LOS ANGELES COUNTY DRAINAGE AREA SEPULVEDA DAM FLOOD CONTROL RESERVOIR

DONALD C. TILLMAN WATER RECLAMATION PLANT EASEMENT IMPLEMENTATION

Initial Study/Mitigated Negative Declaration (IS/MND)

March 2019

Prepared By
City of Los Angeles
Department of Public Works,
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1 INTRODUCTION

1.1 Purpose of Initial Study

The purpose of preparing an Initial Study (IS) under the California Environmental Quality Act (CEQA) is to provide a preliminary analysis of a proposed project to determine whether a Negative Declaration (ND) or an Environmental Impact Report (EIR) should be prepared. An IS may also enable a lead agency to modify a project, mitigating adverse impacts in lieu of preparing an EIR, thereby enabling the project to qualify for a Mitigated Negative Declaration (MND). The IS provides a factual basis for the ND or MND or serves to focus an EIR on the significant effects of a project.

1.2 Document Format

Section 1, Introduction: This section provides an overview of the Proposed Project and the CEQA environmental documentation process.

Section 2, Project Description: This section provides a description of the project location, project background, project components, and proposed construction and operation for the Proposed Project.

Section 3, Environmental Factors Potentially Affected: This section provides an overview of environmental factors that would be potentially affected by the Proposed Project and provides the recommended environmental documentation for the Proposed Project.

Section 4, Evaluation of Environmental Impacts: This section presents the City of Los Angeles' (City) CEQA checklist for all impact areas and mandatory findings of significance. Includes discussion and identifies applicable mitigation measures.

Section 5, Summary of Mitigation and Conservation Measures: This section provides the mitigation measures that would be implemented to ensure that potential adverse impacts of the Proposed Project would be reduced to a less than significant level. It also describes additional conservation measures that would be implemented.

Section 6, Mandatory Findings of Significance: This section summarizes the potential impacts of the Proposed Project and describes the level of significance of potential impacts before and after mitigation.

Section 7, Preparation and Consultation: This section provides a list of key personnel involved in the preparation of this report and key personnel consulted.

Section 8, References: This section provides a list of reference materials used during the preparation of this report.

1.3 CEQA Process

Once the adoption of a ND or MND has been proposed, a public comment period opens for no less than twenty (20) days, or thirty (30) days if there is state agency involvement. The purpose of this comment period is to provide public agencies and the general public an opportunity to review the IS and to comment on the adequacy of the analysis and the findings of the lead agency regarding potential environmental impacts of the proposed project. If a reviewer believes the project may have a significant effect on the environment, the reviewer should (1) identify the specific effect, (2) explain why it is believed the effect would occur, and (3) explain why it is believed the effect would be significant. Facts or expert opinion supported by facts should be provided as the basis of such comments.

After the close of the public review period, the Board of Public Works considers the ND or MND, together with any comments received during the public review process and makes a recommendation to the City of Los Angeles (City) Council on whether to approve the project. One or more Council committees may then review the proposal and documents and make its own recommendation to the full City Council. The City Council is the decision-making body and also considers the ND or MND, together with any comments received during the public review process, in the final decision to approve or disapprove the project. During the project approval process, persons and/or agencies may address either the Board of Public Works or the City Council regarding the project. Public notification of agenda items for the Board of Public Works, Council committees and City Council is posted 72 hours prior to the public meeting. The Board of Public Works Agenda is available via the internet at http://www.bpw.lacity.org/. The Council agenda can be obtained by visiting the Council and Public Services Division of the Office of the City Clerk at City Hall, 200 North Spring Street, Suite 395; by calling 213/978-1047, 213/978-1048 or TDD/TTY 213/978- 1055; or via the internet at https://www.lacity.org/your-government/elected-officials/city-council/city-council-committee-meetings.

If the project is approved, the City will file a Notice of Determination with the County Clerk within 5 days. The Notice of Determination will be posted by the County Clerk within 24 hours of receipt. This begins a 30-day statute of limitations on legal challenges to the approval under CEQA. The ability to challenge the approval in court may be limited to those persons who objected to the approval of the project, and to issues presented to the lead agency by any person, either orally or in writing, during the public comment period.

As a covered entity under Title II of the Americans with Disabilities Act (ADA), the City does not discriminate on the basis of disability and, upon request, will provide reasonable accommodation to ensure equal access to its programs, services, and activities.

2 PROJECT DESCRIPTION

2.1 Introduction

The Proposed Project is the issuance of a long-term easement for the operation of the Donald C. Tillman Water Reclamation Plant (Plant) in the Sepulveda Dam Flood Control Reservoir (Sepulveda Dam Reservoir), in Los Angeles County, California (CA). Section 4 of the Flood Control Act (FCA) of 1944 (Public Law 78-534), as codified in 16 United States Code (USC) 460(d), authorizes the United States Army Corps of Engineers (Corps) to grant leases of lands, including structures or facilities thereon, at water resources development projects for such periods, and upon such terms, and for such purposes as the Secretary of the Army may deem reasonable in the public interest. Pursuant to that authority, the Corps authorized construction of the Plant and the adjacent Japanese Garden on land in the Sepulveda Dam Reservoir pursuant to a lease between the City of Los Angeles and the United States (U.S.), DACW09-1-72-3. That lease expires in October 2019 and the Corps has received a request from the City of Los Angeles Department of Public Works, Bureau of Sanitation (LASAN) for a long-term easement for the operation of the Plant.

Under the terms and the duration of this easement, LASAN would complete several construction projects, the most substantial of which would be modifications to the dikes that surround and protect the Plant in case of flooding from the nearby Los Angeles River.

2.2 Location

The Sepulveda Dam Reservoir is approximately 17 miles northwest of downtown Los Angeles, in the San Fernando Valley community of Van Nuys, California. It lies immediately west of Interstate 405 (I-405, San Diego Freeway) and north of U.S. Highway 101 (US-101, Ventura Freeway) (Figure 2-1). The Plant is located at 6100 Woodley Avenue (Ave.), north of Burbank Boulevard (Blvd.) and south of Victory Blvd.

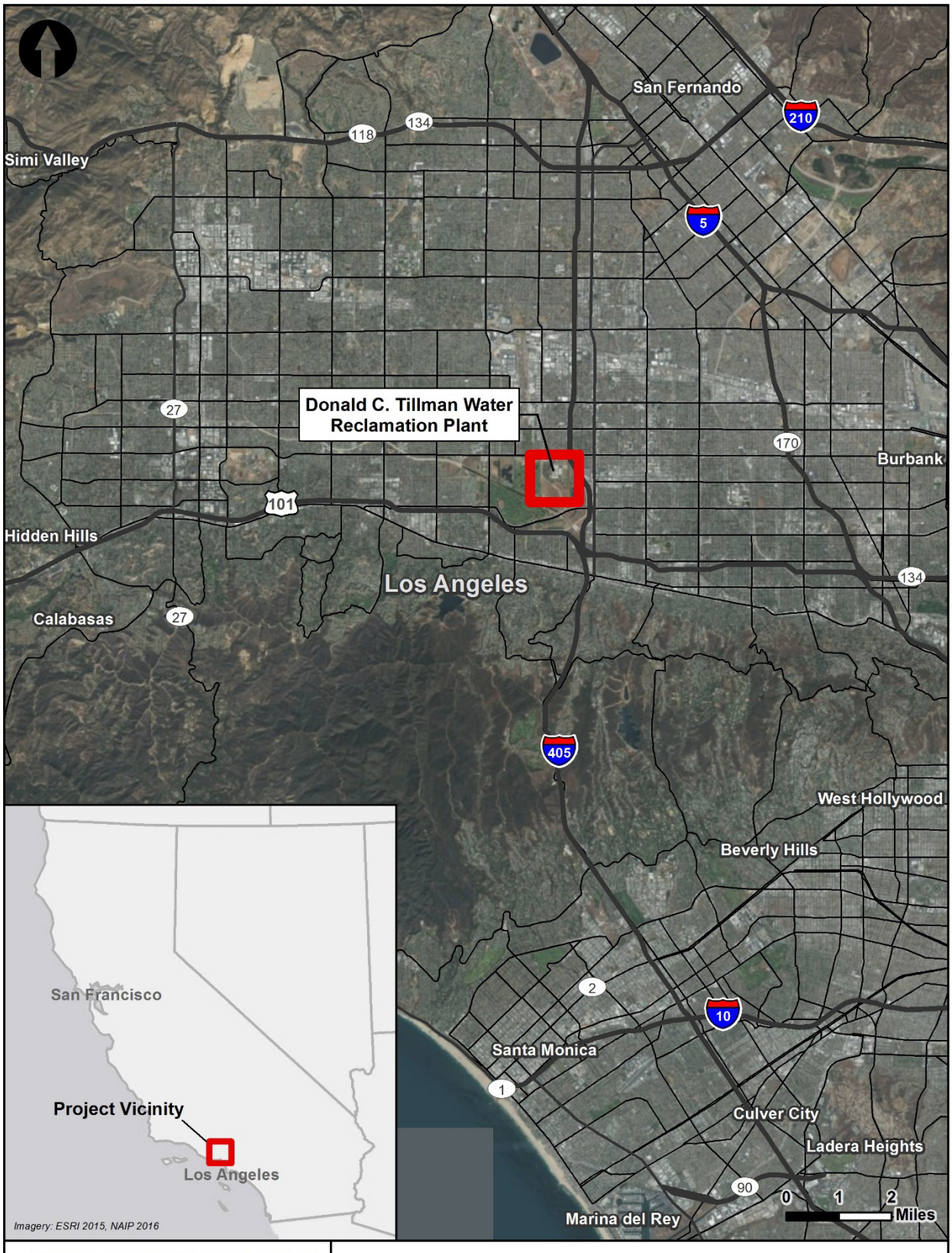
2.3 Setting

The Plant occupies approximately 90 acres within the Sepulveda Dam Reservoir, which comprises 2,000 acres of federally-owned land under the jurisdiction of the Corps, Los Angeles District. The Sepulveda Dam Reservoir is an integral part of the comprehensive plan for flood control in the Los Angeles County drainage area. The Sepulveda Dam regulates runoff from a drainage area of approximately 152 square miles, including the San Gabriel, Santa Monica, and Santa Susana mountains, and the Simi Hills. Historically, major inflow and impoundment events at the Sepulveda Dam Reservoir have resulted from winter storms. The peak flood elevation of 705.10 feet (ft.) was registered in 1980, which was below the estimated 100-year flood peak of 712.0 ft. elevation.

The Plant is located in the northeast corner of Sepulveda Dam Reservoir (Figure 2-2) and is an integral part of the City's wastewater system operated by LASAN. It provides hydraulic relief for major interceptor sewers in the San Fernando Valley, as well as the North Outfall Sewer, the La Cienega-San Fernando Valley Relief Sewer tunnel through the Santa Monica Mountains, and downstream portions of the Hyperion system including the Hyperion Treatment Plant (HTP). The Plant grounds include the 6.5-acre Japanese Garden, designed by Dr. Koichi Kawara and dedicated in 1984.

Due to the Plant’s location within a flood control facility, it is uniquely susceptible to flood damages and requires adequate flood protections. To protect the Plant from floodwaters, the City took three necessary measures, including;

- Building a combination concrete/earthen flood control dike around the Plant,



DONALD C. TILLMAN WATER RECLAMATION PLANT EASEMENT IMPLEMENTATION INITIAL STUDY

FIGURE 2-1 PROJECT LOCATION

DONALD C. TILLMAN WATER RECLAMATION PLANT EASEMENT IMPLEMENTATION INITIAL STUDY

Legend

Project Area

FIGURE 2-2 DONALD C. TILLMAN WATER RECLAMATION PLANT AND THE SEPULVEDA DAM RECREATION AREA

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- Removing 567,000 cubic yards (cy) of soil from fields adjacent to the Plant to compensate for the floodplain storage capacity displaced by the diked area,
- Extending the Plant effluent outfall pipeline to below the Sepulveda Dam spillway into the Los Angeles River, which made extension of the Plant outfall unnecessary to discharge the Plant's effluent into the sewer system during floods.

The 2,000-acre Sepulveda Dam Reservoir, in addition to the Plant, contains the Sepulveda Dam Recreation Area, the Sepulveda Basin Wildlife Reserve, and the dam structure itself (Figure 2-2). Sepulveda Dam Recreation Area occupies the majority of the Sepulveda Dam Reservoir and includes a number of recreational facilities throughout the Sepulveda Dam Reservoir. These facilities include the Balboa Sports Center, the Balboa Golf Course, the Encino Golf Course, the Woodley Lakes Golf Course, Woodley Ave. Park, the Balboa Recreation Lake (Lake Balboa) and Lake Balboa Park (Figure 2-2). Additionally, open playfields, including a large cricket field, are located within the recreation area. The Sepulveda Basin Wildlife Reserve, located in the southeastern portion of the Sepulveda Dam Reservoir, is approximately 225 acres and consists of restored natural habitat, an educational staging area and amphitheater, and various pathways and pedestrian bridges. Wastewater from the Plant is of sufficient quality to be used as recycled water for irrigation of the Japanese Garden within the Plant grounds, for irrigation of the Woodley Lakes, Balboa, and Encino Municipal golf courses, and as source water for the Japanese Garden Lake, the Wildlife Lake, Lake Balboa, and the Los Angeles River.

2.4 Background

The Plant began operations in 1985 in the Sepulveda Dam Reservoir with the intent to relieve pressure on the major interceptor sewers in the San Fernando Valley as well as to relieve pressure on the HTP by treating sewage from the western portion of the San Fernando Valley. The Plant currently provides treatment of incoming wastewater for customers between Chatsworth and Van Nuys, producing about 80 million gallons of recycled water each day. About 40 percent of that wastewater comes from commercial uses, while 60 percent comes from residences. The treatment process includes grit removal, bar screens, primary sedimentation, activated sludge biological treatment, nitrification and denitrification treatment, secondary clarification, coagulation, dual media filtration, chlorination and dechlorination. The sludge from the primary and secondary treatment processes and filter backwash are returned to the interceptor and then transported to the HTP for further treatment.

The Plant is a full tertiary treatment facility with capacity to provide "Title 22" treatment. Title 22 is the legislation enacted by the California State Department of Health Services to regulate the various types of water reuse and levels of required treatment of recycled water. Title 22 allows for many uses of recycled water including irrigation of food crops, parks, playgrounds, school yards, residential landscaping, cemeteries, freeway landscaping, golf courses, fish hatcheries, commercial laundries, flushing toilets and urinals and industrial process water. Recycled water produced at the Plant is reused within the Plant and is also distributed to the Japanese Garden, located in the western portion of the Plant as well as to adjacent golf courses and to Lake Balboa and Wildlife Lake within the Sepulveda Dam Reservoir recreational area. The remaining water, which has undergone full Title 22 treatment, is released to the Los Angeles River downstream of the Sepulveda Dam Reservoir.

The Japanese Garden is open to the general public and is available for lease for special events. Monday through Thursday, as well as on Sundays, the Garden is open for either docent-led tours or self-guided walking tours. Additionally, during those hours the on-site gift shop is open. The Garden is staffed by four full-time and three part-time administrators as well as four full-time gardeners and one supervisor. Two part-time specialized tree pruners are employed to prune the Garden's 123 black pine trees. Periodically throughout the year, festivals, cultural events, and special exhibits take place at the Garden. Examples of such events include the Origami Festival, the Japanese Heritage Celebration and other

special exhibits. Attendance is limited to 200 people for these events. Additionally, the Garden is available for lease for special events, including weddings, photo shoots, movie filming, fundraisers, and business meetings. Attendance for these events is limited to 84 guests.

2.5 Purpose

The purpose of the Proposed Project is to provide LASAN with a long-term easement for continued operation of the Plant. A prerequisite for issuance of a new easement is rehabilitation of the existing dikes to ensure protection from the standard project flood (SPF). Recent dike investigations indicate that the SPF would occur at 713.52 ft. National Geodetic Vertical Datum of 1929 (NGVD29), equal to a 200-year flood (Arcadis 2016). In order to meet this height, plus the additional freeboard height requirement, the existing floodwalls and dikes around the Plant must be raised.

2.6 Proposed Project

The Proposed Project involves the issuance of a new easement, which includes the prerequisite raising of the existing dikes to meet flood protection requirements, as well as a suite of components that would be undertaken to update Plant facilities. These components include the construction of a Multi-Purpose Building (MPB) in service to the Japanese Garden needs, and two capital improvement projects to improve sewer service and flow-metering in maintenance vaults within the Plant grounds.

2.6.1 Dike Rehabilitation

Dike rehabilitation to provide SPF protection is a requirement for LASAN to be granted a new long-term easement (Arcadis 2016). Studies determined that the SPF would occur at 713.52 ft. NGVD29, equal to the 200-year flood (Arcadis 2016). In addition to increasing dike height to meet this elevation, it is necessary per Federal Emergency Management Agency (FEMA) requirements to include "freeboard" or a number of additional feet of height on a dike or dam that allows an increased factor of safety. A site plan of the Proposed Project is shown in Figure 2-3. Design elevations needed to meet the requirements of the Corps for issuance of a new easement are shown in Table 2-1.

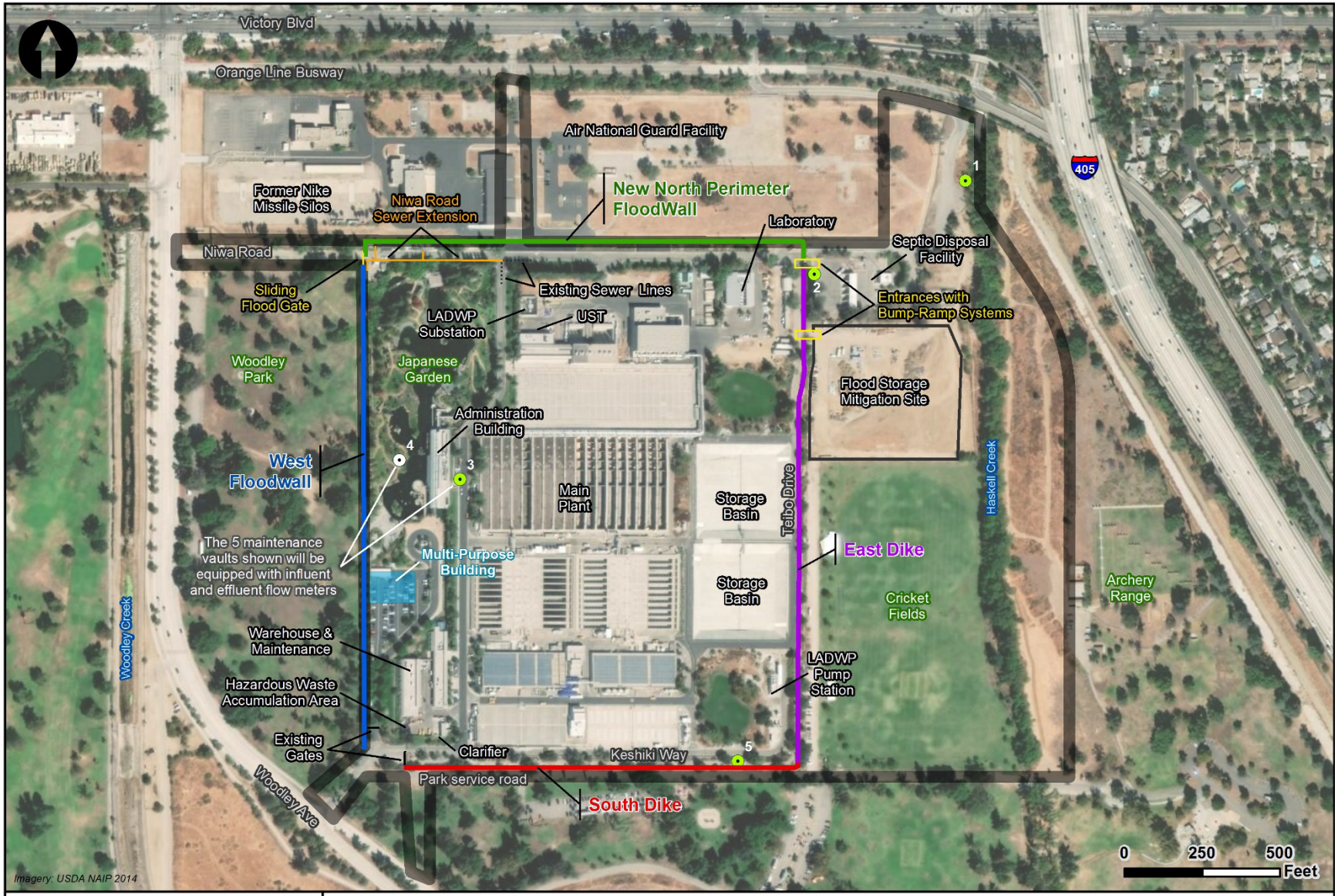
Table 2-1. Design Elevations

Feature	SPF Elevation (ft. NGVD29[1])	Freeboard (ft.)	Datum Adjustment[2] (ft.)	Minimum Design Elevation (ft. NAVD88)
West Floodwall	713.5	2.7	+2.22	718.42
South Dike	713.5	2.2	+2.22	717.92
East Dike	713.5	2.2	+2.22	717.92
Dike Superiority Spillway	713.5	0	+2.22	715.72

Source: Arcadis 2016, [1]Datum system used for calculations, [2]Adjustment to convert NGVD29 to NAVD88.
Note: NAVD29 = National Geodetic Vertical Datum of 1929, NAVD88 = North American Vertical Datum of 1988

2.6.2 Multi-Purpose Building

Construction of a permanent new building of approximately 18,000 square feet ($ft.^2$) is part of the Proposed Project. The new MPB (Figure 2-3) would house the existing employees, docents and the gift shop of the Japanese Garden, and would include new meeting and conference rooms and exhibit space. The facility would provide improved working conditions and permanent office space for the City's staff and the 75 docent volunteers. Additionally, the new facility would provide adequate space for the existing rotating exhibits to be relocated from the Administrative Building and housed within a permanent exhibit hall. The new facility would provide added space for educational programs, cultural events, and special events at the Plant and within the Garden. The facility would be designed in accordance to the Leadership in Energy and Environmental Design (LEED) criteria to incorporate sustainable design features.


Victory Blvd
Orange Line Busway
Air National Guard Facility
Former Nike Missile Silos
Niwa Road Sewer Extension
New North Perimeter FloodWall
Laboratory
Septic Disposal Facility
Niwa Road
Sliding Flood Gate
Existing Sewer Lines
Entrances with Bump-Ramp Systems
LADWP Substation
UST
Woodley Park
Japanese Garden
Flood Storage Mitigation Site
Administration Building
West Floodwall
Main Plant
Storage Basin
Teibo Drive
Haskell Creek
East Dike
The 5 maintenance vaults shown will be equipped with influent and effluent flow meters
Multi-Purpose Building
Storage Basin
Cricket Fields
Archery Range
Woodley Creek
Warehouse & Maintenance
LADWP Pump Station
Hazardous Waste Accumulation Area
Existing Gates
Clarifier
Keshiki Way
Park service road
Woodley Ave
South Dike
405
1
2
3
4
5
0
250
500
Feet
Imagery: USDA NAIP 2014
DONALD C. TILLMAN WATER RECLAMATION PLANT EASEMENT IMPLEMENTATION INITIAL STUDY
Legend
Project Area
Proposed Multi-Purpose Building
Maintenance Vaults
Existing
New
FIGURE 2-3 SITE PLAN: PROPOSED PROJECT

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2.6.3 Capital Improvement Projects

Two forthcoming capital improvement projects involving infrastructure upgrades are included in this IS and are discussed below.

Niwa Road Sewer Installation. This project would extend the existing sewer within the Plant in order to provide sewer service to the Japanese Garden facilities, replacing the existing septic tank system. The sewer system would be installed along Niwa Road, north of the gardens, and would extend to the restrooms located on the east side of the gardens. A trench approximately 200 yards long and 12 ft. deep would be constructed to tie into an existing force main found along Niwa Road. Approximately 250 cy of soil would be excavated and temporarily stockpiled alongside the trench during construction. An 8-inch pipe would be installed to connect the bathrooms. Most of the soil would be used to backfill the trench, and approximately 13 cy of soil would be disposed of offsite. The project is anticipated to take up to 9 months to construct and would be constructed in 2024. The proposed location of the Niwa Road Sewer is shown on Figure 2-3.

Installation of Inflow and Effluent Flow Meter Vaults. This component would involve installation of four new 4-ft. diameter maintenance vaults for flow metering equipment. For the four new maintenance vaults and one existing maintenance vault, power and signal instrumentation would be integrated with the existing Plant distribution control system. The proposed locations of the new vaults and the existing vault are shown on Figure 2-3.

2.6.4 Pilot Projects

Plant staff occasionally implement small pilot projects to test or demonstrate the efficacy of a new type of equipment or procedure. These projects do not require construction or installation of permanent features. Pilot projects may include the temporary use of a small trailer to house containerized equipment and a technician, installation of temporary, above-ground piping, and submersible pipes. These types of projects are not anticipated to result in any impacts to natural resources or human uses of the Plant. Should impacts for a future project be anticipated, a separate planning and environmental evaluation would be undertaken by the City at that time.

2.7 Project Construction

2.7.1 Dike Rehabilitation.

Based on the minimum design elevations, a number of dike rehabilitation measures were identified as necessary to meet the requirements for a new easement. These measures are described below.

West Flood Wall. Measures required to increase the height of the West Flood Wall to meet the required design elevation include installing a wall height extension of 0.5 ft. to the western floodwall south of the Japanese Garden. Reconstructive measures required to increase the height of the West Flood Wall to the required design elevation include removal of a previous wall height extension along the dry sand/stone garden within the Japanese Gardens and replacing with a new extension with the additional height needed.

South Dike. Retrofit measures required to increase the height of the South Dike to the required design elevation include installation of a 1,295-ft. long, 27-inch high parapet concrete wall. Additional measures include armoring on the flood side to protect against wave action, removing the Teibo Drive pavement to allow for construction on the narrow crest, and installing concrete pavement on the protected side of the parapet wall to protect against wave overtopping scour and to provide a traversable surface. Also, to

increase the stability of the existing flood side retaining walls, tie-back anchors would be required. Figure 2-4 shows a cross-section of the south dike with the proposed retrofits.

East Dike. Retrofit measures required to increase the height of the East Dike to the required design elevation include installing a 1,610-ft. long, 27-inch high parapet concrete wall on the dike crest. Additional required measures include placing armoring on the flood side to protect against wave action, removing a 300-ft. long segment of Teibo Drive pavement to allow for construction on the narrow crest, installing 300 ft. of concrete pavement on the protected side of the parapet wall to protect against wave overtopping scour and to provide a traversable surface, and maintaining the existing 1301-ft. long Teibo Drive road.

North Perimeter. Retrofit measures required to increase the height of the north perimeter to the minimum design elevation include installing a 1,410-ft. long, 27-inch high concrete wall and foundation. Additional measures include installing armoring on the flood side to protect against wave action and installing a concrete pad on the protected side of the wall to protect against wave overtopping scour. A cross-section of the proposed north perimeter wall is shown in Figure 2-5.

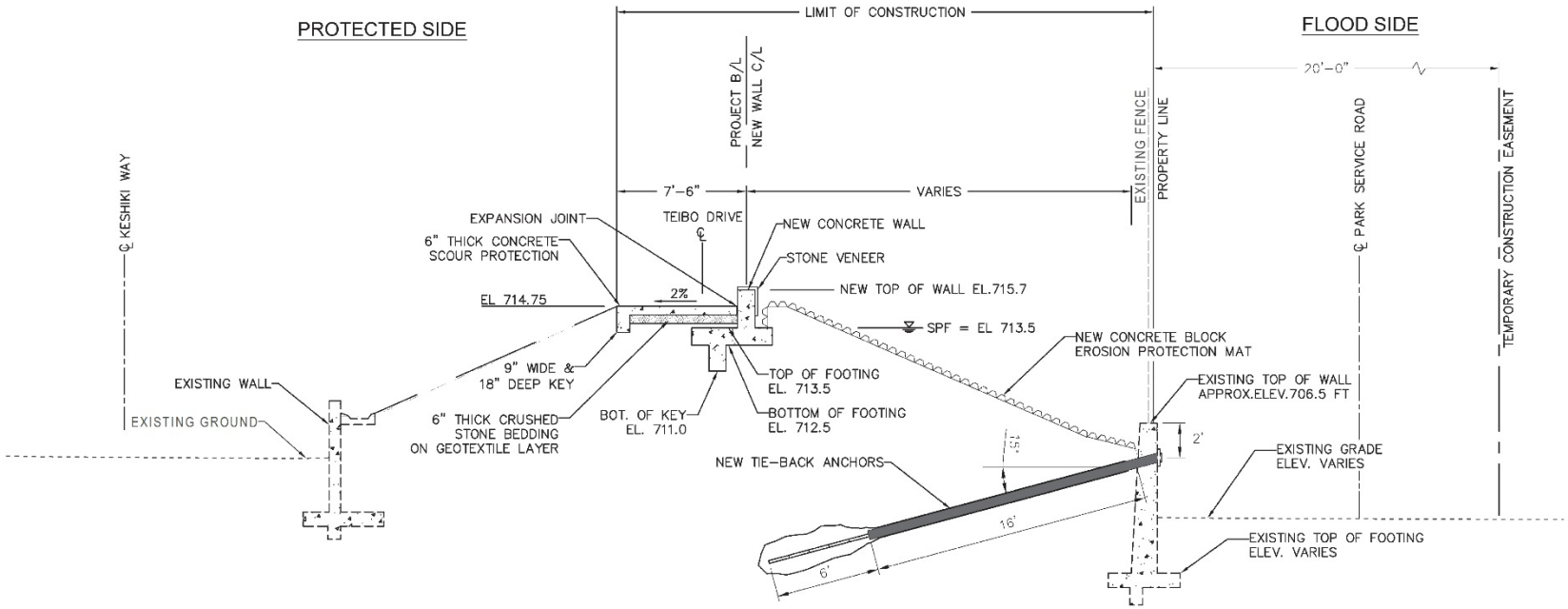
Entrance Roadways. Retrofit measures for the Plant entrance roadways include the installation of sliding flood gates at the northwest entrance on Niwa Road and the installation of a bump-ramp system at the northeast entrance on Niwa Road and at the entrance to the area north of the cricket fields off of Teibo Drive. The bump-ramp system would be elevated to the required design elevation. The main entrance would retain its current configuration as its bump ramp system is of adequate height.

