Executive Summary

Introduction

The Los Angeles Department of Water and Power (LADWP) has proposed the Silver Lake Reservoir Complex (SLRC) Storage Replacement Project (SRP) (Proposed Project) to address water quality objectives and comply with drinking water regulations. The SLRC consists of the open Ivanhoe and Silver Lake Reservoirs that are used for storage of drinking water and are connected directly to the LADWP municipal water distribution system.

The treated water that enters the reservoirs is drinking water quality, but water in the reservoirs is exposed to contamination from birds, insects, animals, and humans. Sunlight and elevated temperatures, especially during the summer months, contribute to the growth of algae that degrades water quality and increases taste and odor problems. Chlorine is used to treat algae in Ivanhoe and Silver Lake Reservoirs, but it also reacts with naturally occurring organic materials that produce trihalomethanes (THMs) and halo acetic acids (HAAs). The higher the level of algae and other organic material in the reservoirs, the greater the potential of THMs and HAAs. Both compounds are Cancer Group B carcinogens (shown to cause cancer in laboratory animals).

To comply with increasingly more stringent state and federal regulations, including those that address THMs and HAAs, LADWP must make major changes to its open reservoir system. These regulations include the Stage 2 Disinfection By-Products Rule and the Long-Term 2 Enhanced Surface Water Treatment Rule.

LADWP has investigated several onsite and offsite alternatives to address water quality objectives and regulations and has determined that offsite covered storage is a practicable alternative that achieves the objectives identified for the Proposed Project.

Purpose of this Document

This Draft Environmental Impact Report (EIR) addresses the potential environmental impacts that are anticipated to result from construction and operation of the Proposed Project. The Draft EIR has been prepared in accordance with the California Environmental Quality Act (CEQA). LADWP is the lead agency for the CEQA process and has independently evaluated, directed, and supervised the preparation of this document.

Description of Proposed Project

The Proposed Project would remove Silver Lake and Ivanhoe Reservoirs from direct service to the LADWP water distribution system. Water storage currently provided by SLRC would be replaced by a 110-million-gallon (MG) buried storage reservoir at the former Headworks Spreading Grounds (HWSG site) (see Figure ES-1 for a general site location map).

The 127-acre SLRC is located in the community of Silver Lake and consists primarily of LADWP-owned Silver Lake and Ivanhoe Reservoirs and related facilities. Silver Lake is 5 miles northwest of downtown Los Angeles and just east of Griffith Park. The community of Silver Lake surrounding the SLRC is generally bordered by Interstate 5 to the north, the Glendale Freeway and Glendale Boulevard to the east, Sunset Boulevard to the south, and Griffith Park Boulevard to the west. The HWSG site consists of 43 acres of undeveloped land adjacent to the Los Angeles River (LA River) and between the City of Burbank and Griffith Park. It is bounded on the north by the LA River and State Highway 134, and on the east and south by Forest Lawn Drive. The property is owned by the City of Los Angeles Department of Recreation and Parks, and LADWP retains an easement over the entire property.

The new water storage reservoir at the HWSG site would be accompanied by a 4-megawatt (MW) hydroelectric power generating facility to capture energy from the water pressure flowing into the reservoir. A new bypass pipeline around the SLRC and a regulating station at the southern end of the reservoir complex would convey water to existing service areas. Silver Lake and Ivanhoe Reservoirs would be removed from the LADWP water distribution system and maintained as nonoperating water system facilities.

Project Alternatives

This Draft EIR addresses two alternatives to the Proposed Project: the No Project Alternative and the Onsite Tank Storage with Operational Changes (OTSOC) Alternative.

The No Project Alternative would result in the continued operation of Silver Lake and Ivanhoe Reservoirs without significant operational changes and no action being taken by LADWP toward meeting water quality standards. The storage reservoir and hydroelectric plant would not be constructed at the HWSG site, and the bypass pipeline and regulating station would not be constructed at the SLRC. Silver Lake and Ivanhoe Reservoirs would not be removed from the water distribution system.

The OTSOC Alternative would involve construction of four underground storage tanks at the SLRC in the meadow area and part of Silver Lake Reservoir to provide 100 MG of regulatory water storage. Similar to the Proposed Project, Ivanhoe and Silver Lake Reservoirs would be removed from service to the water distribution system and maintained as nonoperating water system facilities.

Major Findings and Conclusions

All identified potential significant impacts resulting from operation of the Proposed Project can be mitigated to a less-than-significant level. However, there would be significant short-term impacts during the approximately 6.5-year construction period, some of which may not be completely mitigated. These potential impacts and proposed mitigation measures are summarized below. Detailed information regarding these potential impacts is available in Chapters 3 through 14 of this Draft EIR.

HWSG Site
SLRC
GRIFFITH PARK
LOS ANGELES
HOLLYWOOD HILLS
LITTLE ARMENIA
THAI TOWN
SILVER LAKE
ATWATER VILLAGE
GLENDALE
BURBANK
GLENDALE
GLENDALE
GLENDALE

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Land Use

Both the HWSG site and the SLRC are zoned OS (Open Space). Facilities at the SLRC are allowed outright, while facilities at the HWSG site would require a Conditional Use Permit. No significant impacts to land use are anticipated from construction or operation of the Proposed Project.

