALL BE 24" BELOW GRADE. INSTALL METALLIC BACKED MARKING TAPE ALONG LENGTH 12" ABOVE SLEEVE LABELED 'IRRIGATION' IN 2" CAPITAL LETTERS @ EVERY 3'.

TYPICAL VALVE CALL-OUT & CONTROLLER REFERENCE:

A-1 25 11/2"

- TOTAL GALLONS PER MINUTE FOR VALVE
- CONTROLLER & VALVE STATION NUMBER
- VALVE SIZE (SEE PLANS)

THRUST BLOCKS:

1. THRUST BLOCKS SHALL BE INSTALLED ALONG THE LENGTH OF THE MAINLINE AT ALL CHANGES OF DIRECTION (TEES, ELBOWS), AT STOPS OR ENDS, AND AT EQUIPMENT DEPICTED IN THE LEGEND OR DETAILS.
2. BURIED THRUST BLOCKS SHALL BE CONSTRUCTED AT THE OUTSIDE EDGE OF AN ELBOW OR DOWNSTREAM OF A TEE. AND ON-GRADE THRUST BLOCKS SHALL COMPLETELY ENCASE PIPES.
3. ALL CONCRETE THRUST BLOCK BEARING FACES SHALL BE POURED AGAINST UNDISTURBED SOIL OR 90% COMPACTED BACKFILL. ON-GRADE THRUST BLOCKS SHALL BE POURED INTO A TEMPORARY CONSTRUCTED FORM FOR ALL EXPOSED BERING FACES.
4. A MINIMUM APWA CLASS 2000 PORTLAND CEMENT CONCRETE SHALL BE USED ON ALL THRUST BLOCKS.
5. FITTINGS SHALL BE ENCASED IN AN 8 MIL VINYL WRAP PLASTIC COVER.
6. THRUST BLOCKS SHALL BE A MINIMUM OF 1.5 CUBIC FEET, UNLESS OTHERWISE DEPICTED.

LATERAL LINE PIPE SIZING CHART

IRRIGATION GPM	MIN. PIPE SIZE	PIPE TYPE
0 - 8.5	3/4"	PVC SCH 40
8.5 - 12.5	1"	PVC SCH 40
12.5 - 22.5	1 1/4"	PVC SCH 40
22.5 - 34.5	1 1/2"	PVC SCH 40
34.5 - 54.5	2"	PVC CLASS 315
54.5 - 74.5	2 1/2"	PVC CLASS 315
74.5 - 110.0	3"	PVC CLASS 315

OPERATION NOTES:

1. THIS IRRIGATION PLAN IS DESIGNED AS A TEMPORARY SYSTEM WITH DEACTIVATION AFTER SUITABLE ESTABLISHMENT OF NATIVE VEGETATION HAS BEEN ACHIEVED, AS DETERMINED BY THE ENGINEER.
2. THE INITIAL IRRIGATION SCHEDULE AND MAXIMUM RUN TIME SHALL BE DETERMINED BY MEASURING THE TIME OF OPERATION THAT RESULTS IN SATURATION OF PLANTING BASIN SOIL, BUT DOES NOT RESULT IN RUNOFF OUTSIDE OF BASINS. A RUNOFF TEST SHALL BE CONDUCTED FOR EACH VALVE ON THE SYSTEM. THE VALVE SHALL BE TURNED ON AND ALLOWED TO OPERATE UNTIL RUNOFF IS OBSERVED. THE TIME RECORDED SHALL BE THE MAXIMUM RUN TIME FOR EACH VALVE. THE IRRIGATION SCHEDULE AND MAXIMUM RUN TIME SHALL BE REVIEWED AT AN INTERVAL ESTABLISHED BY THE ENGINEEER AND ADJUSTED AS APPROPRIATE PER THE RECOMMENDATION OF THE ENGINEER.
3. THE IRRIGATION SCHEDULE SHALL BE CONTINUALLY MONITORED AND ADJUSTED, AS NEEDED BASED ON CURRENT WEATHER CONDITIONS, PROGRESS IN PLANT ESTABLISHMENT, AND INDIVIDUAL CONTAINER TREE HEALTH.

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LICENSED LANDSCAPE ARCHITECT STUART F. FRASER 3457 Certified 10-31-16 Renewal Date 6-12-16 Date STATE OF CALIFORNIA

REVISIONS					
Number	Date	Initials	Location	Description	Approved

REFERENCES

File Name D05744-L-002.DWG

Scale	AS SHOWN	DATE
Designer	S. FRASER	02/15/16
Assistant		
Drawn By	S. FRASER	2/15/16
Checked By	L. MICHL	2/15/16
Last Update	SFF	06/17/16
Recommended J. RESONG		
ANDREW L. LINARD		6/16

APPROVED	DATE
As to Design SUSAN ROWGHANI	6/16
As to Operation RICHARD F. HARASICK	6/16
As to Distribution KEITH D. SESSION	6/16
Senior Assistant GM of Water MARTIN L. ADAMS	6/16

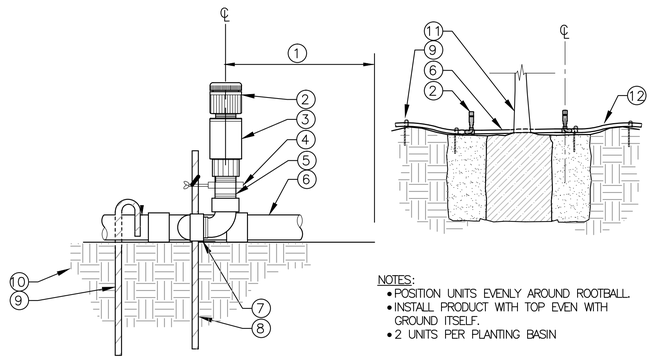
UPPER STONE CANYON RESERVOIR WQIP
LANDSLIDE REPAIR
IRRIGATION PLAN, LEGENDS AND NOTES

DEPARTMENT OF WATER AND POWER
WATER SYSTEM CITY OF LOS ANGELES

DRAWING NUMBER D05744 -L-002

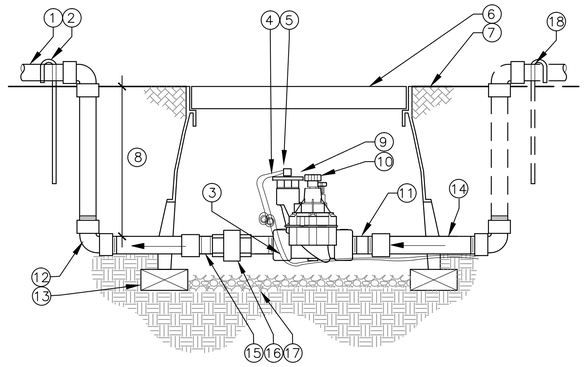
VERSION: 01.0

D05744-L-003



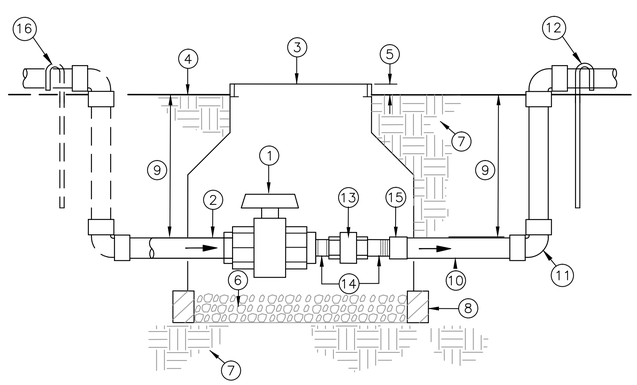
ITEM	DESCRIPTION
1	6" (MIN.) FROM INSIDE EDGE OF PLANTING BASIN
2	2 PRESSURE COMPENSATING BUBBLER PER BASIN (SEE LEGEND)
3	DRAIN CHECK VALVE (SEE LEGEND FOR REQ.)
4	RUBBER TWIST TIE TO SECURE HEAD AND RISER TO STAKE –MIN. 1
5	1/2" SCH 80 NIPPLE
6	UV RESISTANT PVC LATERAL LINE ON GRADE
7	SWING JOINT ASSEMBLY ATTACHED TO PVC PIPE FITTING (2" marlex st. ells)
8	18" #3 REBAR STAKE (min 12" into grade) DO NOT PENETRATE ROOT BALL
9	#3 REBAR J-STAKE AT 10' O.C. (MAX.) AND AT PIPE ENDS. (stakes to extend min. 12" into subgrade)
10	EXISTING GRADE
11	CONTAINER TREE (SEE PLANTING DETAIL A, SHT L-006)
12	CONTAINER TREE PLANTING BASIN (SEE PLANTING DETAIL A, SHT L-006)
10	EXISTING GRADE

A ON-GRADE BUBBLER HEAD DETAIL
SECTION – NOT TO SCALE



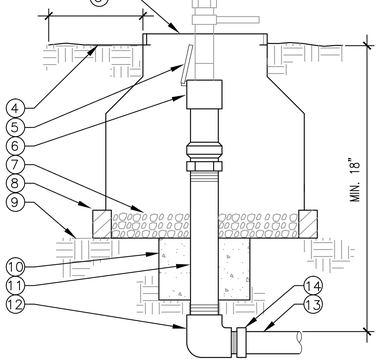
ITEM	DESCRIPTION
1	UV RESISTANT PVC LATERAL PIPE, SEE LEGEND
2	#3 REBAR J STAKE (SET 12" INTO GRADE MIN.)
3	CONTROL WIRES, TAPE TO BOTTOM OF MAINLINE
4	CONTROL WIRES, BUNDLE AND TAPE (INCLUDE A MIN OF 4" OF EXTRA WIRE COILED INTO VALVE BOX)
5	WATER PROOF WIRE CONNECTORS
6	LOCKABLE VALVE BOX (SEE LEGEND & SPECS)
7	FINISH GRADE/EXISTING GRADE/TOP OF MULCH
8	18" (MIN.) DEPTH FOR MAINLINE/LATERALS IN & OUT OF VALVE BOX
9	SOLENOID
10	REMOTE CONTROL VALVE (SEE LEGEND)
11	PVC SCH 80 NIPPLE (TYP). TEFLON TAPE THREADS.
12	PVC SCH 80 ELL (TYP)
13	BRICK OR BLOCK SUPPORTS
14	PVC MAINLINE PIPE FROM ISOLATION VALVE. BELOW GRADE VALVES A-1 & A-2 AND ABOVE GRADE FROM VALVES A-3, 4 & 5, SEE LEGEND
15	SHORT NIPPLES PVC, SCH 80 (typ)
16	UNION (PVC)
17	3.0–INCH MINIMUM DEPTH OF PEA GRAVEL SUMP
18	#4 REBAR J–STAKE ON ON–GRADE MAINLINE AT 40' O.C. (MAX.) AND ON ENDS. EXTEND 16" INTO SUBGRADE (MIN.)

B REMOTE CONTROL VALVE/MASTER VALVE
SECTION – NOT TO SCALE



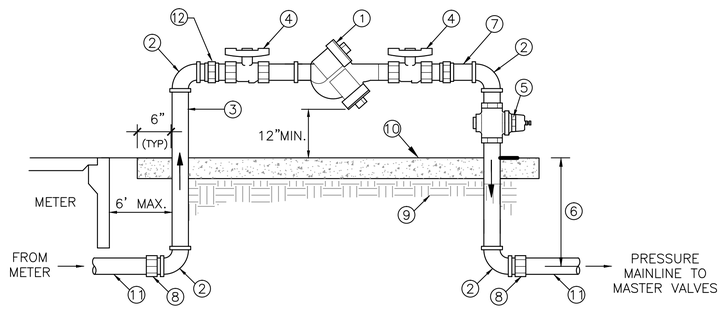
ITEM	DESCRIPTION
1	PVC SCH 80 BALL VALVE W/INTEGRAL UNION, SEE LEGEND
2	PVC MAINLINE PIPE FROM P.O.C. ON GRADE IN AREA 7
3	PLASTIC VALVE BOX WITH LOCKING LID, (SEE NOTES)
4	FINISH GRADE
5	2" ABOVE FINISH GRADE
6	6" DEEP (MIN.) PEA GRAVEL SUMP
7	COMPACTED SUBGRADE TO 90%
8	BRICK OR CONC. BLOCK SUPPORTS ON COMPACTED SOIL
9	18" (MIN.) DEPTH FOR MAINLINE, 24" DEPTH AT ROADS/DRIVEWAYS
10	PVC LATERAL PIPE TO SPRINKLER HEADS
11	PVC SCH 40 SXS ELL
12	#3 REBAR J–STAKE, EXTEND 16" INTO SUBGRADE (MIN.) (SEE NOTES)
13	UNION (PVC)
14	SHORT NIPPLES PVC, SCH 80 (typ)
15	PVC SCH 80 FEMALE ADAPTER (typ)
16	#4 REBAR J–STAKE ON ON–GRADE MAINLINE AT 40' O.C. (MAX.) AND ON ENDS. EXTEND 16" INTO SUBGRADE (MIN.)