Construction Methods. Dike rehabilitation construction would include site work and concrete work. Site work would include clearing and grubbing and would require use of excavators, front loaders, backhoes, mini-excavators, forklifts and 3 to 4 utility pickup trucks. Concrete work equipment would include a pump truck, multiple concrete mixing trucks, a forklift, and 3-4 utility pickup trucks. Construction would last 12 months, beginning in summer 2019. On an average day, three or four crews totaling 15 to 20 workers would be present. Approximately 10 to 15 trucks would enter and exit the site each day on average.

Construction of the proposed dike improvements would involve standard construction methods. The work primarily consists of standard reinforced concrete wall construction involving panel wall formwork and placing concrete by pump. Placing concrete by pump would alleviate access issues with developing the wall height extensions on the western wall and constructing the parapet wall on top of the existing dikes by being able to retain the security fencing and not needing to bring concrete trucks into the secured facility. The only specialized feature would be the stone veneer which would be installed by a stone mason.

A bump-ramp system, elevated to the required design elevation, would be installed at both the northeast entrance on Niwa Road and the entrance to the area north of the cricket fields on Teibo Drive.

Construction access would be primarily from Woodley Ave. via the main entrance to the Plant and by Densmore Ave. off of Victory Blvd. (Figure 2-3). Access along the south and east dikes would be made along the park service road and the roadway located between the Plant and the cricket fields. A site available for the contractor's staging and storage of materials is located north of the cricket fields.



Note: Dike shown in above cross-section is the South Dike at the Donald C. Tillman Water Reclamation Plant

DONALD C. TILLMAN WATER RECLAMATION PLANT EASEMENT IMPLEMENTATION INITIAL STUDY	**FIGURE 2-4 TYPICAL CROSS-SECTION OF DIKE WITH PARAPET WALL**

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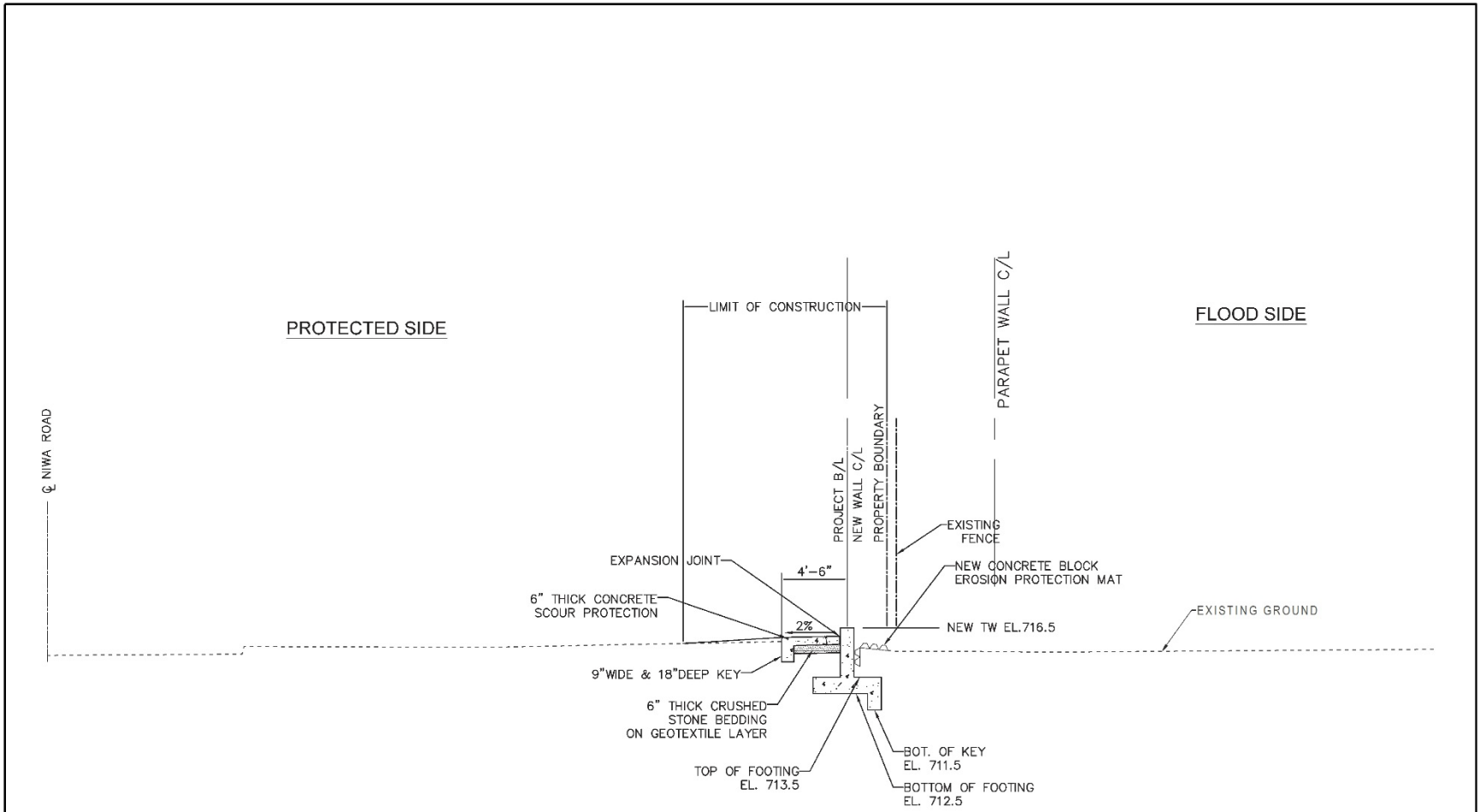

DONALD C. TILLMAN WATER RECLAMATION PLANT EASEMENT IMPLEMENTATION INITIAL STUDY

FIGURE 2-5 CROSS-SECTION OF NORTH PERIMETER WALL

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2.7.2 Multi-Purpose Building

Construction of the facility would occur over an approximately 18-month period beginning in 2025. Staging and construction laydown areas and construction worker parking would be provided on the east side of the Plant. The northern portion of the parking lot would be occupied by the footprint of the new facility (Figure 2-3). Upon completion of construction, the remaining parking area would be redesigned to accommodate approximately 113 total parking spaces.

An average of 20 workers would be onsite during the construction period, and an average of one to two truck trips per day would occur during construction.

2.7.3 Capital Improvement Projects

Niwa Road Sewer Installation. Construction of the new sewer line to service the Japanese Gardens would include the use of a backhoe, small excavator, dump truck, light service vehicles, and a forklift. A crew of 4-6 workers would be at the project site most days. The project would result in temporarily diminished width of Niwa Road, but this would only affect LASAN operations vehicles, and would not affect public uses. Niwa Road would be passable by service vehicles during the construction period. The Niwa Road Project would occur over a 9-month period in 2024.

Installation of Inflow and Effluent Flow Meter Vaults. Construction of the four new maintenance vaults would include excavation of approximately 300 cy of soil, and installation of precast maintenance vaults that would be imported to the Plant. Soils would be hauled to a local landfill or recycling facility. A small manhole would be installed flush with the ground surface on top of the vaults to allow for installation of metering instrumentation. The fifth vault is already found in the Japanese Garden area and would only include installation of electrical equipment and instrumentation. Construction would require up to 20 truck trips and up to 120 worker trips over the 3-month construction period, which is anticipated to run from November 2019 to February 2020.

2.8 Operations and Maintenance

Dike Rehabilitation. An updated operations and maintenance (O&M) manual has been developed that incorporates a description of the Plant, the O&M responsibilities and procedures during flood and non-flood periods, and reporting requirements. This manual is being reviewed by the Corps and will be officially approved and adopted by LASAN. It should be noted that no flood warning system is required for the current operation of the flood system as no manual elements are included. The recommended improvements include a closure system that would require manual implementation. The O&M manual would be further updated to include these procedures. Following construction of dike rehabilitation measures, operation of the Plant would not substantially change. The existing O&M manual guidelines would be applied to ensure that O&M of new dike features was undertaken as necessary. Periodic maintenance would be undertaken, and, where new features were present, additional maintenance would be necessary.

Flood Evacuation Plan. The Plant has a well-rehearsed Flood Evacuation Plan in place with procedures for communicating the potential for flood waters, evacuating visitors, contractors and employees, and shutting down Plant operations if necessary. The Plant conducts annual evacuation drills to ensure that personnel are up to date on these procedures.

Multi-Purpose Building. Following the completion of construction, the new facility would house the existing Japanese Garden staff and docents as well as the existing gift shop. Additionally, the exhibit space within the Administration Building would be relocated to the new facility. The new meeting and

conference room space would provide enhanced facilities for the existing meetings, conferences, events, educational programs, and cultural activities that occur at the Plant. No permanent increase in the number of staff or docent volunteers would occur as a result of project implementation. The existing parking lot, a portion of which would be lost through the construction of the new facility, would be reconfigured to accommodate a total of approximately 113 parking spaces. This supply of parking would be adequate to accommodate existing Japanese Garden and Plant employees as well as visitors.

Niwa Road Sewer Extension. Once installed, the Niwa Road Sewer extension would require almost no maintenance. The only maintenance requirements would occur if the sewer line plugged up or failed. Neither of these scenarios is considered likely to occur.

Installation of Inflow and Effluent Flow Meter Vaults. New maintenance vaults and inflow and effluent flow meters, integrated into the instrumentation with the Plant's distributed control system, would require occasional maintenance to calibrate and clean the instrumentation, replace electronic components, and check readings. Additional maintenance is not anticipated.

2.9 Project Actions and Approvals

The Proposed Project and environmental documentation, including this IS/MND, would require approval by the City of Los Angeles Board of Public Works and City Council. Additional anticipated approvals or permits for the Proposed Project include, but are not limited to the following:

- Corps, Lease Amendment to construct the facility on Corps-owned land
- City of Los Angeles Department of Transportation (LADOT), Traffic Control Plan review

The analysis in this document assumes that, unless otherwise stated, the Proposed Project would be designed, constructed and operated following all applicable laws, regulations, ordinances and formally adopted City standards (e.g., City of Los Angeles Municipal Code and City of Los Angeles Department of Public Works, Bureau of Engineering [LABOE] Standard Plans). Construction would follow the uniform practices established by the Southern California Chapter of the American Public Works Association (e.g., Standard Specifications for Public Works Construction and the Work Area Traffic Control Handbook) as specifically adapted by the City of Los Angeles (e.g., The City of Los Angeles Department of Public Works Additions and Amendments to the Standard Specifications for Public Works Construction [also known as "The Brown Book," formerly Standard Plan S-610]).

3 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project.

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

3.1 DETERMINATION

DETERMINATION: (*To be completed by the Lead Agency*) On the basis of this initial evaluation:

☐	I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
☒	I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
☐	I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
☐	I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
☐	I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature — Date

Paul A. Shoemaker — 3/15/2019

Signature — Date

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4 EVALUATION OF ENVIRONMENTAL IMPACTS

This chapter describes resources that are found in the study area and describes the effects that implementation of the Proposed Project may have on those resources. Impacts to resources may result from the construction of the Proposed Project, or O&M associated with the completed project. For each resource area, the potential impacts resulting from implementation of the Proposed Project are evaluated for their level of significance.

The categories used to designate impact significance are described below:

- *No Impact* A project is considered to have no impact if there is no potential for impacts, or if the environmental resource does not exist within the project area or the area of potential effect (APE). For example, there would be no impacts related to wastewater disposal if the project would not involve the production of wastewater.
- *Less than Significant* This determination applies if there is some impact, but not one that qualifies under the significance criteria as a significant impact.
- *Less than Significant with Mitigation* This determination applies to impacts that exceed significance criteria, but for which feasible mitigation is available to reduce the impacts to a less than significant level.
- *Potentially Significant* This determination applies to impacts that are significant but for which: 1) no feasible mitigation has been identified to reduce the impact to a less than significant level, or 2) feasible mitigation has been identified, but the residual impact remains significant after mitigation is applied. Therefore, the impact is considered significant and unavoidable.

Determination of impact is driven by the application of significance criteria. These are the thresholds which trigger a determination of impact significance. In turn, significance criteria are determined through evaluation of the regulatory setting of the area from a federal, state, and local standpoint. When no regulatory guidelines are available, generalized criteria can be substituted.

In cases where impacts are expected, but which can be reduced with adequate mitigation, those mitigation measures are described. A revised level of significance may result from mitigation. In some cases, less than significant determinations are made, but application of mitigation may still be warranted to further reduce potential impacts (CEQA Section 15021).

Impact assessment takes into consideration construction and operational impacts. Construction impacts are those that may occur during implementation of construction actions and are compared to baseline conditions under which no project would occur. Operational impacts are those that may occur after the project has been completed.

The analysis of potential impacts and mitigation measures is based on pre-determined significance criteria. The significance criteria used in this IS are taken from Appendix A: Environmental Checklist Form included in the CEQA Guidelines (CA OPR 2018):

(1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (for example, the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (for example, the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

(2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

(3) Once the lead agency has determined that a particular physical impact may occur, the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

(4) "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from "Earlier Analyses," as described in (5) below, may be cross-referenced).

(5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or ND. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:

   a. Earlier Analysis Used. Identify and state where they are available for review.

   b. Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

   c. Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

(6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts. Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

(7) Supporting Information Sources: A source list should be attached, and other sources used, or individuals contacted should be cited in the discussion.

(8) This form is only suggested, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.

(9) The explanation of each issue should identify:

   a. The significance criteria or threshold, if any, used to evaluate each question; and

   b. The mitigation measure identified, if any, to reduce the impact to less than significance.

4.1 Aesthetics (AES)

Aesthetics (AES)	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the Project:				
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☒	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

4.1.1 Environmental Setting

A visual quality/aesthetic analysis is subjective and considers the project design in relation to the surrounding visual character, heights, and building and structure types, its potential to obstruct scenic views or vistas, and its potential for light and glare. The Proposed Project's specific design would be considered to have a significant adverse environmental effect on visual quality only if it were to cause a substantial, demonstrable, negative change.

Visual conditions within the project area are dominated by the Plant facilities and the Japanese Garden. The developed area of the Plant is industrial in appearance, contrasting with the natural vegetated landscape of the Japanese Garden. The Plant itself is a well-organized industrial facility, with relatively low-profile gray buildings placed closely together to minimize the Plant's overall footprint. Facilities range from large square footage buildings of one to two stories, to low-profile clarifiers, to aeration tanks with concrete walls and bottoms. Parking lots, roadways, and walls also comprise portions of the Plant grounds and contribute to the industrial appearance. However, green areas are also present within the Plant grounds and include grassed retention basins, treed and grassy margins between buildings, and the Japanese Garden. The Japanese Garden is named SuihoEn or "Garden of Water and Fragrance" and occupies 6.5 acres in the northwest corner of the Plant grounds (Figure 2-3). Water reclaimed by the Plant is used to irrigate the gardens and fill the ponds. The Japanese Garden is noted as having high aesthetic value (Corps 2011a).

The Plant is surrounded to the south and west by the Sepulveda Basin Recreation Area, which includes Woodley Lakes Golf Course, Woodley Park, and the Sepulveda Basin Wildlife Reserve. These areas are characterized by large expanses of mown grass and trees. The Sepulveda Basin Wildlife Reserve was also noted as having high quality aesthetic and environmental value in the Sepulveda Basin Master Plan (Corps 2011b, LADCP 2015). To the north, the Plant is bordered by the California Air National Guard (CANG) facility and Victory Blvd., north of which is a residential area. To the east, it is bordered by open space and I-405, beyond which is a residential area. The visual character of the Plant is dominated by paved surfaces, low buildings, roadways, and parking lots.

The Plant is surrounded on three sides by a raised earthen dike or dike wall, or combination of both, which varies in height from 6 to 10 ft. The southern boundary of the Plant grounds is bordered by a rock wall with a vegetated dike. The wall prevents the Plant from being viewed from access roads, parking lots, recreational fields, and Woodley Ave. The earthen dike has a paved path for bikes and pedestrians. A wall without an earthen dike comprises the border of the Plant to the west (Figure 2-3). This wall limits views from surrounding park areas and Woodley Ave., allowing only the tops of the buildings and trees within the Plant grounds to be seen. The east border has an earthen dike with a chain link fence (Figure 2-3); again, only the tops of the buildings can be seen from the east, and a pedestrian and bike path is present. Earthen dikes are generally vegetated with drought-tolerant shrubs and trees. The Plant is operated continuously, and, for safety and security purposes, lighting is provided 24 hours a day.

4.1.2 Regulatory Setting

The California Scenic Highway Program, governed by the Streets and Highways Code, §260 et seq., is intended to preserve and protect highway corridors in areas of outstanding natural beauty from changes that would diminish the aesthetic value of the adjacent lands. There are no California Department of Transportation (Caltrans)-designated scenic highways in the project area or vicinity (Caltrans 2009). Construction and operation of the project would not be subject to the requirements of the Scenic Highway Program.

The City of Los Angeles General Plan provides guidelines for the protection and conservation of ten citywide elements. In particular, the Conservation Element (LADCP 2001) provides a summary of protections established for natural resources. Section 15, Land Form and Scenic Vistas, provides the following objective and policy:

- Objective: Protect and reinforce natural and scenic vistas as irreplaceable resources and for the aesthetic enjoyment of present and future generations.
- Policy: Continue to encourage and/or require property owners to develop their properties in a manner that will, to the greatest extent practical, retain significant existing land forms (e.g., ridge lines, bluffs, unique geologic features) and unique scenic features (historic, ocean, mountains, unique natural features) and/or make possible public view or other access to unique features or scenic views.

As the facility is currently leased from the Corps, and the Corps would grant the new easement, applicable Corps policy for aesthetics must be considered. Policy Guidance Letter Number (No.) 29, Expenditures on Aesthetics at Civil Works Projects, is a memorandum that summarizes those policies to protect aesthetic quality (Corps 1991). The memorandum states that incorporating environmental quality into project design, including consideration of the visual quality of the project, continues to be an important goal of the Civil Works program.

4.1.3 Potential Impacts

AES (a): Have a substantial adverse effect on a scenic vista?

A scenic vista generally offers views of objects, settings, or features of visual interest, or panoramic views of large geographic areas of scenic quality, primarily from a given vantage point. There are no designated scenic vistas in the project area. The existing dikes prevent views into or out of the Plant and raising dikes by less than 2 ft. would have no significant impact on scenic vistas. The maintenance vault and Niwa Road sewer would be underground and would not have any impact on a scenic vista. The MPB would be two stories tall ($\leq$ 31 ft.) and would be more visible than the existing one-story structure but would have much greater aesthetic value than the existing trailer. Therefore, the impact would be less than significant.

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

The surrounding highways are not designated as part of the California Scenic Highway system and are not locally designated scenic highways. Therefore, there would be no impact to scenic resources along a state scenic highway. No trees, rock outcroppings, historic buildings, or other scenic resources would be affected by the project, and there would be no impact.

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

During construction, the presence of construction equipment, land clearing and earth moving, and increased generation of dust from exposed soils could all contribute to diminished aesthetic appeal of the project area. However, this impact would be temporary and would therefore be less than significant. In addition, most construction activities would occur within the Plant, which is mostly hidden from public view by dikes. Within the Plant, viewer groups that would be affected include Plant employees and visitors to the Japanese Garden. Any visual effects would be alleviated through implementation of the conservation measures identified in Section 4.1.4 and Section 5 such as dust control, concentrating large equipment onto staging areas when not in use, establishing a minimum buffer zone between the staging area and Haskell Creek, and using fenced screening as necessary. Dike rehabilitation would be the most visible activity and would be limited to a one-year period. Those affected would include Plant employees, visitors to the Plant and to the surrounding recreation areas, as well as those traveling along Woodley Ave. However, construction effects would be temporary, and in conjunction with conservation measures identified in Section 4.1.4, the impacts to aesthetics would be less than significant.

The new maintenance vaults and Niwa Road sewer line would be fully underground and would not alter the visual character of the Plant. Raising the existing dikes by less than 2 ft. would have a negligible effect on views into and out of the Plant property, as views are already restricted by the existing dikes. New dikes would look similar to the old dikes but would be slightly higher and would have a low concrete wall on the top. The visual character of the dikes would be largely unchanged, except for the addition of a stone veneer to the sides of the dikes, which would enhance the aesthetic quality of these features.

Following construction, the site would be returned to its original visual condition. The staging area and borrow pit would be restored to their former condition. The presence of the MPB within the Plant would not change the existing visual character of the site, which would remain industrial in appearance. The MPB would replace the one-story temporary trailer facility that is currently being used. As the MPB would be two stories, it would be more visible than the existing structure, both from outside the Plant as well as from the Japanese Gardens. Although this would permanently alter these views, the new building would have significantly higher aesthetic value than the existing trailer. In addition, the aesthetic value of the Japanese Garden would not be affected by the Proposed Project. Therefore, permanent changes associated with the Proposed Project would have a less than significant impact on visual resources and aesthetics in the project area.

AES (d): Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

During construction, lighting could be needed at the staging area. Since this would be a temporary change that would be removed following construction, it would be a less than significant impact. No new light sources would be permanently installed outside of the Plant boundary and additional lights within the Plant boundary would not significantly change current light and glare conditions. Therefore, effects related to light or glare would be less than significant.

4.1.4 Mitigation

No mitigation would be required. However, the following conservation measures would be implemented during construction of the Proposed Project:

AES-1. Signs would be posted prohibiting trespassing within the "construction zone".

AES-2. Vehicular traffic would be confined to routes of travel to and from the project site, and cross-country vehicle and equipment use would be prohibited outside designated work and storage-staging areas.

AES-3. Work and staging areas would be kept orderly and free of trash and debris.

AES-4. A storage area for collection and storage of recyclable and green waste materials would be kept within the work area. All trash and debris would be removed from the work area at the end of each day.

AES-5. When not in use, large equipment would be concentrated in staging areas.

AES-6. A buffer zone would be established between the staging area and Haskell Creek.

AES-7. Fenced screening would be used as necessary.

4.2 Agriculture and Forest Resources (AFR)

Agricultural and Forest Resources (AFR)	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the Project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

4.2.1 Environmental Setting

The Proposed Project area is highly developed as municipal infrastructure. There are no agricultural or forestry uses of the site, and there is no opportunity for such uses in the future. The surrounding open space is developed as a public recreation area and does not contain agricultural or timber resources.

4.2.2 Regulatory Setting

There are no regulations relevant to agriculture or forestry that apply to the project area.

4.2.3 Potential Impacts

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

The Los Angeles County General Plan and City of Los Angeles General Plan indicate that there are no areas considered Prime Farmland, Farmland of Local Importance, Farmland of Statewide Importance, or Unique Farmland in the project area or the surrounding region (LADCP 2001, DRP 2015). Therefore, there would be no impact associated with this criterion.

AFR (b): Conflict with existing zoning for agricultural use or a Williamson Act contract?
and,
AFR (c): Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?
and,
AFR (d): Result in the loss of forest land or conversion of forest land to non-forest use?
and,
AFR (e): Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

The project area and surrounding lands are zoned by the City of Los Angeles and Los Angeles County as a public facility and as open space (DRP 2015, LADCP 2017a). No agricultural uses occur within or near the project site, and no lands are held under a Williamson Act contract. No forest lands or timberlands occur within or near the project site. There would be no impacts associated with these criteria.

4.2.4 Mitigation

There would be no impacts to agricultural and forest resources, therefore no mitigation would be required.

4.3 Air Quality (AIR)

Air Quality (AIR)	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the Project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	☒
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☒	☐
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal, state, or regional ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☐	☒	☐
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐

4.3.1 Environmental Setting

The project site lies within the South Coast Air Basin (SCAB). The SCAB covers an area of approximately 6,745 square miles and is bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. The southern portion encompasses all of Orange County and Riverside County, Los Angeles County except for Antelope Valley, and the non-desert portion of San Bernardino County. The SCAB lies within the semi-permanent high-pressure zone of the eastern Pacific Ocean. The climate of the region is classified as Mediterranean, and is characterized by warm, dry summers and mild winters with moderate rainfall. Prevailing daily winds in the region are westerly, with a nighttime return flow.

The South Coast Air Quality Management District (SCAQMD) maintains an air quality monitoring network to assess the air quality throughout the SCAB. For the area that includes the Plant, air quality data is recorded at the Reseda air monitoring station, located approximately 4 miles northwest of the Plant.

The Proposed Project is located in Los Angeles County, which is designated as a state nonattainment area for ozone (O_3), fine particulate matter (PM) less than 2.5 microns in diameter ($PM_{2.5}$), PM 10 microns or less in diameter (PM_{10}), and lead; and as an attainment or maintenance area for carbon monoxide (CO), nitrogen dioxide (NO_2), and sulfur dioxide (SO_2).

4.3.2 Regulatory Setting

Federal Clean Air Act. The federal Clean Air Act (CAA) (42 USC 7401, et seq.) is the comprehensive federal law that regulates air emissions from stationary and mobile sources. Among other things, this law authorizes the U.S. Environmental Protection Agency (USEPA) to establish National Ambient Air Quality Standards (NAAQS) to protect public health and public welfare and to regulate emissions of hazardous air pollutants. One of the goals of the Act was to set and achieve NAAQS in every state by 1975 in order to address the public health and welfare risks posed by certain widespread air pollutants. The Act was amended in 1977 and 1990 primarily to set new goals (dates) for achieving attainment of NAAQS since many areas of the country had failed to meet the deadlines. The CAA calls for state, local, tribal and federal governments to work in partnership to clean the air.

California Clean Air Act. The California Clean Air Act, (CCAA) signed into law in 1988, established the California Ambient Air Quality Standards (CAAQS). All areas of the state are required to achieve and maintain the CAAQS by the earliest practicable date. Areas not in attainment need to prepare Air Quality Management Plans (AQMPs).

In California, the California Air Resources Board (CARB) is responsible for enforcing air pollution regulations. In the SCAB, the SCAQMD has this responsibility. The CCAA outlines a program to attain the CAAQS for O_3, NO_2, SO_2, and CO by the earliest practical date. Since the CAAQS are often more stringent than the NAAQS, attainment of these more stringent CAAQS will require more emission reductions than what will be required to show attainment of the NAAQS. Similar to the federal system, the state requirements and compliance dates are based on the severity of the ambient air quality standard violation within a region.

South Coast Air Quality Management District. For areas that do not attain the NAAQS, the CAA requires the preparation of a State Implementation Plan (SIP), detailing how the state will attain the NAAQS within mandated timeframes. The SCAQMD is responsible for preparing the portion of the SIP applicable to its boundaries, which include the SCAB; adoption of control regulations for stationary sources; and implementation of indirect source and transportation control measures (e.g. employee ridesharing rules). The SCAQMD has established various rules to manage air quality in the SCAB, including Rules 402 and 403. Rule 402 (Nuisance) states that a person should not emit air contaminants which cause a nuisance. Rule 403 (Fugitive Dust) controls fugitive dust through various requirements including applying water to disturbed soils.

In response to the SIP requirement, the SCAQMD developed the 2012 AQMP (SCAQMD 2012). The Final Plan demonstrates attainment of the federal 24-hour standard for $PM_{2.5}$, classified as fine PM, by 2014 in the SCAB through adoption of all feasible measures. The General Conformity rule of the CAA requires conformity determination for federal actions in a nonattainment or maintenance area to ensure that federal actions conform to the initiatives established in the applicable SIP or tribal implementation plan. This project is exempt from the conformity determination requirement because the project does not have the potential to create emissions which would equal or exceed the *de minimis* thresholds established in 93.153(b)(1).

While the 2012 AQMP focused on attainment of the 24-hour $PM_{2.5}$ standard, it has since been determined, primarily due to unexpected drought conditions, that it was impracticable to meet the standard by the original attainment year. Since that time, the USEPA has approved a re-classification to "serious" nonattainment for the 24-hour $PM_{2.5}$ standard, which requires a new attainment demonstration with a new attainment deadline. To address these issues, the SCAQMD began development of the 2016 AQMP and has issued a Draft Final Plan (SCAQMD 2016a), which demonstrates compliance with the 24-hour $PM_{2.5}$ standard by 2019.

4.3.3 Potential Impacts

AIR (a): Conflict with or obstruct implementation of an applicable air quality plan?

There are two criteria for demonstrating consistency with the AQMP. The first is demonstrating that the Proposed Project would not result in an increase in the frequency or severity of existing air quality violations, cause or contribute to new violations, or delay timely attainment of air quality standards or the interim emission reductions specified in the AQMP. The second is demonstrating the Proposed Project would not exceed any of the assumptions in the AQMP for the year of the project buildout.

The first criterion would be met for the following reasons:

- The Proposed Project has minimal associated operational emissions. The Proposed Project would not alter any aspect of the operation of the facility. Construction emissions for the Proposed Project would be temporary and would not have a long-term impact on the region's ability to meet state and federal air quality standards. The project would comply with all state and local air pollution control regulations, including SCAQMD Rule 403 for fugitive dust.
- The SCAQMD has set construction significance thresholds to protect regional air quality and ensure the attainment of air quality standards consistent with the AQMP. As shown in Table 4-1, the Proposed Project would not exceed any of these thresholds. Any construction equipment used to complete the Proposed Project would operate in compliance with state law and would therefore be consistent with the objectives of the AQMP.

The second criterion would be met because rehabilitation of the dikes, installation of the Niwa Road sewer extension, and construction of the MPB and new maintenance vaults, as stated above, would not alter any aspect of Plant operations. Therefore, the Proposed Project would not impact any of the assumptions in the AQMP, including population, trip generation or inducement of growth. No impact would occur.

AIR (b): Violate or contribute to the violation of an air quality standard?

Project construction would have minor impacts to air quality in the region and the immediate project vicinity as a result of earth moving and construction activities. Emissions would result from the import of various materials including concrete and other construction materials, and emissions would be generated by trucks and employee vehicles, as well as by moving fill material in trucks. The California Emissions Estimator Model (CalEEMod), Version 2016.3.1, was used to estimate on-site and off-site construction emissions. CalEEMod is a statewide land use emissions computer model designed to provide a uniform platform to quantify potential criteria pollutant and greenhouse gas (GHG) emissions associated with both construction and operations from a variety of land use projects. The model quantifies direct emissions from construction and operation activities (including vehicle use), as well as indirect emissions, such as GHG emissions from energy use, solid waste disposal, vegetation planting and/or removal, and water use. It is the SCAQMD's recommended model for evaluating emissions. The estimated construction emissions are shown in Table 4-1. Detailed emissions calculations from CalEEMod are given in Appendix A. All criteria pollutants were modeled other than lead, for which there would be no potential sources of emission.

The SCAQMD developed regional significance thresholds for mass daily emission rates of criteria pollutants for both construction and operational sources (SCAQMD 1993) as well as localized significance threshold (LST) methodology as a way of demonstrating compliance with state and federal ambient air quality standards in the project vicinity. LSTs only apply to nitrogen oxides (NO_x), CO, PM_{10}, and $PM_{2.5}$.