Earth Resources

Construction activities at the HWSG site and the SLRC would require grading and excavation that would potentially result in soil erosion and runoff sedimentation. Facilities at both sites would be subject to geologic hazards. Potential impacts would be mitigated by utilizing approved engineering and construction techniques. Potential seismic impacts would be reduced to less-than-significant levels by designing structures according to seismic requirements and as determined by geotechnical and seismic hazard analyses.

Water Resources

Construction activities at the HWSG site and the SLRC would potentially impact surface water quality in the event of precipitation runoff and the presence of excavated and/or unprotected soil. Potential surface water quality impacts would be mitigated to a less-than-significant level by obtaining a National Pollutant Discharge Elimination System Municipal Stormwater General Construction Permit, developing and implementing a Storm Water Pollution Prevention Plan (SWPPP), and employing interim grading and other measures specified by the Los Angeles City erosion control ordinances.

Biological Resources

Construction activities for the Proposed Project could potentially result in the loss of riparian habitat along the south portion of the HWSG site; the loss of waters of the U.S. and California Department of Fish and Game (CDFG) jurisdictional streambed and bank at the HWSG site; and impacts to the following at the HWSG site and/or the SLRC: special-status plants, nesting birds of special concern, and special-status bats. Impacts to biological resources would be mitigated to less-than-significant levels by preconstruction surveys with subsequent detailed mitigation for special-status plants and wildlife and by replacement of waters of the U.S. and riparian areas.

Cultural Resources

The potential for discovery of prehistoric or historical archaeological sites at the HWSG site and the SLRC is considered to be low. However, in the event such sites are discovered, impacts would be mitigated to below the level of significance through recovery or treatment of archaeological resources. Construction activities at the SLRC would disturb vegetation that contributes to the historic character of the reservoir complex, which would constitute a significant impact. Impacts to vegetation would be reduced to a less-than-significant level by employing the *Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Cultural Landscapes* for landscape restoration following construction.

Paleontologic Resources

Earth-disturbing activities during construction at the HWSG site and the SLRC could potentially reveal paleontologic resources. Impacts to paleontologic resources would be mitigated to less-than-significant levels through construction monitoring and subsequent recovery and identification.

Traffic and Transportation

Construction traffic at the HWSG site may result in a significant impact at the intersection of Forest Lawn Drive and Zoo Drive that cannot be completely mitigated. Construction traffic at the SLRC may result in a significant impact at the intersections of Silver Lake Boulevard and Van Pelt Place and Riverside Drive and Fletcher Drive. Mitigation provided will ensure that the traffic impact at Riverside Drive and Fletcher Drive is less than significant, while the traffic impact at Silver Lake Boulevard and Van Pelt Place may remain significant after mitigation. In-street construction would be required for installation of a distribution line at the HWSG site and construction of the bypass pipeline at the SLRC; potentially adverse in-street impacts would be mitigated by preparation and implementation of site-specific transportation management plans.

Noise

Construction activities at both the HWSG site and the SLRC may result in a significant noise impact as a result of construction equipment that cannot be completely mitigated. Impacts associated with construction noise would be reduced by using properly maintained construction equipment with high-grade mufflers, shielding sensitive receptors from fixed-location machinery, minimizing the use of extreme noise producers, restricting work hours, and adhering to the City of Los Angeles Noise Ordinances. In addition, at the SLRC, construction areas will be shielded with noise control barriers. Also, a noise monitoring and mitigation program will be implemented at both project sites to continually assess construction noise impacts and implement additional mitigation when and where required. Unmitigated operation of the regulating station at the SLRC would likely result in a significant noise impact. However, LADWP will include technologically advanced sound-reduction measures in its detailed design of the regulation station equipment and/or enclosure materials to ensure that noise levels during operation of the regulating station are less than significant at the nearest residence.

Air Quality

Construction activities at the HWSG site and the SLRC would occur over approximately 6.5 years and include nine construction phases at the two sites. To minimize construction emissions, the Proposed Project would implement standard construction practices that would help minimize fugitive dust. Even with these practices, air emissions during construction are anticipated to exceed significance thresholds for reactive organic gas (ROG), nitrogen oxide (NO_x) and particulate matter with a diameter of less than 10 micrometers (PM_{10}) at the HWSG site and NO_x and PM_{10} at the SLRC. When construction emissions for both project sites are combined, construction emissions are anticipated to exceed significance thresholds for ROG, NO_x, and PM_{10}. Mitigation to reduce construction-related air quality

impacts during construction would be implemented, but it is likely that impacts to air quality during construction would remain significant even after mitigation.

Public Services and Utilities

The Proposed Project would be constructed and operated within the existing capacity of fire, police and emergency medical services, community facilities, and utilities. The Proposed Project would generate approximately 4 MW of energy that would be conveyed through existing power lines. No significant impacts to public services and utilities are anticipated from construction or operation of the Proposed Project.

Hazardous Materials

Construction activities at the HWSG site and the SLRC would require the use of hazardous materials including gasoline, diesel fuel, motor oil, hydraulic fluid, solvents, cleaners, sealants, welding flux, various lubricants, paint, and paint thinner. Acutely hazardous materials would not be used at either site. Quantities of hazardous materials that would be onsite would be small; and storage and use onsite would comply with applicable laws, ordinances, and regulations. No significant adverse impacts are anticipated from their use.