C MANUAL CONTROL BALL VALVE
SECTION – NOT TO SCALE



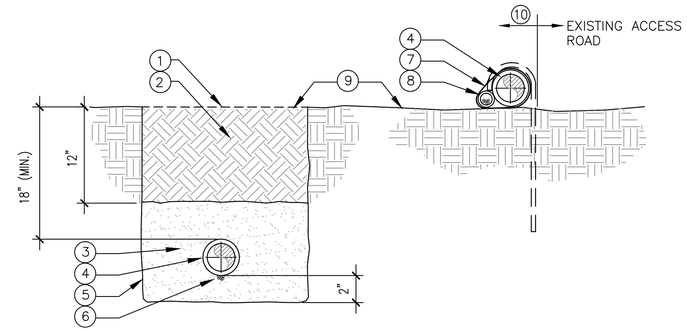
ITEM	DESCRIPTION
1	QUICK COUPLER KEY W/SWIVEL HOSE ELL
2	PLASTIC VALVE BOX WITH LOCKING LID, SEE SPECS
3	18" FROM EDGE OF PATHS, ETC
4	FINISH GRADE
5	RUBBER COVER
6	QUICK COUPLER VALVE, SEE LEGEND
7	1 CU. FT. (min) PEA GRAVEL SUMP
8	BRICK OR CONC. BLOCK SUPPORTS ON COMPACTED SOIL
9	COMPACT SUBGRADE TO 90% COMPACTED SUBGRADE
10	8"x 8"x8" CONCRETE THRUST BLOCK ON 90% COMPACTED NATIVE GRADE
11	RED BRASS NIPPLE (length as required)
12	RED BRASS THREADED ELL
13	PVC MAINLINE PIPE, SEE LEGEND
14	PVC SCH 80 MALE ADAPTER (slip x thread)

D QUICK COUPLER VALVE DETAIL
SECTION – NOT TO SCALE



ITEM	NO.	DESCRIPTION
1	1	REDUCED PRESSURE BACKFLOW PREVENTER (RPBP), SEE LEGEND
2	4	RED BRASS 90 °ELBOW
3	2	RED BRASS RISER
4	1	RESILIENT SEATED BALL VALVE (part of RPBP assembly)
5	1	PRESSURE REGULATOR, SEE LEGEND
6	1	18" MIN. DEPTH
7	VARIES	SHORT RED BRASS NIPPLES (AS REQUIRED)
8	2	PVC SCH 80 FEMALE ADAPTER TO MAINLINE
9	–	COMPACT SUBGRADE TO 90%
10	1	4" THICK X 12" WIDE CONCRETE (2000 P.S.I. PAD, W/ 2% CROSS PITCH)
11	–	PVC MAINLINE, SEE LEGEND
12	2	RED BRASS UNION

E BACKFLOW PREVENTER ASSEMBLY DETAIL
SECTION – NOT TO SCALE



BURIED MAINLINE ON-GRADE MAINLINE

ITEM	DESCRIPTION
1	FINISH GRADE (BURIED MAINLINE)
2	NATIVE SOIL BACKFILL FREE OF ROCKS AND DEBRIS, SATURATE AND AND COMPACT BACKFILL TO 90% (BURIED MAINLINE)
3	CLEAN BACKFILL OVER AND AROUND PIPE, NO ROCKS OR DEBRIS (BURIED MAINLINE)
4	PVC IRRIGATION PIPE, SEE PLANS AND LEGEND
5	LEVEL AND COMPACT TRENCH BED BEFORE PIPE PLACEMENT (BURIED MAINLINE)
6	TAPE CONTROL WIRES TO BOTTOM OF PIPE (BURIED MAINLINE)
7	STRAP CONTROL WIRE PIPE TO PIPE WITH HEAVY DUTY CABLE TIE (ON–GRADE MAINLINE)
8	ON–GRADE CONTROL WIRES IN SCH 40 PIPE (ON–GRADE MAINLINE)
9	EXISTING GRADE
10	LOCATE OUTSIDE OF EXISTING ACCESS ROAD (ON–GRADE MAINLINE)
11	#4 REBAR J–STAKE AT 40' O.C. (MAX.) AND ON ENDS. EXTEND 16" INTO SUBGRADE (MIN.) (ON–GRADE)

F MAINLINE DETAIL (BURIED/ON GRADE)
SECTION – NOT TO SCALE

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LICENSED LANDSCAPE ARCHITECT — STUART F. FRASER — 2499 — STATE OF CALIFORNIA

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Assistant		
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UPPER STONE CANYON RESERVOIR WQIP
LANDSLIDE REPAIR
IRRIGATION DETAILS

DEPARTMENT OF WATER AND POWER
WATER SYSTEM — CITY OF LOS ANGELES

DRAWING NUMBER
D05744 -L-003

VERSION: 01.0

D05744-L-004

PLANTING AREA 7

ESA

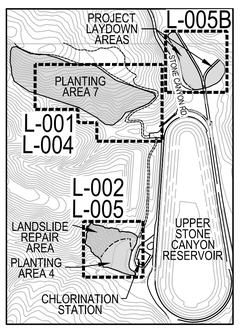
ACCESS ROAD/FIRE BREAK

ACCESS ROAD

STONE CANYON ROAD

•15G

PLANTING PLAN L-004



KEY MAP N.T.S.

PLAN LEGEND

- JUGLANS CALIFORNICA
- QUERCUS AGRIFOLIA (CONTAINER SIZE) — xx"
- EXISTING NATIVE TREE/MASSING (PROTECT–IN–PLACE, LOCATION ESTIMATED)
- PROJECT PLANTING AREA
- EXISTING ACCESS ROAD/FIRE BREAK
- ESA — ENVIRONMENTALLY SENSITIVE AREA/ NATIVE VEGETATED SLOPES (PROTECT–IN–PLACE/ACCESS RESTRICTED)
- ACCESS ROUTE THROUGH EXISTING VEGETATION (DIAGRAMATIC) (ENGINEER PRE–APPROVAL OF ROUTE REQUIRED PRIOR TO WORK, SEE NOTES)

REFER TO PLANTING LEGEND ON SHT L–006 AND SPECIFICATIONS FOR PLANT PALETTES, SEED MIX AND ADDITIONAL PLANTING REQUIREMENTS, RESTRICTIONS AND REQUIRED SITE PROTECTION MEASURES

30 15 0 30 60 SCALE IN FEET

N

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LICENSED LANDSCAPE ARCHITECT STUART F. FRASER 5801 Signature 10-31-16 Renewal Date STATE OF CALIFORNIA

REVISIONS					
Number	Date	Initials	Location	Description	Approved

REFERENCES	
File Name	D05744-L-004.DWG

Scale	AS SHOWN	DATE
Designer	S. FRASER	02/15/16
Assistant		
Drawn By	S. FRASER	2/15/16
Checked By	L. MICHL	2/15/16
Last Update	SFF	06/17/16
Recommended J. RESONG		
ANDREW L. LINARD		6/16

APPROVED	DATE
As to Design SUSAN ROWGHANI	6/16
As to Operation RICHARD F. HARASICK	6/16
As to Distribution KEITH D. SESSION	6/16
Senior Assistant GM of Water MARTIN L. ADAMS	6/16