As shown in Tables 4-1 through 4-3, there would be no violations of federal, regional, or local air quality standards during construction or operation of the Proposed Project. Therefore, the Proposed Project would not violate or contribute to the violation of an air quality standard, and impacts would be less than significant. In addition, air quality effects would be alleviated through implementation of the conservation measures identified in Section 4.3.4 and Section 5, such as the creation of a Fugitive Dust Emission Control Plan and restrictions on equipment idling times.

Table 4-1. Regional Construction Emissions

Emissions Component	Criteria Pollutant Emissions (pounds [lbs]/day)					
	Reactive Organic Gases (ROG)	NO_x	PM_{10}	$PM_{2.5}$	sulfur oxides (SO_x)	CO
Estimated Construction Emissions[1]	62.5	68.9	13.4	6.7	0.1	58.3
Regional Thresholds[2]	75	100	150	55	150	550
Above Threshold?	No	No	No	No	No	No

Source: Tetra Tech 2017a
[1] CalEEMod output files, Appendix A
[2] SCAQMD 2015

Table 4-2. Regional Operational Emissions

Emissions Component	Criteria Pollutant Emissions (lbs/day)					
	ROG	NO_x	PM_{10}	$PM_{2.5}$	SO_x	CO
Estimated Emissions[1]	7.4	1.0	0.2	0.1	0.01	1.2
Regional Threshold[2]	55	55	150	55	150	550
Above Threshold?	No	No	No	No	No	No

Source: Tetra Tech 2017a
[1] CalEEMod output files, Appendix A
[2] SCAQMD 2015

Table 4-3. Localized Construction and Operational Emissions

Emissions Component	Criteria Pollutant Emissions (lbs/day)					
	ROG	NO_x	PM_{10}	$PM_{2.5}$	SO_x	CO
Estimated Emissions[1]	3.1	33.9	7.3	3.3	0.1	18.2
Localized Threshold[2]	NA	142	8.4	5.0	NA	891
Above Threshold?	NA	No	No	No	NA	No

[1] CalEEMod output files, Appendix A
[2] Localized Significance Thresholds, linear interpolation between 5-Acre Site and 2-Acre Site for a 3.44-Acre site, 25-meter receptor distance. SCAQMD 2016c.

AIR (c): Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal, state, or regional ambient air quality standard?

The SCAB is a designated non-attainment area for several criteria pollutants including O_3, PM_{10} and $PM_{2.5}$ (SCAQMD 2016b). Therefore, there is the potential for a regional cumulative impact associated with the emission of these pollutants. The SCAQMD has developed regional mass emission rate significance thresholds which are designed to enable the basin to reach attainment for these pollutants. These thresholds can be used to assess whether or not the project emissions would contribute to a cumulative impact.

As shown in Tables 4-1 through 4-3, the Proposed Project would result in emissions of criteria pollutants below critical thresholds during construction, and would have minimal operational emissions, so cumulatively significant impacts would not be anticipated. Therefore, the Proposed Project would not contribute to a cumulatively considerable increase in criteria pollutants. Impacts would be less than significant.

AIR (d): Expose sensitive receptors to substantial pollutant concentrations?

The risk posed to a receptor is a function of both the concentration of PM and the duration of exposure. Potential receptors at the nearest receptor location, the Japanese Gardens, would be present for short time periods at infrequent intervals. All other potential receptors are in residential areas that are separated from the project site by large distances and by heavily trafficked thoroughfares (Victory Blvd. to the north and I-405 to the east). The distance to these potential receptors would result in greatly reduced pollutant concentrations at these locations. Additionally, while construction activity would vary from day to day, construction activity would not occur with enough intensity and duration to significantly increase health risks. Therefore, the Proposed Project's emissions would not expose sensitive receptors to substantial pollutant concentrations and the impact would be less than significant.

AIR (e): Create objectionable odors affecting a substantial number of people?

As a wastewater reclamation plant, objectionable odors are regularly present directly within the Plant. Although such odors may occasionally escape to the immediately surrounding area depending on pollutant load, wind, and temperature, such conditions would not be affected by the Proposed Project, and the Proposed Project would not increase the volume or capacity of the Plant. The potential for the Proposed Project to create objectionable odors would be limited to tailpipe emissions from construction equipment. These emissions would be limited in duration and would affect only a very narrow range and a short distance downwind of the construction. Therefore, impacts would be minimal and less than significant.

4.3.4 Mitigation

No mitigation would be required for compliance with applicable air quality standards. However, the following conservation measures are based on standard Best Management Practices (BMPs) and would be implemented during construction of the Proposed Project:

AIR-1. A Fugitive Dust Emission Control Plan would be developed and implemented. Measures to be incorporated into the plan would include, but would not be limited to, the following:

1. Unpaved and other disturbed areas of the active sites would be watered at least two times per day or apply CARB certified soil binders.
2. Wheel washers/cleaners would be installed, or the wheels of trucks and other heavy equipment would be washed where vehicles exited the site or used unpaved access roads.

3. If equipment were operating on soils that cling to wheels, the contractor would be required to use a "grizzly" or other such device using rails, pipes, or grates to dislodge mud, dirt, and debris from the tires and undercarriage of vehicles on the road exiting the project site, immediately before the pavement in order to remove most of the soil from vehicle tires.
4. Increased frequency of watering of all disturbed fugitive dust emission sources, or implementation of other additional fugitive dust conservation measures, if wind speeds (as instantaneous wind gusts) were to exceed 25 miles per hour.
5. Activities and operations on unpaved roads and areas would be minimized to the extent feasible during high wind events
6. Vehicle speeds would be limited to 15 miles per hour or less within the work areas.
7. Roadways next to the Proposed Project site would be kept clean and daily project-related accumulated silt and debris would frequently be removed.

AIR-2. All on-road construction vehicles would meet all applicable California on-road emission standards and would be licensed in the state of California.

AIR-3. All off-road construction diesel engines not registered under CARB's Statewide Portable Equipment Registration Program, which have a rating of 50 horsepower or more, would be required to meet, at a minimum, the Tier 3 California Emission Standards for Off-road Compression-Ignition Engines as specified in California Code of Regulations (CCR), Title 13, Section 2423(b)(1). If a Tier 3 or Tier 3-equivalent engine were not available for a particular item of equipment, Tier 2 compliant engines would be allowed on a case by case basis.

AIR-4. Diesel catalytic converters, diesel oxidation catalysts and diesel particulate filters as certified and/or verified by the USEPA or CARB would be installed on equipment operating on-site.

AIR-5. Idling of heavy-duty diesel trucks during loading and unloading would be limited to five minutes; auxiliary power units would be used whenever possible.

AIR-6. All equipment would be maintained as recommended by manufacturers' manuals.

AIR-7. Any equipment not in use for more than 30 minutes would be shut down.

AIR-8. Electric equipment would be substituted whenever possible for diesel- or gasoline-powered equipment.

4.4 Biological Resources (BIO)

Biological Resources (BIO)	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the Project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☒	☐	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☒	☐
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

4.4.1 Environmental Setting

The Sepulveda Dam Reservoir provides wetland, riparian, and upland habitats that are occupied by a variety of small mammals, reptiles, and birds. Although these habitat types are present in the Sepulveda Dam Reservoir, they are generally highly disturbed by recreational use, invasive species, maintenance, and flood control practices. Habitat around the Plant is primarily maintained open space characterized by grassy areas, large trees, and recreational fields. A narrow riparian zone is found along Haskell Creek on the eastern boundary of the leased property (Figure 2-3). The balance of the land surrounding the Plant is either developed for recreation or is comprised of upland (non-aquatic) habitat.

Vegetation. Vegetation communities found in and around the Plant are a mix of upland, riparian, altered or ruderal types, and maintained lawn and ornamentals. Remnants of cottonwood-willow riparian habitat exist along Haskell Creek, found in the drainage between the Plant's eastern dike and the Sepulveda Dam, but there are no other native habitat types in the vicinity of the Plant. Ornamental tree/maintained lawn and ruderal land (disturbed, unmaintained land) are the dominant habitat types in and around the Plant. Numerous trees are found in and around the Plant, including on the dikes. Tree species identified during dike inspections (Tetra Tech 2013b) are listed in Table 4-4:

Table 4-4. Tree Species in and around the Plant

Common Name	**Scientific Name**
Sweet gum	*Liquidambar styraciflua*
Coast live oak	*Quercus agrifolia**
Mexican elderberry	*Sambucus mexicana*
California sycamore	*Platanus racemose**
Arroyo willow	*Salix lasiolepsis**
Fremont cottonwood	*Populus fremontii**
Southern California Black Walnut	*Juglans californica**
Aleppo pine	*Pinus halepensis*
Ash	*Fraxinus sp.*
Carolina cherry	*Prunus caroliniana*
Olive	*Olea Europea*
Valley oak	*Quercus lobata*
Bottlebrush	*Callistemon viminalis*
White alder	*Alnus rhombifolia*
Crape myrtle	*Lagerstroemia indica*
Jacaranda	*Jacaranda mimosifolia*
Japanese black pine	*Pinus thumbergii*
Sequoia	*Sequoia sempervirens*
Yew pine	*Podocarpus macrophyllus*
*Species protected under one or more local ordinances	

Wetlands. The artificial ponds in the Japanese Garden are mapped by the National Wetlands Inventory (NWI) as PUBHx, which refers to Palustrine, Unconsolidated Bottom, Permanently Flooded, Excavated (USFWS 2017). Although this area is mapped as possible wetland by the NWI, these ponds would not be jurisdictional wetlands as they are not vegetated with emergent species and there is no surface connection to other wetland areas. Similarly, although Haskell Creek is mapped as "Riverine" wetlands, it may be considered jurisdictional Waters of the U.S. (WOUS) but would not be considered jurisdictional wetlands as it does not fulfill the vegetation requirement for jurisdictional wetlands. Jurisdictional wetlands likely occur outside of the project area in the wildlife area and Balboa Lake. A jurisdictional wetland delineation has not been performed for the area.

Wildlife. Based on available habitat and land uses, it is likely that mammal species found in the study area would include raccoon (*Procyon lotor*), opossum (*Didelphis virginiana*), striped skunk (*Mephitis mephitis*), California ground squirrel (*Spermophilus beecheyi*), and Botta's pocket gopher (*Thomomys bottae*). Non-native species such as feral cats and dogs are also likely found in the Sepulveda Dam Reservoir. Gray fox (*Urocyon cinereoargenteus*) and coyotes (*Canus latrans*) may also use the area on occasion. Although bat species use the Sepulveda Dam Reservoir for roosting and breeding, or are year-round residents, there are no recorded instances of them roosting or breeding in the vicinity of the Plant.

Numerous bird species are likely to use the area for breeding or wintering or are residents. During a survey of avian species in the summer of 2017, Corps biologists recorded 54 bird species in Sepulveda

Basin, including hawks, owls, passerines, migratory songbirds and waterfowl, and others (Bordenave and Ray, personal communication, 2017). Species observed during the survey include mourning dove (*Zenaida macroura*), great horned owl *(Bubo virginianus),* Anna's hummingbird (*Calypte anna*), Allen's hummingbird (*Selasphorus sasin*), black phoebe (*Sayornis nigricans*), California quail *(Callipepla californica*), great blue heron *(Ardea herodias*), chestnut-backed chickadee (*Poecile rufescens*), American robin (*Turdus migratorius*), northern mockingbird (*Mimus polyglottos*), California towhee (*Pipilo crissalis*), song sparrow (*Melospiza melodia*), Brewer's blackbird (*Euphagus cyanocephalus*), house finch (*Carpodacus mexicanus*), and yellow-breasted chat *(Icteria virens*). All of these bird species except for the California quail (*Callipepla* californica) are protected under the Migratory Bird Treaty Act (MBTA).

Based on available habitat types and land uses, common reptile species such as San Diego alligator lizard (*Elgaria multicarinatus webbi*), western fence lizard (*Sceleporous occidentalis biseriatus*), side-blotched lizard (*Uta stansburiana*), coastal western whiptail (*Cnemidophorus tigris multiscutatus*), California striped racer (*Masticophis lateralis lateralis*), and San Diego gopher snake (*Pitouphis melanoleucus annectens*) are likely to occur in the vicinity of the Plant.

Threatened and Endangered Species. A list of federally-designated threatened, endangered, or candidate species that are known to occur in Los Angeles County, California was obtained from the U.S. Fish and Wildlife Service (USFWS) (USFWS 2015). In addition, a list of species that have been recorded as occurring within the Sepulveda Dam Reservoir and its vicinity has been obtained from the California Natural Diversity Database (CNDDB), maintained by the California Department of Fish and Wildlife (CDFW) (CDFW 2016).

According to the CNDDB, the least Bell's vireo *(Vireo bellii pusillus)* is the only special status species that has been directly observed within Sepulveda Dam Reservoir. During presence/absence surveys performed in summer of 2017, Corps biologists identified the least Bell's vireo as occurring in the riparian zone that borders Haskell Creek, approximately 1,500 ft. south of the Plant (Corps 2017). Riparian habitat nearer to the Plant is of lower quality in terms of its suitability as vireo habitat, as trees are mature and there is little shrubby undergrowth, which is preferred by the vireo. The vireo is not known to occur within the Plant boundaries, and there is no viable habitat for it within the Plant. Other special status species reported within Los Angeles County by the USFWS (USFWS 2015) have no recorded occurrences within the Sepulveda Dam Reservoir according to the CNDDB (CDFW 2016), and because there is insufficient habitat to support these species in or around the Plant, they are unlikely to occur and are not discussed further in this report.

Critical Habitat. According to USFWS's listed species and critical habitat mapper (USFWS 2015), there is no critical habitat within the project area.

4.4.2 Regulatory Setting

Clean Water Act. The Clean Water Act (CWA) has provisions for protecting biological resources within the aquatic environment through identification of beneficial uses and prohibitions on fill of wetlands or other WOUS. The primary functions of the CWA in protecting biological resources in this instance are to ensure that any impacts to wetlands or WOUS are compensated for and to provide a framework for ensuring that water quality is maintained or improved.

Endangered Species Act. The federal Endangered Species Act (ESA) protects threatened and endangered species by prohibiting federal actions that would jeopardize the continued existence of such species or result in destruction or adverse modification of any critical habitat of such species. If effects to listed species are anticipated, Section 7 of the Act requires consultation regarding protection of such

species be conducted with the USFWS and/or the National Marine Fisheries Service prior to project implementation. (16 USC 1531, 1536).

Migratory Bird Treaty Act. The MBTA implements various treaties and conventions between the U.S. and Canada, Japan, Mexico, and Russia for the protection of migratory birds. Under the act, taking, killing or possessing migratory birds, their nests, or eggs, is prohibited.

California Endangered Species Act, Sections 1600-1607. The California Endangered Species Act (CESA) focuses on protecting all native species of fishes, amphibians, reptiles, birds, mammals, invertebrates, and plants, and their habitats threatened with extinction and those experiencing a significant decline which, if not halted, would lead to a threatened or endangered designation.

California Fish and Wildlife Code, Sections 1600-1607 Sections 1600 through 1607 regulate work that would substantially divert, obstruct, or change the natural flow of a river, stream, or lake; that would substantially change the bed, channel, or bank of a river, stream, or lake; or that would use material from a streambed.

4.4.3 Potential Impacts

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

Special-Status Species

A search of the CNDDB (CDFW 2016), and surveys for least Bell's vireo conducted in the project area by the Corps in June and July of 2011 (described below) indicated that three special-status species may occur in the project vicinity. These species include the western pond turtle (California Species of Concern), the tricolored blackbird (California Species of Concern) and the least Bell's vireo (a federal and state endangered species).

Within the Plant, there is little natural habitat for fish or wildlife species. Birds may use the trees within the Plant boundaries for roosting, foraging, or nesting, but there is no other viable habitat. The Japanese Garden does not provide native habitat for fish or wildlife. Native species that might normally pass through the project area, using trees for stopovers or foraging in grassy areas, would be expected to disperse readily to other areas of the Sepulveda Dam Reservoir, or to not enter the site at all once construction began. Although a sparse riparian zone is found along Haskell Creek, east of the Plant but within the lease area, it is composed mostly of canopy species and does not satisfy the habitat requirements of any of the sensitive species identified above. There are adequate areas of more natural wildlife habitat along the Los Angeles River and the Wildlife Lake to the south of the project area. There is no suitable habitat for any sensitive or special status species in the project area, therefore impacts would be less than significant.

Western Pond Turtle

While the western pond turtle can utilize a variety of aquatic habitats, the species requires certain habitat features that are not present at the project site. For instance, the western pond turtle requires bank vegetation with canopy cover for basking, and the landscaped vegetation at the Japanese Garden lake is not sufficient for this habitat need. They also need natural sources of food, including algae, various plants, insects, snails, crustaceans, spiders, fish, and frogs. In addition, the western pond turtle requires deep pools or submerged structure such as logs where it can hide from predators. The Japanese Garden lake at the project site does not provide sufficient food or habitat. The nearest suitable aquatic habitat to

the project site that could support western pond turtle is approximately 0.5 mile to the southeast within the Sepulveda Basin Wildlife Reserve.

Tricolored Blackbirds

Tricolored blackbirds are known to use ponds and marshy fields near the project site. This species requires dense emergent marsh vegetation such as cattails and bulrushes. While tricolored blackbirds may occasionally visit the pond at the Japanese Garden, there is not suitable marsh habitat for the species to forage or nest there. The nearest suitable habitat to the project site that could support tricolored blackbirds is approximately 0.5 mile southeast of the project site within the Sepulveda Basin Wildlife Reserve.

Least Bell's Vireo

The least Bell's vireo is listed as endangered under both the ESA and CESA. It requires riparian vegetation, containing both canopy and understory layers, located near upland habitats that would support foraging. The least Bell's vireo is most commonly associated with willow understory, in which they nest and forage. This habitat type is commonly found in sandy and gravelly bottomland areas along rivers and streams and does not occur in the project area. The nearest viable habitat for this species is approximately 1,500 ft. south of the project area, which would not be affected by the Proposed Project.

West of Haskell Creek and north of the Cricket Fields, staging areas would be buffered from the stream by a minimum distance of 100 ft. (mitigation measure BIO-3) and biological surveys would be conducted to determine if least Bell's vireo or species protected under the MBTA were present in the area (mitigation measure BIO-1). Based on surveys performed by the Corps, it is thought that these protected birds may be present approximately 1,500 ft. south of the project area, but not within or adjacent to the project area, and the habitat within Haskell Creek next to the cricket fields is unsuitable for vireo life history requirements. LASAN and the Corps would perform surveys for this species prior to construction, as specified in mitigation measure BIO-1. If nesting pairs of least Bell's vireo or MBTA species were identified during these surveys, mitigation measure BIO-2 would be implemented to avoid significant effects to this species during construction. Details of mitigation measures are provided in Section 4.4.4. Because listed species including the least Bell's vireo are highly unlikely to be found in the area and because LASAN would confirm this by performing pre-construction surveys, impacts to listed species would be less than significant with mitigation.

Earthen fill needed to modify the dikes would either be locally-sourced offsite or sourced from a vacant dirt lot located adjacent to the construction laydown area, located south of the Septic Disposal Facility in the northeast portion of the proposed easement area (Figure 2-3). Limited wildlife use occurs in this area, with only temporary stops to rest in nearby trees. If nesting birds were present, pre-construction surveys (BIO-1) would identify nests and species and prescribe avoidance measures. Wildlife would be expected to avoid the area during construction. The loss of availability of the proposed borrow area is not a significant loss to wildlife in the area, as better habitat is available along the Los Angeles River and at the Wildlife Lake to the south of the Plant.

Operation of the Plant under the easement would not result in increased disturbance or take of protected species or disturbance of nests or breeding habitat.

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

Riparian habitat occurs east of the Plant along Haskell Creek, and although it is relatively sparse and does not perform significant habitat functions for listed species, it is still considered a sensitive habitat type by

CDFW. Additionally, part of Haskell Creek has a soft (natural) bottom and a defined bed and bank. This is also considered a sensitive habitat type by CDFW and is regulated under Section 1602 of the California State Fish and Game Code. The length of riparian forest and streambed is approximately 2,100 ft. within the lease area. However, as riparian habitat or otherwise sensitive natural communities do not occur in the construction footprint for the Proposed Project, the Proposed Project would have no direct impact on these natural resources. Under mitigation measure BIO-3, the Plant operators would maintain a minimum 100-ft. buffer between the edge of the construction laydown area (Figure 2-3) and the edge of the riparian zone to reduce the potential for disturbance to this area. The construction contractor would prepare a stormwater pollution prevention plan that would be approved by the Los Angeles Regional Water Quality Control Board to control pollutants, including sediment, before they reached Haskell Creek. Implementation of these measures would reduce the potential for indirect impacts to less than significant.

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

The artificial ponds in the Japanese Garden are non-jurisdictional wetlands. There are no jurisdictional wetlands within the project area, and no aquatic areas would be affected by the Proposed Project. There would be no effects associated with this criterion.

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

The Proposed Project area does not serve as a migratory corridor for any species other than passerines which may forage in the trees found on and around Plant property. Migratory birds protected under the MBTA could be affected if construction disturbance would cause them to abandon their nests. Construction timed to occur outside of the nesting period for migratory birds, which generally runs from March 1 to August 31, would have a less than significant effect on migratory birds. For construction occurring during the nesting season, mitigation measures BIO-1 and BIO-2 would be implemented to ensure that this impact would be less than significant.

BIO (e): Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

The project area is not within a Wildflower Reserve Area defined by Los Angeles County (Los Angeles County Code Title 12 chapter 12. 36.020; Los Angeles County 2017), nor is it within one of the significant ecological areas designated by Los Angeles County (DRP 2015).

Los Angeles County Oak Tree Ordinance (L.A. County Code, Title 22, Ch. 22.56, Part 16). This ordinance protects oak trees that are 8 inches in diameter or larger. In general, projects that would affect oak trees of this size would require a permit and preparation of a mitigation plan. However, utilities such as the Plant are exempt from this requirement, therefore no permit is required. During construction, the Plant operators would strive to minimize damage to or removal of oaks trees found on the dikes or in other locations in and around the Plant.

Impacts would be less than significant.

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

The Proposed Project is not located within the jurisdictional area of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. As a result, no impacts from project construction and operation would occur.

4.4.4 Mitigation

BIO-1. Pre-Construction Nesting Bird Surveys. LASAN would conduct pre-construction surveys for work conducted between March 1 and September 15, to determine if active nests of the federally and state listed endangered least Bell's vireo were present within 500 ft. of construction work areas. Up to eight surveys would be performed, consistent with survey protocols of the USFWS.

BIO-2. Breeding Bird Avoidance. Construction activities with the potential to generate noise levels in excess of 60 decibels (dB) equivalent continuous level (Leq) or ambient (if ambient is greater than 60 dB Leq) within 500 ft. of areas determined to support nesting least Bell's vireos or MBTA species would be postponed until (1) all nesting (or breeding/nesting behavior) had ceased, as determined by a qualified biologist, or until after September 15; or (2) temporary noise attenuation (e.g., construction of a noise wall, noise berm, noise blankets, equipment baffles, etc.) and monitoring measures were implemented at the edge of the construction footprint to ensure that noise levels did not exceed 60 dB Leq or ambient (if ambient is greater than 60 dB Leq), as measured from the location of the active nest(s) under the direction of a qualified biologist and acoustician. Alternatively, the duration of construction equipment operation could be controlled to keep noise levels below 60 dB Leq or ambient in lieu of or in concert with a wall or other sound attenuation barrier. If noise levels could not be reduced below 60 dB Leq or ambient at the location of the nest(s), then the construction activities causing the excess noise would be postponed until all nesting (or breeding /nesting behavior) had ceased, as determined by a qualified biologist. All grading permits and improvement plans would specify these restrictions.

BIO-3. 100-ft. wide buffer zones would be established between Haskell Creek and any construction activity areas.

4.5 Cultural Resources (CUL)

Cultural Resources (CUL)	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would The Project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5	☐	☐	☒	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☒	☐	☐
c) Cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code 21074?	☐	☒	☐	☐
d) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐
e) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☒	☐	☐

4.5.1 Environmental Setting

The Plant was constructed in 1985, therefore all structures are less than 50 years of age and are not eligible for listing as historic or architectural resources unless they are of exceptional significance. The project site is located within a portion of the Los Angeles Basin not previously known to contain significant archaeological resources. An archaeological and paleontological resources assessment was prepared as part of this project (ArchaeoPaleo 2017). This evaluation included a full records search of databases managed by the South Central Coastal Information Center (SCCIC), as well as reconnaissance-level surveys of the project area and the APE. The records search indicated that no archeological sites have been recorded within the Plant or within a half mile of the Plant. Previous surveys were conducted in 2005 as part of the City Integrated Resource Plan EIR, with similar results (LASAN and LADWP 2006). The Native American Heritage Commission (NAHC) conducted a records search of sacred sites within the Proposed Project area and determined that there are no known sacred sites within the project boundaries.

The NAHC also identified Native American individuals or organizations who may have knowledge of cultural resources in the project area, including representatives of the Chumash, Fernandeno, Tataviam, Shoshone Paiute, and Yaqui tribes. Letters were sent to representatives of each of these tribes asking for comments on potential effects on Native American resources (Appendix B). One comment was received from the Chumash/Tataviam tribe requesting to have a Native American observer present when disturbing ground in or near sacred areas (ArchaeoPaleo 2017).

Cultural Resources Records Searches and Historic Map Reviews Conducted for the Project. On March 18, 2015 a cultural resource records search was conducted at the SCCIC, which is a repository for

the California Historical Resources Information System that is located on the campus of California State University, Fullerton. The search also included a review of the following publications and lists: National Register of Historic Places (NRHP), California Historical Landmarks, California State Historical Resources Inventory, California Register of Historical Resources (CRHR), California Points of Historical Interest, U.S. Geological Survey (USGS) historic topographic maps, historic aerial photos, the Southwest Museum Map, and the 1925 U.S. Bureau of Ethnology Map. The record search focused specifically on the Proposed Project APE and the area within a 1-mile radius of the Plant (ArchaeoPaleo 2017).

Previously Conducted Surveys and Previously Recorded Cultural Resources. The records search indicated that a total of 28 previous cultural resources investigations have been conducted within one mile of the Plant. Nine of the studies were conducted within the project area itself, but were limited to surface surveys and record searches, and did not include monitoring, excavation, or subsurface investigations. These 9 studies did not identify any resources within the Plant. The studies did note that surface soils were heavily disturbed due to agricultural activity and modern development, suggesting that although surface indicators of cultural resources are absent, significant resources could exist beneath the surface (ArchaeoPaleo 2017). All previous surveys are summarized in Table 4-5.

Table 4-5. Cultural Resources Surveys Conducted within 1 mile of the APE

Report No.	Year	Author(s)	Title	Within APE or 1-mile radius
LA-384	1977	Patricia Martz	*Description and Evaluation of the Cultural Resources within Haines Debris Basin, Hansen Dam, Lopez Dam, Sepulveda Dam, Los Angeles County, CA*	APE
LA-1037	1976	Michael J. McIntyre and Louis J. Tartaglia	*Assessment of the Archaeological Impact by the Proposed Development of the East Valley Interceptor Sewer-Unit 1*	APE
LA-2409 (also V-1040)	1982	Kenneth Steele and Albert Gallardo	*For Improvement of the Operational Characteristics of Route 101, the Ventura Freeway in Los Angeles and Ventura Counties, between Route 405 in Los Angeles, and the Santa Clara River in Oxnard [Draft Environmental Impact Statement]*	1-mile radius
LA-2098	1990	Harmsworth Associates	*Draft Environmental Assessment, City of Los Angeles Public Works, Sepulveda Flood Control Basin, Los Angeles, CA: Tillman Water Reclamation Plant Flood Protection Project*	APE
LA-3289	1990	Gene Davis	*Mobil M-70 Pipeline Replacement Project Cultural Resource Survey Report for Mobil Oil Corporation*	1-mile radius
LA-3486	1994	E. Gary Stickel	*A Cultural Resources Inventory for the East Valley Water Reclamation Project*	APE
LA-3720	1977	City of Los Angeles	*Historic Property Survey: Hayvenhurst Ave. – Between Sherman Way and Victory Blvd., W.O. 21263*	1-mile radius
3742	1982	John Romani	*Archaeological Survey Report for the 07-LA/VEN 101 Project, P.M. 17.1-38.2/0.0-22.7, 07351-076620*	1-mile radius

Report No.	Year	Author(s)	Title	Within APE or 1-mile radius
3774	1975	Carl William Clewlow, Jr.	*Evaluation of Archaeological Resources and Potential Impact of Proposed Construction of the Sepulveda Water Reclamation Plant [An EIR]*	APE
3789	1996	W&S Consultants	*Phase I Archaeological Survey/Class III Inventory, San Fernando Valley East-West Transportation Corridor Study Area, Los Angeles, CA*	APE
4099	1990	Harmsworth Associates	*Historic Property Survey Report: Negative Findings for the Proposed Tillman Flood Protection Project, Sepulveda Flood Control Basin, Los Angeles, CA*	APE
4563	1999	Curt Duke	*Cultural Resource Assessment for Pacific Bell Mobile Services Facility LA 675-11, in the County of Los Angeles, CA*	1-mile radius
5601	1999	Curt Duke	*Cultural Resource Assessment to Pacific Bell Mobile Services Facility LA 099-01, County of Los Angeles, CA*	1-mile radius
5609	2001	Curt Duke	*Cultural Resource Assessment: Cingular Wireless Facility No. VY100-01, Los Angeles County, CA*	1-mile radius
7806	2003	Roger D. Mason and Jay K. Sander	*Cultural Resources Survey of the Proposed Sepulveda Basin Water Recycling Project, Los Angeles County, Los Angeles, CA*	1-mile radius
7814	2002	Barbara Sylvia and Adam Sriro	*Highway Project Description: 07- LA-405 50.8/60.2-174-199610 [Proposal to alleviate traffic congestion, implement standard design features and improve safety at the Southbound I-405 to the Northbound US-101 connector]*	1-mile radius
7835	2000	W&S Consultants	*Phase I Archaeological Survey/Class III Inventory, San Fernando Valley East-West Transit Corridor, BRT Alternative, Study Area, Los Angeles, CA*	1-mile radius
7840	2001	Barbara Sylvia	*Highway Project Description: 07-LA-101/134 1837/41.5, 0.0/9.9 -174-21850K [Proposal to provide beautification and modernization along Route 134 from 134/170 separation to Shoup Ave UC, and along Route 101 from the 101/170 separation to Concord Street UC]*	1-mile radius
8898	2007	Cindy L. Baker and Mary L. Maniery	*Cultural Resource Inventory and Evaluation of United States Army Reserve 63D Regional Readiness Command Facilities*	1-mile radius
8953	2007	Kelly Ewing-Toledo	*Historic Property Survey Report for the Southbound Interstate 405 (San Diego Fwy) to US Highway 101 (Ventura Fwy) Connector Improvement Project, Los Angeles County, CA*	APE

Report No.	Year	Author(s)	Title	Within APE or 1-mile radius
9598	2008	Wayne H. Bonner	*Cultural Resources Records Search and Site Visit Results for T-Mobile Candidate SV00614J (15020 Oxnard Monopole), 15020 Oxnard Street, Van Nuys, Los Angeles County, CA*	1-mile radius
10208	2001	Barbara Sylvia	*Highway Project Description: 07- LA-101-19.47/61.46-07-174- 19480K [Metal Beam Guardrail (MBGR) along sections of Route 101 from Route 134 to the Ventura County line]*	1-mile radius
10730	2010	Wayne H. Bonner and Arabesque Said	*Cultural Resources Records Search and Site Visit Results for T-Mobile USA Candidate SV11794-C (Vanowen ROW), 15680 Vanowen Street, Cel 1, Van Nuys, Los Angeles County, CA*	1-mile radius
10828	2008	Mitch Marken	*Determination of No Historic Properties Affected for the Los Angeles Department of Parks and Recreation Dodger Dream Field Project (Project No. 208653), City of Los Angeles, Los Angeles County, CA*	1-mile radius
11314	2010	Dana Supernowicz	*Architectural Study of the 405 Freeway/Victory Blvd. Project, AT&T Site No. LAT026, 15900 Victory Blvd., Van Nuys, Los Angeles County, CA 91406*	1-mile radius
11750	2009	AMEC Earth and Environmental	*Final Cultural Resources Survey Sepulveda Air National Guard Station, Van Nuys, Los Angeles County, CA*	APE
12358	2012	Shannon L. Loftus	*Cultural Resource Records Search and Site Survey: AT&T Site LA0277, Victory and Hayvenhurst LTE 6421 Unit Cel #1, Odessa Ave., Los Angeles, Los Angeles County, CA 91316, CASPR #3551017966*	1-mile radius
12505	2012	James R. Wallace et al.	*Draft Phase I Cultural Resources Assessment: San Fernando Valley Water Recycling Project, City of Los Angeles, CA*	1-mile radius
Source: ArchaeoPaleo 2017				

The SCCIC search identified 6 previously recorded cultural resource sites within 1 mile of the project area, four of which were historic and two of which were pre-historic (ArchaeoPaleo 2017). None of the identified sites were within or adjacent to the APE. No NHRP or listed historic properties have been documented within the project's APE. All recorded sites are summarized in Table 4-6.