Visual Resources

The HWSG site would have a highly disrupted appearance during much of the construction period. Because the level of visual quality at the HWSG site is currently low, this disrupted appearance would not represent a significant impact to visual resources. Operation of the facilities at the HWSG site would generally result in an improvement of the appearance of the HWSG site. Construction activities at the SLRC would result in a temporary decrease in the overall level of visual quality for the disturbed areas. Operation of the proposed facilities at the SLRC is not anticipated to result in adverse impacts to visual resources.

Summary of Project Impacts and Mitigation

Table ES-1 briefly describes the potential significant impacts by resource area, identifies the mitigation measures to be implemented to reduce the impact below the level of significance, and shows the level of significance after mitigation. If a potential impact can be mitigated to a less-than-significant level, this is identified in the Level of Significance after Mitigation column with an “LS.” If it is possible that a potential impact may remain significant after mitigation, this is identified with an “S” in the Level of Significance after Mitigation column.

TABLE ES-1
Summary of Project Impacts and Mitigation Measures

Potentially Significant Impact		Mitigation	Level of Significance after Mitigation
HWSG Site	**SLRC**		
Earth Resources (Chapter 4)			
Grading and excavation activities required for construction may result in soil erosion and sedimentation runoff that would have potentially significant impacts. These potential impacts would be mitigated by Mitigation Measure ER-1.	Excavation during construction activities and grading and soil storage at the construction staging area on the east side of Silver Lake Reservoir may potentially result in significant adverse impacts to soil resources, including soil erosion and runoff sedimentation. These potential impacts would be mitigated by Mitigation Measure ER-1.	**Mitigation Measure ER-1: Soil Resources** One or more of the following measures to control soil erosion and sedimentation will be implemented as feasible: • The area disturbed by clearing, grading, earth moving, or excavation operations will be as small as feasible to prevent excessive dust. • Pregrading/excavation activities will include watering the area to be graded or excavated before commencement of grading or excavation. Application of water will penetrate sufficiently to minimize fugitive dust during grading activities. • Trucks will be required to have their loads covered going offsite. • Graded and excavated material, exposed soil areas, and active portions of the construction site, including unpaved onsite roadways, will be treated to prevent fugitive dust. Treatment will include, but not be limited to, periodic watering and/or roll compaction as appropriate. Watering will be done at least twice daily. • Inactive graded and/or excavated areas will be monitored at least weekly for dust stabilization. Soil stabilization methods, such as water and roll-compaction will be periodically implemented over portions of the construction site that are inactive for over 4 days.	LS

TABLE ES-1
Summary of Project Impacts and Mitigation Measures

Potentially Significant Impact		Mitigation	Level of Significance after Mitigation
HWSG Site	**SLRC**		
		• During periods of high winds (i.e., wind speed sufficient to cause fugitive dust to impact adjacent properties), clearing, grading, earth-moving, and excavation operations will be curtailed to the degree necessary to prevent fugitive dust created by onsite activities and operations from being a nuisance or hazard to offsite properties. • Adjacent streets and roads will be swept at least once per day, preferably at the end of the day, if visible soil material is carried over to adjacent streets and roads. • A Storm Water Pollution Prevention Plan (SWPPP) will be developed and implemented that will include Best Management Practices (BMPs) to minimize conveyance of sediment into waterways. The SWPPP may include some or all of the following or any other measure necessary: - V-ditches will be constructed above all cut or fill slopes to divert water from newly exposed slope faces. - Straw bale dikes or filter fabric barriers will be located downslope of disturbed areas to act as sediment traps. - Topsoil will be selectively removed, stockpiled, and replaced as a surface medium for revegetation. - Exposed slope faces will be revegetated as soon after construction as possible. - Temporary sedimentation basins will be constructed as necessary.	

TABLE ES-1
Summary of Project Impacts and Mitigation Measures

Potentially Significant Impact		Mitigation	Level of Significance after Mitigation
HWSG Site	**SLRC**		
Existing alluvial materials underlying the reservoir site may prove to be unsuitable foundation materials. Potential impacts would be mitigated by Mitigation Measure ER-2.	Numerous small faults and fractures may be encountered during excavation and tunneling activities at the SLRC. Potential impacts related to these faults would be mitigated by Mitigation Measure ER-2.	**Mitigation Measure ER-2: Geologic Hazards** The following measures will be implemented, as feasible, to mitigate potentially significant impacts resulting from geologic hazards to less-than-significant levels: • Facilities will be designed according to seismic standards as determined by geotechnical and seismic hazard analyses. The analyses will be based on site-specific subsurface investigations and ground motion design recommendations. • Appropriate geotechnical soil testing will be performed during the design phase so that the proposed grading and facilities can be properly designed to meet applicable structural and seismic requirements. • The foundation for the storage reservoir will be founded in competent materials at the site. The results of the site-specific design-level geotechnical and seismic hazard analysis noted above will assist in determining which foundation design and construction methods are implemented at the HWSG site.	LS

TABLE ES-1
Summary of Project Impacts and Mitigation Measures

Potentially Significant Impact		Mitigation	Level of Significance after Mitigation
HWSG Site	**SLRC**		
		• LADWP will file a geotechnical report with the California Division of Safety of Dams(DSOD) as part of the application process for construction of a new reservoir. During construction, both LADWP soils engineer and inspectors from DSOD will monitor progress. Field checking of foundation and geologic conditions during construction will also ensure that designs and grading accommodate any unusual conditions that may not have been previously discovered. • If adverse slopes are encountered, slope stability will be analyzed; and slope stabilization measures will be established during design to minimize the potential for landslide damage. • Cuts and fill slopes will not exceed a 2:1 (horizontal:vertical) ratio except for cuts directly into bedrock where steeper slopes may be safely obtained. • Analyses of slope stability will be made in areas where cuts into marginal or adversely dipping slopes are required for construction of proposed facilities to minimize the potential for landslide damage.	