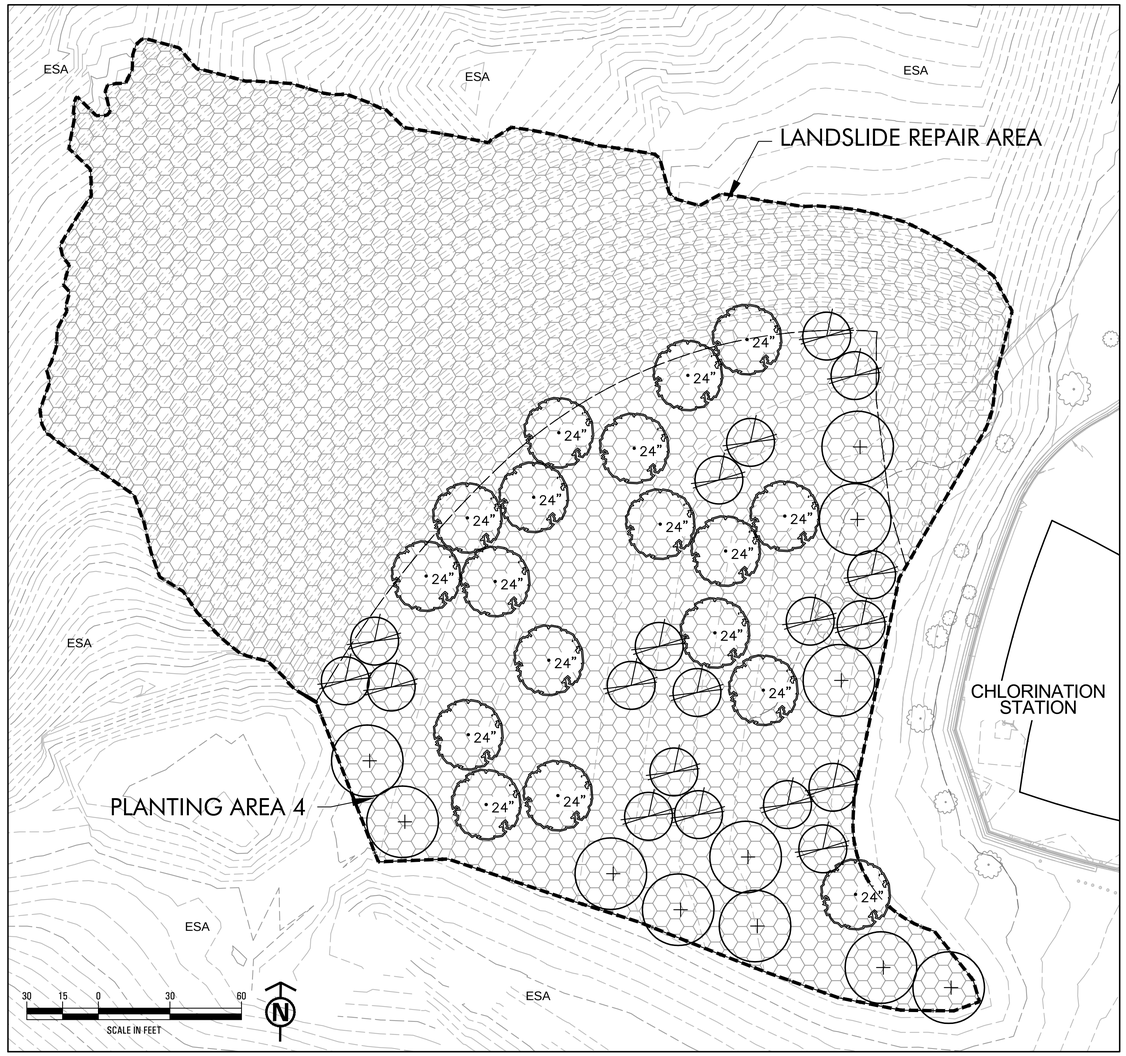
UPPER STONE CANYON RESERVOIR WQIP
LANDSLIDE REPAIR
PLANTING PLAN AND LEGEND

DEPARTMENT OF WATER AND POWER
WATER SYSTEM — CITY OF LOS ANGELES

DRAWING NUMBER D05744 -L-004

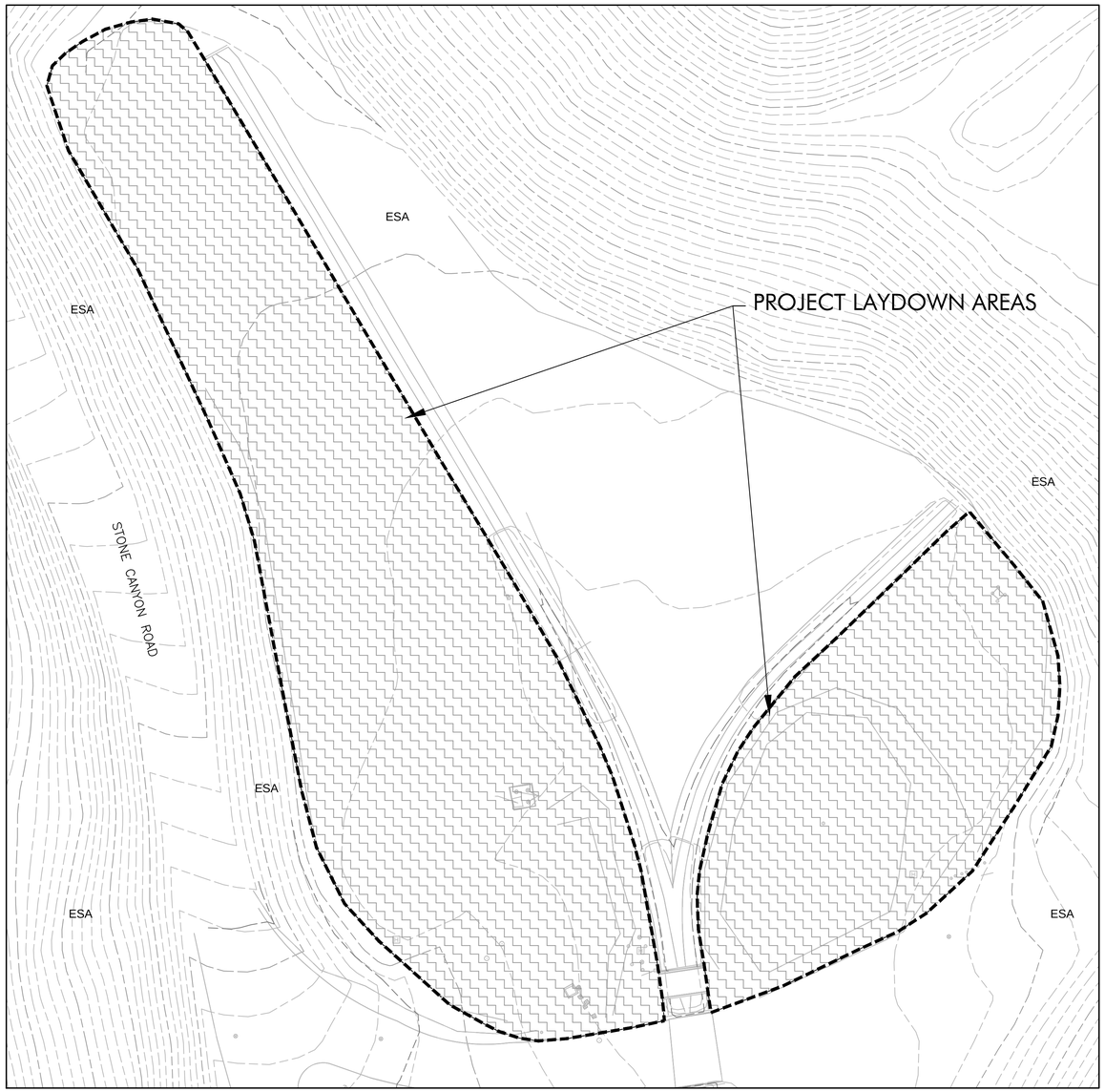
VERSION: 01.0

D05744-L-005



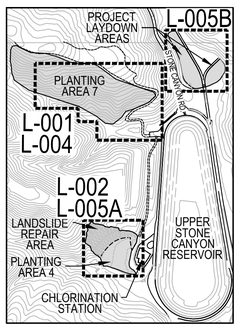
PLANTING PLAN L-005A

SCALE: 1" = 30'-0"



PLANTING PLAN L-005B

SCALE: 1" = 30'-0"



KEY MAP N.T.S.

PLAN LEGEND

- SEED AREAS: LANDSLIDE REPAIR & PLANTING AREA 4
- SEED AREAS: PROJECT LAYDOWN AREAS
- JUGLANS CALIFORNICA
- PLATANUS RACEMOSA
- QUERCUS AGRIFOLIA (CONTAINER SIZE) — XX"
- PROJECT PLANTING AREA
- EXISTING ACCESS ROAD/FIRE BREAK
- ESA — ENVIRONMENTALLY SENSITIVE AREA/ NATIVE VEGETATED SLOPES (PROTECT-IN-PLACE/ACCESS RESTRICTED)

REFER TO PLANTING LEGEND ON SHT L-006 AND SPECIFICATIONS FOR PLANT PALETTES, SEED MIX AND ADDITIONAL PLANTING REQUIREMENTS, RESTRICTIONS AND REQUIRED SITE PROTECTION MEASURES

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LICENSED LANDSCAPE ARCHITECT STUART F. FRASER 3461 — Signed 30-15 — Renewal 5/09 6-11-16 — STATE OF CALIFORNIA

REVISIONS					
Number	Date	Initials	Location	Description	Approved

REFERENCES
File Name D05744-L-005.DWG

Scale	AS SHOWN	DATE
Designer	S. FRASER	02/15/16
Assistant		
Drawn By	S.FRASER	2/15/16
Checked By	L. MICHL	2/15/16
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UPPER STONE CANYON RESERVOIR WQIP
LANDSLIDE REPAIR
PLANTING PLAN, DETAIL AND NOTES

DEPARTMENT OF WATER AND POWER
WATER SYSTEM — CITY OF LOS ANGELES

DRAWING NUMBER D05744 -L-005

VERSION: 01.0

D05744-L-006

CONTAINER PLANT LEGEND
PLANTING AREAS 4 & 7

TOTAL PLANTING AREAS = 8.56 AC./373,308 S.F.
CONTAINER PLANTING AREAS = 1.61 AC./70,300 S.F.

SYMBOL	BOTANICAL NAME	COMMON NAME	CONTAINER SIZE	SPACING (O/C)	QTY.	DETAIL
	JUGLANS CALIFORNICA	CALIFORNIA BLACK WALNUT	5 GAL	20'	52	Ⓐ
+	PLATANUS RACEMOSA	WESTERN SYCAMORE	24" BOX	30'	11	Ⓐ
XX"	QUERCUS AGRIFOLIA	COAST LIVE OAK	15 GAL	30'	26	Ⓐ
	(24" = 24" BOX AND 15G = 15 GALLON CONTAINER SIZES)		24" BOX	30'	18	Ⓐ
				TOTAL PLANTS =	107	

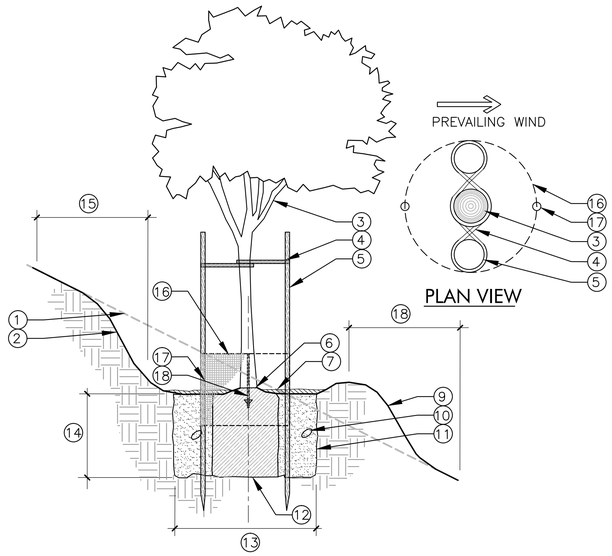
SEED MIX LEGEND
NATIVE LANDSLIDE AREA /PLANTING AREA 4/LAYDOWN AREAS HYDROSEED MIX - 3.88 AC./168,860 S.F.

SYMBOL	BOTANICAL NAME	COMMON NAME	PLS**	LBS./ACRE	TOTAL LBS.
	ACMISPON GLABER	DEERWEED	85	3.0	11.6
	ARTEMISIA CALIFORNICA	CALIFORNIA SAGEBRUSH	10	4.0	15.5
	BACCHARIS PILULARIS	COYOTEBRUSH	1	0.5	1.9
	BROMUS CARINATUS*	CALIFORNIA BROME	85	1.5	5.8
	CASTILLEJA EXERTA*	PURPLE OWL'S CLOVER	25	2.5	9.7
	ELYMUS CONDENSATUS	GIANT WILDRYE	70	3.0	11.6
	ENCELIA CALIFORNICA	CALIFORNIA ENCELIA	25	2.5	9.7
	ERIOGONUM FASCICULATUM	FLAT-TOPPED BUCKWHEAT	10	2.0	7.8
	ESCHSCHOLZIA CALIFORNICA*	CALIFONIA POPPY	73	2.5	9.7
	HESPEROYUCCA WHIPPLEI	CHAPARRAL YUCCA	60	1.5	5.8
	ISOCOMA MENZIESII	MENZIE'S GOLDENBUSH	15	1.5	5.8
	LASTHENIA CALIFORNICA*	COAST GOLDENFIELD	50	2.0	7.6
	LUPINUS BICOLOR*	PYGMY LUPINE	90	3.0	11.6
	MALACOTHAMNUS FASCICULATUS	CHAPARRAL MALLOW	10	2.5	9.7
	MALOSMA LAURINA	LAUREL SUMAC	70	1.0	3.9
	MIMULUS AURANTIACUS	STICKY MONKEY FLOWER	2	2.0	7.8
	RHUS OVATA	SUGAR SUMAC	75	2.5	9.7
	SALVIA MELLIFERA	BLACK SAGE	40	5.0	19.4
	STIPA LEPIDA	FOOTHILL NEEDLEGRASS	65	1.5	5.8
			TOTAL LBS. =	44.0	170.6

* QUICK GERMINATING SPECIES FOR EROSION CONTROL
** PLS = PERCENT LIVE SEED

PLANTING AND SEEDING NOTES:

1. FOR PLANTING AREA 4 AND THE LANDSCAPE SLIDE AREA:
   - ALL GRADING WORK SHALL BE COMPLETE, BMPS IN PLACE, AND ALL WORK APPROVED BY THE ENGINEER PRIOR TO IRRIGATION INSTALLATION, HYDROSEEDING AND CONTAINER PLANTING.
2. FOR PLANTING AREA 7:
   - ACCESS ROUTES DEPICTED IN THE PLAN ARE DIAGRAMATIC. THE ENGINEER SHALL FLAG ACCESS ROUTES THROUGH NATIVE VEGETATION (ESAs) TO DESIGNATED MAINTAINED ACCESS ROUTES AND PLANTING LOCATIONS PRIOR TO WORK.
   - THE CONTRACTOR SHALL CLEAR AND MAINTAIN AN 18" ACCESS ROUTE FREE OF VEGETATION FOR THE DURATION OF THE INSTALLATION AND MAINTENANCE PERIOD.
   - ACCESS ROUTES SHALL BE ESTABLISHED THROUGH EXISTING NON-NATIVE VEGETATION AND AVOID IMPACTS TO NON-NATIVE VEGETATION, AS PRACTICABLE. ONLY THE ABOVEGROUND PARTS OF VEGETATION SHALL BE REMOVED DURING CLEARING. ALL ROOTS AND THE CROWN OF NATIVE SHRUB SPECIES SHALL BE LEFT IN PLACE.
   - BMPS SHALL BE INSTALLED, AS NEEDED TO STABILIZE SLOPES IF EROSION IS IDENTIFIED
   - ACCESS ROUTES SHALL FOLLOW IRRIGATION LATERAL LINE RUNS, AS PRACTICABLE.
   - THE CONTRACTOR SHALL REMAIN WITHIN THE LIMITS OF THE DESIGNATED ACCESS ROUTES FOR THE DURATION OF INSTALLATION AND SUBSEQUENT MAINTENANCE PERIOD.
   - ADDITIONAL ACCESS ROUTES TO WORK AREAS (WITHIN ESAs) SHALL REQUIRE FIELD APPROVAL BY THE ENGINEER PRIOR TO USE.
3. FOR THE LAYDOWN AREA:
   - ALL CONSTRUCTION WORK SHALL BE COMPLETE, CONSTRUCTION MATERIALS, EQUIPMENT AND DEBRIS REMOVED, BMPS IN PLACE, AND APPROVED BY THE ENGINEER PRIOR TO HYDROSEEDING.
   - THE ENGINEER SHALL VERIFY HYDROSEEDING LIMITS AND ACREAGE PRIOR TO HYDROSEEDING.
4. ANY IMPACT TO NATIVE VEGETATION/ESAs OUTSIDE THE DESIGNATED LIMITS OF WORK, OR DESIGNATED ACCESS ROUTES SHALL REQUIRE IN-KIND REPLACEMENT BY THE CONTRACTOR AND AT NO EXPENSE TO THE DEPARTMENT.
5. CONTAINER PLANTS SHALL BE LOCATED PER THESE PLANS AND PER THE ENGINEER'S DIRECTION TO MIMIC NATURAL PLANT DISTRIBUTION AND SHALL NOT BE PLANTED IN UNIFORM ROWS. ONCE ALL THE CONTAINER PLANTS HAVE BEEN SPOTTED IN PLACE, THE CONTRACTOR SHALL ACQUIRE FINAL APPROVAL FROM THE ENGINEER PRIOR TO EXCAVATING PLANTING HOLES.
6. ALL WEEDS AND DEAD BIOMASS SHALL BE CLEARED FROM A MINIMUM 3' RADIUS FROM THE OUTSIDE OF CONTAINER PLANTING BASINS AND MAINTAINED ACCESS ROUTES PRIOR TO INSTALLATION (SEE DETAIL A, SHT L-006). THESE 'WEED EXCLUSION ZONES' SHALL REMAIN WEED FREE FOR THE DURATION OF THE MAINTENANCE PERIOD. ALL NATIVES WITHIN 'WEED EXCLUSION ZONES' SHALL BE TRIMMED IF EXCESSIVE GROWTH SHADES CONTAINER PLANTS, PER THE RECOMMENDATION OF THE ENGINEER.
7. ALL SEED AND CONTAINER PLANTS SHALL HAVE ORIGINATED FROM FROM CISMONTANE SOUTHERN CALIFORNIA SOURCES, AS PRACTICABLE. ALL CONTAINER PLANTS AND SEED SHALL BE ACQUIRED FROM A NURSERY/SEED SUPPLIER SPECIALIZING IN NATIVE VEGETATION. THE NURSERY/SEED SUPPLIER SHALL REQUIRE PRE-APPROVAL BY THE ENGINEER.
8. ALL SEEDS SHALL BE CLEARLY LABELED SHOWING TYPE OF SEED, TEST DATE, SUPPLIER, AND PERCENTAGE OF THE FOLLOWING: PURE SEED, CROP SEED, INERT MATTER, WEED SEED, NOXIOUS WEEDS, AND TOTAL GERMINATION CONTENT. ALL MATERIAL SHALL BE DELIVERED TO THE SITE IN ORIGINAL, UNOPENED CONTAINERS BEARING THE MANUFACTURER'S GUARANTEED ANALYSIS. ALL SEED MIXES SHALL BE STORED IN A DARK, COOL PLACE AND NOT BE ALLOWED TO BECOME DAMP PRIOR TO USE.
9. ALL CONTAINER PLANT MATERIALS SHALL BE OF ADEQUATE SIZE AND SHAPE FOR THEIR CONTAINER. ROOT BOUND, OR POORLY ROOTED PLANTS SHALL NOT BE ACCEPTED. ALL PLANTS SHALL BE FREE OF PESTS AND DISEASES, AND SHALL BE IN A HEALTHY AND VIGOROUS CONDITION. ALL MATERIALS REJECTED BY THE ENGINEER SHALL BE REMOVED FROM SITE AND REPLACED IN-KIND BY THE CONTRACTOR AND AT NO EXPENSE TO THE DEPARTMENT.
10. ALL CONTAINER PLANTS SHALL BE PLANTED WITHIN 10 WORKING DAYS FOLLOWING DELIVERY TO THE SITE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR WATERING AND PROTECTING ALL PLANTS AND MATERIALS STORED ON-SITE.
11. PLANTING AND SEEDING SHALL ONLY OCCUR WHEN ENVIRONMENTAL CONDITIONS ARE FAVORABLE FOR SUCH ACTIVITIES AND PRE-APPROVED BY THE ENGINEER. PLANTING OR SEEDING SHALL NOT TAKE PLACE IF TEMPERATURES ARE UNREASONABLY HIGH, OR IF THE SITE IS EXCESSIVELY WET OR MUDDY.
12. PLANTING HOLES SHALL BE FILLED WITH WATER AND ALLOWED TO DRAIN COMPLETELY BEFORE PLANTING CONTAINER PLANTS.
13. CONTAINER PLANTS SHALL BE PLANTED PER DETAIL A, THE LEGEND, AND THE PROJECT SPECIFICATIONS, PLANTS SHALL BE WATERED THOROUGHLY IMMEDIATELY AFTER BEING PLANTED.
14. PLANTED CONTAINER PLANTS SHALL HAVE OPERATIONAL IRRIGATION BUBBLERS INSTALLED WITHIN 1-DAY OF PLANTING, OR THE CONTRACTOR SHALL HAND WATER UNTIL THE IRRIGATION SYSTEM IS OPERATIONAL.
15. AVOID EXISTING NATIVE VEGETATION OR PLANTED TREES WHEN APPLYING HYDROSEED, OR WASH HYDROSEED MULCH OFF EXISTING NATIVE VEGETATION WITHIN 24 HOURS OF HYDROSEED APPLICATION.



ITEM	DESCRIPTION
1	EXISTING SLOPE OR LINE OF SIGHT BEYOND
2	LAYBACK SLOPE BEHIND PLANT BASIN AS NEEDED TO PREVENT SOIL SLOUGHING
3	5 GALLON, 15 GALLON OR 24" BOX TREE, (SEE PLAN & LEGEND)
4	15 GAL. AND 24" BOX ONLY: (2) No.10 GAUGE GALVANIZED WIRE WITH RUBBER OR PLASTIC HOSE AROUND. STAPLE TO STAKE
5	15 GAL. AND 24" BOX ONLY: (2) 2" DIAMETER TREATED LODGEPOLE TREE STAKES (SET PLUMB); DO NOT PENETRATE ROOTBALL
6	ROOT CROWN OF SHRUB 1" ABOVE FINISH GRADE
7	3" THICK SHREDDED BARK MULCH LAYER IN PLANTING BASIN, HOLD BACK 3" FROM ROOT CROWN
8	WATERING BASIN 6" ABOVE FINISH GRADE, FIRMLY COMPACTED
9	FINISH GRADE
10	CONTROLLED RELEASE FERTILIZER PACKETS TO BE INCLUDED IN BACKFILL MIX (PER SPECS.). PACKS PER TREE: (3) FOR 5 GAL., (9) FOR 15 GAL., (15) FOR 24" BOX
11	BACK FILL MIX PER SOILS AMENDING REQUIREMENTS (SEE NOTES AND SPECS)
12	ROOT BALL (SIZE VARIES PER PLAN)
13	EXCAVATE TO DEPTH OF ROOTBALL
14	EXCAVATE TO 2.5X WIDTH OF ROOTBALL
15	WEED EXCLUSION ZONE: CLEAR AND MAINTAIN WEED FREE A MINIMUM OF 3' OUTSIDE OF PLANTING BASIN
16	5 & 15 GAL ONLY: 1/2" HARDWARE CLOTH WIRE MESH SHELTER:
17	5 & 15 GAL ONLY: INSTALL SHELTER MIN. 24" ABOVE GRADE AND TRENCHED MIN. 12" BELOW SOIL SURFACE.
18	5 & 15 GAL ONLY: STAPLE/WIRE SHELTER TO TREE STAKES AND/OR 48" T-POSTS AT FOUR SIDES AND VERTICALLY AT EVERY 6". INSTALL MIN. 12" BELOW GRADE, DO NOT PENETRATE ROOTBALL

Ⓐ 24" BOX/15 GAL. TREE PLANTING DETAIL
NOT TO SCALE

VERSION: 01.0

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LICENSED LANDSCAPE ARCHITECT STUART F. FRASER 5365 Signature 10-31-16 Renewal Date 6-17-18 Date STATE OF CALIFORNIA

REVISIONS					
Number	Date	Initials	Location	Description	Approved

REFERENCES	
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LANDSLIDE REPAIR
PLANTING PLAN, DETAIL AND NOTES

DEPARTMENT OF WATER AND POWER
WATER SYSTEM CITY OF LOS ANGELES

DRAWING NUMBER
D05744 -L-006

APPENDIX C

Hazardous Materials Sites Database Review

Water Quality Improvement Project EIR Addendum
Regulatory Records Database Review
Feb-15

Site Name	Database	Address	Proximity to Proposed Project	City	Details	Findings
Landslide Stabilization Site	historicalaerials.com	-	-	-	Reviewed aerial photos from 1947 to 2005. The landslide stabilization site appears to be a part of a lake in the 1947 and 1952 aerial photographs. Surrounding areas are not developed. In the 1964 photo, the landslide stabilization site is adjacent to the present day Upper Stone Canyon Reservoir. The landslide stabilization site is vacant, undeveloped land. Residential areas are visible in the surrounding areas. Between the years 1964 and 2005, the landslide stabilization site appears to be unchanged and similar to the 1964 photograph. A few buildings have appeared near the reservoir and surrounding areas have been further developed into residential homes within the same years.	Based on the aerial photographs the project area has never been developed and there are no indication of uses that would adversely impact the environmental conditions of the project area.
Mobil #17-273	GeoTracker LUST	2337 Roscomare Rd.	0.41 miles southwest from the project area	Los Angeles	The LUST listing is related to a unauthorized gasoline release to soil reported on April 12, 1985. The case was closed on December 12, 1998.	This site is unlikely to have impacted the subsurface conditions of the project area, given the release was to only soil and the case had received closure.
Mandeville Pump Station	GeoTracker UST	15115 Mulholland Dr.	0.50 Miles Northwest from the project area	Los Angeles	The listing is related to permitting.	This site is unlikely to have impacted the subsurface conditions of the project area.
Rosomare Rd. Elementary School	EnviroMapper RCRA-LQG	2425 Roscomare Rd.	0.41 miles west of the project area	Los Angeles	The listing is related to permitting.	This site is unlikely to have impacted the subsurface conditions of the project area.
La Pumping Plant #24	EnviroMapper RCRA-SQG	2457 Nalin Dr.	0.50 miles west of the project area	Los Angeles	The listing is related to permitting.	This site is unlikely to have impacted the subsurface conditions of the project area.

Notes:

GeoTracker	Online database maintained by the Regional Water Quality Control Board
Enviro Mapper	Online site that provides access to several EPA databases with information about environmental activities that may affect air, water, and land anywhere in the United States
LUST	Leaking Underground Storage Tank
WDR	Waste Discharge Requirements
RCRA	Resources Conservation and Recovery Act Information

The following databases were searched, but did not have listings for the proposed project: Superfund, NPL, EnviroStor, CERCLIS, CDO, CAO and SWD.