Native American Outreach. On March 19, 2015 the NAHC was contacted to request a Sacred Lands file search. The NAHC responded on March 26, 2015 that no Native American cultural resources were identified by their search as within the Proposed Project APE or study area. The response included a list of 11 Native American contacts. A Project outreach letter was sent to each of the individuals listed by the NAHC on March 31, 2015. One response was received on April 2, 2015, from the Chumash/Tataviam Tribe, who expressed concern about the Proposed Project due to its proximity to documented sacred sites and recommended a Native observer be present during any ground disturbance related to the Proposed Action (ArchaeoPaleo 2017:50). The letter provided information regarding the Project and a request regarding any known cultural resources in the Project study area. The outreach letters are for

informational purposes only and do not take the place of formal government consultation under Assembly Bill (AB) 52 between the lead agency and tribes. Outreach to these contacts and meaningful discussions may reveal tribal cultural resources that could be impacted by the Proposed Project or provide community concerns regarding the Project's treatment of cultural resources.

Table 4-6. Cultural Resources Recorded within 1 mile of the APE

Primary Site No.	Time Period	Site Type	CRHR/NRHP Eligibility	Within APE or 1-mile radius
CA-An-345	Prehistoric	Milling Stone Horizon Occupation Site	Destroyed	1-mile radius
P19-100250	Prehistoric	Split cobble core	Not evaluated	1-mile radius
P19-188093	Historic	Sepulveda Flood Control Dam	Eligible	1-mile radius
P19-187950	Historic	Area Maintenance Support Activity 32	Ineligible	1-mile radius
P19-188772	Historic	Van Nuys Air National Guard Facility	Ineligible	1-mile radius
P19-175500	Historic	15106 Oxnard St.	Not eligible	1-mile radius
Source: ArchaeoPaleo 2017				

4.5.2 Regulatory Setting

California Environmental Quality Act. CEQA applies to discretionary projects causing a significant effect on the environment and a substantial adverse change in the significance of a historical or archaeological resource. Resources listed on or determined to be eligible for listing on the CRHR [California Public Resources Code (PRC) §5024.1; Title 14, §4852 et seq., CCR] are those that must be given consideration in the CEQA process.

Assembly Bill 52. AB 52 provides for the consideration of tribal cultural resources during the CEQA process by adding or amending the PRC Sections 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2, and 5097.94. This bill specifies that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource, as defined, is a project that may have a significant effect on the environment. The bill requires a lead agency to begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project prior to determining whether a ND, MND, or EIR is required for a project. This requirement is applicable if the tribe has requested to the lead agency, in writing, to be informed by the lead agency of proposed projects in that geographic area and the tribe requests consultation. The bill also specifies examples of mitigation measures that may be considered to avoid or minimize impacts on tribal cultural resources. These provisions are applicable to projects that have a notice of preparation or a notice of ND or MND filed on or after July 1, 2015 and are therefore applicable to this project.

California Public Resources Code. In addition to the PRC sections affected by AB 52, several other sections regulate cultural resources. California PRC Section 5020-5029.5 establishes the criteria for the CRHR, creates the California Historic Landmarks Committee, and authorizes the Department of Parks and Recreation to designate Registered Historical Landmarks and Registered Points of Historical Interest. It also establishes criteria for the protection and preservation of historic resources. Several other sections of the PRC also provide protection of cultural resources. Section 5097-5097.6 provides guidance for state agencies in the management of archaeological, paleontological, and historical sites affected by major public works project on state land. Subsections 5097.9-5097.991 establish regulations for the protection of Native American religious places and establishes the NAHC. They also require that California Native

American remains and associated grave artifacts be repatriated and that notification of discovery of Native American human remains be made by the NAHC to the person it believes to be the most likely descendant (MLD).

Senate Bill 922. Senate Bill 922 exempts from California Public Records Act information pertaining to Native American graves, cemeteries, archaeological sites, and sacred places in the possession of the California NAHC and other state or local agencies.

Senate Bill 18. Senate Bill 18 provides protection and preservation of Native American Traditional Cultural Places during city and county general plan development. The bill is not applicable to the Project as there are no General Plan amendments or development required.

Senate Concurrent Resolution No. 87. Senate Concurrent Resolution No. 87 provides for the identification and protection of traditional Native American resource gathering sites on state land. The resolution is not applicable to the Project since there are no state lands involved.

Administrative Code, Title 14, Section 4307. Administrative Code, Title 14, Section 4307 prohibits individuals from removing, injuring, defacing, or destroying any object of paleontological, archaeological, or historical interest or value.

Government Code, Sections 6253, 6254, and 6254.10. Government Code, Sections 6253, 6254, and 6254.10 states that disclosure of archaeological site information is not required for records that relate to archaeological site information maintained by the Department of Parks and Recreation, the State Historical Resources Commission, or the State Lands Commission.

California Health and Safety Code. Several sections of the California Health and Safety Code (CHSC) provide protection of human remains. Section 7050.5 requires construction or excavation to be stopped near human remains until a coroner determines whether the remains are Native American; requires the coroner to contact the NAHC if the remains are Native American. Section 7051 establishes removal of human remains from interment, or from a place of storage while awaiting interment or cremation, with the intent to sell them or to dissect them with malice or wantonness as a public offense punishable by imprisonment in a state prison. Section 7052 states that willing mutilation of, disinterment of, removal from a place of disinterment of, and sexual penetration of or sexual contact with any remains known to be human are felony offenses.

California Code of Regulations, Section 1427. CCR, Section 1427 recognizes that California's archaeological resources are endangered by urban development and that these resources need preserving. This section establishes as a misdemeanor the willful injury, disfigurement, defacement, or destruction of any object or thing of archaeological or historical interest or value by someone who is not the owner, whether situated on private lands or within any public park or place. It also states that it is a misdemeanor to alter any archaeological evidence found in any cave, or to remove any materials from a cave.

Senate Concurrent Resolution No. 43. Senate Concurrent Resolution No. 43 requires all state agencies to cooperate with programs of archaeological survey and excavation, and to preserve known archaeological resources whenever reasonable.

Penal Code, Title 14, Section 622.5. Penal Code, Title 14, Section 622.5 establishes as a misdemeanor offense for any person, other than the owner, who willfully damages or destroys archaeological or historic features on public or privately-owned land.

Los Angeles County General Plan. The Los Angeles County General Plan Conservation Element establishes policies for preserving and managing historical, cultural, and paleontological resources within unincorporated areas of Los Angeles County. The County Historical Landmarks and Records Commission identifies such resources within unincorporated areas that are not yet protected under state or federal law (DRP 2015).

City of Los Angeles General Plan and Municipal Code. According to the Conservation Element of the City of Los Angeles General Plan, the policy of the City is to "continue to protect historic and cultural sites and/or resources potentially affected by proposed land development, demolition, or property modification activities" (LADCP 2001). The City of Los Angeles Department of City Planning Office of Historic Resources is responsible for managing the preservation of historic resources within the City of Los Angeles. The Cultural Heritage Commission oversees the protection of designated local landmarks.

Chapter 1, Article 2, Section 12.20.3 of the City of Los Angeles Municipal Code establishes regulations for Historical Preservation Overlay Zones. The section states: "It is hereby declared as a matter of public policy that the recognition, preservation, enhancement, and use of buildings, structures, Landscaping, Natural Features, and areas within the City of Los Angeles having Historic, architectural, cultural or aesthetic significance are required in the interest of the health, economic prosperity, cultural enrichment and general welfare of the people" (City of Los Angeles 2017). Under the established regulations, each designated preservation zone must have a Historic Preservation Board. These boards are required to review all proposed development within a given zone and to prepare a Preservation Plan for that zone (City of Los Angeles 2017). Portions of Van Nuys have been designated as historic preservation overlay zones. The Plant is not within or adjacent to one of these zones (LADCP 2017b).

Significance Criteria. CEQA, as amended by the requirements of AB 52, states that a project may have a significant effect on the environment if it will cause a substantial adverse change in the significance of a historical resource or have a significant effect on a unique archaeological resource or a tribal cultural resource. The CEQA Environmental Checklist Form addresses significance criteria with respect to cultural resources (PRC Sections 21000 et seq.). Under CEQA an impact on cultural resources would be considered significant if a project would either directly or indirectly:

- Cause a substantial adverse change in the significance of a historical resource;
- Cause a substantial adverse change in the significance of an archaeological resource;
- Cause a substantial adverse change in the significance of a tribal cultural resource, as defined; or
- Disturb any human remains, including those interred outside of formal cemeteries.

Historical resources are those cultural resources that are considered eligible or listed on the CRHR (PRC 21084.1). Criteria for CRHR listing and eligibility are defined in PRC 5024.1, and CCR Title 14, Section 4850.3. Specifically, a resource may be eligible for the CRHR if it:

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

If an archaeological resource does not fall within the definition of a historical resource, it may meet the definition of a "unique archaeological resource" (PRC 21083.2(g)). Unique archaeological resources include archaeological artifacts, objects, or sites that:

a. Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information;
b. Has a special and particular quality such as being the oldest of its type or the best available example of its type; or
c. Is directly associated with a scientifically recognized important prehistoric or historic event or person.

Tribal cultural resources are significant resources with cultural value to a California Native American tribe. PRC 21074 defined tribal cultural resources as either of the following:

1. Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:
    A. Included or determined to be eligible for inclusion in the CRHR.
    B. Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1.
2. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.

When determining if a resource merits CRHR-eligibility, the lead agency must consider the value of the resource to the applicable tribe (i.e. is the resource associated with the lives of persons important *to the relevant tribe's* past?).

A cultural landscape that meets the above criteria is also considered a tribal cultural resource to the extent that the landscape is geographically defined in terms of the size and scope of the landscape. A historical resource described in Section 21084.1, a unique archaeological resource as defined in subdivision (g) of Section 21083.2, or a "non-unique archaeological resource" as defined in subdivision (h) of Section 21083.2 may also be a tribal cultural resource if it conforms to the above criteria.

If an archaeological resource does not meet the definitions of a unique archaeological resource, tribal cultural resource, or historical resource, the effects of the project on those resources are not considered a significant effect on the environment (CEQA Guidelines (15064.5 (c)(4)).

Significant effects on historical resources, unique archaeological resources, and tribal cultural resources can be eliminated by pursuing an alternative course of action or mitigating to less than significant levels. Preservation in-place (avoidance) is the preferred manner for mitigating impacts to all cultural resources (CCR 15126.4(b)(3)(A)). If preservation in-place is not feasible, data recovery excavation of archaeological resources is generally an acceptable alternative pursuant to the provisions of CCR 15126.4(b)(3)(C). Significant effects to tribal cultural resources are preferably resolved via mitigation measures identified through consultation with the relevant tribe. If none are identified through consultation, recommended mitigation measures may include 1) treating the resource with culturally appropriate dignity by protecting the cultural character and integrity of the resource, protecting the traditional use of the resource, and/or protecting the confidentiality of the resource. Other measures may include permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.

Direct effects from a project could result from: demolition or alteration of historic buildings or structures, vegetation clearing, grading, excavation or trenching for canals and ditches, and any other earth-moving activity that disturbs previously undisturbed or unevaluated cultural resources such as prehistoric objects or sites, making those objects and their cultural resources unavailable for future scientific investigation. These activities may also impact tribal cultural resources by affecting their integrity and sacred nature.

4.5.3 Potential Impacts

CUL (a): Would the proposed project cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?

A Phase 1 archeological and paleontological resources survey was performed within the lease area boundaries. No historical resources were identified within the lease area (ArchaeoPaleo 2017). Historic resources were identified nearby, but outside of, the lease boundaries, and would not be affected by the Proposed Project. Construction of the MPB, rehabilitation of the dikes, installation of the Niwa Road sewer line, and installation of the maintenance vaults would only occur in previously disturbed areas, and excavation for these projects is planned to occur only in soils that were imported and placed as fill material. However, excavation for the MPB and Niwa Road project to 5 and 15.5 ft., respectively, could potentially extend into native soils. As no historic resources have been identified in the lease area, the potential to encounter historic resources in these construction areas is considered low. In the event that such materials were found, they would be documented and a discovery plan would be prepared to ensure that if additional cultural resources were found during construction, they would be treated in accordance with state and federal laws, as well as the guidance of the MLD. With this response plan in place, the Proposed Project would not be anticipated to affect any historical resources and impacts would be less than significant.

CUL (b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

No archaeological resources have been recorded within the lease area (ArchaeoPaleo 2017). One recorded archaeological resource, Sepulveda Dam, is located adjacent to, but outside of, the lease area, and would not be affected by the Proposed Project. Excavation for the Proposed Project would occur only within soils that were disturbed by previous construction, or which were imported as fill. There would be no effects associated with excavation in imported fill materials or previously disturbed soils.

Since no previous subsurface archaeological investigations have occurred within the lease area boundaries, the actual presence or absence of archaeological resources in undisturbed, native soils is not known. Excavation for the MPB is expected to be limited to 5 ft. below the current ground surface, and it is not expected that archaeological resources would be found. However, if excavation within native soils were at any point required for construction of the MPB, it could disturb previously unknown archaeological resources, which would be a significant impact. Excavation to depths of up to 15.5 ft. below the current ground surface for the Niwa Road sewer project could also uncover native soils. Since several previous surveys have not found evidence of cultural resources in the lease area, the potential to encounter cultural resources in these construction areas is considered low. However, mitigation measures CUL-1, CUL-2, and CUL-3 would be implemented to ensure that any accidental discovery of cultural resources would be documented and further construction actions would be planned to avoid any additional cultural resources. With implementation of mitigation measures CUL-1, CUL-2, and CUL-3, potential impacts to cultural resources would be less than significant.

CUL (c): Cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code 21074?

The NAHC identified Native American individuals or organizations who may have knowledge of cultural resources in the project area, including representatives of the Chumash, Fernandeno, Tataviam, Shoshone Paiute, and Yaqui tribes. Letters were sent to representatives of each of these tribes asking for comments on potential effects on Native American resources (Appendix B). One response was received on April 2, 2015, from the Chumash/Tataviam Tribe, who expressed concern about the Proposed Project due to its proximity to documented sacred sites and recommended a Native observer be present during any ground disturbance related to the Proposed Action (ArchaeoPaleo 2017:50). To date, no tribes have contacted LASAN to request consultation. No tribal resources have been documented in the area, and the potential to encounter such resources during construction is considered to be low since most or all of the excavation would occur in fill material that was brought in when the Plant was originally constructed. However, LASAN will implement mitigation measure CUL-2 and ensure that a Native American observer can be present during construction. This impact would be less than significant with mitigation.

CUL (d): Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

No paleontological resources have been recorded on the site, although there are three fossil localities within 1.0 to 1.5 miles in older sediment than is present on the surface of the project area. The fossil localities from these deposits yielded vertebrate specimens of bison, extinct camel, extinct horse, and extinct peccary. This older sediment is not present on the surface or within the previously disturbed or imported soils in which excavation could occur, therefore there would be no impacts from excavation within these soils. However, such resources could be present at an unknown depth within the project area. Excavation in previously undisturbed Pleistocene soils would possibly disturb paleontological resources, which would be a significant impact. This impact would be reduced to less than significant by implementation of mitigation measure CUL-4.

CUL (e): Disturb any human remains, including those interred outside of formal cemeteries?

No known burial sites are located within the project site or the lease area boundary. However, it is possible that human remains could exist in the previously undisturbed soils beneath the imported fill or the previously disturbed soils in which construction would occur. In the event that construction occurred in previously undisturbed soils and an unknown burial site or human remains were found during excavation, mitigation measure CUL-3 would be implemented to reduce the potential effects to human remains to less than significant.

4.5.4 Mitigation

CUL-1. LASAN would retain an archaeologist who meets the Secretary of the Interior's Professional Qualification Standards to oversee preparation of the Cultural Resources Monitoring Plan (CRMP), construction monitoring, and preparation of a final monitoring report. The CRMP would be based on Project design plans, the results of the Phase I archaeological study prepared for the Proposed Project (ArchaeoPaleo 2017), input from Native American representatives, Secretary of the Interior's standards for identification and evaluation of historic properties, NRHP Bulletins, California State Historic Preservation Officer (SHPO) guidance, and other relevant information.

CUL-2. LASAN would retain a Native American monitor who is traditionally and culturally affiliated with the Proposed Project site to accomplish monitoring as required by the CRMP in mitigation measure CUL-1. The Native American monitor would also be empowered to halt and re-direct work in the event of a discovery until it was assessed for significance, consultation was completed, and treatment

implemented, if necessary. The provisions of the Native American monitoring plan would be included in the CRMP.

CUL-3. The CRMP would include protocols for the identification, assessment, and treatment of known resources and any unanticipated discoveries of archaeological resources during Project implementation, including notification procedures, significance evaluation procedures, reporting procedures, and other prescribed actions. The CRMP would state that avoidance or preservation in place would be the preferred means to avoid effects to historic properties but would provide procedures to follow should avoidance not be feasible. The CRMP would specify the roles and responsibilities of involved parties, and the location, duration, and timing of monitoring until a depth at which the potential to encounter buried archaeological deposits was greatly reduced. The buffered areas would be identified on construction plans to guide monitoring. The CRMP would outline procedures for determining when/where monitoring could be reduced or discontinued in consultation among the Corps, LASAN, qualified archaeologist, and appropriate Native American representatives.

CUL-4. Surface grading and shallow excavations would be unlikely to produce significant fossil specimens (McLeod 2015). Older, Pleistocene age alluvium, which has the potential to yield significant fossils, may occur at an unknown depth beneath the surficial sediments. Therefore, paleontological monitoring of excavations that encounter undisturbed native alluvial sediment or bedrock of Pleistocene age or older within any part of the easement area would be performed by a qualified paleontological resources monitor (SVP 2010). Such monitoring would be conducted full-time until the Paleontologist assigned to the Proposed Project determined that such excavations would be unlikely to yield significant paleontological resources, and thus such monitoring was no longer required. Sediment samples would be collected and processed for wet screening in order to determine the potential for microfossils (significant vertebrate fossils too small to be “readily visible within the sedimentary matrix” and “non-vertebrate paleoenvironmental indicators” such as single-celled organisms, mollusks, and plant remains). If the qualified paleontological resources monitor determined that the sediment uncovered by project excavations had the potential for microfossils, then a test sample (about 600 pounds [lbs] of sediment or matrix) would be collected from the project and screen washed (SVP 2010). The monitor could determine that a larger standard sample (at least 6,000 lbs) from each locality or deposit was required.

4.6 Geology and Soils (GEO)

Geology and Soils (GEO)	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the Project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to Division of Mines and Geology Special Publication 42.)	☐	☐	☒	☐
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☐	☒	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code, creating substantial risks to life or property?	☐	☐	☐	☒
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒

4.6.1 Environmental Setting

The Proposed Project site is located along the southern boundary of the San Fernando Basin, an east-west trending structural trough within the Transverse Ranges Geomorphic Province. The province is dominated by east-west trending mountain ranges and alluvial- filled valleys. The site is situated on an alluvial outwash complex shedding from the northern flank of the Santa Monica Mountains to the south and the Los Angeles River complex to the west.

The principal geologic materials exposed within the project site and surrounding area include artificial fills and alluvial sediments. Sedimentary and igneous bedrock deposits are exposed in the hill and mountain ranges, located approximately 2 miles to the south. Minor accumulations of fill are present within the parking lot and the perimeter dikes. These fills are in turn underlain by alluvium. The depth of alluvium underlying the site was not determined from the drilling performed for the geotechnical study, but alluvial depths in excess of 100 ft. are anticipated for the site (Tetra Tech 2013a).

4.6.2 Regulatory Setting

California has promulgated a number of regulations regarding geology and soils. The International Building Code regulates construction practices including sections pertinent to design and construction to avoid geotechnical hazards. The codes include design standards and general design parameters for seismic design. The State Building Standards Commission is responsible for administering California's building codes, including adopting, approving, publishing, and implementing codes and standards.

The Alquist-Priolo Earthquake Fault Zoning Act was passed in 1972 to address the hazards of surface faulting to buildings. This state law was a direct result of the 1971 San Fernando Earthquake. The purpose of the Alquist-Priolo Earthquake Fault Zoning Act is to prevent the construction of buildings used for human occupancy on the surface trace of active faults. This act only addresses the hazard of surface fault rupture. Other earthquake hazards are addressed by the Seismic Hazards Mapping Act passed in 1990, which addresses non-surface fault rupture earthquake hazards, including liquefaction and seismically induced landslides.

The Seismic Hazards Mapping Act requires the mapping of seismic hazard zones to mitigate hazards to help protect public health and safety. Included are shaking hazards, liquefaction, and landslides. Amplified shaking hazard zones are areas where historic occurrence of amplified ground shaking or local geological and geotechnical conditions indicate a potential for ground shaking to be amplified to such a level that mitigation would be required. Liquefaction hazard zones are areas where historic occurrences of liquefaction, or local geological, geotechnical, and groundwater conditions, indicate a potential for permanent ground displacement. Earthquake-induced landslide hazard zones are areas where Holocene occurrence of landslide movement, or local slope of terrain, and geological, geotechnical and ground moisture conditions indicate a potential for permanent ground displacements.

A number of local building permits and programs regulate development and construction of facilities in the City and Los Angeles County. The Los Angeles Building Code provides requirements for construction, grading, excavation, use of fill, and foundation work including types of materials and design, so as to minimize the likelihood and severity of consequences from geologic hazards. The Los Angeles Department of Building and Safety regulates construction and development in hillside areas.

4.6.3 Potential Impacts

GEO (a): Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of known earthquake fault, ground shaking, liquefaction, or landslides?

A geotechnical investigation of the project site was prepared as part of the Levee Certification Report for the Plant (Tetra Tech 2013a). The geotechnical investigation was prepared to evaluate the general soil/foundation conditions along the existing dike and floodwall alignments and to provide a professional opinion with regard to the ability of the dike embankments and floodwall to contain the 100-year return period flood.

i) *Earthquake Fault Rupture:* Official Maps of Earthquake Fault Zones (EFZs) were reviewed to evaluate the location of the project site relative to active fault zones. EFZs (known as Special Studies Zones prior to 1994) have been established in accordance with the Alquist-Priolo Special Studies Zones Act enacted in 1972. The Act directs the State Geologist to delineate the regulatory zones that encompass surface traces of active faults that have a potential for future surface fault rupture. The purpose of the Alquist-Priolo Act is to regulate development near active faults in order to mitigate the hazard of surface fault rupture. The Proposed Project location is not located in an Alquist-Priolo EFZ. The nearest active faults are the Verdugo Fault, located approximately 7 miles

northeast of the project location, and the Hollywood Fault, located approximately 8 miles south (Tetra Tech 2013a). Therefore, the potential for surface rupture due to faulting occurring beneath the site during the design life of the facility is considered low.

ii) *Strong Seismic Ground Shaking:* Similar to most sites in southern California, the project site is susceptible to ground shaking during earthquakes. As previously mentioned, the Proposed Project site is not located in an Alquist-Priolo EFZ, thus the potential for hazards associated with ground shaking is considered to be low. Furthermore, the potential for damage to the dikes or other structures during ground acceleration, or seismic shaking, was evaluated in the geotechnical evaluation (Tetra Tech 2013a). This evaluation is a standard of practice in California to evaluate the potential for gross instability during earthquake loading. Although the report indicated that the potential for dike failure due to seismic shaking is low, there is still the possibility of damage. Therefore, all structures and facilities constructed during this project would comply with recommendations to address shaking hazards based on the "Site Class Definitions" in the 2007 California Building Code. The dikes and other structures would be designed by California-licensed civil and structural engineers and the construction work would be performed by licensed professional contractors who would ensure that construction was consistent with safety standards required to reduce the risk of seismic hazards. Designs and plans would also require reviews and permits per local, state, and federal laws. Therefore, implementation of the Proposed Project would result in less than significant impacts.

iii) *Seismic-Related Ground Failure, Including Liquefaction:* Based on the review of the Van Nuys Quadrangle State of California Seismic Hazard Zone Report and Map of Seismic Hazard Zones (CDMG 1997 and 1998), the Plant is located within an area identified by the state of California as subject to the hazards of liquefaction. Liquefaction typically occurs when saturated, fine-grained loose sediments are subject to intense ground-shaking. However, the site-specific liquefaction analysis performed as part of the engineering evaluation found that the liquefaction potential of the types of soils found within the dikes and foundations is very low, and the deep water table further reduces the potential for liquefaction. Therefore, construction and operation of the Proposed Project has low potential to be affected by liquefaction, and impacts would be less than significant.

iv) *Landslides:* The geotechnical investigation found that the Proposed Project site is not located in an area subject to earthquake-induced landslides. The Proposed Project area is flat and is not identified by the California Department of Conservation as a potential landslide hazard area (CDMG 1997). As a result, there is expected to be low susceptibility to seismically induced landslides within the project area, and there would be no impact.

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

The Proposed Project would result in excavation of topsoil and other ground disturbances over several acres. These actions could increase the potential for erosion from sheetflow during rainstorms, or during windy conditions. Such impacts would be temporary. California regulations require that discharges of stormwater associated with construction activity disturbing more than one acre become permitted under the General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Order 2009-009-Division of Water Quality), known as a Construction General Permit (CGP). This permit requires the development and implementation of a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP must list BMPs that the contractor would use to control stormwater runoff and reduce erosion and sedimentation. A sediment monitoring plan is also required if the site discharges to a water body with impaired or limited water quality (SWRCB 2013). The construction contractor would

prepare a SWPPP and ensure that it was implemented during construction of the MPB, rehabilitation of the dikes, construction of the new maintenance vaults, and installation of the Niwa Road sewer extension.

During operations, the tops of the dikes would be paved, but soils would be exposed on the sides of the dikes, which could lead to erosion during rain events. The sides of the dikes would be landscaped to reflect current conditions, with sufficient vegetation to control erosion and result in minimal loss of topsoils.

Therefore, construction and operations would result in less than significant impacts associated with erosion and loss of topsoil.

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

Calculations in the geotechnical evaluation report (Tetra Tech 2013a) indicate that theoretical settlement of the floodwall and dike embankments ranges from 5.5 to 13 inches. Essentially all of the estimated settlement is expected to have occurred during the first two years after construction. No evidence of settlement-related features such as cracks, depressions or sinkholes were noted during the field assessment. Furthermore, an evaluation of the liquefaction potential of alluvial and more granular silty soils performed by use of Standard Penetration Test results from exploratory borings indicates that all soils have high enough density to resist liquefaction. Potential settlement from soil liquefaction or seismic slope deformation is considered to be negligible. The potential for future settlement of the flood control system that would impact its serviceability is considered very low.

Unstable geological units are those that are prone to landslide, sloughing, or other types of slope failure. The Proposed Project is located in an area that is very flat, with slopes limited to the sides of the dikes. Although localized failures could occur during dike rehabilitation if banks were undermined or weakened by top pressure from heavy construction equipment, such failure would be unlikely to affect human safety or the safety of property. The angle of the finished dike walls would be gentle enough that it would not promote landslides. Furthermore, the geotechnical report indicates that no project features would promote lateral spreading or subsidence. Construction of the MPB and installation of the maintenance vaults and Niwa Road sewer would occur on level ground, and all these structures would be designed to industry standards. The Proposed Project, therefore, does not increase the risk of on- or off-site landslide, lateral spreading, subsidence, or slope failure, and this impact would be less than significant.

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

The soil underlying the majority of the Plant is clay loam. The fields just east of the east dike are underlain by fine sandy loam (Table 4-7, NRCS 2017). The fine sandy loam is primarily composed of sand, with a low percentage of clay (13 percent). The linear extensibility of this soil type is 1.3 percent and the plasticity index is 8 percent (Table 4-7, NRCS 2017). The clay loam is approximately equal parts sand, clay, and silt, and has a linear extensibility of 4.0 percent and a plasticity index of 21.5 (Table 4-7, NRCS 2017). This suggests that the soil underlying much of the Plant property has moderate-to-high shrink-swell potential. However, dike rehabilitation would not affect or disrupt existing soils, as the work would consist of placing concrete parapets on top of the existing dikes.