TABLE ES-1
Summary of Project Impacts and Mitigation Measures

Potentially Significant Impact		Mitigation	Level of Significance after Mitigation
HWSG Site	**SLRC**		
Water Resources (Chapter 5)			
Short-term impacts to surface water quality could occur during construction at the HWSG site and the SLRC in the event of drainage from precipitation that would potentially result in substantial erosion. Changes in topography and the presence of excavated and/or unprotected soil could all affect stormwater runoff. These potential impacts would be mitigated by Mitigation Measure WR-1.		**Mitigation Measure WR-1: Surface Water Quality** • The project would obtain an NPDES Municipal Stormwater General Construction Permit (General Permit), and comply with all permit requirements. • An SWPPP will be developed and implemented that will include BMPs to minimize conveyance of sediment into waterways. The SWPPP may include some or all of the following or any other measure necessary: - V-ditches will be constructed above all cut or fill slopes to divert water from newly exposed slope faces. - Straw bale dikes or filter fabric barriers will be located downslope of disturbed areas to act as sediment traps. - Topsoil will be selectively removed, stockpiled, and replaced as a surface medium for revegetation. - Exposed slope faces will be revegetated as soon as possible after construction. - Temporary sedimentation basins will be constructed as necessary. • Interim grading and other measures specified by the Los Angeles City erosion control ordinances would be employed to mitigate any short-term flooding due to stormwater.	LS

TABLE ES-1
Summary of Project Impacts and Mitigation Measures

Potentially Significant Impact		Mitigation	Level of Significance after Mitigation
HWSG Site	**SLRC**		
Biological Resources (Chapter 6)			
Construction activities at the HWSG site would potentially result in the loss of the riparian community along the southern edge of the site. This potential impact would be mitigated by Mitigation Measure BR-1.		**Mitigation Measure BR-1: Riparian Habitat at the HWSG Site** To mitigate for the loss of riparian habitat along the south portion of the HWSG site, mitigation will be implemented that will include replacement of riparian areas consistent with anticipated requirements of federal Clean Water Act (CWA) permits and state Section 1600 agreements. Mitigation may be achieved through funding of existing mitigation banks, habitat restoration, or other means acceptable to resource agencies.	LS
Construction activities at the HWSG site would potentially result in the loss of waters of the U.S. and CDFG jurisdictional streambed and bank, which would represent a significant impact. This potential impact would be mitigated by Mitigation Measure BR-2.		**Mitigation Measure BR-2: Jurisdictional Waters** The Proposed Project will obtain and comply with conditions of permits issued from U.S. Army Corps of Engineers (USACE) (CWA, Section 404) and the CDFG (Streambed Alteration Agreement [SAA], Section 1603). The details of mitigation requirements for impacts to jurisdictional waters will be determined through continuing consultation with USACE and CDFG. Mitigation may be achieved through funding of existing mitigation banks, habitat restoration, or other means acceptable to resource agencies.	LS

TABLE ES-1
Summary of Project Impacts and Mitigation Measures

Potentially Significant Impact		Mitigation	Level of Significance after Mitigation
HWSG Site	**SLRC**		
Because portions of the HWSG site have been relatively undisturbed for many years and rare plants may have a reservoir/seed source in adjacent Griffith Park, special-status plant species may be present during areas to be disturbed for construction activities. Potential impacts to these special-status plant species would be mitigated by Mitigation Measure BR-3.		**Mitigation Measure BR-3: Special-Status Plants** Mitigation for potential impacts to special-status plants will include the following: • Preconstruction surveys will be conducted at the HWSG site prior to any ground-disturbing activities, and in the appropriate flowering season for special-status plants. • If rare plants are identified at the HWSG site, then detailed mitigation will be developed in coordination with the appropriate resource agency (CDFG or USFWS), which may potentially include the following: - Exclusion zones where practical to preclude impacts to rare plant - Translocation of seeds, topsoil, and/or plants to areas outside the disturbance footprint - Establishment of new populations in areas that will not be subject to future development, and where populations may be protected and managed in perpetuity - Investment in mitigation bank lands as appropriate to the specific species	LS
Nesting bird species of special concern, consisting of yellow-breasted chat, California horned lark, loggerhead shrike, and burrowing owl, have the potential to nest at the HWSG site and in limited areas at the SLRC. Additionally, ardeids may nest in tall trees at either site. Potential impacts to these species would be mitigated by Mitigation Measure BR-4.		**Mitigation Measure BR-4: Nesting Birds of Special Concern** Preconstruction surveys for nesting special-status birds will be conducted at the HWSG site and the SLRC prior to ground-disturbing activities. Depending on the results of these surveys, the following mitigation measures will be implemented: • All vegetation removal required for the Proposed Project will occur prior to the nesting season for most birds (February to August) to avoid direct impacts to nesting birds.	LS