APPENDIX D

Plant Species Observed

Plant Species Observed During Field Survey (October 30, 2015)

PLANT SPECIES

ANGIOSPERMS (DICOTS)

ADOXACEAE – MUSKROOT FAMILY

Sambucus nigra ssp. caerulea – blue elderberry

ANACARDIACEAE – SUMAC OR CASHEW FAMILY

Malosma laurina – laurel sumac

Rhus ovata – sugar sumac

ASTERACEAE – SUNFLOWER FAMILY

Artemisia californica – California sagebrush

Baccharis pilularis – coyotebrush

Baccharis salicifolia – mule-fat

Encelia californica – California brittlebush

Isocoma menziesii – Menzies' goldenbush

CAPRIFOLIACEAE – HONEYSUCKLE FAMILY

Lonicera subspicata – southern honeysuckle

CHENOPODIACEAE – GOOSEFOOT FAMILY

* *Salsola tragus* – Russian thistle

EPHORBIACEAE – SPURGE FAMILY

***** *Ricinus communis* – castorbean

FAGACEAE – OAK FAMILY

Quercus agrifolia – California live oak

GROSSULARIACEAE – GOOSEBERRY FAMILY

Ribes speciosum – fuchsiaflower gooseberry

JUGLANDACEAE – WALNUT FAMILY

Juglans californica – southern California black walnut

LAMIACEAE – MINT FAMILY

Salvia mellifera – black sage

MALVACEAE – MALLOW FAMILY

Malacothamnus fasciculatus – Mendocina bushmallow

PHRYMACEAE – LOPSEED FAMILY

Mimulus aurantiacus – orange bush monkeyflower

PLATANACEAE – PLANE TREE, SYCAMORE FAMILY

Platanus racemose – California sycamore

RHAMNACEAE – BUCKTHORN FAMILY

Ceanothus cuneatus – buckbrush

MONOCOTS

AGAVACEAE – AGAVE FAMILY

Hesperoyucca whipplei – chaparral yucca

POACEAE – GRASS FAMILY

* *Bromus diandrus* – ripgut brome
* *Bromus madritensis* ssp. *rubens* – red brome
* *Cortaderia jubata* – purple pampas grass
* *Cynodon dactylon* – Bermuda grass
* *Stipa miliacea* var. *miliacea* – smilograss
Elymus condensatus – giant wildrye

* signifies introduced (non-native) species

APPENDIX E

Protected Tree Inventory

Upper Stone Canyon Reservoir
Protected Tree Inventory

Prepared for:

Los Angeles Department of Water and Power
Environmental Planning and Assessment
111 North Hope Street, Room 1044
Los Angeles, California 90012
Contact: Julie Van Wagner

Prepared by:

DUDEK
38 North Marengo Avenue
Pasadena, California 91101
Contact: Ryan Gilmore

SEPTEMBER 2015

Printed on 30% post-consumer recycled material.

TABLE OF CONTENTS

Section **Page No.**

APPENDICES

FIGURES

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1 INTRODUCTION

In February 2012, the Los Angeles Department of Water and Power (LADWP) certified the Final Environmental Impact Report (EIR) for the Upper Stone Canyon Water Quality Improvement Project. The approved project involved installation of an approximately 700,000-square-foot flexible membrane floating cover for the entire surface of the reservoir (referred to as the "floating cover alternative" in the Draft and Final EIR). A chlorination station is located on the western edge of the reservoir, consisting of a chlorine storage room, chlorine equipment room, electrical equipment room, several chemical storage rooms, and a dry media scrubber room. The facility is typically unstaffed, but water treatment operators visit the facility on a daily basis to inspect the system and respond to any alarms.

Recently, a landslide hazard area was identified immediately west of the chlorination station that could damage the station in the event of slope failure. As such, portions of the nearby hillside will be graded and stabilized to avoid future damage to the station and/or interruptions of service to the chlorination system and nearby subterranean bypass line.

This Protected Tree Inventory (report) summarizes Dudek's field evaluation of the trees anticipated to be directly impacted by the stabilization effort on the Upper Stone Canyon Reservoir site (project site), which is located in the City of Los Angeles (City), California. This report includes a discussion of tree evaluation methods, a summary of findings, identification of anticipated impacts, and tree protection and tree replanting requirements consistent with Section 46.02 of the City's Municipal Code and protected tree removal permit process. The primary focus of Dudek's field evaluation was to evaluate protected trees (as defined by the City's Municipal Code) that are within or immediately adjacent the grading and stabilization activities and therefore, expected to be impacted.

This report provides an evaluation and analysis, as completed by a Dudek certified arborist and reviewed by a Dudek certified arborist and California licensed Pest Control Advisor, of trees located on the proposed project site. The survey area contains 48 protected trees and 11 planted trees, all of which will require removal for project-related improvements. Based on the City's Protected Tree Policy (City of Los Angeles 2006), a minimum of 107, 15-gallon replacement trees will be required.

1.1 Site Description

Upper Stone Canyon Reservoir is located approximately 0.5 mile south of Mulholland Drive between Roscomare Road and Beverly Glen Boulevard in the City of Los Angeles (Figure 1). The Stone Canyon Reservoir Complex (SCRC) property is owned and maintained by LADWP. Upper Stone Canyon Reservoir is accessed from Mulholland Drive via a private road located

approximately 1.5 miles east of the San Diego Freeway (Interstate 405 (I-405)). The project site is located in the Hollywood Hills, and the site's topography is dominated by moderately steep hillsides (Figure 2).

1.2 Project Description

The proposed project would involve approximately 85,000 cubic yards of grading to stabilize the landslide area immediately west of the existing chlorination station. Grading would be balanced on site and excess soil would be distributed to suitable spreading/disposal locations within the SCRC. The project would require approximately 12 months to complete.

The proposed project would be contained entirely within the boundaries of the approximately 750-acre SCRC property. Land uses surrounding the property are predominantly low- to very-low-density residential. The northern portion of the SCRC, located just north of Upper Stone Canyon Reservoir, is included within the Outer Corridor zone of the Mulholland Scenic Parkway Specific Plan (Specific Plan) Area, which encompasses an area extending outward 0.5 mile from the road right-of-way. The Specific Plan was designed to help preserve natural scenic values and enhance passive recreation opportunities along the Mulholland Drive corridor. The northwestern most corner of the SCRC property, including the north entry gate to the property, is located within the Specific Plan Area's Inner Corridor, which extends outward 500 feet from the road right-of-way and within which greater restrictions on development activities apply.

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8584

FIGURE 1

Regional Map

Upper Stone Canyon Reservoir Protected Tree Inventory

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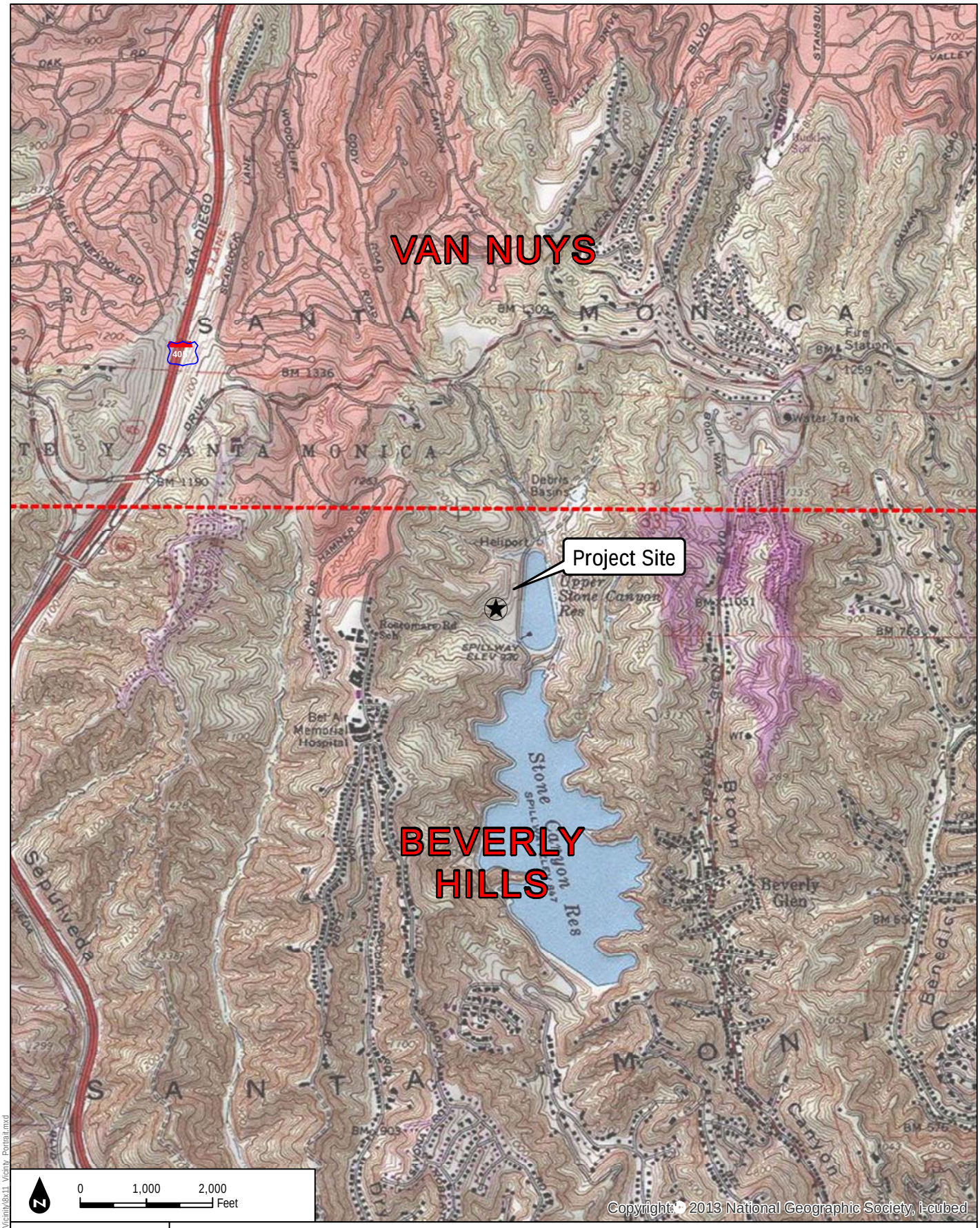

DUDEK

8584

SOURCE: USGS 7.5-Minute Series Quadrangle.

FIGURE 2

Vicinity Map

Upper Stone Canyon Reservoir Protected Tree Inventory

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2 METHODS

Individual Tree Evaluation

Consistent with Section 46.00 of the City's Municipal Code, this report is based on information compiled through field reconnaissance and a review of appropriate site reference materials, including aerial photography, U.S. Geological Survey topographic maps, and digital ortho-quarter quadrangle data. A tree inventory and assessment of the project site was performed by Dudek arborists on August 3, 2015, pursuant to City Ordinance No. 177404.

All trees on the project site were assessed, tagged, inventoried, mapped, and plotted on a tree location exhibit (Appendix A). All inventoried trees were tagged with aluminum tags bearing a unique identification number, which were placed on the trunk of inventoried trees. These numbers correspond to the tree locations presented in Appendix A and the tree data matrix in Appendix B.

Tree diameter was measured using a diameter tape, which provides adjusted figures for caliper measurements when wrapping the tape around an object's circumference. Diameter measurements were taken according to the City's definition of "diameter." The cross-sectional width of the tree trunk of each tree was measured at 4.5 feet above the natural grade. Tree height was visually estimated by experienced arborists. Tree canopy diameters were measured with a 50-foot measuring tape. The diameter measurements were made along an imaginary line intersecting the tree trunk that best approximated the average canopy diameter.

For each inventoried tree, physical conditions (health and structure) were recorded, and the health, aesthetics, and balance/symmetry of the trees were assessed and graded as *good*, *fair*, *poor*, or *dead*, as described below:

Good: Representing no apparent problems

Fair: Representing minor problems

Poor: Representing major problems

Dead: Representing a dying and/or dead tree

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3 OBSERVATIONS

Individual Trees

The project survey area contains 48 living and 4 dead protected species trees, and 11 planted non-protected trees. Appendix A provides the location of each tree located on the project site. The site's 59 living trees are composed of 26 Southern California black walnut (*Juglans californica*), 11 (planted) western (California) sycamore (*Platanus racemosa*), and 22 California live oak trees (*Quercus agrifolia*). The trees range from single- to multi-stemmed and have individual stem caliper measurements at 4.5 feet above natural grade that range from 4 to 29.7 inches. The trees range in approximate height from 10 to 45 feet tall, with canopies that range between 12 and 45 feet at their widest point. Health and structure varies by individual tree. Tree health ranges from very poor to fair, and tree structure ranges from very poor to good. Individual tree characteristics for the protected trees are presented in Appendix B.