Based on the recommendations in a geotechnical design memorandum that was prepared for the MPB (LABOE 2012), during construction of the MPB and installation of the maintenance vaults and the Niwa Road sewer extension, any existing fill soils considered to be soft would be removed and recompacted

during grading. Import material would consist of clean, non-expansive material conforming with the latest edition of the "Greenbook" Standard Specifications for Public Works Construction for structural backfill (LABOE 2012). With use of nonexpansive soils, no impacts would occur.

Table 4-7. Characteristics of soils underlying the Plant property

Soil Name	Soil Description	Portion of Site	Slope Percentage	Drainage	Percent Sand[1]	Percent Clay[1]	Percent Silt[1]	Linear Extensibility[1, 2]	Plasticity Index[1]
Conejo-Urban land complex	Clay loam	Plant, Japanese Gardens	0 – 2 %	Well drained	35.5 %	30.5 %	34.0 %	4.0 %	21.5 %
Capistrano-Urban land complex	Fine sandy loam	Eastern fields outside of dike prism	0 – 2 %	Well drained	59.2 %	13 %	27.8 %	1.3 %	8 %

Source NRCS 2017.
[1] Weighted average of all soil layers. [2] Reported as percent change in volume of the whole soil as moisture content is decreased from a moist to a dry state.

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

The Proposed Project would not result in the use of septic tanks or other wastewater disposal systems, therefore there would be no impacts associated with this criterion.

4.6.4 Mitigation

No mitigation would be required. However, the following conservation measures would be implemented during construction of the Proposed Project:

GEO-1. An Erosion and Sedimentation Control Plan (Plan) would be prepared. The Plan would identify measures to be implemented to minimize the erosion effects of grading and excavation. Erosion control methods to be described in the Plan and implemented would include:

- Avoiding soil disturbance during periods of heavy precipitation or high winds.
- Keeping disturbed areas to the minimum necessary for construction.
- Reducing surface water flows across graded or exposed areas.
- Using straw bales, soil mats, or silt fences to stabilize disturbed areas.
- Using culvert, ditches, water bars and sediment traps to control runoff and erosion.
- Bioengineering techniques for erosion control.

GEO-2. All requirements would be shown on grading plans. Conditions would be adhered to throughout all grading and construction periods.

GEO-3. If a significant rain event occurred during construction activities, activities would cease.

GEO-4. Slope stability measures would be implemented at each construction and borrow site.

GEO-5. All suitable excavated fill material would be stockpiled for the shortest period of time possible. If any unsuitable material was found or generated, it would be disposed at a commercial landfill or approved site.

GEO-6. All clearing, grading, earth moving, and excavation would cease during periods of winds greater than 20 miles per hour (averaged over one hour) when disturbed material is easily windblown, or when dust plumes of 20 percent or greater opacity impacted public roads, occupied structures, or neighboring property.

GEO-7. Watering would take place a minimum of twice daily on unpaved/untreated roads and on disturbed soil areas with active operations to minimize fugitive dust.

GEO-8. All fine material transported off-site would be sufficiently watered or securely covered to prevent excessive dust.

GEO-9. Stockpiles of soil or other fine loose material would be stabilized by watering or other appropriate method to prevent windblown fugitive dust.

GEO-10. Areas temporarily disturbed by construction would be returned to pre-construction conditions by grading and re-vegetating. Barren areas would be seeded and /or planted with native vegetation to reduce potential erosion.

4.7 Greenhouse Gas Emissions (GHG)

Greenhouse Gas Emissions (GHG)	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the Project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b) Conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

4.7.1 Environmental Setting

Significant changes in global climate patterns have recently been associated with global warming, an average increase in the temperature of the atmosphere near the Earth's surface, attributed to accumulation of GHG emissions in the atmosphere. GHGs trap heat in the atmosphere, which in turn heats the surface of the Earth. Some GHGs occur naturally and are emitted to the atmosphere through natural processes, while others are created and emitted solely through human activities. The emission of GHGs through the combustion of fossil fuels (i.e., fuels containing carbon) in conjunction with other human activities appears to be closely associated with global warming. State law defines GHGs to include the following: carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6) (CHSC §38505(g)). The most common GHG that results from human activity is CO_2, followed by CH_4 and N_2O.

Traditionally, GHGs and other global warming pollutants are perceived as solely global in their impacts and that increasing emissions anywhere in the world contributes to climate change anywhere in the world. A study conducted on the health impacts of CO_2 "domes" that form over urban areas indicated that they cause increases in local temperatures and local criteria pollutants, leading to adverse health effects.

In 2014, CO_2 emissions accounted for just over 84 percent of total emissions in California (CARB 2016). CO_2 is produced by the burning of fossil fuels such as coal, natural gas, and oil, solid waste, trees and wood products. CO_2 also results from manufacture of cement as well as certain other chemical processes. CO_2 is absorbed by plants and is thus removed from the atmosphere, though not in sufficient quantities to not cause a build-up of GHG in the atmosphere.

The CARB estimated total CO_2 equivalent emissions (CO_2e) in 2014 to be 441.5 million metric tons (MT). Of that total, 37 percent came from transportation sources, 20 percent from power generation, 24 percent from industrial use, 8 percent from agriculture, 11 percent from commercial and residential use, and less than 1 percent from other sources (CARB 2016).

4.7.2 Regulatory Setting

Under the provisions of the CAA, the USEPA has the authority to regulate GHGs should a finding be made that GHGs have the potential to create adverse impacts. In April 2007, the U.S. Supreme Court held that GHG emissions are pollutants within the meaning of the CAA. In reaching its decision, the Court also acknowledged that climate change results, in part, from anthropomorphic causes (Massachusetts et

al. v. Environmental Protection Agency 549 U.S. 497, 2007). The Supreme Court's ruling paved the way for the regulation of GHG emissions by USEPA under the CAA. In response to this Supreme Court decision, on December 7, 2009 the USEPA Administrator signed two distinct findings regarding GHGs under Section 202(a) of the CAA:

- Endangerment Finding: That the current and projected concentrations of the GHGs in the atmosphere threaten the public health and welfare of current and future generations; and,
- Cause or Contribute Finding: That the combined emissions of GHGs from new motor vehicles and new motor vehicle engines contribute to the GHG pollution which threatens public health and welfare.

The CARB is responsible for the development, implementation, and enforcement of California's motor vehicle pollution control program, GHG statewide emission estimates and goals, and development and enforcement of GHG emission reduction rules. Responding to growing scientific and political concern regarding global climate change, California has recently adopted a series of laws to reduce the level of GHGs in the atmosphere and emissions of GHGs from commercial and private activities within the state. AB 1493 requires the development and adoption of regulations to achieve "the maximum feasible reduction of greenhouse gases" emitted by noncommercial passenger vehicles, light-duty trucks, and other vehicles used primarily for personal transportation. It also requires CARB to design and implement emission limits, regulations, and other measures to reduce GHG emissions to 1990 levels by 2020.

The SCAQMD convened a "Greenhouse Gas CEQA Significance Threshold Working Group" to consider a variety of benchmarks and potential significance thresholds to evaluate GHG impacts. On December 5, 2008, the SCAQMD adopted an interim CEQA GHG Significance Threshold for projects where SCAQMD is the lead agency (SCAQMD 2008). This GHG interim threshold is set at 10,000 MT per year (MT/year) of CO_2e emissions. Projects with incremental increases below this threshold would not be cumulatively considerable.

4.7.3 Potential Impacts

GHG (a): Generate greenhouse gas emissions that may have a significant impact on the environment? and,
GHG (b): Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

The analysis of GHG emissions differs from the analysis of criteria pollutant emissions for the following reasons:

For criteria pollutants, the LSTs are based only on daily emissions because attainment or non-attainment is primarily based on daily exceedances of applicable ambient air quality standards. Ambient air quality standards are based on relatively short-term exposure effects on human health (e.g., one-hour and eight-hour standards). However, since the half-life of GHGs are long (the half-life of CO_2, for example, is approximately 100 years), GHGs persist in the atmosphere and have a long-term influence on global climate. As a result, the effects of GHG emissions are typically evaluated over a longer timeframe than a single day (e.g., as annual emissions). GHG emissions are typically considered to be cumulative impacts because they contribute to global climate effects. In CalEEMod, a global warming potential is assigned to calculations to determine the GHG CO_2e emissions.

Adverse effects to climate change would occur if construction and/or operation of an action would result in the following:

- Daily regional emissions in excess of the SCAQMD thresholds. The GHG significance threshold combines construction amortized over 30 years and operational emissions. On December 5, 2008 the SCAQMD Governing Board adopted the staff proposal for an interim GHG significance threshold for projects where the SCAQMD is lead agency (SCAQMD 2008). The guidance provides a tiered approach for significance determinations, including a Tier 3 screening threshold of 10,000 MT/year of CO_2e emissions.

The construction emissions of GHGs associated with conducting the dike rehabilitation were estimated by CalEEMod as part of a larger analysis, which included additional on-site construction work to be done as part of a future (non-overlapping) project that would upgrade Plant facilities. Combined construction emissions estimates for the two projects (the dike rehabilitation and the facility upgrade) are shown in Table 4-8. The total estimated CO_2e emissions for the combined projects are 48.1 MT/year. This is well under the significance threshold of 10,000 MT/year of CO_2e emissions. Therefore, cumulative GHG air quality impacts would be less than significant.

Table 4-8. GHG Emissions from Construction Associated with Dike Rehabilitation and Facility Upgrade

Activity	**CO_2e (MT/year [1,2])**
Construction [3]	48.1
Operation	1,754.9
Total Project Emissions	**1,803.0**
SIGNIFICANCE THRESHOLD	**10,000**
SIGNIFICANT?	**No**

[1] CalEEMod output files, Appendix A
[2] 1 MT = 2,205 lbs
[3] GHGs from short-term construction activities are amortized over 30 years

The operation of the facility would not be expected to change significantly with dike rehabilitation and construction of the MPB. As a result, there would be no increases in operational emissions of GHGs associated with the implementation of the Proposed Project.

Based upon these considerations, the Proposed Project would not be expected to generate GHG emissions, either directly or indirectly, that could 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 GHG gases.

4.7.4 Mitigation

No mitigation measures would be necessary. However, conservation measures AIR-2, AIR-3, AIR-4, AIR-5, AIR-6, AIR-7, and AIR-8 (see Section 4.3.4) would help to reduce emissions of GHGs during project construction.

4.8 Hazardous Materials (HAZ)

Hazardous Materials (HAZ)	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the Project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☒	☐	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☒	☐	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d) Be located on a site included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☒	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	☒
i) Generate vectors (flies, mosquitos, rodents, etc.) or have a component that includes agricultural waste.	☐	☐	☐	☒

4.8.1 Environmental Setting

In order to support normal operations, the Plant facility has an underground storage tank (UST) containing diesel fuel as well as above-ground storage tanks that contain chemicals used in the water treatment process and for maintenance activities (LASAN 2011, Tetra Tech 2015). All hazardous

materials at the Plant are properly stored, handled, and used (Tetra Tech 2015). The on-site location, chemical description, and quantity of each of the stored chemicals/hazardous materials is inventoried and is reported in the facility's hazardous materials business plan. The chemicals reported in the 2011 business plan are listed in Table 4-9 (LASAN 2011).

Table 4-9. Hazardous Materials and Petroleum Products Exceeding Reportable Quantities

Chemical	CAS No.	Storage Area	Maximum Quantity On-Site	Reportable Quantity	CUPA Amounts
Acetic Acid	64-19-7	Warehouse and Dechlor Building	36 gallons	5,000 lbs	500 lbs
Acetylene	74-86-2	Mechanic Shop and Warehouse	1950 $ft.^3$	NA	200 $ft.^3$
Ammonium Hydroxide (19 to 19.5%)	1336-21-6	Tank South of Phase II Final Tanks	26,300 gallons	1,000 lbs	500 lbs
Argon	7440-371	Mechanic Shop and Warehouse	2,016 $ft.^3$	NA	200 $ft.^3$
Calcium Hypochlorite	07778-54-3	Japanese Garden Outdoor Storage Yard near Blower Building	6,000 lbs	10 lbs	500 lbs
Ecoscent (plant oil mixture for odor control)	NA (Mixture)	Storage Huts in front of Headworks (300 gallons) / Various locations (100 gallons)	400 gallons	NA	NA
Gear Compound EP ISO 220 (lubricating oil)	NA	Emergency Generator Room and Headworks	385 gallons	42 gallons	5 gallons
Gear Compound EP ISO 680 (lubricating oil)	NA	Emergency Generator Room and Headworks	55 gallons	42 gallons	5 gallons
Hydraulic Oil AWISO 32	NA	Blower Building - Headworks	415 gallons	42 gallons	5 gallons
Carbon Dioxide	124-38-9	Mechanic Shop and Warehouse	1,008 $ft.^3$	NA	NA
Helistar A 1025 (mixture of argon, helium and CO_2)	NA	Mechanic Shop and Warehouse	844 $ft.^3$	NA	NA
Clarifioc LA-2691 Polymer	NA	Tank North of Phase 1 Final Tanks	20,000 gallons	NA	NA
Diesel Engine Oil SAE 40	NA	Emergency Generator Room	55 gallons	42 gallons	5 gallons
Diesel Fuel	68334-30-5	UST North of Generator Room	5,000 gallons	42 gallons	Exempt
Ferric Chloride	7705-08-0	Phase 1 Filter Building/Phase 1 Secondary Tanks	4,000 gallons	1,000 lbs	500 lbs
Gasoline	Generic	Maintenance Service Yard Trailers	20 gallons	42 gallons	5 gallons
Grease	Generic	Headworks and Warehouse	960 lbs	42 gallons	5 gallons
Hydrochloric Acid 15%	7647-01-0	Pump Room No. 1	500 gallons	450 gallons (5,000 lbs)	500 lbs
Hydrochloric Acid 32%	7647-01-0	On Aeration Deck	220 gallons	5,000 lbs	500 lbs
Oxygen	77-82-447	Mechanic Shop and Warehouse	3,360 $ft.^3$	NA	200 $ft.^3$
AQUA WORKS MPC Cleaning Solutions (parts washer solution)	NA	Mechanic Shop	50 gallons	NA	NA
Propane	74986	Southeast Maintenance Yard	500 gallons	NA	200 $ft.^3$
Oil (Omala)	64742547	Headworks	55 gallons	42 gallons	5 gallons
Sodium Bisulfite	7631-90-5	$NaHSO_3$ Storage Tanks	37,000 gallons	450 gallons (5,000 lbs)	55 lbs
Sodium Hypochlorite	7681-52-9	NaOCI Storage Tanks	80,000 gallons	100 lbs	500 lbs
Motor Oil SAE Low 40	NA	Emergency Generator Room and Headworks	110 gallons	42 gallons	5 gallons

Source: LASAN 2011
Note: lbs = pounds. $ft.^3$ = cubic feet. CUPA = Certified Unified Program Agency. CAS No. = Chemical Abstracts Service No.

In the course of normal operations, the facility also generates hazardous waste and petroleum waste on-site. This waste is stored in a hazardous waste accumulation area that is equipped with a spill response kit, located in the southwest corner of the property (Figure 2-3). All waste is properly stored on-site until it is collected and disposed off-site by an outside contractor (LASAN 2011, Tetra Tech 2015). An inventory of on-site waste was included in the 2011 business plan and is shown in Table 4-10. The Plant is classified as a Small Quantity Generator as defined by the Resource Conservation and Recovery Act (RCRA) (EDR 2015) — a facility that generates more than 100 kilograms (kg) and less than 1,000 kg of hazardous waste during any calendar month and accumulates less than 6,000 kg of hazardous waste at any time, or generates 100 kg or less of hazardous waste during any calendar month and accumulates more than 1,000 kg of hazardous waste at any time (Tetra Tech 2015).

Table 4-10. Hazardous and Petroleum Waste Inventory

Waste Identification No.	Waste Identification No. Description	Annual Amount (lbs)
221	Non-RCRA hazardous waste liquid (oil)	13,112
223, 352	Non-RCRA hazardous waste solid (oily rags and absorbent, oil filters)	722
725, 791	RCRA hazardous waste, liquid, NOS (nitric acid, sulfuric acid, mercury, potassium chloride)	112
331	RCRA hazardous waste, liquid, NOS (solvents, paint)	645
141, 181, 331	RCRA hazardous waste, liquid, NOS (lead batteries)	469
NA	EHS solid, NOS (fluorescent bulbs)	323

Notes: EHS = Environmental Health and Safety; NA = not applicable; NOS = not otherwise specified
Source: LASAN 2011

In 2015, Tetra Tech conducted an environmental baseline survey (EBS) of the Plant facility on behalf of LASAN (Tetra Tech 2015). The purpose of the EBS was to identify potential recognized environmental conditions including the presence or likely presence of any hazardous substances or petroleum products on the property, under conditions that indicated an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water on and around the property (Tetra Tech 2015). The EBS was completed in accordance with the following standard practices: ASTM International (ASTM) D6008-96, ASTM E1527-13, and Title 40 Code of Federal Regulations (CFR) Chapter 1, Subchapter J, Part 312 (Tetra Tech 2015).

Results of the EBS were used to assess whether or not contamination was present on the property and to classify the environmental condition of the entire property (Tetra Tech 2015). Categorization was done in accordance with ASTM D5746-98. Property Categories 1 through 4 are suitable with respect to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Section 120(h) requirements for lease or transfer to non-federal recipients (Tetra Tech 2015).

The Plant was categorized at two levels. The area around the storage basins in the eastern portion of the main Plant (5 percent of the Plant area) was classified as Category 4, indicating that release, disposal, or migration of hazardous substance has occurred, and that all removal or remedial actions have been taken (Tetra Tech 2015). Organochlorine pesticides, specifically dichlorodiphenyltrichloroethane (DDT) and its metabolites, dichlorodiphenyldichloroethylene (DDE) and dichlorodiphenyldichloroethane (DDD), were detected in soil during excavation for construction of two storage basins in the area. Even though concentrations of these pesticides did not exceed the USEPA soil screening levels (FREY Environmental, Inc. 2011), affected soil was excavated and disposed of off-site (Tetra Tech 2015).

The area around the diesel UST in the northwestern section of the Plant, as well as the remainder of the Plant property (95 percent of the Plant area) was assigned Category 3. This categorization indicates an

area where hazardous substances have been released or disposed of, or where they migrated, but at concentrations that do not require removal or remedial response (Tetra Tech 2015). The original 10,000-gallon diesel UST was installed in 1984 (EDR 2015). In 1993, when low levels of diesel fuel were detected in soil samples, the tank was replaced with a 5,000-gallon double-walled galvanized steel UST equipped with a continuous interstitial leak detection system, which remains in use today (LASAN 2011, Tetra Tech 2015). The soils were re-tested before installation of the new tank, and diesel concentrations in the soil were below the relevant action level (American Analytics 1993, LABOE 1993, Tetra Tech 2015). On the remainder of the property, some areas of soil/fill may be contaminated with DDD, DDE, and DDT from past agricultural use; however, concentrations are likely well below the USEPA soil screening levels (Tetra Tech 2015).

The Plant is adjacent to an environmental remediation site at the CANG facility (DTSC 2017). However, although documented releases have occurred at the CANG facility, these did not overlap the Property and there is no evidence they have migrated to the Property. Conditions at the adjacent properties are considered unlikely to have affected the environmental condition of the Property (Tetra Tech 2015).

4.8.2 Regulatory Setting

Hazardous materials and waste are regulated at the federal, state, and local levels. At the federal level, major regulations include; (1) the CERCLA, 42 USC §§ 9601-9627, for cleanup of hazardous materials sites, (2) the RCRA, 42 USC §§ 6901-6991i, which regulates hazardous waste from "cradle to grave," and (3) the Toxic Substances Control Act, 15 USC §§ 2601-2682, which involves hazard assessment, labeling, and use restrictions relating to toxics. The primary federal agencies with regulatory responsibility for hazardous materials and waste and associated safety management are: (1) the USEPA for management and cleanup of hazardous materials and waste, (2) the U.S. Department of Labor, Occupational Safety and Health Administration (OSHA) for occupational safety and health, and (3) the U.S. Department of Transportation (USDOT) for transportation of hazardous materials and waste.

Implementation and enforcement of federal regulations often occurs at the state or local level. For example, the USEPA has granted the state of California primary oversight responsibility to administer and enforce its own hazardous waste program under RCRA. California's hazardous waste program is at least as strict as, and in some aspects stricter than, RCRA.

At the state level, California's primary regulations for hazardous materials and waste are found in CCR, Title 22, Division 4.5, *Environmental Health Standards for the Management of Hazardous Waste*, and CHSC, Division 20, Chapter 6. The California Environmental Protection Agency (CalEPA) is California's unified environmental authority. The CalEPA oversees and coordinates the activities of multiple environmental entities that implement and enforce state and federal regulations:

- CARB, which regulates air pollutants
- California Department of Resources Recycling and Recovery (CalRecycle), which manages recycling and protection of the state's natural, historical, and cultural resources
- California Department of Pesticide Regulation, which regulates pesticide sale and use
- California Department of Toxic Substances Control (DTSC), which regulates hazardous waste, conducts and oversees site cleanups, and promotes pollution prevention
- Office of Environmental Health and Hazard Assessment, which evaluates the risks posed by hazardous substances
- The State Water Resources Control Board (SWRCB), which maintains records of and regulates releases of hazardous substances and petroleum-based materials that could affect groundwater or surface water

California's Unified Hazardous Waste and Hazardous Materials Management Regulatory Program (Unified Program) provides for local implementation of the following six regulatory programs:

- Above-ground storage tank program (reference CHSC, Division 20, Chapter 6.67)
- Hazardous materials inventory and reporting requirements program (reference CHSC, Division 20, Chapter 6.95), which includes requirements for developing hazardous materials business plans
- California accidental release prevention program (reference CHSC, Division 20, Chapter 6.95, Article 2)
- Uniform Fire Code hazardous materials management plan and inventory statement preparation program (reference California Fire Code, Section 8001.3)
- UST program (reference CHSC, Division 20, Chapter 6.7, Article 2 and CCR, Title 23, Chapter 16, Division 3)
- Hazardous waste generator and on-site hazardous waste treatment program (reference CHSC, Division 20, Chapter 6.5, *Hazardous Waste Control Law* and CCR, Title 22, Division 4.5)

The local implementing agencies for the Unified Program are known as Certified Unified Program Agencies (CUPA) or participating agencies.

State occupational health and safety regulations related to hazardous materials and waste are found in CCR, Title 8, Chapter 3.2 and the California Labor Code and are implemented and enforced by the California Occupational Safety and Health Administration. State regulations related to the transport of hazardous materials and waste are found in the CCR, Title 22, CHSC, and California Vehicle Code and are implemented and enforced by the DTSC and California Highway Patrol.

At the local level, Title 11 (Health and Safety) and Title 12 (Environmental Protection) of the Los Angeles County Code of Ordinances contain multiple ordinances related to hazardous waste, solid waste, and USTs. In Los Angeles County, these ordinances as well as state regulations governing hazardous substance generation and storage are implemented and enforced by the Los Angeles CUPA. This agency is managed by the Health Hazardous Materials Division (HHMD) of the Los Angeles County Fire Department. The HHMD permits and regulates the use, storage, and disposal of hazardous materials through the following programs: the California Accidental Release Prevention program, the Aboveground Petroleum Storage Tank program, the Hazardous Waste program, and the Hazardous Materials program. USTs are regulated by the Los Angeles County Department of Public Works (DPW), which is a Participating Agency to the CUPA. The Environmental Protection Division of the DPW permits and inspects USTs within cities and unincorporated areas of Los Angeles County through the UST program. Additional monitoring and enforcement related to environmental contamination or human exposure resulting from improper handling of hazardous materials is conducted by the Los Angeles County Department of Public Health Environmental Health Division, which conducts surveillance and enforcement related to radiation management, solid waste treatment, and the contamination of stormwater, drinking water, and recreational water bodies. Vector control programs are implemented by the Greater Los Angeles County Vector Control District, a public health agency formed and authorized under the CHSC.

4.8.3 Potential Impacts

HAZ (a): Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?
and,
HAZ (b): Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Construction of the Proposed Project and some future maintenance activities would require petroleum, oil, lubricants, paint, asphalt, and other potentially hazardous materials to be transported to, temporarily stored on, and used at the project site, and would generate waste. The routine transport, use, or disposal of these materials and petroleum products would carry some risk compared to situations not involving these materials.

The construction contractor(s) would be responsible for the proper handling, storage, use, transport, disposal, and cleanup of hazardous substances, petroleum products, and waste. The construction contractor(s) would be responsible for appropriately and accurately characterizing waste to determine whether it meets the criteria for hazardous waste. Safety Data Sheets (formerly known as Material Safety Data Sheets) for all relevant chemicals would be kept on-site and available for review by all site personnel, and all hazardous materials would be used and stored in accordance with the manufacturer's instructions and applicable regulations.

To minimize the risk of upset and accident conditions, ensure proper management of hazardous materials and waste, and protect people and the environment from associated hazards, the construction contractor(s) would implement mitigation measure HAZ-1: Prepare and Implement a Construction-Specific Hazardous Materials Management Plan and a Site-Specific Health and Safety Plan. These plans would detail relevant industry standard BMPs and procedures to comply with federal, state, and local legal requirements regarding hazardous materials and waste. With implementation of this mitigation measure, potential impacts would be less than significant.

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

There are no schools within 0.25 mile of the Proposed Project area; therefore, no impact would occur.

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

The project site is not listed in the EnviroStor database, which is a list of hazardous materials release sites compiled by the DTSC pursuant to Government Code Section 65962.5. The database search identified several sites near the project site where investigation or remediation of hazardous materials or petroleum products has occurred. This includes the CANG facility to the north, where localized soil contamination was found at two sites. The affected soil was removed, groundwater was not impacted, and the contaminants are not likely to have migrated to the project site (Tetra Tech 2015, DTSC 2017). Given that the project site is not listed in the EnviroStor database, and that remediation has been completed at the adjacent listed site, the Proposed Project would not create a significant hazard to the public or the environment. As a result, potential impacts would be less than significant.

The EBS described in Section 4.8.1 classified 95 percent of the Plant property as Category 3, indicating that this area may contain contamination resulting from release, disposal, or migration of hazardous materials, but at concentrations that do not require removal or remedial response. The remaining 5 percent

of the property, around the storage basins in the eastern part of the Plant, is classified as Category 4, indicating that the area was contaminated through the release, disposal, or migration of hazardous materials, and that all required removal or remedial actions were completed. Accordingly, the proposed construction activities would not create a significant hazard to the public, so effects would be less than significant.

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

and,

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

The Proposed Project is 0.25 mile southeast of the southern boundary of the Van Nuys Airport. It is not in the vicinity of a private airstrip. According to the comprehensive land use plan developed by the Los Angeles County airport land use commission (ALUC 2004), the project area is not in the runway protection zone for the Van Nuys Airport. The project area is also not within the runway approach area identified in the Van Nuys Airport Master Plan (LADCP 2006). Therefore, the project would not result in a safety hazard for people residing or working in the project area. There would be no impacts associated with these criteria.

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

A significant impact could occur if the Proposed Project required closing roadways into or out of the Plant, thereby interfering with emergency response and/or evacuation plans. The Proposed Project does include the installation of a sliding flood gate at the northwest entrance on Niwa Road, and the installation of a bump-ramp system at the northeast entrance on Niwa Road and at the entrance to the area north of the cricket fields off of Teibo Drive. During the installations, construction activities would be limited to one-half of the roadway at a time, allowing passage of vehicles in one lane. In addition, no modifications would be made to the main entrance, and access through this entrance would not be limited at any time. During the nine-month construction period associated with the Niwa Road sewer installation, the width of Niwa Road would temporarily be diminished in the construction area (Figure 2-3). However, sufficient width would be retained to allow passage of service and emergency vehicles during the construction period. Access to the construction and staging areas for the MPB would be through the main entrance, which would be unaffected by dike rehabilitation. Minor and short-term increases in traffic associated with construction of the Proposed Project would not impact roadway operations. Therefore, there would be no impairment of emergency response plans or emergency evacuation plans and no impacts would occur.

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

The southernmost extent of the project area is approximately 1.6 miles north of Ventura Blvd., which marks the northernmost edge of a narrow fire buffer zone that borders the mountain fire district of the Santa Monica Mountains (LADCP 1996). Both the fire buffer zone and mountain fire district are classified as wildfire hazard areas in the City of Los Angeles General Plan (LADCP 1996). The Los Angeles County General Plan, which designates fire hazard severity zones in Los Angeles County, classifies the Santa Monica Mountains fire district as a very high fire hazard zone (DRP 2015). However, according to the City of Los Angeles and Los Angeles General Plans, the project site itself is not within a fire buffer zone, fire district, or designated fire hazard severity zone. In addition, the project site is

developed and does not contain wildlands. As a result, the Proposed Project would not expose people or structures to a significant risk of loss, injury or death involving wildland fires, and there would be no impact associated with this criterion.

HAZ (i): Would the project generate vectors (flies, mosquitoes, rodents, etc.) or have a component that includes agricultural waste?

Construction would include clearing, grubbing, and the placement of soil and concrete to raise the dikes and set foundations. The project would not generate disease vectors such as mosquitoes, flies, or rodents and does not have a component that includes agricultural waste. Thus, there would be no impact associated with this criterion.

4.8.4 Mitigation

HAZ-1. To ensure that the routine transport, use, or disposal of hazardous materials would be done in compliance with federal, state, and local laws, ordinances, and regulations, and to help avoid and minimize potential accidents or spills during construction, a construction-specific Solid and Hazardous Materials and Waste Management Plan would be prepared by the construction contractor(s) prior to construction. All contractors would also prepare and implement a site-specific Worker Health and Safety Plan to be approved by the Corps' Safety Office prior to start of construction activities.

The plans would conform to applicable local, regional, state, and federal laws, policies, and regulations regarding the transportation, storage, handling, management, and disposal of hazardous materials and wastes and would detail relevant BMPs. They would be implemented for the duration of the construction. The plans would be on-site during construction and distributed to workers and managers prior to the start of construction.