TABLE ES-1
Summary of Project Impacts and Mitigation Measures

Potentially Significant Impact		Mitigation	Level of Significance after Mitigation
HWSG Site	**SLRC**		
		• Where nests for special-status birds are established within 500 feet of construction activities, construction will be delayed until (a) fledglings leave the nest and are independent of adults or (b) it is determined by CDFG that no adverse effects are likely to occur to the nest or brood from adjacent construction activities, and a Biological Monitor is provided to conduct construction monitoring to ensure that effects on the nest site or brood do not reach adverse levels. • Construction adjacent to the known heron rookery at Silver Lake will be avoided during the nesting season for herons (February to August).	
Construction activities at the HWSG site and the SLRC may result in impacts to special-status bats when roost sites are located near construction disturbance areas. Potential impacts to these species would be mitigated by Mitigation Measure BR-5.		**Mitigation Measure BR-5: Special-Status Mammals (Bats)** Preconstruction surveys for bat roosts will be conducted at the HWSG site and the SLRC prior to ground-disturbing activities. Where active roosts are identified during these surveys, the following mitigation measures will be implemented: • Within 300 feet of the location of active roosts, ground disturbance and roost destruction would be avoided during the parturition period (March 15 through August 31). • Where this avoidance is not feasible, if potential roosts are identified prior to onset of parturition, roosts may be removed during the evening forage period (within 4 hours after dark) or fitted with one-way exit doors to effectively eliminate and exclude roost.	LS

TABLE ES-1
Summary of Project Impacts and Mitigation Measures

Potentially Significant Impact		Mitigation	Level of Significance after Mitigation
HWSG Site	**SLRC**		
Cultural Resources (Chapter 7)			
The potential for discovery of prehistoric or historical archaeological sites at the HWSG site and the SLRC is considered to be low; however, impacts may be potentially significant if sites are found. Potential impacts would be mitigated by Mitigation Measure CR-1.		**Mitigation Measure CR-1: Archaeological Resources** Potential impacts to cultural resources related directly or indirectly to Proposed Project-related activities shall be reduced to below the level of significance through recovery or treatment of archaeological resources encountered during archaeological site investigations or monitoring of ground-disturbing activities (construction) in areas with the potential to contain archaeological resources. When investigations identify unique archaeological resources as defined in Section 21083.2 of the Public Resources Code (PRC), the site shall be subject to specified requirements for treatment. Where elements of the Proposed Project are expected to require earthmoving, the following program shall be implemented and the requirement duly noted in Proposed Project plans and specifications: • Retain a qualified archaeologist to implement a monitoring and recovery program in any area identified as having the potential to contain unique archaeological resources. • A qualified archaeologist shall monitor earth-moving activities in areas that are likely to contain unique archaeological resources. The archaeologist shall be authorized to halt construction, if necessary, in the immediate area where buried cultural remains are encountered. Prior to the resumption of grading activities in the immediate vicinity of the cultural remains, the project proponent shall provide the archaeologist with the necessary resources to identify and implement a program for the appropriate disposition as specified by Section 15064.5(e) of the CEQA Guidelines.	LS

TABLE ES-1
Summary of Project Impacts and Mitigation Measures

Potentially Significant Impact		Mitigation	Level of Significance after Mitigation
HWSG Site	**SLRC**		
		• The selected archaeologist shall be required to secure a written agreement with a recognized museum repository regarding the final disposition and permanent storage and maintenance of any unique archaeological resources recovered as a result of the archaeological monitoring. This would also include corresponding geographic site data that might be recovered as a result of the specified monitoring program. The written agreement for the disposition of recovered artifacts shall specify the level of treatment (preparation, identification, curation, cataloging) required before the collection would be accepted for storage. • The selected archaeologist shall attend a preconstruction meeting to provide information regarding regulatory requirements for the protection of unique archaeological resources. Construction personnel shall be trained on procedures to be followed in the event that a unique archaeological resource is encountered during construction. In addition, the archaeologist shall ensure that the preconstruction meeting participants are trained to notify the Los Angeles County Medical Examiner (coroner) within 24 hours of the discovery of human remains. Upon discovery of human remains, there shall be no further excavation or disturbance of the site or any reasonably nearby area suspected to overlie adjacent human remains until the following conditions are met: - The Los Angeles County Medical Examiner has been informed and has determined that no investigation of the cause of death is required; and, if the remains are of Native American origin, the descendants of the deceased Native Americans have made a recommendation to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in PRC Section 5097.98.	