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4 POTENTIAL TREE IMPACTS

Impact totals presented in this report are based on a review of the conceptual site plans for the Upper Stone Canyon Reservoir landslide hazard project. Detailed site grading and impact area delineation data were available at the time of this report and it was possible to identify the trees that will be subject to direct impacts. Typically, specific circumstances allow some trees to be preserved in place within or adjacent to the development envelope. These trees are often identified at later stages of a project when detailed planning occurs. At the site planning stage, however, it may be possible, and is encouraged, to preserve as many protected trees as reasonably feasible.

Based on the analysis conducted for this report, along with estimates from a review of the conceptual site plan for the project site, all 48 protected and 11 planted trees are located within the disturbance footprint and will experience impacts to above- and belowground tree components (tree trunk/branches and roots) at levels where tree preservation is not possible. All 59 trees will be removed and replaced per the City's requirements. Replacement plans for the trees requiring removal are presented in the following sections.

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5 TREE REPLACEMENT PLAN

The City Ordinance No. 177404 defines a protected tree as any of the following Southern California native species that measures 4 inches or more in cumulative diameter, 4.5 feet above the ground level at the base of the tree:

a) Oak tree including Valley Oak (*Quercus lobata*) and Coast Live Oak (*Quercus agrifolia*), or any other tree of the oak genus indigenous to California but excluding the Scrub Oak (*Quercus dumosa*)

b) Southern California Black Walnut (*Juglans californica* var. *californica*)

c) California (Western) Sycamore (*Platanus racemosa*)

d) California Bay (*Umbellularia californica*) (City Ordinance No. 177404)

The ordinance does not apply to trees grown or held for sale by a licensed nursery, or trees planted or grown as a part of a tree planting program.

Note: Calflora (2015) has updated the names of some of these species: coast live oak is now named California live oak, scrub oak is now named Nuttall's scrub oak, *Juglans californica* var. *californica* is now named *Juglans californica*, and California bay is now named California laurel.

5.1 Replanting Requirements

The City's ordinance regarding the preservation of protected trees as detailed in Section 46.02(c)1 of the Los Angeles Municipal Code authorizes the City to require that a permittee replace a protected tree approved for removal or relocation with at least two 15-gallon trees of a protected variety. The California sycamores that are located within the survey area were planted as part of a planting program and are exempt from the Section 46.02(c)1 guidelines for tree replacement. Nonetheless, they will be replaced one to one with 15-gallon trees.

Therefore, a minimum of 107 trees (15-gallon) are required to be replanted for the removal of 59 trees (48 protected and 11 planted). It is recommended that the replacement tree species be the same as the removed trees (*Q. agrifolia, P. racemosa,* and *J. californica*) and in a similar ratio to the number removed. Accordingly, there would be 52 walnuts, 11 sycamores, and 44 oaks planted.

5.2 Tree Removal Permit

Tree replacement activities would occur in a manner consistent with Chapter IV, Article 6, Section 46.02 of the City's Municipal Code (City of Los Angeles 2006).

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6 CONCLUSIONS

Dudek inventoried and evaluated 59 living and 4 dead protected and planted trees on the project site. A total of 48 protected trees and 11 planted trees are anticipated to be impacted by the proposed project. The tree impacts associated with the project would be offset through replacement tree planting, as defined and directed by the City's Urban Forestry Division. In total, it is recommended that 107 trees of same species as impacted and in similar proportions be planted to offset project-related impacts. Planting is recommended to occur in the vicinity of the project site or on site and incorporated into the post-development landscape. The recommended tree replacement plan meets the minimum requirements of the City Protected Tree Ordinance.

Arborist's Statement

This report provides conclusions and recommendations based on an examination of the trees and surrounding site by ISA-certified arborists. Arborists are tree specialists who use their education, knowledge, training, and experience to examine trees, recommend measures to enhance the beauty and health of trees, and attempt to reduce the risk of living near trees.

No root crown excavations or investigations or internal probing was performed during the tree assessments. Therefore, the presence or absence of internal decay or other hidden inferiorities in individual trees could not be confirmed. It is recommended that any large tree proposed for preservation in an area that receives human use be thoroughly inspected for internal or subterranean decay by a qualified arborist before finalizing preservation plans.

Arborists cannot detect every condition that could possibly lead to the failure of a tree. Trees are living organisms that fail in ways not fully understood. Conditions are often hidden within trees and belowground. Arborists cannot guarantee that a tree will be healthy or safe under all circumstances or for a specified period. There are no guarantees that a tree's condition will not change over a short or long period due to weather or cultural or environmental conditions. Trees can be managed but not controlled.

This certified arborist-prepared Protected Tree Inventory report has been reviewed by an ISA-Certified Arborist/Licensed Pest Control Advisor and found consistent with the City of Los Angeles Protected Tree Ordinance No. 177404.

I would be pleased to answer any questions or respond to any comments regarding this Protected Tree Inventory report.

Sincerely,

Ryan Gilmore
Urban Forestry Specialist
ISA-Certified Arborist WE-9009A

Doug Duncanson
ISA-Certified Arborist WE-5972A
Licensed Pest Control Advisor 74161

7 REFERENCES

Calflora. 2015. Calflora Website Database. August 2015. Accessed August 21, 2015. http://www.calflora.org/

City of Los Angeles. 2006. Protected Tree Ordinance. City of Los Angeles Municipal Code. March 2006. Accessed August 15, 2015. http://cityplanning.lacity.org/Code_Studies/Other/ProtectedTreeOrd.pdf.

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APPENDIX A

Tree Locations Exhibit

DUDEK

Appendix A

Tree Locations Exhibit

Upper Stone Canyon Reservoir Protected Tree Inventory

APPENDIX B

Tree Data Matrix

APPENDIX B
Tree Data Matrix

Tree Number	Botanical Name	Common Name	Stems	Individual Stem Diameter					Tree Diameter	Height (ft.)	Canopy (ft.)	Health	Structure	Notes	X	Y
				D1	D2	D3	D4	D5								
1	*Platanus racemosa*	California sycamore	1	6	0	0	0	0	6	25	18	Fair	Good	Planting program tree	-118.457	34.12026
2	*Platanus racemosa*	California sycamore	1	9	0	0	0	0	9	30	25	Fair	Good	Planting program tree	-118.4571	34.120246
3	*Platanus racemosa*	California sycamore	1	10	0	0	0	0	10	35	25	Fair	Good	Planting program tree	-118.4572	34.120252
4	*Platanus racemosa*	California sycamore	1	8	0	0	0	0	8	35	25	Fair	Good	Planting program tree	-118.4574	34.120254
5	*Quercus agrifolia*	California live oak	4	13	13	10	9	0	22.781571	35	40	Fair	Fair		-118.4574	34.120377
6	*Platanus racemosa*	California sycamore	1	6					6	20	20	Fair	Poor	Hard lean - Planting program tree	-118.4573	34.120317
7	*Platanus racemosa*	California sycamore	1	8					8	25	20	Fair	Good	Planting program tree	-118.4572	34.120312
8	*Platanus racemosa*	California sycamore	1	6					6	20	20	Fair	Fair	Planting program tree	-118.4571	34.120327
9	*Platanus racemosa*	California sycamore	1	11					11	30	25	Fair	Good	Planting program tree	-118.457	34.120344
10	*Platanus racemosa*	California sycamore	3	5	4	4			7.5498344	18	18	Fair	Poor	Planting program tree	-118.4569	34.120398
11	*Platanus racemosa*	California sycamore	1	5					5	16	16	Fair	Fair	Planting program tree	-118.457	34.120401
12	*Platanus racemosa*	California sycamore	1	4					4	18	16	Fair	Fair	Planting program tree	-118.4571	34.120387
13	*Quercus agrifolia*	California live oak	1	22					22	18	16	Fair	Fair		-118.457	34.120678
14	*Quercus agrifolia*	California live oak	3	20	16	15			29.681644	18	16	Fair	Fair		-118.4572	34.120855
15	*Quercus agrifolia*	California live oak	1	7					7	22	8	Dead	Poor		-118.4572	34.120883
16	*Quercus agrifolia*	California live oak	1	26					26	45	45	Fair	Fair		-118.4572	34.120817
17	*Quercus agrifolia*	California live oak	3	14	13	12			22.561028	35	35	Fair	Fair		-118.4573	34.120795
18	*Quercus agrifolia*	California live oak	1	20					20	40	35	Fair	Poor	Large trunk cavity	-118.4573	34.120777
19	*Quercus agrifolia*	California live oak	3	17	16	15			27.748874	35	35	Fair	Fair		-118.4572	34.120722
20	*Quercus agrifolia*	California live oak	2	14	13				19.104973	25	35	Fair	Poor	Lean	-118.4574	34.120692
21	*Quercus agrifolia*	California live oak	3	18	16	9			25.70992	40	35	Fair	Fair		-118.4574	34.120699
22	*Quercus agrifolia*	California live oak	1	16					16	25	25	Fair	Fair		-118.4576	34.120644
23	*Quercus agrifolia*	California live oak	2	18	16				24.083189	35	40	Fair	Poor	Basal crack/splitting	-118.4576	34.120838
24	*Quercus agrifolia*	California live oak	1	18					18	40	40	Fair	Fair		-118.4576	34.120885
25	*Quercus agrifolia*	California live oak	2	13	11				17.029386	35	35	Fair	Fair		-118.4575	34.120892
26	*Quercus agrifolia*	California live oak	7	13	11	9	9	8	22.715633	45	45	Fair	Fair	7 7	-118.4575	34.120937
27	*Quercus agrifolia*	California live oak	3	14	12	7			19.723083	35	35	Fair	Poor		-118.4575	34.120962
28	*Quercus agrifolia*	California live oak	4	12	12	9	7		20.445048	25	30	Fair	Poor		-118.4575	34.120932
29	*Juglans californica*	Southern California black walnut	5	5	4	4	4	4	9.4339811	15	18	Very poor	Very poor		-118.4575	34.121044
30	*Juglans californica*	Southern California black walnut	4	6	6	5	4		10.630146	22	18	Poor	Very poor		-118.4575	34.121067
31	*Juglans californica*	Southern California black walnut	3	13	9	7			17.291616	35	30	Very poor	Very poor		-118.4575	34.121024
32	*Juglans californica*	Southern California black walnut	4	5	4	3	2		7.3484692	25	20	Very poor	Very poor		-118.4574	34.121058
33	*Juglans californica*	Southern California black walnut	2	6	4				7.2111026	20	20	Very poor	Very poor		-118.4573	34.121053
34	*Juglans californica*	Southern California black walnut	2	6	3				6.7082039	20	15	Dead	Very poor		-118.4574	34.121011
35	*Juglans californica*	Southern California black walnut	1	7					7	15	15	Dead	Very poor		-118.4573	34.12102
36	*Juglans californica*	Southern California black walnut	2	7	5				8.6023253	25	20	Poor	Poor		-118.4573	34.12098
37	*Juglans californica*	Southern California black walnut	3	7	5	3			9.1104336	20	20	Poor	Very poor		-118.4572	34.121033
38	*Juglans californica*	Southern California black walnut	6	7	6	6	5	5	13.076697	20	20	Fair	Fair	Additional stem - 6	-118.4572	34.121045
39	*Juglans californica*	Southern California black walnut	2	7	4				8.0622577	15	15	Fair	Fair		-118.4572	34.121023
40	*Juglans californica*	Southern California black walnut	3	7	6	6			11	20	25	Poor	Very poor		-118.4572	34.120998
41	*Juglans californica*	Southern California black walnut	2	7	5				8.6023253	10	20	Dead	Very poor		-118.4574	34.120988