The construction-specific Solid and Hazardous Materials and Waste Management Plan would contain these elements, at a minimum:

- Responsible personnel and clearly defined roles and responsibilities, including employee training requirements
- Emergency preparedness and prevention, including emergency contacts, emergency response equipment and procedures, procedures for responding to unanticipated soil contamination, contingency plans, spill prevention and containment, and spill response equipment and procedures
    - Contractors would have in place an accidental spill prevention and response plan for all hazardous materials that could be used on site. In the event of a spill or release of hazardous substances at the construction site, the contaminated soil would be immediately contained, excavated and treated per federal and state regulations developed by the USEPA, as well as local hazardous waste ordinances. All contaminated materials would be disposed of promptly and properly to prevent contamination of the site. Someone would be present to monitor refueling activities to ensure that spillage from overfilling, nozzle removal, or other action did not occur.
    - During construction, if an area of suspected contamination were encountered, construction activity in the area would cease and soil sampling would be conducted to determine the nature and extent of the potential contamination. If testing indicates that contamination did exist, the area would be cleaned up in accordance with applicable federal and state regulations.

- Hazardous materials and petroleum products management including inventory, inventory control procedures, storage details, hazard communication requirements, and reporting requirements
    - Construction and maintenance fluids (oils, antifreeze, fuels) would be stored in closed containers (no open buckets or pans) and disposed of promptly and properly away from the channel to prevent contamination of the site
- Waste management procedures including anticipated waste streams, waste minimization practices, criteria and process for characterizing hazardous waste, and waste storage, transport, and disposal procedures
- BMPs to be employed to reduce the risks associated with petroleum, oil, lubricants, paint, asphalt, and other potentially hazardous materials transport, storage, and use
    - Refueling of equipment would be accomplished on site least 50 ft. away from flowing water and with the use of liners. BMPs would be used and would include such actions as having hazardous waste clean-up equipment and spill kits staged on-site and using the appropriate size and gauge drip pans and absorbent diapers. Spill kits would be in close proximity to the fuel truck in case of fuel or other fluid spills. Contractor equipment would be checked for leaks prior to operation and repaired as necessary

The site-specific Worker Health and Safety Plan would contain these elements, at a minimum:

- Responsible personnel (name of the Site Safety Officer) and clearly defined roles and responsibilities, including a description of the work to be done
- Emergency contacts and emergency response procedures, including the address and contact information for the nearest hospital and a map showing the most direct route to a hospital and safe air ambulance landing zone
- Emergency evacuation routes and procedure
- Types of safety issues that could be encountered (e.g., slips, trips, falls, heat) and description of safe work practices
- List of chemicals used or stored on the site
- Designated heavy equipment traffic circulation route plans
- Employee training and all appropriate worker, public health, and environmental protection equipment and procedures
- Documentation that all workers had reviewed and signed the plan.

The following conservation measure would also be implemented:

HAZ-2. Only trained contractors or personnel would participate in the application of pesticides and herbicides. Such personnel would adhere to regulations and guidelines for the safe application of pesticides, including, but not limited to storage and handling of materials, operation of application equipment, suitable climatic conditions for application, and avoidance of sensitive receptors. The herbicides used would need to be approved for use in or near water.

4.9 Hydrology and Water Quality (WAT)

Hydrology and Water Quality (WAT)	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the Project:				
a) Violate any water quality standards or waste discharge requirements?	☐	☐	☒	☐
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☐	☒
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion of siltation on- or off-site?	☐	☐	☒	☐
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	☐	☐	☒	☐
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☒	☐
f) Otherwise substantially degrade water quality?	☐	☐	☒	☐
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other authoritative flood hazard delineation map?	☐	☐	☐	☒
h) Place within a 100-year flood hazard area structures that would impede or redirect flood flows?	☐	☒	☐	☐
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☐	☒
j) Expose people or structures to a significant risk of loss, injury or death involving inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒

4.9.1 Environmental Setting

4.9.1.1 Surface Water

The Los Angeles River flows adjacent to the project site, 0.5 miles south of the Plant facility. The headwaters of the Los Angeles River are in the Santa Monica, San Gabriel, and Santa Susana Mountains. The Los Angeles River drains an area of 824 square miles, 60 percent of which is intensely urbanized. Along much of its length, the river is channelized and the river bottom is lined with concrete (LARWQCB 2014).

The project site is located within the Sepulveda Dam Reservoir, just upstream of the Sepulveda Dam (Corps 2011b). The dam was constructed in 1941 by the Corps as a single purpose flood control structure (Corps 2013). The dam was designed to provide flood protection for downstream regions by temporarily storing flood runoff from upstream drainages and controlling its release. Of the eight outlets in the dam, only four have gates, and the dam therefore cannot completely block flow in the river (Corps 2011b, 2013). The gates are fully open under normal conditions (Corps 2013). The capacity of the reservoir when the spillway gates are raised to their maximum elevation of 710 ft. is 18,129 acre-feet (acre-ft.) (Corps 2011b).

In all, 152 square miles of the Los Angeles River watershed drains to the Sepulveda Dam Reservoir (Corps 2011b). In this upper portion of the watershed, streamflow is predominantly composed of flood flows from the San Fernando Valley and point source releases of water from municipal separate storm sewer systems (MS4s) (LARWQCB 2014). In reaches below the Sepulveda Dam, discharges of effluent from municipal wastewater treatment plans are the dominant source of streamflow (LARWQCB 2014).

The Los Angeles River passes the project area immediately above a USGS gage station (USGS gage 11092450 LOS ANGELES R A SEPULVEDA DAM CA). The gage is located 0.6 miles below Sepulveda Dam. Water that flows to this segment of the Los Angeles River drains from an area of 158 square miles (USGS 2017). Streamflow is generally highest in winter months (December, January, February, March) and lowest in summer (June, July, August, September), but peaks or wanes during the shoulder season in some years, likely in response to substantial annual variation in regional precipitation patterns. In the last 15 water years (WY, October 1 – September 30), 2002-2016, the annual average streamflow in this section of the Los Angeles River has ranged from a low of 70.8 cubic feet per second (cfs) in WY 2016 to a high of 292.1 cfs in WY 2005. During this period, streamflow was highest in February (WY 2002 – 2016 average = 267 cfs) and lowest in August (WY 2002 – 2016 average = 63 cfs). The highest single month average streamflow was 1,040 cfs in February of 2005, and the lowest was 43.7 cfs in October of 2013. The highest instantaneous streamflow occurred on March 20th 2011, when discharge reached 19,600 cfs (USGS 2017).

Water quality in the Los Angeles River is severely impaired due to MS4 releases of runoff from the heavily urbanized watershed, point source inputs, and illegal discharge and dumping (LARWQCB 2014). Common contaminants include fecal coliform bacteria, nutrients, and heavy metals. Numerous potential point and non-point sources exist within the heavily developed watershed, making it difficult to identify the source of these contaminants.

4.9.1.2 Groundwater

The project area falls within the south coast hydrologic region of California. In this region, 23 percent of water demand is met by groundwater withdrawal, considerably less than in the central coast (83 percent) or central valley (31 – 41 percent) hydrologic regions, but more than in the San Francisco Bay (5 percent) or Colorado River (8 percent) hydrologic regions. Within the south coast hydrologic region, the project area is in the Los Angeles sub-region (sub-region 4) and overlies the San Fernando Valley Groundwater

Basin (Basin No. 4-12) (DWR 2003). The San Fernando Valley Groundwater Basin encompasses 145,000 acres, and well yields within this basin average 1,220 gallons per minute (DWR 2003).

The exact depth to groundwater below the Plant is unknown, but the water table is known to be relatively deep. Results of borings at the project site are summarized below:

- Borings drilled for the Blower Building in the northern portion of the facility did not encounter groundwater to depths as deep as 53 ft. (LABOE 2006). These borings were drilled in late September 2005.
- Borings drilled for the in-Plant storage basins within the eastern portion of the facility did not encounter groundwater to depths as deep as 51 ft. (approximate elevation 660 ft.). These borings were drilled in September 2009 (LABOE 2010).
- One boring drilled for the Multi-Use Building within the western portion of the facility did encounter evidence of perched water at a depth of 39 ft. (approximate elevation 670 ft.). This boring was drilled in March 2012 (LABOE 2012).
- Borings drilled at the project site to up to 41.5 ft. below ground surface by Tetra Tech during the geotechnical field investigation did not encounter groundwater (Tetra Tech 2013a).
- Borings drilled by the Corps and the CANG at and near the Plant have encountered groundwater from 50 ft. to well over 100 ft. below ground surface (Corps 2012a, 2012b; CANG 2013, 2014)

The above information indicates that groundwater levels below the Plant likely fluctuate seasonally and in response to periods of high rainfall. Groundwater likely flows south and southeast along the topographic gradient (EDR 2015).

The San Fernando Valley Groundwater Basin can be characterized as calcium sulfate-bicarbonate dominating the eastern part of the basin (close to the Sepulveda Dam Reservoir) and calcium bicarbonate dominating the western side of the basin (ULARAW 1999). Total dissolved solids (TDS) concentrations in the basin range from 326 to 615 milligrams per liter (mg/L) and electrical conductivity ranges from 540 to 996 siemens (ULARAW 1999). Well monitoring data taken from 125 public supply wells shows an average TDS content of 499 mg/L and a range from 176 to 1,160 mg/L. The San Fernando Valley groundwater basin is known to contain multiple plumes of volatile organic compounds, specifically trichloroethylene and tetrachloroethylene (DWR 2003, USEPA 2009). There are four designated Superfund Site Investigation Areas in the basin. These areas are in the far eastern portion of the San Fernando Valley and do not contain the Sepulveda Dam Reservoir or the Plant (USEPA 2009).

4.9.2 Regulatory Setting

Clean Water Act. The CWA established water quality standards for surface waters and the basis for regulating the discharge of pollutants into WOUS. Under the CWA the USEPA has implemented pollution control programs including wastewater standards for industry and water quality standards for contaminants in surface water. It became unlawful to discharge any pollutant from a point source (a discrete conveyance such as a pipe or man-made ditch) under the CWA, unless a permit was obtained. The USEPA National Pollutant Discharge Elimination System (NPDES) controls discharges of pollutants to WOUS by requiring permits that help regulate point source discharges from industry, municipalities, and other facilities.

Corps permit authorization is required to work within WOUS under Section 404 of the CWA. Section 404 establishes a program to regulate the discharge of dredge or fill material into WOUS, including wetlands. Activities in WOUS regulated under this program include fill for development, water resource projects (such as dams and levees), infrastructure development (such as highways and airports) and mining

projects. Section 404 requires a permit before dredged or fill material may be discharged into WOUS, unless the activity is exempt from Section 404 regulation.

Porter-Cologne Water Quality Control Act. The Porter-Cologne Water Quality Control Act was enacted in the state of California in 1969 to protect water resources, including groundwater. Through this legislation, the California SWRCB and its nine Regional Boards were given authority to preserve and enhance water resources in the state. The legislature "finds and declares that the people of the state have a primary interest in the conservation, control, and utilization of the water resources of the state, and that the quality of all the waters of the state shall be protected for use and enjoyment by the people of the state" (SWRCB 2016).

The SWRCB carries out its duties under the Porter-Cologne Water Quality Control Act through regional, water basin plans. The project area is under the jurisdiction of the Los Angeles Regional Water Quality Control Board (LARWQCB). The *Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties* (Basin Plan) is the master document for protecting water resources in the region (LARWQCB 2014).

Any construction activities more than 1 acre would require coverage under the SWRCB NPDES General Permit for Discharges from Construction Activities, Order No. 2010-0014-DWQ, NPDES No. CAS000002 (CGP). This CGP requires the development of a SWPPP and the implementation of BMPs to minimize offsite sedimentation during construction projects.

Antidegradation Policy. In instances where existing water quality is better than that prescribed by the objectives, the state Antidegradation Policy applies (State Board Resolution 68-16: Statement of Policy with Respect to Maintaining High Quality of Waters in California). The Antidegradation Policy states that "whenever the existing quality of water is better than the quality established in policies as of the date on which such policies become effective, such existing high quality would be maintained until it has been demonstrated to the state that any change would be consistent with maximum benefit to the people of the state, would not unreasonably affect present and anticipated beneficial use of such water, and would not result in water quality less than that prescribed in the policies." Any activity which produces or may produce a waste or increased volume or concentration of waste and which discharges or proposes to discharge to existing high quality waters would be required to meet waste discharge requirements. These requirements would result in the best practicable treatment or control of the discharge necessary to assure that a pollution or nuisance would not occur. Furthermore, the requirements would assure that the highest water quality consistent with maximum benefit to the people of the state would be maintained.

California Department of Fish and Wildlife. The CDFW is responsible for conserving, protecting, and managing the state's fish, wildlife, and native plant resources. Fish and Game Code, Section 1602, requires that the agency be notified of proposed actions that may substantially modify a river, stream, or lake, including ephemeral streams, desert washes, and watercourses. If it is determined that the proposed activity may adversely affect fish and wildlife resources, then a Streambed Alteration Agreement would be prepared. The Proposed Project would proceed in accordance with the agreement.

Los Angeles Regional Water Quality Control Board Basin Plan. The LARWQCB adopts and administers the Basin Plan for surface waters (including the Ventura River, the Santa Clara River, and the Los Angeles River, as well as tributaries and smaller creeks) and groundwater resources in Los Angeles and Ventura counties. In addition to establishing water quality standards, the Basin Plan contains implementation programs and policies to achieve those objectives for all waters addressed through the plan (California Water Code, §13240-13247).

In this Basin Plan, and pursuant to the CWA, water quality standards are composed of two parts: (1) the designated beneficial uses of water (Table 4-11) and criteria or objectives to protect those uses from pollution and degradation. Beneficial uses are defined for surface waters and groundwater. Beneficial uses that apply to the project area are summarized in the following table, and definitions are contained in the Basin Plan (LARWQCB 2011, 2014).

Table 4-11. Beneficial Uses

Beneficial Uses of Waters		Surface Waterbody	Groundwater Basin
Abbreviation	Name	Los Angeles River – Reach 5	San Fernando Valley
REC1	Water Contact Recreation	Existing	
REC2	Non-contact Water Recreation	Existing	
WARM	Warm Freshwater Habitat	Existing	
WILD	Wildlife Habitat	Existing	
WET	Wetland Habitat	Existing	
AGR	Agricultural Supply		Existing
IND	Industrial Service Supply		Existing
MUN	Municipal and Domestic Supply	Potential	Existing
PROC	Industrial Process Supply		Existing
GWR	Groundwater Recharge	Existing	
Source: LARWQCB 2011			

The section of the Los Angeles River that is adjacent to the project site and passes through the Sepulveda Dam Reservoir constitutes reach 5 of the Los Angeles River (between Balboa Blvd. and Sepulveda Dam), as designated by the LARWQCB. The existing beneficial uses for this reach of the river are groundwater recharge (GWR); water contact recreation (REC1); non-contact water recreation (REC2); warm freshwater habitat (WARM); wildlife habitat (WILD); and wetland habitat (WET) (LARWQCB 2011). The municipal and domestic supply (MUN) beneficial use is designated as a potential beneficial use for this reach of the Los Angeles River.

Water Quality Objectives (WQOs) to protect beneficial uses are both narrative and numerical. Narrative objectives are general descriptions of water quality that must be attained through pollutant control measures and watershed management. Numerical objectives typically describe pollutant concentrations, physical/chemical conditions of the water itself, and the toxicity of the water to aquatic organisms. These objectives represent the maximum amount of pollutants that can remain in the water column without causing any adverse effect on organisms using the aquatic system as habitat, on people consuming those organisms or water, and on other current or potential beneficial uses. Together, the narrative and numerical objectives define the level of water quality that shall be maintained within the region. The LARWQCB has set objectives and limits for ammonia, bacteria, chlorine, nitrogen, dissolved oxygen, organic chemicals, pesticides, pH, priority pollutants, suspended materials, temperature, and toxicity, among other parameters. Objective and limits are set regionally as well as for specific reaches and in support of specific beneficial uses. Reach 5 of the Los Angeles River has been assigned a site-specific 30-day average objective for ammonia (LARWQCB 2013). The objective is dependent on pH and temperature and changes seasonally based on whether early life stages of fish are present (April – September) or absent (October – March) (LARWQCB 2013). No additional specific WQOs have been assigned to this reach, but specific WQOs have been assigned to the reach immediately downstream for the following parameters: TDS (950 mg/L), sulfate (300 mg/L), chloride (190 mg/L), and nitrogen (8 mg/L).

The 2012 CalEPA 303(d) List/ 305(b) Assessment Report lists the 1.9-mile long Reach 5 of the Los Angeles River (entirely within Sepulveda basin) as impaired for ammonia, copper, lead, nutrients, oil, and trash (SWRCB 2012). Point and non-point sources have contributed to the ammonia and nutrient impairments. Point and non-point sources as well as surface runoff and discharge from urban storm sewers have led to the presence of trash in this reach. The source of the copper, lead, and oil contamination is unknown (SWRCB 2012). The Total Maximum Daily Loads (TMDLs) for ammonia and nutrients were approved by the USEPA in 2004, the TMDLs for copper and lead were approved in 2005, and the TMDL for trash was approved in 2008 (SWRCB 2012). A TMDL for oil is still being developed (SWRCB 2012).

In California, all groundwater is considered suitable, or potentially suitable, for municipal or domestic use unless otherwise designated by the SWRCB. The SWRCB seeks to maintain a high-quality drinking groundwater resource wherever it is present by limiting bacteria, organic and inorganic chemical constituents, and maintaining acceptable taste and odor so that potential beneficial uses are not adversely affected. The project site overlies the San Fernando Valley groundwater management zone. This zone has designated beneficial uses for agricultural supply, industrial service supply, municipal and domestic supply, and industrial process supply (Table 4-11, LARWQCB 2011).

Protection of groundwater is regulated by the LARWQCB. The primary WQO for groundwater is maintenance of the existing high quality of groundwater (i.e., ″background″). In addition, at a minimum, groundwater shall not contain concentrations of bacteria, chemical constituents, radioactivity, or substances producing taste and odor in excess of the objectives described above unless naturally occurring background concentrations are greater. For all groundwater in California designated for use in municipal and domestic supplies there are established exceedance criteria for arsenic, fecal coliform, barium, boron, chloride, cyanide, fluoride, hardness, metals, methylene blue-activated substances, nitrate-nitrogen, pH, radioactivity, sodium, sulfate, TDS, and taste and odor compounds (LARWQCB 2013). WQOs for groundwater in the Los Angeles River Basin are provided in Chapter 3 of the Basin Plan (LARWQCB 2013). In addition, in designated management zones, zone-specific criteria have been set. In the San Fernando Valley Basin, to the west of I-405, the TDS objective is 800 mg/L, the sulfate objective is 300 mg/L, the chloride objective is 100 mg/L, and the boron objective is 1.5 mg/L (LARWQCB 2013).

Under existing law, the LARWQCB regulates waste discharges to land that could affect water quality, including both groundwater and surface water quality. Waste discharges that reach groundwater are regulated to protect both groundwater and any surface water in continuity with groundwater. Waste discharges that affect groundwater that is in continuity with surface water cannot cause violations of any applicable surface water standards.

4.9.3 Potential Impacts

WAT (a): Violate any water quality standards or waste discharge requirements?
and,
WAT (f): Otherwise substantially degrade water quality?

For the duration of the Proposed Project construction would occur year-round and would have the potential to lead to erosion and discharge of sediment, the release of pollutants bound to sediment, and the production of pollutants associated with construction, such as trash, solvents, sanitary waste from portable restrooms or sewage treatment facilities, and concrete curing compounds. The discharge of these pollutants during construction could impair the quality of any surface water that they flow into. The Proposed Project would be subject to the requirements of a NPDES CGP because project area construction exceeds 1 acre. To obtain coverage under the CGP, the project proponent must provide a

Notice of Intent, a SWPPP, and other documents required by Attachment B of the CGP. Activities subject to the CGP include clearing, grading, and disturbances to the ground. Construction activities covered under the CGP are regulated at the local level by the LARWQCB.

The construction SWPPP would be prepared by a qualified SWPPP developer to meet the certification requirements in the CGP. The SWPPP would require that:

- All pollutants and their sources, including sources of sediment associated with construction, construction site erosion, and all other activities associated with construction be controlled;
- Where not otherwise required to be under a LARWQCB permit, all discharges unrelated to stormwater be identified and eliminated, controlled, or treated;
- Site BMPs be effective and would reduce or eliminate pollutants in stormwater discharges and authorized discharges unrelated to stormwater from construction to the Best Available Technology/Best Conventional Technology standard;
- Calculations and design details, and BMP controls for site run-on, be complete and correct; and
- Stabilization BMPs be installed after construction to reduce or eliminate pollutants.

The SWPPP would also include BMPs for:

- Erosion control (including wind erosion) and tracking controls to minimize tracking of mud from the site,
- Sediment control,
- Controls for water discharges unrelated to stormwater (such as water from vehicle and equipment cleaning), and
- Waste management and materials pollution control.

Surface water and groundwater beneficial uses that apply to the project area are identified in Table 4-11, and surface water WQOs are outlined in Section 4.9.2. These beneficial uses and WQOs would not be adversely affected by construction or operations, due to the location of project work and the implementation of BMPs and the SWPPP. Surface water beneficial uses are associated with the Los Angeles River, which would not be affected by construction of the Proposed Project as construction would only occur in the vicinity of the Plant, 0.5 miles north of the Los Angeles River. Groundwater beneficial uses would not be affected since grading would not intersect the groundwater table and, since the area of new impermeable surface would be minimal, would not affect infiltration into aquifers.

As currently designed, the project would avoid impacts to jurisdictional WOUS and wetlands subject to regulation by the Corps and LARWQCB. The extent of potential CDFW jurisdiction is expected to extend across the bankfull width of the Los Angeles River. Potential CDFW jurisdiction would extend beyond the top-of-bank to where riparian vegetation occurs. No project activities would occur within potential CDFW jurisdiction.

Assuming implementation of the SWPPP, impacts would be less than significant.

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

If the project removed an existing groundwater recharge area or substantially reduced runoff that results in groundwater recharge, a potentially significant impact could occur. The project does not require use of groundwater supplies and would not substantially interfere with groundwater recharge in the project area.

A geotechnical investigation of the project site was prepared as part of the Levee Certification Report for the Plant (Tetra Tech 2013a). Groundwater was not encountered in any of the test borings performed by Tetra Tech to the depth of exploration (up to 41.5 ft.) during the field investigation (Tetra Tech 2013a). Borings drilled for previous investigations within the Plant also did not require groundwater when drilling as deep as 53 ft. (in 2005), 51 ft. (in 2009), and 39 ft. (in 2012) (LABOE 2006, 2010, 2012). Borings drilled by the Corps and the CANG at and near the Plant have encountered groundwater from 50 ft. to well over 100 ft. below ground surface (Corps 2012a, 2012b; CANG 2013, 2014). This information indicates that the water table below the Plant is relatively deep. Excavation for the Proposed Project would occur to a maximum depth of 15.5 ft. below the current ground surface, which is well above the water table. The project area is already developed and not managed as a groundwater recharge area, and the Proposed Project would add less than one-third acre of impermeable surface materials, so impacts to groundwater infiltration would be minimal. The project would be expected to have no impact on the volume of water in the underlying aquifer or on the local groundwater table level.

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

Erosion and siltation reduction measures would be implemented during construction consistent with an approved SWPPP, which would demonstrate compliance with the NPDES permit held by the Plant. The proposed activities would alter the dike prism only minimally by adding a concrete flood wall on the north perimeter, and, upon completion, site topography would be returned to pre-project conditions. The proposed activities would therefore be expected to have a less than significant impact on drainage patterns in the project area. The project site is located 0.5 mile north of the Los Angeles River, and no project activities would alter its course or lead to substantial erosion or siltation on- or off- site. Impacts would be less than significant.

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

The completed Niwa Road sewer line and maintenance vaults would be located underground and would not impact surface runoff on-site. A small concrete pad would be installed on top of the maintenance vaults, but this would have a negligible impact on surface runoff, particularly as the majority of the new vaults would be placed in areas that are already covered by impervious surfaces. The MPB would be constructed at the north end of the existing parking lot for the Plant and Japanese Gardens. As the parking lot is already paved, construction of the MPB structure would not increase the area of impervious surfaces in this portion of the Plant. In the course of dike rehabilitation, concrete pavement would be installed on top of the East Dike, South Dike, and North Perimeter wall on the protected side of the parapet wall to protect against wave overtopping scour and to provide a traversable surface. As there is currently a paved path running along the top of the existing South Dike and the south end of the existing East Dike, the installation of the concrete pavement on the top of the rehabilitated dikes would not represent a significant change in the area of impervious surfaces. In addition, the sides of these dikes would be landscaped to

reflect current conditions, with sufficient vegetation to control erosion and reduce surface runoff. Along the northern portion of the rehabilitated East Dike, the concrete pavement would simply replace the existing paved surface along the edge of Teibo Drive and would not increase the area of impervious surfaces. Only the concrete pavement to be installed on the protected side of the North Perimeter wall would constitute a new area of impervious surfaces. The concrete pavement would be just less than 8 ft. wide (Figure 2-5) and would have a slight 2 percent slope to prevent ponding. The pavement would extend for approximately 1400 ft. east-west along the perimeter wall, covering an area of approximately 10,900 - 11,220 ft.^{2} (0.25 - 0.26 acres). This paved strip could potentially lead to a minor increase in the amount of runoff generation along the northern edge of the property. Any additional runoff would be captured by the existing Plant stormwater collection system and diverted to the Los Angeles River, as under existing conditions. The increase in runoff would not be of sufficient volume to result in flooding downstream. As a result, the impact of the Proposed Project on surface runoff would be less than significant.

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

During construction, runoff over disturbed soils during storm events could introduce sediments into the stormwater drainage system, leading to turbidity and loss of fill material and/or topsoil. The potential for such an impact would be reduced by implementation of a SWPPP. The impact would be less than significant.

Following construction, any additional stormwater produced on-site as a result of the small increase in the total area of impervious surfaces associated with installation of the North Perimeter wall would be collected by the existing Plant stormwater drainage system, which has sufficient capacity to handle the additional runoff. The stormwater would be diverted to the Los Angeles River, as under current conditions. Impacts would be less than significant.

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

No housing would be constructed as part of the Proposed Project, therefore there would be no impacts.

WAT (h) and WAT (i): Place within a 100-year flood hazard area structures that would impede or redirect flood flows? Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?

Rehabilitation of the South Dike would require the installation of tie-back anchors in the floodplain to increase the stability of the existing flood-side retaining walls. The volume of these tie-backs would be minimal (<1 cy) and their installation would not impact the storage capacity of the floodplain. As a result, potential impacts would be less than significant.

A portion of the southern bump ramp system at the entrance to the area north of the cricket fields off of Teibo Drive would fall within the 100-year floodplain. The ramp surface would be paved and could sustain inundation with acceptable maintenance costs. Installing the concrete mat on the south and east faces of the dikes would also reduce available space for floodwaters. The volume of the concrete mat and the portion of the southern bump ramp below the 100-year flood elevation was calculated based on design plans, and it was found that this action would result in the loss of approximately 150 cy of flood storage within the 100-year floodplain. To mitigate these losses of floodplain storage, a total of 150 cy of earth would be excavated from the northeast area of the leased lands, located outside of the dike perimeter, within the floodplain (Figure 2-3). Fill removed would be transported to and deposited in a location

outside of the Sepulveda Basin. With the implementation of this mitigation measure (WAT-1), the impact of dike rehabilitation activities on floodplain storage would be less than significant.

The Niwa Road project would occur fully within the dike perimeter and would not impact floodplain storage. Two of the proposed maintenance vaults would be installed outside of the dike perimeter, within the Plant limits (Figure 2-3). These vaults would be installed underground and would not impact storage within the floodplain. A small concrete pad would be installed on top of each of the vaults to allow for installation of metering instrumentation, but the pad would be flush with the ground surface and would have no impact on flood storage within the floodplain. Construction of the MPB would be fully contained within the dike perimeter and would have no impact on flood storage within the floodplain.

Under normal circumstances, the increased flood protection provided by the rehabilitated dike would reduce the risk to people or structures within the 100-year flood hazard of loss, injury, or death as a result of flooding. If the heightened dike were to fail during a 100-year flood event, the resulting flooding would be no worse than would occur under current conditions and no impacts would occur.

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

The Proposed Project area is located well inland of any area that could be reached by a tsunami or seiche, and mudflows are unlikely to occur as the site is flat. Therefore, there would be no impacts associated with tsunami, seiche, or mudflows.

4.9.4 Mitigation

WAT-1. Construction of the southern bump ramp system at the entrance to the area north of the cricket fields off of Teibo Drive and installation of the concrete mat on the south and east faces of the dikes would result in a 150-cy decrease in flood storage capacity within the floodplain (see Section 4.9.3). To mitigate this loss, a total of 150 cy of earth would be excavated from the northeast area of the leased lands, located outside of the dike (see Figure 2-3). Fill removed would be transported to and deposited in a location outside of the Sepulveda Dam Reservoir.

The following conservation measures would also be implemented:

WAT-2. A SWPPP would be prepared to reduce the potential for accidental release of fuels and other toxic materials. Consistent with federal and state regulations, all other applicable permits for construction would be obtained. A Notice of Intent would be sent to the SWRCB in Sacramento. Workers would be educated on measures included in the SWPPP at the pre-construction meeting or prior to beginning work in the Proposed Project area. The SWPPP would include such actions as having hazardous waste clean-up equipment and spill kits staged on-site and using the appropriate size and gauge drip pans and absorbent diapers. Spill kits would be in close proximity to the fuel truck in case of fuel or other fluid spills. Contractor equipment would be checked for leaks prior to operation and repaired as necessary. “No-fueling zones” would be designated on construction plans. Fluids released because of spills, equipment failure (broken hose, punctured tank) or refueling would be immediately controlled, contained, and cleaned-up as per federal and state regulations. All contaminated materials would be disposed of promptly and properly to prevent contamination of the site. The barriers would be such that spills would be contained and easily cleaned up. Someone would be present to monitor refueling activities to ensure that spillage from overfilling, nozzle removal, or other action did not occur.

WAT-3. If a major storm event were forecast to occur within 48 hours, work would stop and all equipment and vehicles would be moved to an area not subject to flooding by the 100-year flood event (approximately 712 ft.).

4.10 Land Use and Land Use Planning (USE)

Land Use and Land Use Planning (USE)	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the Project:				
a) Physically divide an established community?	☐	☐	☐	☒
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒

4.10.1 Environmental Setting

The Sepulveda Dam Basin Master Plan specifies the area occupied by the Plant as Multiple Resource Management – Inactive. This classification is applied when the Corps does not operate the land. Inactive lands also include the borrow area in Woodley Park, which is an isolated area called out as Inactive in the Master Plan. The surrounding areas are designated Recreation – Low Density.