TABLE ES-1
Summary of Project Impacts and Mitigation Measures

Potentially Significant Impact		Mitigation	Level of Significance after Mitigation
HWSG Site	**SLRC**		
		If archaeological sites are encountered during construction of the Proposed Project, an evaluation of significance will be made by the selected archaeologist. Those sites that are determined eligible for listing in the California Register of Historical Resources (CRHR) shall be treated in accordance with one of the three feasible measures described in the "CEQA and Archaeological Resources," CEQA Technical Advice Series: • Capping (covering) the site with a level of soil prior to construction over the site • Incorporating into open space areas of the project site • Excavating where the first two measures are not feasible For eligible sites, the City of Los Angeles shall, prior to construction, implement the applicable treatment plan.	
	Areas at and surrounding the SLRC contain landscaping that contributes to the historic character of the SLRC that may be disturbed or removed during construction. Impacts to this landscaping would result in potentially significant impacts. Potential impacts would be mitigated by Mitigation Measure CR-2.	**Mitigation Measure CR-2: Historic Landscaping Restoration** Landscaping of the 30,000-square-foot, open, grassy area located at the southwest corner of the SLRC, the proposed location of a jacking pit, pipeline, concrete vaults for a regulating station, and other new facilities shall be returned to an appearance approximating preconstruction conditions, insofar as is possible, prior to removal of Ivanhoe and Silver Lake Reservoirs from service to the water distribution system. Where avoidance or transplantation of onsite trees and other vegetation is not possible, the proposed regulating station area (SLRC-2) should be landscaped with mature, healthy trees and plant material of comparable species, in keeping with the historic character and appearance of these portions of the reservoir complex.	LS

TABLE ES-1
Summary of Project Impacts and Mitigation Measures

Potentially Significant Impact		Mitigation	Level of Significance after Mitigation
HWSG Site	**SLRC**		
		In areas where planting of trees and other large vegetation would impede operation of the new facilities, grass will be replanted over the buried structures, approximating the current appearance of the site inasmuch as that is practicable. Insofar as is possible, landforms shall be returned to their preconstruction topography. The *Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Cultural Landscapes* should be employed to mitigate potential impacts to the existing landscaping resulting from construction activities. The same mitigation measure shall be employed for impacts related to the removal or degradation of landscaping in the area designated for equipment and material staging (SLRC-1), within the former East Cove area. Landscape rehabilitation will be performed in coordination with the Property Maintenance and Management Plan for the SLRC.	

TABLE ES-1
Summary of Project Impacts and Mitigation Measures

Potentially Significant Impact		Mitigation	Level of Significance after Mitigation
HWSG Site	**SLRC**		
Paleontologic Resources (Chapter 8)			
Earth-disturbing activities at both the HWSG site and the SLRC could potentially reveal paleontologic resources. Potential impacts to paleontologic resources would be mitigated by Mitigation Measures PR-1, PR-2, and PR-3.		**Mitigation Measure PR-1: Paleontologic Resources at HWSG Site and SLRC** Mitigation will include the following measures: • Earth-moving activities that have a potential for disturbing previously undisturbed strata identified as being paleontologically important will be monitored by a paleontologic construction monitor. If fossil remains are encountered, they will be recovered, along with associated specimen data and corresponding geologic and geographic site data. The level of monitoring will reflect the paleontologic importance/impact sensitivity of the rock unit underlying the area of disturbance and the type of earth-moving activity. • If fine-grained strata with a potential for containing microfossils or small fossil remains are encountered, rock/sediment samples will be collected and processed to allow for the recovery of these fossil remains. • If necessary, earth-moving activities will be diverted temporarily around a fossil/sampling locality until the fossil remains/sample has been removed. • If warranted, rock/sediment or fossil samples will be submitted to commercial laboratories for microfossil and pollen identification, or radiometric dating analysis.	LS

TABLE ES-1
Summary of Project Impacts and Mitigation Measures

Potentially Significant Impact		Mitigation	Level of Significance after Mitigation
HWSG Site	**SLRC**		
		• Recovered fossil remains will be prepared to the point of identification, identified by knowledgeable paleontologists, curated, catalogued with Natural History Museum of Los Angeles Vertebrate Paleontology Department (LACMVP) fossil specimen and locality numbers, and transferred to the LACMVP for permanent storage. • A final technical report of results and findings will be prepared by the paleontologist. **Mitigation Measure PR-2: Paleontologic Resources at the HWSG Site** Monitoring at the HWSG site will be conducted on a spot-check basis once excavation for the reservoir and any ancillary facility has reached a depth 5 feet below grade in the stream channel deposits. If fossil remains are encountered by excavation, the monitoring level will be increased to full time. **Mitigation Measure PR-3: Paleontologic Resources at the SLRC** Paleontologic monitoring of construction at the SLRC will be conducted during the periods that ground-disturbing activities are ongoing at depths greater than 5 feet, and are occurring within Quaternary alluvium or Miocene marine sediments. With the exception of the excavations for the cut-and-plug operations, expected to occur only within artificial fill, all excavations to depths greater than 5 feet may affect paleontologically sensitive sediments. Therefore, these excavations will be monitored *except* in cases where it can be conclusively demonstrated that artificial fill occurs at depths exceeding 5 feet; and that the excavations are, therefore, occurring in sediments with no paleontologic sensitivity. Monitoring will be conducted by a trained paleontologic monitor under the direction of a professional paleontologist. Monitoring will consist of inspection of debris and backdirt generated by excavations, as well as exposed sediment profiles when safely accessible. Boring and drilling operations will be spot monitored at least once a day, and will be full-time monitored should fossils be encountered. All other excavations in paleontologically sensitive sediments will be subjected to full-time paleontologic monitoring.	