APPENDIX B
Tree Data Matrix

Tree Number	Botanical Name	Common Name	Stems	Individual Stem Diameter					Tree Diameter	Height (ft.)	Canopy (ft.)	Health	Structure	Notes	X	Y
				D1	D2	D3	D4	D5								
42	*Juglans californica*	Southern California black walnut	3	4	4	3			6.4031242	15	20	Very poor	Very poor		-118.4574	34.120971
43	*Juglans californica*	Southern California black walnut	3	3	2	2			4.1231056	15	20	Very poor	Very poor		-118.4574	34.12097
44	*Juglans californica*	Southern California black walnut	2	8	9				12.041595	20	25	Very poor	Very poor	Lean	-118.4572	34.120936
45	*Juglans californica*	Southern California black walnut	3	5	3	2			6.164414	25	25	Very poor	Very poor	Lean	-118.4573	34.120919
46	*Juglans californica*	Southern California black walnut	8	9	8	6	6	6	15.905974	35	35	Very poor	Very poor	Additional stems - 6, 6, 6	-118.4577	34.121015
47	*Juglans californica*	Southern California black walnut	4	7	7	6	6		13.038405	20	20	Very poor	Very poor		-118.4578	34.120919
48	*Quercus agrifolia*	California live oak	1	9					9	25	20	Fair	Fair		-118.4578	34.120942
49	*Juglans californica*	Southern California black walnut	9						0	12	12	Very poor	Very poor	All 1 tree	-118.4579	34.121051
50	*Juglans californica*	Southern California black walnut	11						0	12	12	Very poor	Very poor	All 1 tree - buried bases also for 49	-118.4579	34.121032
51	*Juglans californica*	Southern California black walnut	3	3	2	2			4.1231056	16	16	Poor	Poor		-118.4579	34.120981
52	*Quercus agrifolia*	California live oak	2	18	13				22.203603	45	45	Fair	Fair		-118.4579	34.120908
53	*Quercus agrifolia*	California live oak	2	9	8				12.041595	35	35	Fair	Fair		-118.458	34.120766
54	*Juglans californica*	Southern California black walnut	5	3	3	3	3	3	6.7082039	25	25	Poor	Very poor		-118.458	34.120754
55	*Quercus agrifolia*	California live oak	1	20					20	45	45	Fair	Fair		-118.4579	34.12062
56	*Quercus agrifolia*	California live oak	2	16	9				18.35756	35	35	Fair	Fair		-118.4578	34.120564
57	*Quercus agrifolia*	California live oak	1	7					7	15	15	Fair	Poor		-118.4578	34.120539
58	*Juglans californica*	Southern California black walnut	5	7	6	6	5	5	13.076697	25	25	Very poor	Very poor		-118.4578	34.120436
59	*Juglans californica*	Southern California black walnut	4	6	5	4	4		9.6436508	25	25	Very poor	Poor		-118.4577	34.120468
60	*Juglans californica*	Southern California black walnut	1	9					9	35	35	Very poor	Poor		-118.4577	34.12038
61	*Juglans californica*	Southern California black walnut	2	9	5				10.29563	35	30	Very poor	Poor		-118.4577	34.120346
62	*Juglans californica*	Southern California black walnut	4	4	4	5	3		8.1240384	20	20	Very poor	Very poor		-118.4577	34.120338
63	*Juglans californica*	Southern California black walnut	2	8	8				11.313708	35	35	Poor	Fair		-118.4575	34.120314

APPENDIX F

California Gnatcatcher Survey Report

DUDEK
31878 CAMINO CAPISTRANO #200
SAN JUAN CAPISTRANO, CALIFORNIA 92675
T 949.450.2525 F 949.450.2626

April 12, 2016 8584-05

U.S. Fish and Wildlife Service
Attn: Recovery Permit Coordinator
2177 Salk Avenue, Suite 250
Carlsbad, California 92008

Subject: ***Focused Coastal California Gnatcatcher Survey Report, Upper Stone Canyon Landslide Remediation Activities, Los Angeles County, California***

Dear Recovery Permit Coordinator:

This report documents the results of protocol-level presence/absence surveys for coastal California gnatcatcher (*Polioptila californica californica*) (CAGN), conducted to support the remediation of a landslide area adjacent to Upper Stone Canyon (project) in Los Angeles, California. The surveys were conducted in all areas of potentially suitable habitat. For the purposes of this survey, potentially suitable CAGN habitat included all sagebrush scrub habitat (and all sagebrush sub-associations) on site. The study area encompassed approximately 52 acres of suitable CAGN habitat.

CAGN is a federally listed threatened species and a California Department of Fish and Wildlife Species of Special Concern. It is closely associated with coastal sage scrub habitat, and is thereby threatened primarily by loss, degradation, and fragmentation of this habitat. CAGN typically occurs below 820 feet above mean sea level (amsl) within 22 miles of the coast and below 1,640 feet amsl for inland regions (Atwood and Bolsinger 1992). Studies have suggested that CAGN avoid nesting on very steep slopes (greater than 40%) (Bontrager 1991). CAGN is also impacted by brown-headed cowbird (*Molothrus ater*) nest parasitism (Braden et al. 1997).

LOCATION AND EXISTING CONDITIONS

The study area is situated approximately 0.5 mile south of Mulholland Drive between Roscomare Road and Beverly Glen Boulevard in the Bel Air community of the City of Los Angeles (Figures 1 and 2). The project site can be accessed from Mulholland Drive via a non-public road called Stone Canyon Road, which is located approximately 1.5 miles east of Interstate 405. The Upper Stone Canyon Reservoir is part of the larger Stone Canyon Reservoir Complex, which is owned and maintained by the Los Angeles Department of Water and Power. This property consists of approximately 750 acres and includes Upper Stone Reservoir, Lower Stone Canyon Reservoir (Lower Stone Reservoir), and related facilities for water quality control and distribution. The

study area is located in Section 33 of Township 1 North, Range 15 West and Section 4 of Township 1 South, Range 15 West of the Beverly Hills 7.5-minute U.S. Geological Survey topographic quadrangle.

The study area is characterized by very steep scrub-covered slopes rising from the reservoir edge along the eastern boundary of the study area. Elevations within the study area range from approximately 900 feet amsl along reservoir edge for the eastern extent of the study area to approximately 1,040 feet amsl at the northern extent of the study area.

According to the U.S. Department of Agriculture, one gravelly loam soil overlaps the study area: Topanga-Mipolomol-Sapwi association, 30% to 75% slopes (USDA 2015).

VEGETATION COMMUNITIES

Two vegetation communities were identified within the study area: mixed scrub mapping unit and coast live oak woodland alliance. Vegetation acreages are presented in Table 1.

Table 1
Habitat Acreages in Study Area

Vegetation Community	Acreage
Mixed Scrub Mapping Unit	52.41
Coast Live Oak Woodland Alliance	10.24

Mixed Scrub Mapping Unit

The mixed scrub mapping unit (also referred to as Venturan–Diegan transitional coastal sage scrub) is not recognized by the Natural Communities List (CDFG 2010). According to Holland (1986), coastal sage scrub is composed of a variety of soft, low shrubs, characteristically dominated by drought-deciduous species such as California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), and sage species (*Salvia* spp.), with scattered evergreen shrubs, including lemonade berry (*Rhus integrifolia*) and laurel sumac. In the study area, this community included California sagebrush, California brickellbush (*Brickellia californica*), California brittle bush (*Encelia californica*), mulefat (*Baccharis salicifolia*), California sycamore (*Platanus racemosa*), giant wild rye (*Elymus condensatus*), and jubata grass (*Cortaderia jubata*).

Coast Live Oak Woodland Alliance

The coast live oak woodland alliance (*Quercus agrifolia*) includes coast live oak as the dominant or co-dominant tree in the canopy. The alliance has a continuous to open canopy less than 100 feet in height with a sparse to intermittent shrub canopy and sparse or grassy ground layer (Sawyer et al. 2009). In the study area, this species was dominated by coast live oak (*Quercus agrifolia*). Other species present included milk thistle (*Silybum marianum*) and shortpod mustard (*Hirschfeldia incana*).

METHODS

Focused surveys for CAGN were performed within the study area between October 16, 2015 and February 8, 2016, by permitted Dudek biologists Erin Bergman (Permit No. TE813545-5) and Brock Ortega (Permit No. TE813545-6) (Table 2). Non-permitted personnel Lisa Michl and Julie Van Wagner accompanied CAGN-permitted biologists as passive observers, which included sitting quietly with little or no movement for prolonged periods while studying CAGN movements with binoculars and listening carefully to vocalizations. The surveys were conducted following the currently accepted methods of the U.S. Fish and Wildlife Service: Coastal California Gnatcatcher (*Polioptila californica californica*) Presence/Absence Survey Protocol (USFWS 1997) for the non-breeding season. The survey consisted of nine visits at a minimum of 14-day intervals. Survey routes are shown in Figure 3. Survey routes completely covered all areas of suitable CAGN habitat on site. Appropriate birding binoculars (7x35 to 10x50 power) were used by each permitted biologist to aid in detecting and identifying bird species. The survey conditions were within protocol limits, as shown in Table 2. A recording of vocalizations was used frequently to elicit a response from the species. The recording was played approximately every 50 to 100 feet.

Table 2
Survey Details and Conditions

Date	Time	Personnel	Survey Conditions (temperature, skies, wind)
10/16/2015	0710–1138	EJB	68°F–82°F; 1.1–2.6 mph winds; 15%–100% clouds
10/30/2015	0700–0918	BAO; LM; JVW	64°F–66°F; 0-5 mph winds with occasional 15 mph gusts; 0% clouds
11/13/2015	0630–1205	EJB	59°F–63°F; 1.2–4.3 mph winds; 5%–10% clouds
11/27/2015	0635–1200	EJB	55°F–61°F; 2.5–4.5 mph winds; 60%–80% clouds
12/11/2015	0712–1206	EJB	53°F–59°F; 1.1–3.6 mph winds; 60%–90% clouds
12/28/2015	0701–1200	EJB	51°F–64°F; 1.2–3.1 mph winds; 30%–50% clouds
01/11/2016	0618–1200	EJB	49°F–63°F; 1.4–6.1 mph winds; 50%–60% clouds

Table 2
Survey Details and Conditions

Date	Time	Personnel	Survey Conditions (temperature, skies, wind)
01/25/2016	0708–1211	EJB	58°F–66°F; 1.1–2.3 mph winds; 0%–30% clouds
02/08/2016	0701–1200	EJB	64°F–84°F; 0.8–1.6 mph winds; 0%–10% clouds

EJB = Erin Bergman; BAO= Brock Ortega; LM = Lisa Michel; JVW = Julie Van Wagner; mph = miles per hour

RESULTS AND DISCUSSION

There were no CAGN individuals observed during these focused surveys. A total of 62 wildlife species were observed during this survey. Species observed included one reptile, 54 birds, three invertebrates, and four mammals. A full list of wildlife species observed within the study area during the surveys is provided in Appendix A. The 10-day pre-survey notification letter sent to the U.S. Fish and Wildlife Service on March 20, 2015, is included in Appendix B.

I certify that the information in this survey report and attached exhibits fully and accurately represent my work. Please contact Brock Ortega (bortega@dudek.com) or Erin Bergman (ebergman@dudek.com) if you have any questions.