Land uses surrounding the Plant include recreational uses to the west, south and east, and a National Guard training facility located to the north. Other land uses in the surrounding area include transportation and high-density housing. Lands used for transportation are found to the west, north, and east of the Plant, and include freeways and 2- and 4-lane surface streets. The area north of Victory Blvd., which is north of the Plant, is primarily used for multiple-family apartments.

4.10.2 Regulatory Setting

The Plant is found on federal land and is subject only to federal land use requirements. These requirements are provided in the Sepulveda Dam Basin Master Plan, as described above.

4.10.3 Potential Impacts

USE (a): Physically divide an established community?
The Proposed Project would not divide an established community, therefore there would be no impacts.

USE (b): Conflict with applicable land use plans, policies, and regulations of an agency with jurisdiction over the project adopted for avoiding or mitigating an environmental effect?
The Proposed Project would be consistent with land uses specified in the Sepulveda Dam Basin Master Plan and with all Corps planning regulations, therefore there would be no impact.

USE (c): Conflict with any applicable habitat conservation plan or natural community conservation plan?
There are no habitat conservation plans covering the project area. Oak trees are protected under the Los Angeles County Oak Tree Ordinance, but utilities such as the Plant are exempt from this ordinance.

Furthermore, no oak trees would be removed as part of the Proposed Project, so there would be no impact.

4.10.4 Mitigation

No mitigation would be necessary for land use and planning.

The following conservation measure would be implemented:

USE-1. The Proposed Project would comply with local zoning requirements and guidelines for construction, including the Public Facilities General Plan and the Sepulveda Dam Basin Master Plan.

4.11 Mineral Resources (MIN)

Mineral Resources (MIN)	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the Project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b) Result in the loss of availability of locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒

4.11.1 Environmental Setting

The primary mineral resources that have been identified within the City of Los Angeles boundaries are sand, gravel and rock deposits, known collectively as construction aggregate (LADCP 2001). Sand and gravel have been mined in this region since the early 1900s, when the use of concrete in construction became common (LADCP 2001). As development has continued in this region, demand for this resource has only increased, and today the Los Angeles greater metropolitan area is the leading producer and consumer of construction aggregate among all metropolitan areas nationwide (DRP 2015).

4.11.2 Regulatory Setting

Sections 2761(a) and (b) and 2790 of the Surface Mining and Reclamation Act (SMARA) provide for a mineral lands inventory process termed classification-designation. The California Division of Mines and Geology (CDMG) and the State Mining and Geology Board (SMGB) are the state agencies responsible for administering this process. The primary objective of the process is to provide local agencies with information on the location, need, and importance of minerals within their respective jurisdictions. It is also the intent of this process that this information be considered in future land-use decisions planning decisions. Under SMARA, local land use jurisdictions are the enforcing lead agencies for mineral resource issues, which state agencies guide and regulate city and county enforcement of SMARA.

4.11.3 Potential Impacts

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

Mineral Land Classification (MLC) studies prepared by the CDMG State Geologist, as specified by SMARA (PRC 2710 et seq) of 1975, have been prepared for Los Angeles County. The project area falls within the boundary of two MLC study areas. The first study, published in 1979, classified sand and gravel resource areas within the San Fernando Valley Production-Consumption Region (CDMG 1979). The project area is in the northwestern portion of this region and falls within an area classified as a Mineral Resource Zone (MRZ)-1, indicating that no significant mineral deposits are present, or that such deposits are unlikely to be present (CDMG 1979). A second MLC study classified Portland cement concrete aggregate resources within Los Angeles County (CDMG 1994). This study also classified the project area as MRZ-1 (CDMG 1994). In both of the MLC studies, no land in or immediately adjacent to the project area was classified as containing significant mineral resources or was deemed available for

mining by the SMGB (CDMG 1979, 1994). Therefore, implementation of the Proposed Project would not result in a loss of known mineral resources and there would be no impact.

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

The Los Angeles County General Plan indicates that there are no state-classified MRZ-2 mineral resources zones containing significant mineral deposits within the project area or in the nearby vicinity (DRP 2015). The City of Los Angeles General Plan and the General Plan framework EIR also indicate that there are no zones designated as MRZ-2 within the project area or in the nearby vicinity (LADCP 1995, 2001).

The Proposed Project area is managed by the Corps in accordance with the Sepulveda Basin Master Plan (Corps 2011b). This plan identifies the Proposed Project area as a recreational and public use facility and does not delineate the area as a mineral resource recovery site. Under the City of Los Angeles General Plan and Encino-Tarzana community plan the Plant is zoned as a public facility, and the immediate surrounding area is zoned as open space (LADCP 2017a). The project area does not fall within the areas covered by any of the specific plans (LADCP 2017c).

The implementation of the Proposed Project would not result in a loss of available or potential mineral resource recovery activities and there would be no impact.

4.11.4 Mitigation

No mitigation would be necessary for mineral resources.

4.12 Noise

Noise	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the Project:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☐	☒
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

4.12.1 Environmental Setting

Noise is generally defined as unwanted or excessive sound. The Los Angeles County Code of Ordinances Section 12.08.230, defines a noise disturbance as "an alleged intrusive noise which violates an applicable noise standard" (Los Angeles County 2017). Section 12.08.210 defines an intrusive noise as a noise "which intrudes over and above the existing ambient noise at the receptor property" (Los Angeles County 2017). The City of Los Angeles Municipal Code defines ambient noise as "the composite of noise from all sources near and far in a given environment" (City of Los Angeles 2017). The City General Plan's Noise Element further defines ambient noise as "the 'given' level of sound to which we are accustomed in our residential, work or other particular environments", and defines any sound above that sound level to be intrusive sound (LADCP 1999).

Sound is created when an object vibrates and radiates part of its energy as acoustic pressure waves through a medium such as air, water or a solid. The ear, the hearing mechanism of humans and most animals, receives these sound pressure waves and converts them to neurological impulses which are transmitted to the brain for interpretation. Two parameters are used to technically describe the sound environment at any instant in time: amplitude (or sound power) and frequency (or pitch). These two characteristics affect the way people respond to sound. Amplitude of a sound is a measure of the pressure

or force that a sound can exert. This sound pressure is measured in the logarithmic units of dB. A "weighting" is then added to the measurement to reflect that human hearing is less sensitive at low frequencies and extreme high frequencies than in the frequency mid-range. This is called "A" weighting, and the resulting weighted level is called the A-weighted sound level (dBA). Although the A-weighted noise level may adequately indicate the level of environmental noise at any instant, community noise levels vary continuously. Noise levels can be measured at a specific moment in time or over a long period of time. The descriptors for the weighted 24-hour noise level are called the Community Noise Equivalent Level or Day-Night Noise Level. Table 4-12 below shows the common noise sources for indoor and outdoor peak noise levels.

Table 4-12. Representative Noise Sources and Levels

Common Outdoor Activities	Noise Levels (dbA)	Common Indoor Activities
	110	Rock Band
Jet Fly-over at 1000 ft. Gas Lawnmower at 3 ft.	100 – 110	Inside Subway Train
Diesel Truck at 50 ft. Noisy Urban Daytime	90 – 100	Food Blender at 3 ft.
	80 – 90	Garbage Disposal at 3 ft. Shouting at 3 ft.
Gas Lawn Mower at 100 ft. Commercial Area	70 – 80	Vacuum Cleaner at 10 ft.
Heavy Traffic at 300 ft.	60 – 70	Normal Speech at 3 ft. Large Business Office
Quiet Urban Daytime	50 - 60	Dishwasher next room
Quiet Urban Nighttime Quiet Suburban Nighttime	40 - 50	Small Theater/Conference Room (background)
	30 – 40	Library Bedroom at Night
Quiet Rural Nighttime	20 – 30	Concert hall (background) Broadcast & Recording Studio
	10 - 20	
	0	Lowest Threshold of Human Hearing
Source: LADCP 1999.		

Acoustic energy at frequencies below the range of human hearing is experienced as vibration. Ground-borne vibrations are typically produced by roadway traffic including large trucks, trains, and construction equipment. Such vibrations may cause damage to structures or adversely affect scientific equipment and may disturb residents (Caltrans 2013). The peak particle velocity (PPV), defined as the maximum instantaneous peak of the vibration signal, is most frequently used to describe vibration impacts to buildings. The root mean square (RMS) amplitude, defined as the average of the squared amplitude of the signal, is most frequently used to describe the effect of vibration on the human body. Typically, ground-borne vibration generated by man-made activities attenuates rapidly with distance from the source of the vibration. The threshold of architectural damage for conventional sensitive structures is 0.2 inches/second PPV and the threshold of human annoyance to ground-borne vibration is 80 RMS (Hanson et al. 2006).

4.12.1.1 Existing Noise Sources

The City of Los Angeles General Plan Noise Element states that transportation activity is the principal source of urban noise in Los Angeles (City of Los Angeles 2017). These sources include traffic on major arterial roadways within the City, traffic on the I-405, US-101, Interstate 5 (I-5), Interstate 210 (I-210), Interstate 10 (I-10), Interstate 105 (I-105), Interstate 710 (I-710), and Interstate 605 (I-605) freeways,

train movement on nearby railroad lines, and flight activity associated with Los Angeles International Airport, Hawthorn Municipal Airport, Compton/Woodley Airport, Bob Hope Airport, Whiteman Airport, and Van Nuys Airport.

The Plant is located in northern Los Angeles, in the community of Van Nuys. Noise at and around the Plant is characteristic of a densely populated urban area, with major noise sources being I-405, located just east of the Plant; Victory Blvd., located just north of the Plant; and noise from aircraft taking off from and landing at the Van Nuys Airport, which is located approximately two miles north-northwest of the Plant.

Operation of the Plant generates noises that contribute to the ambient noise levels in the vicinity of the Plant. This noise is generated 24 hours per day, 7 days per week. Elevated noise levels occur immediately adjacent to some of the equipment used at the Plant, but this equipment is housed indoors and sound levels are greatly attenuated. Although this ambient noise is noticeable in areas immediately adjacent to the Plant, it is well below any applicable noise thresholds and does not constitute a major noise source. The Plant is bounded on the north by a CANG facility. Operational noise from the Plant is audible to the north at the CANG site, but during field visits, sounds levels were low enough to not be disruptive (Tetra Tech 2014). The Plant is surrounded on the south, east and west by parklands that are used for casual recreational activities by the public. Operational noise from the Plant is audible to the north at the CANG site, but during field visits, sounds levels were low enough to not be disruptive.

Ambient noise conditions are documented in this report based on a field noise measurement study performed the week of November 28, 2016 (Appendix C) (Tetra Tech 2017b). A SoundPro DL sound level meter was used to monitor noise levels at four locations surrounding the Plant; just inside the entrance to the Japanese Gardens at the southern end of the gardens; at the northeast corner of the gardens adjacent to the Plant; on the north side of Victory Blvd. adjacent to Blewett Ave.; and at Woodley Park approximately adjacent to the Plant entrance. Measurements were made during mid-morning and early afternoon hours to capture peak noise levels (off-peak traffic levels). Measurements were made in duplicate to ensure representative sound level quantification. Results of the noise measurement study are provided in Table 4-13.

Table 4-13. Recorded Ambient Sound Levels in or Near the Project Area

Location	Measurement 1 (dB)	Measurement 2 (dB)	Average (dB)
Victory Blvd.	78.3	78.5	78.4
Woodley Park	60.3	61.1	60.7
Japanese Garden, north	58.7	61.2	60.0
Japanese Garden, south	55	57.7	56.4
Source: Tetra Tech 2017b.			

Operation of the Plant is not a significant source of vibration, and no other stationary sources of vibration have been identified in the project area. Vibration may occur as a result of truck traffic or low-flying aircraft, but these sources are occasional and temporary.

4.12.1.2 Sensitive Receptors

Some land uses are considered more sensitive to ambient noise levels than others because of the level of noise exposure (in terms of both exposure duration and insulation from noise) and the types of activities typically involved. Residences, hotels, schools, rest homes, and hospitals are generally considered more sensitive to noise than commercial and industrial land uses. The closest sensitive receptors to the Plant are residences north of Victory Blvd. There are no schools, hospitals, libraries, nursing homes, or other

sensitive receptors in the vicinity of the project area. Potential receptors at the nearest receptor location, the Japanese Gardens, would be present for short time periods at infrequent intervals. Any impacts to visitors to the Japanese Gardens are therefore less than significant.

4.12.2 Regulatory Setting

The federal Noise Control Act (NCA) of 1972, 42 USC 4901 et seq., Public Law 92-574, legislates that each state provide for the protection of its citizens from noise. However, the USEPA, which administered the NCA through the Office of Noise Abatement and Control, phased out funding for that office and delegated primary responsibility for regulating noise to state and local governments. The following sections describe each of the regulations that have been developed at the state, county, and city level for noise control since federal enforcement ended. Though each of the regulations described applies to the Proposed Project, some regulations are stricter than others and would become the basis for significance criteria.

The state of California requires each local government to perform noise surveys and implement a noise element as part of its general plan consistent with the General Plan Guidelines. The study area is located within the jurisdictions of Los Angeles County and the City of Los Angeles, each of which have specific noise guidelines in place, as well as ordinances established as enforcement mechanisms for noise control. The Los Angeles County Code provides applicable noise regulations for exterior noises, specific guidelines for allowable noise in particular land use zones, allowable noise levels for construction activities and duration considerations for construction activities (Los Angeles County 2017). The Los Angeles County General Plan includes a noise element which includes requirements for sound barriers, mitigation measures to reduce excessive noise, or the placement and orientation of buildings, and specifies the compatibility of different uses with varying noise levels (DRP 2015).

The City of Los Angeles Municipal Code provides its own set of regulations for exterior noise and construction (City of Los Angeles 2017). These include the following prohibitions:

- Creating noise above established zoning specific thresholds for various noise sources
- Causing the noise level in a residential area to increase by 5 dB or more
- Engaging in construction, repair, or excavation work with any construction type device, or job-site delivering of construction materials without a Police Commission permit;
- Construction occurring between the hours of 9:00 p.m. and 7:00 a.m.;
- Construction occurring in any residential zone, or within 500 ft. of land so occupied, before 8:00 a.m. or after 6:00 p.m. on any Saturday, nor at any time on any Sunday;
- Construction occurring in a manner as to disturb the peace and quiet of neighboring residents or any reasonable person of normal sensitiveness residing in the area.

4.12.3 Potential Impacts

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

An alternative would result in significant noise effects during construction if:

- Construction activities lasting more than one day would exceed existing ambient exterior noise levels by 10 dBA or more at a noise sensitive receptor;
- Construction activities lasting more than 10 days in a three-month period would exceed existing ambient exterior noise levels by 5 dBA or more at a noise sensitive use; or

- Construction activities would exceed the ambient noise level by 5 dBA at a noise sensitive use between the hours of 9:00 p.m. and 7:00 a.m. Monday through Friday, before 8:00 a.m. or after 6:00 p.m. on Saturday, or at any time on Sunday.

An alternative would result in significant noise effects if operation would:

- Expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
- Expose people to or generate excessive ground-borne vibration or ground-borne noise levels;
- Create a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project; and/or
- Create a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.

Construction of the project could generate noise at nearby receptors on a short-term, temporary, and fluctuating basis. Construction activity noise levels at and near the construction areas would vary depending on the particular type, number, and duration of uses of various pieces of construction equipment. Construction-related material haul trips would raise ambient noise levels along haul routes, depending on the number of haul trips made and types of vehicles used. In addition, certain types of construction equipment generate impulsive noises, which can be annoying to receptors. Table 4-14 shows typical noise levels during different construction stages. Table 4-15 shows typical noise levels produced by various types of construction equipment. All construction equipment would be required to be in proper operating condition with well-maintained exhaust and intake mufflers, consistent with manufacturers' standards. Additionally, no impact tools would be used.

Table 4-14. Typical Construction Activity Noise Levels

Construction Phase	Noise Level (dBA, Equivalent Continuous Level [Leq])
Ground Clearing	84
Excavation	89
Foundations	78
Erection	85
Finishing	89
Average noise levels correspond to a distance of 50 ft. from the noisiest piece of equipment associated with a given phase of construction and 200 ft. from the rest of the equipment associated with that phase.	
Source: USEPA 1971	

Table 4-15. Typical Construction Equipment Noise Levels

Construction Equipment	Noise Level (dBA, Leq at 50 ft.)
Dump Truck	88
Portable Air Compressor	81
Concrete Mixer (Truck)	85
Scraper	88
Jack Hammer	88
Dozer	87
Paver	89
Generator	76
Pile Driver	101
Backhoe	85
Source: Cunniff 1977	

The nearest noise sensitive receptors are residences on the north side of Victory Blvd., located at least 875 ft. north of the construction area; and residences on the east side of the I-405, which are a quarter mile east of the construction area. Noise from a point source is attenuated by 6 dBA with each doubling of distance (Caltrans 2013), therefore, the noise level at the nearest receptor 875 ft. away on Victory Blvd. would be attenuated by 24 dBA. Considering attenuation rates, the noisiest construction activity would result in a 65 dBA contribution to ambient noise levels at that location. When added to the existing noise levels at that location, this contribution would result in an ambient noise level of 78.6 dBA, an increase of 0.2 dBA. Additionally, the landscaping, rock wall and vegetated berm surrounding the plant would further reduce noise levels experienced by surrounding land uses. The construction contract would specify that all construction equipment shall be equipped with mufflers and other suitable noise attenuation devices, as appropriate. Because this impact would be less than 5 dBA, the most stringent significance threshold, noise impacts associated with the Proposed Project would be less than significant.

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

Construction of the Proposed Project has the potential to produce vibration levels that could be annoying or disturbing to humans and cause damage to structures. Vibration from construction projects is caused by general equipment operations and is usually highest during pile-driving, soil compacting, jack hammering and construction-related demolition and blasting activities. For the Proposed Project, the aforementioned higher-vibration construction activities that would occur would be demolition and soil compacting. Vibration levels decrease substantially with distance. Based on the 875-ft. distance to the nearest residential receptor and the fact that project construction would not require a large amount of high-vibration activities and construction activities would be temporary, the Proposed Project would not generate high vibration levels at the nearest residences that would cause annoyance to humans or damage structures. Therefore, a less than significant impact would occur during project construction.

Following the completion of construction, on-site operations would not involve or introduce activities that could generate vibrations or groundborne noise, or otherwise expose persons to such impacts. Therefore, project operations would not result in significant impacts related to groundborne vibration or noise.

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

Construction activities for the Proposed Project would occur over a period of approximately 75 months. Upon completion of construction, no new permanent source of noise or vibration would be created by operation of the new building and employee and visitor traffic would negligibly increase noise levels in the project area. Construction and operations would not result in a substantial permanent increase in ambient noise levels in the project area. There would be no impact.

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

Ambient noise levels in the vicinity of the Plant would increase temporarily during construction. The construction period would be expected to last approximately 75 months. Construction would temporarily increase ambient noise levels in the vicinity of the project site. However, assuming that equipment utilization rates range from 16 to 40 percent during weekdays and only during daylight hours, the noise threshold would not be exceeded. Additionally, little noise impact is anticipated from construction-related on-road traffic. Therefore, the potential impact would be less than significant. Occasional noise increases associated with haul trucks entering or leaving the site would occur, but the low frequency of trucks and low speed limits on surrounding streets would provide adequate control of haul truck noise. Furthermore,

the duration of these effects would be less than half a minute, therefore this impact would be less than significant.

No new noise-generating equipment is proposed for operations of the Plant, and the Plant would operate in the same manner as under current conditions. Therefore, no adverse noise effects associated with ambient noise would occur as a result of operations of the Proposed Project.

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

The Plant is located just over two miles south of the Van Nuys Airport and does not fall within the Van Nuys Airport Land Use Plan. The second closest airport to the project site is Bob Hope Airport in Burbank, which is approximately 9 miles east of the Plant. Therefore, construction and operation of the Proposed Project would not expose people residing or working in the project area to excessive noise levels due to the project site being located within an airport land use plan or within two miles of a public airport where such a plan has not been adopted. No impact would occur.

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

There are no private airstrips in the vicinity of the Proposed Project, therefore there would be no impact associated with this criterion.

4.12.4 Mitigation

No mitigation measures would be necessary. However, the following conservation measures would be implemented during construction of the Proposed Project:

NOISE-1. Activities would comply with local ordinances. Any nighttime or weekend activities would be coordinated with local ordinances and would require a noise permit.

NOISE-2. All equipment would include noise reduction measures, as applicable. These measures would include, but would not be limited to, properly operating and maintaining mufflers, correct placement of equipment engine covers, and ensuring that small loading equipment was equipped with rubber tires. Equipment would be maintained in accordance with manufacturer's recommendations. All machinery would be equipped with the best available exhaust mufflers and "hush kits," as applicable.

NOISE-3. Residents within 0.5 mile of construction activity would be notified 1 week prior to construction activity. The notifications would describe the character of the activities and their duration to enable local residents to modify their activities to reduce potential impacts.

NOISE-4. As part of the Proposed Project's advanced notification to all residences and property owners, a contact person name and phone number would be provided.

NOISE-5. Noise producing signals, including horns, whistles, alarms, and bells would be limited to safety warning purposes only.

4.13 Population and Housing (POP)

Population and Housing (POP)	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the Project:				
a) Include substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

4.13.1 Environmental Setting

The Plant is located in the Van Nuys neighborhood of Los Angeles. Van Nuys is in the San Fernando Valley region of Los Angeles, northwest of downtown Los Angeles. The neighborhood encapsulates approximately nine square miles, and as of 2008 had a population of approximately 110,700 (Los Angeles Times 2017). Adjacent neighborhoods include North Hills, Panorama City, Sun Valley, Valley Glen, Sherman Oaks, Lake Balboa, and Northridge, as well as the Sepulveda Dam Reservoir itself, which is non-residential.

The Plant processes waste generated by users throughout the San Fernando Valley and provides reclaimed water to City of Los Angeles Department of Water and Power (LADWP) customers within the same region. Recycled water can be used for landscape irrigation, industrial purposes, or groundwater recharge.

The closest residential areas are north of Victory Blvd. (approximately 800 ft. north of the northern edge of the Plant), and east of I-405 (approximately 1,500 ft. northeast of the eastern border of the Plant). The average household size in Van Nuys is three people (Los Angeles Times 2017).

Some local residents may pass near the project area along the Woodley Ave. bike path, through use of the recreational facilities within the Sepulveda Dam Reservoir, or while commuting on the Orange Line Busway, which is located north of the site and runs parallel to Victory Blvd. Los Angeles County Metropolitan Transportation Authority (Metro) lines 237 and 164 use the busway.

4.13.2 Regulatory Setting

City of Los Angeles General Plan. The Housing Element City of Los Angeles General Plan is used to guide decisions and actions concerning housing and city growth priorities (LADCP 2013). The Housing Element includes objectives, policies, and implementation programs to address the development, improvement, and conservation of housing in Los Angeles.

The City of Los Angeles General Plan, Housing Element Policy 2.2.5 states that the City will "Provide sufficient services and amenities to support the planned population while preserving the neighborhood for those currently there" (LADCP 2013). In addition, Policy 2.3.2 states that the City will "Promote and facilitate reduction of water consumptions in new and existing housing" (LADCP 2013).

4.13.3 Potential Impacts

POP (a): Include substantial population growth in an area, either directly or indirectly?
The Proposed Project is intended to ensure that operations of the Plant may continue as they do under current conditions by issuance of a new long-term easement, and by ensuring that the Plant is adequately protected from flood waters. Were the Plant incapacitated during or following a flood, sewage treatment for the San Fernando Valley region of Los Angeles would be compromised. Construction of the MPB may result in additional visitors to the Japanese Garden but would not foster substantial population growth.

The project would not be growth inducing, and no expansion of the treatment capacity of the Plant is proposed as part of the construction project or issuance of a new easement. There would be no increases in the number of staff working at the Plant as a result of the project. The project would not result in direct or indirect population growth. No impact would occur.

POP (b): Displace substantial numbers of housing units necessitating the construction of replacement housing?

No housing would be displaced or changed as a result of the Proposed Project; therefore, no impact would occur.

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

No people, housing, businesses or services would be displaced as a result of the Proposed Project, therefore there would be no impacts associated with this criterion.

4.13.4 Mitigation

No mitigation would be required.

4.14 Public Services (PUB)

Public Services (PUB)	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the Project:				
a) Result in substantial adverse physical impacts associated with the provision of, or the need for, new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any public services such as fire protection, police protection, schools, parks, or other services?	☐	☐	☒	☐

4.14.1 Environmental Setting

Public services in the vicinity of the Plant are listed in Table 4-16 below.

The Plant is located within the service area of City of Los Angeles Fire Department (LAFD) and the City of Los Angeles Police Department (LAPD). The Plant is served LAFD station No. 88 and No. 39 (Table 4-16). As the Plant is a City of Los Angeles facility, the LAPD has officers staffed at the Plant. There is a LAPD station nearby in Reseda, CA (Table 4-16). Los Angeles County Sheriff department and police department are also nearby (Table 4-16). Emergency dispatch services are provided by dialing 911. For medical emergencies, ambulance services are provided by several businesses within 5 miles of the project area, including MedResponse, V & A Medical Transportation, M &S Medical Transportation, AMT Ambulance, PRN Ambulance, American Professional Ambulance, and Ambulife Ambulance Services. Ambulances are dispatched by 911 operators.

No schools are located within the vicinity of the Plant. The surrounding parklands are maintained by the Corps.

Emergency room availability is provided on a 24-hour basis by two medical hospitals offering full service emergency care, including Valley Presbyterian Hospital and Encino Hospital Medical Center (Table 4-16).

Other non-emergency public services in the area include libraries, schools, and community centers. The nearest Los Angeles public library branch is located approximately 2 miles east of the project area (Table 4-16). Several elementary, middle, and high schools surround the project area, though none are within a half-mile.

Table 4-16. Public Services

Service	Location	Phone Number	Driving Distance (miles)
West Valley LAPD Station	19020 Vanowen Street Reseda, CA 91335	Non-Emergency Services: 818-374-7611 Emergency: 911	4.7
Los Angeles County Sheriff Department	6230 Sylmar Ave. #104 Van Nuys, CA 91401	Non-Emergency Services: 818-374-2121 Emergency: 911	2.8
Los Angeles County Police Department	14400 Erwin Street Mall #110 Van Nuys, CA 91401	Non-Emergency Services: 818-374-2500 Emergency: 911	2.8
Fire Department	Fire Station No. 88 5101 Sepulveda Blvd. Sherman Oaks, CA 91403	General Information: 818-756-8688 Emergency: 911	2
	Fire Station No. 100 6751 Louise Ave. Lake Balboa, CA 91406	General Information: 818-756-8600 Emergency: 911	2.5
	Fire Station No. 90 7921 Woodley Ave. Van Nuys, CA 91406	General Information: 818-756-8690 Emergency: 911	2.5
	Fire Station No, 39 14415 Sylvan Street, Van Nuys, CA, 91401 *(as of late spring 2019:* *14615 Oxnard Street* *Van Nuys, CA 91411)*	General Information: 818-756-8639 Emergency: 911	2.6 (2.8)
Emergency Medical	Valley Presbyterian Hospital 15107 Vanowen Street, Van Nuys, CA 91405	General Information: 818-782-6600 Emergency: 911	2.1
	Encino Hospital Medical Center 16237 Ventura Blvd. Encino, CA 91436	General Information: 818-995-5000 Emergency: 911	2.8
Library	Los Angeles Public Library – Van Nuys 6250 Sylmar Ave. Van Nuys, CA 91401	General Information: 818-756-8453	2.7
Van Nuys City Hall	14410 Sylvan Street Van Nuys, CA 91401	General Information: 818-756-8121	2.6

4.14.2 Regulatory Setting

Public services, including fire protection, police protection, schools, and parks are regulated at both the city and county level. In Los Angeles County, parks, beaches, and other public areas are regulated in Title 18 of the County of Los Angeles Code of Ordinances (Los Angeles County 2017). Within unincorporated areas of Los Angeles County, the Code of Ordinances also regulates the location and construction of schools, establishes public safety rules for schools, and regulates development in the vicinity of schools. Sewage disposal in unincorporated areas is regulated under Title 20, Division 3, and garbage disposal districts are regulated in Title 20, Division 4a. Regulations pertaining to the consolidated fire protection district of Los Angeles are established in Chapter 83 of Title 32, the Fire Code (Los Angeles County 2017).

The City of Los Angeles has established additional regulations for public services in the City of Los Angeles Municipal Code (City of Los Angeles 2017). Chapter V establishes regulations for police protection (Article 2), public hazards (Article 6), emergency telephone calls (Article 6.5), and fire protection and prevention (Article 7). Fire District regulations are in Chapter IX, Article 1, Division 72. Public works and property, including public parks, playgrounds, beaches, and other recreational properties are regulated in Chapter VI, Article 3. Chapter VI also regulates public sewers (Article 4), streets and sidewalks (Article 2), and garbage collection (Article 6). Solid waste and recycled materials management are regulated in Chapter XIX, Article 1. Public transportation regulations are in Chapter VII, Article 1, and include regulations for taxis and ambulances. Trains are regulated in Article 2 of this same chapter (City of Los Angeles 2017). School districting is regulated under the Los Angeles Charter and Administrated Code, in Volume 1, Article VIII, Section 802 (City of Los Angeles 2017).

4.14.3 Potential Impacts

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

i) *Fire Protection:* The Plant is served by the LAFD local Fire Station No. 88, located at 5101 Sepulveda Blvd., Sherman Oaks, which is approximately 2 miles driving distance from the Plant. Fire Station No. 39, located at 7800 14415 Sylvan Street, Van Nuys, is approximately 3.0 miles driving distance from the project site. Construction of the Proposed Project and issuance of a new easement would not increase the need for fire protection or require expansion of an existing fire station. Therefore, impacts would be less than significant.

ii) *Police Protection:* The Proposed Project would not create conditions that would require an increased level of police protection or the need for additional police facilities. Therefore, impacts would be less than significant.

iii) *Schools:* Construction and operation of the Proposed Project would not be anticipated to result in substantial population growth, as discussed in 13(a) above. Project implementation would not increase demand for schools or require the construction of new facilities, therefore no impacts to school capacity would occur from the Proposed Project.

iv) *Parks:* The Proposed Project would not diminish the extent or quality of existing park facilities, nor would it contribute to population growth that could increase the need for additional recreational facilities. Temporary restrictions on use of the Japanese Garden or small parts of the park grounds surrounding the Plant could occur during construction, but

these effects would be short term and would likely only affect small parts of the Japanese Garden or surrounding parklands at any given time. Impacts would be less than significant.

v) Other Public Facilities: Construction and operation of the Proposed Project would not be growth-inducing and would not result in population increases in the surrounding area. Therefore, the Proposed Project would not substantially increase the demand for or use of libraries or other public facilities in the area and impacts to libraries and other public facilities would be less than significant.