TABLE ES-1
Summary of Project Impacts and Mitigation Measures

Potentially Significant Impact		Mitigation	Level of Significance after Mitigation
HWSG Site	**SLRC**		
Traffic and Transportation (Chapter 9)			
Construction traffic at the HWSG site would potentially have a significant adverse impact at the intersection of Forest Lawn Drive and Zoo Drive. Potentially significant impacts would be mitigated by Mitigation Measure TT-1.		**Mitigation Measure TT-1: Forest Lawn Drive and Zoo Drive** The schedule of the construction workers will be staggered to minimize the impact at this location.	S
	At the SLRC, construction traffic would potentially have a significant adverse impact at the intersection of Silver Lake Boulevard and Van Pelt Place. Potentially significant impacts would be reduced by Mitigation Measure TT-2, but potentially significant impacts may remain after mitigation.	**Mitigation Measure TT-2: Silver Lake Boulevard and Van Pelt Place** Truck deliveries for materials or equipment will be scheduled so that none of the truck trips would arrive or depart the SLRC during the afternoon peak period between 4:00 p.m. and 6:00 p.m. Any truck deliveries will occur before the afternoon peak period.	S
	At the SLRC, construction traffic would potentially have a significant adverse impact at the intersection of Riverside Drive and Fletcher Drive. Potentially significant impacts would be mitigated by Mitigation Measure TT-2.	**Mitigation Measure TT-2: Riverside Drive and Fletcher Drive** Truck deliveries for materials or equipment will be scheduled so that none of the truck trips would arrive or depart the SLRC during the afternoon peak period between 4:00 p.m. and 6:00 p.m. Any truck deliveries will occur before the afternoon peak period.	LS

TABLE ES-1
Summary of Project Impacts and Mitigation Measures

Potentially Significant Impact		Mitigation	Level of Significance after Mitigation
HWSG Site	**SLRC**		
Construction activities at the HWSG site include in-street construction in Forest Lawn Drive for a water distribution line. At the SRC, in-street construction is required for the jacking and receiving pits for the bypass pipeline, for construction of the relief stations, and potentially for the regulating station trunk line. Potentially significant traffic impacts from this in-street construction would be mitigated by Mitigation Measure TT-3.		**Mitigation Measure TT-3: Transportation Management Plan** A site-specific transportation management plan (TMP) will be prepared for any stage of construction that may affect traffic flow in the surrounding street system. This plan may include some or all of the following: • Construction work traffic impacts and strategies, including detours and traffic handling. • Strategies for reducing worker trips, including carpooling and transit. • General access restrictions associated with the Proposed Project, including proper notification of affected residences, businesses, and other facilities prior to construction. Advance public notification will include posting of notices and appropriate signage of construction activity. The TMP must ensure adequate access to residences and facilities via existing roadway intersections and private driveways at all times or include alternate access, detours, or temporary mitigation to address access restrictions adequately. • Emergency access restrictions associated with the Proposed Project, including proper notification of emergency providers and provision of alternate routes, if necessary. All construction activities will be coordinated with local law enforcement, fire protection, and other emergency service providers. These entities will be notified of the timing, location, and duration of construction activities. • Where construction will result in temporary lane closures of sidewalks and other pedestrian facilities, the TMP would address temporary pedestrian access, through detours or safe areas alongside the construction zone. Any affected pedestrian facilities and alternative facilities or detours will be identified. The development of this plan will be coordinated with Los Angeles Department of Transportation (LADOT) and will require its approval prior to the implementation of any measures and activities that would affect traffic flow in the area.	LS

TABLE ES-1
Summary of Project Impacts and Mitigation Measures

Potentially Significant Impact		Mitigation	Level of Significance after Mitigation
HWSG Site	**SLRC**		
Noise (Chapter 10)			
Construction noise produced by onsite machinery may produce levels that exceed ambient noise levels by 5 decibels (dBs) at the HWSG site and at the SLRC, resulting in significant impacts. Potential impacts from construction-related noise at the HWSG site would be mitigated by Mitigation Measure N-1; potential construction-related noise impacts at the SLRC would be mitigated by Mitigation Measure N-2.		**Mitigation Measure N-1: Construction Noise at the HWSG Site** Measures to minimize noise from construction activities at the HWSG site include some or all of the following: • A noise monitoring and mitigation program at the HWSG site will be instituted to continuously assess construction noise impacts and implement mitigation when and where required. The program will account for perceived impacts as well as actual measured noise levels. • Use of extreme noise producers will be minimized as much as possible because aggregate noise levels are generally driven by a few loud machines. Activities such as rock crushing, which produces noises that are both loud and dissimilar to ambient noise, will be minimized. Every effort will be made to complete such activities as soon as possible, rather than extended over the duration of construction. When feasible, extreme noise producers will be shielded by a sound barrier and located as far as possible from noise-sensitive receivers. Where feasible, such activities will be conducted offsite at a nonsensitive location. • Fixed-location machinery, such as generators and compressors, will be shielded from sensitive receivers. Shielding may comprise any arrangement that produces substantial noise reductions including manufactured enclosures; plywood barriers; terrain (berms, dirt piles); and other large, fixed-location machinery. • Activities that may be performed at a fixed location (e.g., sawing lumber) will be shielded similar to the third measure, above. • Machinery will be equipped with high-performance mufflers and other noise-reducing equipment. Machinery will be maintained in good running condition, including frequent lubrication to minimize squealing and additional engine load, to reduce annoying noise emissions.	S