Sincerely,

Brock Ortega
Certified Biologist

Erin Bergman
Certified Biologist

Att.: Figures 1–3
Appendix A: Cumulative List of Wildlife Species Observed or Detected within the Study Area
Appendix B: 10-Day Pre-Survey Notification Letter
cc: Julie Van Wagner, Los Angeles Department of Water and Power

REFERENCES

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FIGURE 1

Regional Map

Coastal California Gnatcatcher Survey Report - Upper Stone Canyon Landslide Remediation Activities

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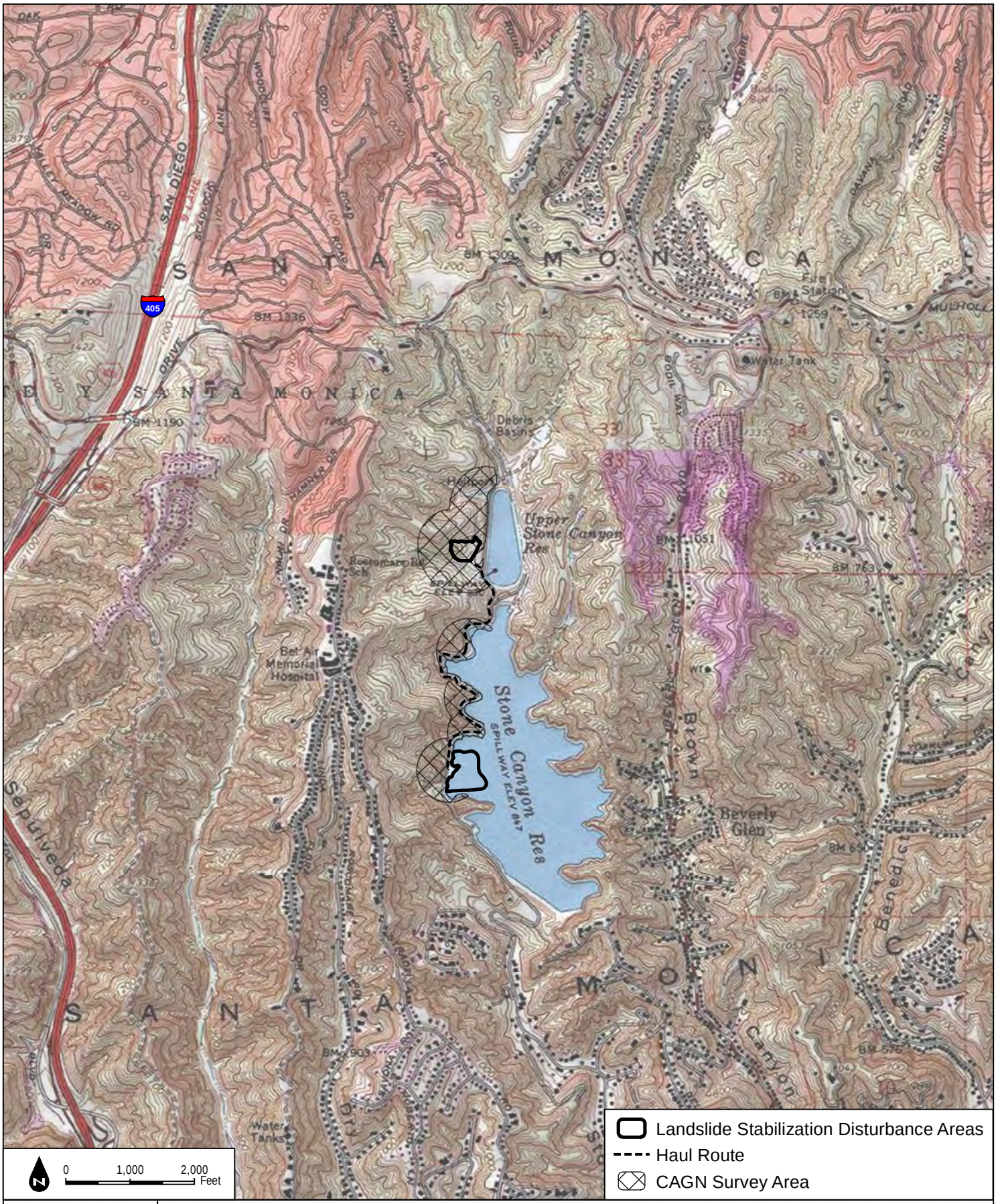

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SOURCE: USGS 7.5-Minute Beverly Hills Quadrangle.

FIGURE 2

Vicinity Map

Coastal California Gnatcatcher Survey Report - Upper Stone Canyon Landslide Remediation Activities

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SOURCE: Google Maps 2016

FIGURE 3

Coastal California Gnatcatcher Survey Results

Coastal California Gnatcatcher Survey Report - Upper Stone Canyon Landslide Remediation Activities

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APPENDIX A

Cumulative List of Wildlife Species Observed or Detected within the Study Area

APPENDIX A
Cumulative List of Wildlife Species Observed or Detected within the Study Area

BIRD

BLACKBIRDS, ORIOLES AND ALLIES

ICTERIDAE—BLACKBIRDS

Agelaius phoeniceus—red-winged blackbird
Euphagus cyanocephalus—Brewer's blackbird

BUSHTITS

AEGITHALIDAE—LONG-TAILED TITS AND BUSHTITS

Psaltriparus minimus—bushtit

CORMORANTS

PHALACROCORACIDAE—CORMORANTS

Phalacrocorax auritus—double-crested cormorant

EMBERIZINES

EMBERIZIDAE—EMBERIZIDS

Melospiza melodia—song sparrow
Melozone crissalis—California towhee
Pipilo maculatus—spotted towhee
Zonotrichia leucophrys—white-crowned sparrow
Junco hyemalis—dark-eyed junco

FALCONS

FALCONIDAE—CARACARAS AND FALCONS

Falco sparverius—American kestrel

FINCHES

FRINGILLIDAE—FRINGILLINE AND CARDUELINE FINCHES AND ALLIES

Spinus psaltria—lesser goldfinch
Haemorhous mexicanus—house finch

FLYCATCHERS

TYRANNIDAE—TYRANT FLYCATCHERS

Sayornis nigricans—black phoebe
Sayornis saya—Say's phoebe
Tyrannus verticalis—western kingbird
Tyrannus vociferans—Cassin's kingbird

GREBES

PODICIPEDIDAE—GREBES

Aechmophorus occidentalis—western grebe
Podiceps nigricollis—eared grebe
Podilymbus podiceps—pied-billed grebe

GULLS

LARIDAE—GULLS, TURNS, AND SKIMMERS

Larus sp. —gull species

HAWKS

ACCIPITRIDAE—HAWKS, KITES, EAGLES, AND ALLIES

Accipiter cooperii—Cooper's hawk
Buteo jamaicensis—red-tailed hawk

HERONS AND BITTERNS

ARDEIDAE—HERONS, BITTERNS, AND ALLIES

Egretta thula—snowy egret
Nycticorax nycticorax—black-crowned night-heron

HUMMINGBIRDS

TROCHILIDAE—HUMMINGBIRDS

Calypte anna—Anna's hummingbird

JAYS, MAGPIES AND CROWS

CORVIDAE—CROWS AND JAYS

Aphelocoma californica—western scrub-jay
Corvus brachyrhynchos—American crow
Corvus corax—common raven

KINGLETS

REGULIDAE—KINGLETS

Regulus calendula—ruby-crowned kinglet

MOCKINGBIRDS AND THRASHERS

MIMIDAE—MOCKINGBIRDS AND THRASHERS

Mimus polyglottos—northern mockingbird

NEW WORLD QUAIL

ODONTOPHORIDAE—NEW WORLD QUAIL

Callipepla californica—California quail

NEW WORLD VULTURES

CATHARTIDAE—CARDINALS AND ALLIES

Cathartes aura—turkey vulture

OLD WORLD SPARROWS

PASSERIDAE—OLD WORLD SPARROWS

* *Passer domesticus*—house sparrow

OLD WORLD WARBLERS AND GNATCATCHERS

SYLVIIDAE—SYLVIID WARBLERS

Polioptila caerulea—blue-gray gnatcatcher

PIGEONS AND DOVES

COLUMBIDAE—PIGEONS AND DOVES

Zenaida macroura—mourning dove

RAILS, GALLINULES AND COOTS

RALLIDAE—RAILS, GALLINULES, AND COOTS

Fulica americana—American coot

Porzana carolina—sora

ROADRUNNERS AND CUCKOOS

CUCULIDAE—CUCKOOS, ROADRUNNERS, AND ANIS

Geococcyx californianus—greater roadrunner

SWALLOWS

HIRUNDINIDAE—SWALLOWS

Tachycineta bicolor—tree swallow

SWIFTS

APODIDAE—SWIFTS

Aeronautes saxatalis—white-throated swift

TITMICE

PARIDAE—CHICKADEES AND TITMICE

Baeolophus inornatus—oak titmouse

WATERFOWL

ANATIDAE—DUCKS, GEESE, AND SWANS

Anas cyanoptera—cinnamon teal
Anas platyrhynchos—mallard
Bucephala albeola—bufflehead
Lophodytes cucullatus—hooded merganser
Oxyura jamaicensis—ruddy duck
Aythya marila—greater scaup
Aythya collaris—ring necked duck

WAXWINGS

BOMBYCILLIDAE—WAXWINGS

Bombycilla cedrorum—cedar waxwing

WOOD WARBLERS AND ALLIES

PARULIDAE—WOOD-WARBLERS

Setophaga coronata—yellow-rumped warbler

WOODPECKERS

PICIDAE—WOODPECKERS AND ALLIES

Melanerpes formicivorus—Acorn woodpecker
Picoides nuttallii—Nuttall's woodpecker
Colaptes auratus—northern flicker

INVERTEBRATE

BUTTERFLIES

LYCAENIDAE—BLUES, HAIRSTREAKS, AND COPPERS

Brephidium exile—western pygmy-blue

NYMPHALIDAE—BRUSH-FOOTED BUTTERFLIES

Junonia coenia—common buckeye

PIERIDAE—WHITES AND SULFURS

Anthocharis sara sara—Pacific sara orangetip

MAMMAL

CANIDS

CANIDAE—WOLVES AND FOXES

Canis latrans—coyote

RATS AND MICE

MURIDAE—RATS AND MICE

Neotoma fuscipes—dusky-footed woodrat

SQUIRRELS

SCIURIDAE—SQUIRRELS

Spermophilus (*Otospermophilus*) *beecheyi*—California ground squirrel

UNGULATES

CERVIDAE—DEERS

Odocoileus hemionus—mule deer

REPTILE

LIZARDS

PHRYNOSOMATIDAE—IGUANID LIZARDS

Sceloporus occidentalis—western fence lizard

* signifies introduced (non-native) species

APPENDIX B

10-Day Pre-Survey Notification Letter

DUDEK

MAIN OFFICE
605 THIRD STREET
ENCINITAS, CALIFORNIA 92024
T 760.942.5147 T 800.450.1818 F 760.632.0164

September 21, 2015 8584

U.S. Fish and Wildlife Service
Attention: Recovery Permit Coordinator
2177 Salk Avenue, Suite 250
Carlsbad, California 92008

Subject: ***Coastal California Gnatcatcher Survey Notification for Upper Stone Canyon Landslide Remediation Project, Los Angeles County, California***

Dear Recovery Permit Coordinator:

Dudek biologists Paul Lemons (Permit No. TE051248-5), Brock Ortega (TE813545-6), Erin Bergman (TE813545-5), and Thomas Liddicoat (TE-139634-1) will be conducting a protocol presence/absence survey for the coastal California gnatcatcher (*Polioptila californica californica; CAGN*) in all suitable habitat within the approximately 80-acre Upper Stone Canyon Landslide Remediation Project site, Los Angeles County, California.

The purpose of the surveys is to determine presence/absence of CAGN. Surveys will conform to the currently accepted protocol of the U.S. Fish and Wildlife Service (USFWS) *Coastal California Gnatcatcher* (*Polioptila californica californica*) *Presence/Absence Survey Protocol*.[1] All areas of suitable habitat will be surveyed 9 times from July 1 through March 14. Focused surveys will commence after 15 days of the USFWS' receipt of this notification, per recovery permit requirements. However, we would like to request approval as soon as possible to allow us to begin early.

A USGS topographic (1:24,000 scale) map of the project area is attached. Please let me know if you require any additional information.

Please contact me at 760.479.4254 if there are any questions concerning this survey.

Thank you,

Brock Ortega
Senior Biologist

[1] U.S. Fish and Wildlife Service. Coastal California Gnatcatcher (Polioptila californica californica) Presence/ Absence Survey Guidelines. February 28, 1997.

Att: Figure 1 – Project Vicinity Map

SOURCE: LADWP 2015; USGS 7.5 Minute Beverly Hills, Van Nuys Quadrangles

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FIGURE 1

Gnatcatcher Survey Area Map