TABLE ES-1
Summary of Project Impacts and Mitigation Measures

Potentially Significant Impact		Mitigation	Level of Significance after Mitigation
HWSG Site	**SLRC**		
		• Construction hours will be strictly enforced. Staging areas will be secured with a locked fence to prevent early startup or late-night maintenance.	
		Mitigation Measure N-2: Construction Noise at the SLRC Measures to minimize noise from construction activities at the SLRC include some or all of the following: • A noise monitoring and mitigation program at the SLRC will be instituted to continuously assess construction noise impacts and implement mitigation when and where required. The program will focus primarily on ensuring no hazardous noise levels exist at nearby residences. Long-term (all day) monitoring should be conducted to verify that noise levels at sensitive receptors do not exceed permissible limits as determined by the appropriate authority. • Construction areas will be shielded with noise control barriers, particularly the area surrounding the regulating station. Barriers may be of any configuration sufficient to control the immediate noise levels; specifically, they should be heavy, continuous (no gaps), and have a sound-absorptive surface on the construction side. Typical construction sound barriers include 3/4-inch plywood with a glass or mineral wool facing, commercially available post-and-panel noise-control fencing, and commercially available noise-control curtains. Barrier height will be as tall as can be practically and safely erected, but should be a minimum of 8 feet high. Entrances to the noise-controlled areas will be located away from sensitive receivers. If feasible, the entrance to the regulating station area will be to the east or southeast (facing the dog park).	S

TABLE ES-1
Summary of Project Impacts and Mitigation Measures

Potentially Significant Impact		Mitigation	Level of Significance after Mitigation
HWSG Site	**SLRC**		
		• Use of extreme noise producers will be minimized as much as possible because aggregate noise levels are generally driven by a few loud machines. Every effort will be made to complete such activities in a timely manner, rather than extending them over the duration of construction. Where feasible, they will be shielded by a sound barrier and located as far as possible from noise-sensitive receivers. Where feasible, such activities will be conducted offsite at a nonsensitive location. • Fixed-location machinery, such as generators and compressors, will be shielded from sensitive receivers. Shielding may comprise any arrangement that produces substantial noise reductions including manufactured enclosures; plywood barriers; terrain (berms, dirt piles); and other large, fixed-location machinery. • Activities that may be performed at a fixed location (e.g., sawing lumber) will be shielded similar to the fourth measure above. • Equipment maintenance and testing facilities at the staging area will be shielded similar to the second measure above. • Machinery will be equipped with high-performance mufflers and other noise-reducing equipment. Machinery will be maintained in good running condition, including frequent lubrication to minimize squealing and additional engine load, to reduce annoying noise emissions. • Loudest operations in the late afternoons and evenings, particularly after 7:00 p.m., will be avoided. • Noise-producing equipment maintenance and testing at the staging area in the evenings, particularly after 7:00 p.m., will be avoided. Testing of loud machinery will be scheduled to coincide with peak morning and afternoon traffic hours, if possible. • Unnecessary equipment will be shut down overnight (e.g., blowers or generators will not be left running unnecessarily). • Construction hours will be strictly enforced. The staging area will be secured with a locked fence to prevent early startup or late-night maintenance.	

TABLE ES-1
Summary of Project Impacts and Mitigation Measures

Potentially Significant Impact		Mitigation	Level of Significance after Mitigation
HWSG Site	**SLRC**		
	Noise produced by the regulating station at the SLRC is anticipated to exceed ambient noise levels by more than 5 dBs, resulting in a significant impact. This impact would be mitigated by Mitigation Measure N-3.	**Mitigation Measure N-3: Noise from Regulating Station at the SLRC** Sufficient technology currently exists to reduce noise levels from the regulating station to a less-than-significant level. However, given that project operation is not anticipated to begin until late 2013, identification of specific sound-reducing measures is not practical because sound-reduction technology is constantly evolving and advancing (i.e., more sophisticated sound-reduction technology is anticipated to be available in the future than is available today). LADWP will include technologically advanced sound-reduction measures in its detailed design of the regulating station equipment and/or enclosure materials to ensure that noise levels during operation of the regulating station are 40 dBA or less at the nearest residence.	LS
Air Quality (Chapter 11)			
Construction emissions are anticipated to exceed maximum daily levels for ROG, NO_x and PM_{10} at the HWSG site, and NO_x and PM_{10} at the SLRC. When construction emissions for both Proposed Project sites are combined, construction emissions are anticipated to exceed significance thresholds for ROG, NO_x, and PM_{10}. Mitigation to reduce significant air quality impacts would be provided by Mitigation Measure AQ-1.		**Mitigation Measure AQ-1: Construction** The following measures would be implemented to reduce construction-related air quality impacts during all nine phases of project construction: • Equipment idling time shall be minimized to the extent possible. • Equipment engines shall be maintained in good condition and in proper tune in accordance with manufacturer specifications. • Electricity from onsite power poles will be used, as feasible, in place of temporary diesel-powered generators. • All construction equipment shall utilize emulsified diesel fuel. The use of such fuel has been demonstrated by the California Air Resources Board to reduce NO_x by 14 percent and reduce PM_{10} (from engine combustion) by 63 percent.	S
Notes: LS = Less than Significant after Mitigation S = Potentially Significant Impact remains after Mitigation			

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