4.14.4 Mitigation

No mitigation would be required. However, the following conservation measures would be implemented during construction of the Proposed Project:

PUB-1. Contractor would prepare a *Public Safety Management Plan* to maintain public health and safety during all phases of construction. Components of the plan would include:

- Notifying the public of the location and duration of construction activities, closing pedestrian and bicycle paths and trails, and restricting other impacted recreation;
- Coordinating with the public and local jurisdictions to minimize impacts and plan contingencies for maintaining emergency response, emergency evacuation plans and capacity of emergency services during construction;
- Posting signs locating construction sites and warning of the presence of construction equipment;
- Fencing construction staging areas; and
- Providing temporary walkways (with appropriate markings, barriers, and signs to safely separate pedestrians from vehicular traffic) and posting detour signs where a sidewalk or pedestrian or bicycle path or trail would be closed during construction.

PUB-2. All contractors would prepare and implement a *Worker Health and Safety Plan* to be approved by the Corps' Safety Office prior to start of construction activities. At a minimum the plan would include:

- All appropriate worker, public health, and environmental protection equipment and procedures;
- Designated heavy equipment traffic circulation route plans;
- Emergency evacuation routes and procedures;
- Emergency response procedures;
- The most direct route to a hospital and safe air ambulance landing zone;
- Name of the Site Safety Officer; and
- Documentation that all workers had reviewed and signed the plan.

PUB-3. The contractor would consult with local jurisdictions to ensure that construction activities did not impede adopted emergency response plans.

PUB-4. Prior to construction activities, the Contractor would notify relevant fire and police of traffic management methods to be used to ensure access at all times.

PUB-5. A Communication Plan would be developed by The Corps' Public Affairs Office and would be implemented during all construction activities. The Communication Plan would describe how local authorities would be notified of public safety concerns, incidents, and emergencies.

PUB-6. Fluids released because of spills, equipment failure (broken hose, punctured tank) or refueling would be immediately controlled, contained, and cleaned-up per federal regulations. All contaminated materials would be disposed of promptly and properly to prevent contamination of the site. Someone would be present to monitor refueling activities to ensure that spillage from overfilling, nozzle removal, or other action did not occur.

PUB-7. Construction employees would strictly limit their activities, vehicles, equipment, and construction materials to the proposed footprint and designated staging areas and routes of travel. The construction area(s) would be the minimal area necessary to complete the project and would be specified in the construction plans. All people on site would be instructed that their activities are restricted to the construction areas.

PUB-8. Contractor would not allow ponding or puddles of standing water to remain within the construction area that would be subject to mosquito breeding.

PUB-9. All work and staging areas would be clearly marked and appropriately guarded to ensure public safety.

PUB-10. Signs would be posted prohibiting trespassing.

PUB-11. The contractor would be required to comply with OSHA and applicable LASAN safety standards.

4.15 Recreation (REC)

Recreation (REC)	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the Project:				
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☒	☐
b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒

4.15.1 Environmental Setting

Recreation is an authorized purpose of the Sepulveda Dam Reservoir per the FCA of 1944. This authorization includes recreational uses both within the Plant grounds (the Japanese Garden) and within park lands surrounding the Plant. The area immediately surrounding the Plant is classified as Recreation – Low Density under the Sepulveda Dam Basin Master Plan and is available for passive recreational uses. Within the Plant, the Japanese Garden is a popular recreation destination and is known for its esthetic value. Designed by Dr. Koichi Kawana and constructed between 1980 and 1984, the Garden was officially dedicated on June 18, 1984. It contains reflecting ponds, walking paths, and extensive ornamental vegetation, and hosts annual events such as the Origami Festival and the Japanese Heritage Celebration. The gardens host over 1,000 visitors per month (LASAN 2017).

Park lands immediately surrounding the Plant include Woodley Park, with additional recreation parks and facilities nearby. Woodley Park is present to the west, south, and east of the Plant. The east side of the Plant includes the Sepulveda Dam Reservoir Cricket Fields and the Woodley Park Archery Range. The Archery Range amenities include a partially enclosed 18-meter short range and a 90-meter long range, which has 12 lanes and is equipped with compressed bales. The long range meets accessibility requirements of the ADA. Two cricket fields are on land leased to LASAN. The cricket field facilities include bleachers, a picnic area with picnic tables, restrooms, and a parking lot.

The lawns on the south and west sides of the Plant comprise Woodley Park proper and are available for picnicking, walking, bird watching, and passive recreational uses. Further to the west, recreational opportunities include fishing, bicycling, and golf. The Wildlife area is located southeast of the Plant with trails, interpretive signs, parking, and restrooms. Recreational facilities within the vicinity of the Plant are listed in Table 4-17.

Table 4-17. Recreational Facilities within 1 Mile of the Plant

Name	Type of Facility	Size	Location (Address, City)	Distance to Plant (miles)
Japanese Garden	Public Gardens	9 acres	6100 Woodley Ave., Van Nuys	0.0
Woodley Ave. Park, Cricket Fields, and Archery Range	Park	46 acres	6350 Woodley Ave., Van Nuys	0.0
Woodley Golf Course	Golf Course	6,803 yards	6331 Woodley Ave., Van Nuys	0.2
Sepulveda Basin Wildlife Area	Wildlife Reserve	175 acres	6350 Woodley Ave., Van Nuys	0.3
Encino Golf Course	Golf Course	6,863 yards	16821 Burbank Blvd., Encino	0.5
Anthony C. Beilenson Park	Park	87 acres	6300 Balboa Blvd., Van Nuys	0.6
Balboa Golf Course	Golf Course	6,359 yards	16821 Burbank Blvd., Encino	0.6
Hjelte Sports Center	Recreation fields	8 acres	16200 Burbank Blvd., Encino	0.9

4.15.2 Regulatory Setting

Although the project site is within the City of Los Angeles, the land is owned by the Corps, therefore it is not subject to City of Los Angeles or County of Los Angeles zoning regulations.

Sepulveda Basin Master Plan. The 2,000-acre Sepulveda Dam Reservoir is under the jurisdiction of the Corps, Los Angeles District. The Sepulveda Master Plan (Corps 2011b) guides land use and development within Sepulveda Dam Reservoir, along with guidance from Corps Regulation 1110-2-1, Land Development Proposals at Corps Reservoir Projects. The area immediately surrounding the Plant is classified as Recreation – Low Density under the Sepulveda Dam Basin Master Plan and is available for passive recreational uses (Corps 2011b). Additional guidance for development projects on Corps lands is provided in the Corps' South Pacific Division Regulation 1110-2-1, Land Development Proposals at Corps Reservoir Projects.

The primary federal regulation that pertains to recreation in federally-owned facilities is the ADA. ADA standards for accessible public facilities require that reasonable accommodation be made to allow disabled citizens access to recreational and other facilities.

4.15.3 Potential Impacts

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

The Proposed Project would not substantially alter the function or capacity of the Sepulveda Dam Reservoir as a recreational site. During construction of the Proposed Project, most construction activity would take place within the Plant grounds.

Construction of the MPB would affect the northern portion of the parking lot for the Japanese Garden. This would not affect the opening hours of the Japanese Garden. While some parking spaces would be retained, it is possible that some visitors would be required to park at other on-site or off-site locations,

such as along Woodley Ave. However, at least two ADA-accessible parking spots would be preserved during construction, and visitors would retain access to the roadway loop abutting the eastern edge of the Japanese Garden parking lot, so that visitors requiring ADA-accessibility could also be dropped off at the entrance to the gardens. Upon completion of construction, the remaining parking area would be redesigned to accommodate approximately 113 total parking spaces. Since parking would be available during construction, parking in the lot itself would only be restricted during the construction period, and public ADA-accessible access would be retained, this reflects a temporary and less than significant impact on recreational access to the Japanese Gardens.

Dike rehabilitation, construction of the new maintenance vaults, and installation of the Niwa Road sewer extension would have no impact on recreational access to the Japanese Gardens. The proposed staging area north of the cricket field is fenced and not accessible to the public.

Construction and operations of the Proposed Project would have no impact on the quantity of recreational opportunities within the Sepulveda Dam Reservoir or the number of recreational visitors to the area.

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

The Proposed Project would not include any recreational facilities and would not require the construction or expansion of recreational facilities. Therefore, there would be no impact to the environment because no new construction or expansion of existing recreational facilities would occur.

4.15.4 Mitigation

No mitigation would be required. However, the following conservation measures would be implemented during construction of the Proposed Project:

REC-1. If necessary to maintain public access to the Japanese Garden throughout the duration of construction, LASAN would arrange for alternative temporary public parking and support facilities in Woodley Ave. Park south and west of the Plant and Garden. Pedestrian access from the alternative temporary parking to the Japanese Garden would be provided and maintained throughout the duration of construction. In addition, access to the Garden from the north would be considered. Coordination with the City Department of Recreation and Parks would be undertaken to secure adequate off-site parking prior to the start of construction.

REC-2. All recreation uses would be detoured from the area for safety of workers and the public.

REC-3. Notices and information on current recreation use status would be provided during the construction period through local media and signage.

4.16 Transportation and Circulation (TRA)

Transportation and Circulation (TRA)	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the Project:				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☐	☒	☐	☐
b) Conflict with an applicable congestion management program, including but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☐	☒	☐	☐
c) Result in a change in air traffic patterns, including either an increase in traffic levels, obstructions to flight, or a change in location, that results in substantial safety risks?	☐	☐	☐	☒
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses?	☐	☐	☒	☐
e) Result in inadequate emergency access?	☐	☐	☒	☐
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☐	☒	☐

4.16.1 Environmental Setting

The project site is bounded to the north by Victory Blvd., and to the west by Woodley Ave. US-101, also known as the Ventura Freeway, is found to the south, and I-405 is found to the east of the project site. I-405, also known as the San Diego Freeway, and US-101 are classified as Congestion Management Plan (CMP) freeways within Los Angeles County. Victory Blvd. is classified as a CMP principal arterial between Topanga Canyon Blvd. to the west and State Route 170 (also known as the Hollywood Freeway) to the east. Regional and local roadways include:

- I-405 is a regional freeway with 8 to 10 lanes traversing through the western parts of Los Angeles County that connects the San Fernando Valley with Orange County. I-405 is located approximately one-half mile east of the project site.

- US-101 is a regional freeway traversing along the Pacific coastline through the northern and western parts of Los Angeles County, connecting Thousand Oaks, Oxnard, and points west with the southern San Fernando Valley, before terminating near downtown Los Angeles. US-101 is located approximately 1.2 miles south of the project site.
- Victory Blvd. provides east-west local and regional access between West Hills and Burbank. It has three eastbound and 2 westbound lanes. Victory Blvd. can be accessed from the Plant via its intersections with Woodley Ave. and Densmore Ave. This roadway is located approximately 0.25 mile north of the project site.
- Woodley Ave. provides north-south local and regional access from Granada Hills to the north, through Van Nuys, to Sepulveda Dam Reservoir. It has two to four lanes depending on the location. Immediate local access is available from Woodley Ave. directly to the Plant site from a southwest driveway between Densmore Ave. and Burbank Blvd. Woodley Ave. is located approximately 0.25 miles west of the project site.

Parking. The Plant's parking plan indicates that there are 256 parking spaces available and a current demand of 180 spaces.

Public Transit. The project area is served by public transit buses operated by Metro. The project site is generally serviced by the Orange Line Busway, found to the north of the site. Metro lines 237 and 164 use the busway. There are no other public transit facilities that service this area.

Pedestrian (including ADA) and Bicycles. Pedestrian access is provided to the Japanese Gardens on a series of paved paths. These paths are ADA-compliant and allow access for visitors in wheelchairs. The operations area of the Plant is also served by paved paths and there is a paved path along the tops of the dikes. However, the operations area is not open to public access. A bike lane is found along Woodley Ave., providing bicycle access to the Plant.

4.16.2 Regulatory Setting

The U.S. Department of Transportation. The USDOT is the primary federal department concerned with transportation regulation. The USDOT is composed of multiple agencies with regulatory responsibilities for different types of transportation such as the Federal Highway Administration (federal highways and roads), Federal Transit Administration (public transit assistance), and Federal Motor Carrier Safety Administration (buses and motor carriers). Federal transportation regulations are primarily found in CFR 23 and 49. Federal programs related to roads and highways, mass transit, and pedestrian and bicycle facilities include Metropolitan and Statewide Planning (49 USC Sections 5303, 5304, 5305), Large Urban Cities (49 USC Section 5307), Rail and Fixed Guideway Modernization (49 USC Section 5309), Bus and Bus Facilities (49 USC Sections 5309, 5318), the Surface Transportation Program, and Congestion Mitigation and Air Quality Improvement Program.

California Department of Transportation. Caltrans is the primary agency responsible for implementing regulations on the state's highways and freeways. State regulations are primarily found in California's Streets and Highways Code and Vehicle Code, and regulate many aspects of transportation such as truck operation and truck routes. Caltrans recently released the *California Transportation Plan 2040*, a new long-range plan that provides a policy framework to address the state's multi-modal transportation needs (Caltrans 2016). Coordination with Caltrans would be necessary where construction would involve highways, regulations, and standards under Caltrans jurisdiction. Depending on the extent of the construction effort associated with a project, a traffic management plan may need to be coordinated with and approved by Caltrans.

The *Regional Transportation Plan/Sustainable Communities Strategy 2012-2035*, prepared by the Southern California Association of Governments (SCAG), is required by federal transportation law and is an important transportation planning document for the six county regions of Imperial, Los Angeles, Orange, Riverside, San Bernardino and Ventura counties. The plan includes over 4,000 multi-modal transportation projects that would help reduce traffic congestion and expand transportation options.

Every county in California is required to develop a CMP that looks at the links between land use, transportation, and air quality and meets meet federal Congestion Management System guidelines as well as state CMP legislation. The SCAG is required by federal planning regulations to determine that county CMPs within its region are consistent with the *Regional Transportation Plan/Sustainable Communities Strategy 2012-20*35.

Los Angeles County Code of Ordinances. Los Angeles County regulations on traffic are established in Title 15 of the county Code of Ordinances (Los Angeles County 2017). This section includes regulations on traffic signs and signals, speed limits, weight limits, crosswalks and bicycles lanes, railroad crossings, road closures, and parking, and also establishes the Los Angeles County highway safety commission and sets penalties for parking infractions. Title 16 – Highways – regulates construction work, utility placement, and development along county highways (Los Angeles County 2017).

Los Angeles County Metropolitan Transportation Authority. Metro is the county's Congestion Management Agency and is responsible for preparing the Congestion Management Program for Los Angeles County (Metro 2010). This program addresses the impact of local growth on the regional transportation system and monitors the operations of the designated CMP roadway network. The CMP establishes level of service (LOS) standards for freeways and arterial intersections. The standards are quantitative descriptions of traffic flow based on factors including speed, travel time, delay and freedom to maneuver (LADOT 2016). Six levels of service are defined for each intersection, varying from LOS A to LOS F. LOS A indicates that traffic flows freely, with little or no delay, and LOS F indicates that traffic demand exceeds the capacity, generally resulting in long queues and delays (LADOT 2016). LOS definitions are provided in Table 4-18. LOS standards are used to evaluate the function of designated CMP highways and roadways at various times of day.

Volume-to-capacity ratio (V/C) is another measure of intersection or roadway performance expressed as a ratio of the volume of traffic to the total capacity to accommodate traffic. For example, a V/C of 0.5 indicates that a roadway or intersection is operating at half its capacity, while a V/C of 1 indicates that a roadway or intersection is operating at capacity. V/C and corresponding LOS are shown in Table 4-18.

In 2016, major intersections and roadway segments of designated CMP roadways located in the vicinity of the project site operated at LOS A and LOS F during a.m. and p.m. peak hours (Koa Corporation 2016). The LOS at various intersections and roadway segments near the project site are shown in Table 4-19.

City of Los Angeles Municipal Code. City of Los Angeles regulations on traffic are established in Chapter VIII of the City of Los Angeles Municipal Code (City of Los Angeles 2017). The chapter includes general traffic regulations, driving rules, parking rules, and regulations for traffic control devices. Private street regulations are in Chapter I Article 8. Noise regulations for vehicles are in Chapter IX Article 4. Public transportation regulations are in Chapter VII, Article 1, and regulations for railroads and railways are in Chapter VII, Article 2. Regulations pertinent to this project include regulations for work within or on a public street or right-of way (Chapter VI, Article 2, Section 62.61), requirements to comply with the Los Angeles traffic control manual (Chapter VI, Article 1, Section 61.06), and regulations on truck routes (Chapter VIII, Division G) (City of Los Angeles 2017).

Table 4-18. Level of Service Criteria for Intersections

LOS	Description of Operations	V/C
A	LOS A describes primarily free-flow operations at average travel speeds, usually about 90 percent of the free-flow speed for the arterial classification. Vehicles are completely unimpeded in their ability to maneuver within the traffic stream. Stopped delay at signalized intersections is minimal.	0.00-.060
B	LOS B represents reasonably unimpeded operations at average travel speeds, usually about 70 percent of the free-flow speed for the arterial classification. The ability to maneuver within the traffic stream is only slightly restricted and stopped delays are not bothersome. Drivers are not generally subjected to appreciable tension.	0.61-0.70
C	LOS C represents stable operations; however, ability to maneuver and change lanes in mid-block locations may be more restricted than at LOS B, and longer queues, adverse signal coordination, or both may contribute to lower average speeds of about 50 percent of the average free-flow speed for the arterial classification. Motorists will experience appreciable tension while driving.	0.71-.080
D	LOS D borders on a range in which small increases in flow may cause a substantial increase in delay and hence decreases in arterial speed. LOS D may be due to adverse signal progression, inappropriate signal timing, high volumes, or some combination of these factors. Average travel speeds are about 40 percent of free-flow speed.	0.81-.090
E	LOS E is characterized by significant delays and average travel speeds of one-third the free-flow speed or less. Such operations are caused by some combination of adverse progression, high signal density, high volumes, extensive delays at critical intersections, and inappropriate signal timing.	0.91-1.00
F	LOS F characterizes arterial flow at extremely low speeds below one-third to one-fourth of the free-flow speed. Intersection congestion is likely at critical signalized locations, with high delays and extensive queuing. Adverse progression is frequently a contributor to this condition.	1.01 or greater
Source: LADOT 2016.		

Table 4-19. Current Intersection and Roadway Performance in the Study Area

Intersection or Street Segment	a.m. Peak		p.m. Peak	
	V/C	LOS	V/C	LOS
Intersections				
Woodley Ave. and Victory Blvd.	1.107	F	0.985	E
Densmore Ave. and Victory Blvd.	0.650	B	0.564	A
Haskell Ave. and Victory Blvd.	1.071	F	1.044	F
I-405 northbound ramps and Victory Blvd.	0.734	C	0.760	C
Street Segments				
Haskell Ave. between Victory Blvd./ Orange Line Busway	0.278	A	0.172	A
Victory Blvd. between Woodley Ave. and I-405	0.891	D	0.913	E
Source: Koa Corporation 2016				

City of Los Angeles General Plan Mobility Element. The Mobility Element of the Los Angeles County General Plan (LADCP 2016) provides a policy framework for the future of the county's multi-modal transportation system.

City of Los Angeles Department of Transportation. LADOT has established specific thresholds for significant project related increases in the V/C of signalized study intersections, as shown in Table 4-20 (LADOT 2016). These increases are meant to apply to projects that would permanently increase traffic volumes (for example, development projects), not construction projects that would only increase traffic temporarily. The criteria shown in Table 4-20 are applied as follows: For an intersection or roadway operating at LOS C, a change less than 0.040 would be less than significant while a change greater than or equal to 0.040 would be significant (LADOT 2016). The same logic is used for intersections or roadways operating at LOS D, E, or F. Impacts to intersections or roadways operating at LOS A or B would be significant if project-related traffic caused the LOS to degrade to LOS C or lower.

Table 4-20. LADOT Significance Criteria for Operational Traffic Increases

LOS	Final V/C*	Project Related V/C Increase
C	0.701 to 0.800	Greater than or equal to 0.040
D	0.801 to 0.900	Greater than or equal to 0.020
E and F	0.901 or greater	Greater than or equal to 0.010

Note:
V/C = volume-to-capacity ratio
* Final V/C is the V/C ratio at an intersection, considering impacts from the project, ambient and related project growth, and without proposed traffic impact mitigations.
Source: LADOT 2016.

4.16.3 Potential Impacts

TRA (a): Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation, including mass transit and nonmotorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?

and,

TRA (b): Conflict with an applicable congestion management program, including LOS standards and travel demand measures or other standards established by the county congestion management agency for designated roads or highways?

The Proposed Project would not cause a long-term increase in traffic on area roadways. During construction, there would be some additional traffic on area roadways, primarily due to trucks transporting concrete and other construction materials to and from the project area and from commute trips by construction workers.

As described in Section 2.7, construction of the dike improvements would add up to 40 one-way worker vehicle trips and 15 one-way truck trips per weekday to area roads during the 12– 18-month construction period. Construction of the MPB would require an average of 20 worker vehicle trips and 1 – 2 truck trips per day over an 18-month period beginning in 2024. Construction of the maintenance vaults would require less than 1 daily truck trip and up to 6 daily worker trips over the 3-month construction period, which is anticipated to run from November 2019 to February 2020. Installation of the Niwa Road sewer line would require approximately 4-6 worker trips per day for a 9-month period beginning in 2024. Truck trips would be scheduled to avoid peak morning and evening travel hours to the extent practicable. Even if all worker and truck trips occurred during peak morning and evening travel hours, the difference in traffic volumes and travel times on area roadways would still be less than significant, as shown in Tables 4-21 through 4-24. These tables were prepared as part of a traffic study that assessed the potential for effects from implementation of the proposed Advanced Water Purification Facility, which was analyzed in an EIR prepared by the City of Los Angeles (LADWP 2016). The numbers of truck trips, worker trips,

and amount of materials to be disposed of offsite were far higher than any of the construction actions described in this IS/MND and were shown to cause a less than significant impact to area traffic. The traffic study was prepared in conformance with the procedures mandated by the Los Angeles County Congestion Management Program to assess impacts to intersections and roadways near the project (Koa Corporation 2016). The traffic study identified the following intersections and roadway segments as those most affected by construction traffic:

- Intersection of Woodley Ave. and Victory Blvd.
- Intersection of Densmore Ave. and Victory Blvd.
- Intersection of Haskell Ave. and Victory Blvd.
- Intersection of I-405 Northbound Ramps and Victory Blvd.
- Haskell Ave. between Victory Blvd. and the Orange Line Busway
- Victory Blvd. between Woodley Ave. and I-405

Traffic counts were conducted at these intersections and roadways to establish baseline traffic volumes and associated LOS and V/C measurements. These baseline measurements are referred to as the "existing" conditions. The traffic study also looked at projected population growth and development projects planned in the area to determine future baseline traffic volumes in 2022 and associated LOS and V/C measurements. These are referred to as "future" conditions and approximate ambient traffic volumes in 2022 near the end of the construction period.

The traffic study then assessed the amount of project-generated traffic and which intersections and roadway segments that traffic would be most likely to traverse to establish what is referred to as "with-project" conditions. The "with-project" conditions were then added to the existing and future baselines to establish the "existing with-project" and "future with project" LOS and V/C. The existing and future with project LOS and V/C were then compared to the existing and future baselines to determine the project-related change in LOS and V/C.

The results of these calculations and comparisons are shown in Tables 4-21 to 4-24. As shown in these tables, project-related traffic would only cause one change in LOS. LOS on Haskell Ave. between Victory Blvd. and the Orange Line Busway would change from LOS A to LOS B during the a.m. peak travel period. Because LOS B is still considered reasonably unimpeded circulation at average travel speeds, this impact would be less than significant. V/C would increase at every intersection and roadway studied. However, the increase in V/C would not exceed the LADOT project related V/C increase (see Table 4-21) for the associated LOS. Therefore, impacts would be less than significant.

Table 4-21. Existing and Existing with-Project LOS in the Study Area

Intersection or Street Segment	Existing		Existing with-Project		Project-Related Change	
	A.M. Peak LOS	P.M. Peak LOS	A.M. Peak LOS	P.M. Peak LOS	A.M. Peak LOS	P.M. Peak LOS
Intersections						
Woodley Ave. and Victory Blvd.	F	E	F	E	None	None
Densmore Ave. and Victory Blvd.	B	A	B	A	None	None
Haskell Ave. and Victory Blvd.	F	F	F	F	None	None
I-405 Northbound Ramps and Victory Blvd.	C	C	C	C	None	None
Street Segments						
Haskell Ave. between Victory Blvd./ Orange Line Busway	A	A	A	A	None	None
Victory Blvd. between Woodley Ave. and I-405	D	E	D	E	None	None

Table 4-22. Existing and Existing with-Project Volume-to-Capacity Ratio in the Study Area

Intersection or Street Segment	Existing		Existing with-Project		Project-Related Change	
	A.M. Peak V/C	P.M. Peak V/C	A.M. Peak V/C	P.M. Peak V/C	A.M. Peak V/C / Exceeds LADOT Criterion (Y/N)	P.M. Peak V/C / Exceeds LADOT Criterion (Y/N)
Intersections						
Woodley Ave. and Victory Blvd.	1.107	0.985	1.109	0.987	0.002 / No	0.002 / No
Densmore Ave. and Victory Blvd.	0.650	0.564	0.655	0.597	0.005 / No	0.033 / No
Haskell Ave. and Victory Blvd.	1.071	1.044	1.079	1.045	0.008 / No	0.001 / No
I-405 Northbound Ramps and Victory Blvd.	0.734	0.760	0.739	0.768	0.005 / No	0.008 / No
Street Segments						
Haskell Ave. between Victory Blvd./ Orange Line Busway	0.278	0.172	0.556	0.344	0.278 / No	0.172 / No
Victory Blvd. between Woodley Ave. and I-405	0.891	0.913	0.899	0.921	0.008 / No	0.008 / No

Table 4-23. Future and Future with-Project LOS in the Study Area

Intersection or Street Segment	Future		Future with-Project		Project-Related Change	
	A.M. Peak LOS	P.M. Peak LOS	A.M. Peak LOS	P.M. Peak LOS	A.M. Peak LOS	P.M. Peak LOS
Intersections						
Woodley Ave. and Victory Blvd.	F	F	F	F	None	None
Densmore Ave. and Victory Blvd.	C	B	C	B	None	None
Haskell Ave. and Victory Blvd.	F	F	F	F	None	None
I-405 Northbound Ramps and Victory Blvd.	D	D	D	D	None	None
Street Segments						
Haskell Ave. between Victory Blvd./ Orange Line Busway	A	A	B	A	A to B	None
Victory Blvd. between Woodley Ave. and I-405	F	F	F	F	None	None

Table 4-24. Future and Future with-Project Volume-to-Capacity Ratio in the Study Area

Intersection or Street Segment	Future		Future with-Project		Project-Related Change	
	A.M. Peak V/C	P.M. Peak V/C	A.M. Peak V/C	P.M. Peak V/C	A.M. Peak V/C / Exceeds LADOT Criterion (Yes or No)	P.M. Peak V/C / Exceeds LADOT Criterion (Yes or No)
Intersections						
Woodley Ave. and Victory Blvd.	1.272	1.132	1.274	1.133	0.002 / No	0.001 / No
Densmore Ave. and Victory Blvd.	0.747	0.648	0.751	0.681	0.004 / No	0.033 / No
Haskell Ave. and Victory Blvd.	1.231	1.199	1.238	1.200	0.007 / No	0.001 / No
I-405 Northbound Ramps and Victory Blvd.	0.843	0.873	0.849	0.881	0.006 / No	0.008 / No
Street Segments						
Haskell Ave. between Victory Blvd./ Orange Line Busway	0.319	0.198	0.639	0.395	0.320 / No	0.197 / No
Victory Blvd. between Woodley Ave. and I-405	1.024	1.049	1.032	1.057	0.008 / No	0.008 / No

Mitigation measure TRA-1 and conservation measures TRA-2 through TRA-10 would be implemented to minimize potential impacts to traffic and transportation. Prior to initiating construction, a detailed construction plan, traffic control plan, and health and safety plan would be developed. The plans would detail the necessary permits and authorizations, the sequencing of construction activities, the procedures for safely implementing construction operations (such as signage), methods of complying with applicable federal, state, and local regulations, and more. Therefore, there would be a less than significant impact on the traffic circulation system and no conflict with plans, ordinances, or policies related to circulation system performance or the Los Angeles County Congestion Management Program.

During the dike rehabilitation phase, one lane of the northwest entrance to the Plant on Niwa Road would temporarily be closed for installation of the sliding flood gates. Construction would occur in the closed lane, while traffic would be allowed to pass in the open lane. When construction was completed on the closed lane, it would be reopened, and the other lane would be closed. These closures would last approximately 1 week each. Flaggers or signage would be implemented to ensure traffic would flow smoothly around the work area and to ensure access to parking areas. Similar procedures would be implemented for installation of the bump-ramp systems at the northeast entrance on Niwa Road and at the entrance to the area north of the cricket fields off of Teibo Drive. The configuration of the main entrance would not be changed, and no lane closures would occur at this entrance. For these reasons, impacts on traffic and parking within the Plant as a result of dike rehabilitation would be less than significant.

Construction of the MPB facility would occur over approximately 18-months. During construction, staging and construction laydown areas, as well as construction worker parking, would be provided in the construction laydown area on the east side of the Plant (Figure 2-3). The northern portion of the parking lot would be occupied by the footprint of the MPB. Parking for Garden visitors and employees of the Plant would still be available in the southern portion of the parking lot and in other on-site and off-site locations. Since parking would still be available along Woodley Ave. during construction, and off-site parking would only be needed by a portion of site visitors temporarily during the construction period, this represents a less than significant impact.

Following completion of construction, the MPB would house the existing Japanese Garden staff and docents as well as the existing gift shop. Additionally, the exhibit space within the Administration Building would be relocated to the new facility. The new meeting and conference room space would provide enhanced facilities for the existing meetings, conferences, events, educational programs, and cultural activities that occur at the Plant. No permanent increase in the number of staff or docent volunteers would occur as a result of project implementation. The existing parking lot, a portion of which would be lost through the construction of the new facility, would be reconfigured to accommodate a total of approximately 113 parking spaces. This supply of parking would be adequate to accommodate existing Japanese Garden and Plant employees as well as visitors. Operations of the new MPB would not impact traffic and parking within the Plant or the surrounding area.

TRA (c): Result in a change in air traffic patterns, including either an increase in traffic levels, obstructions to flight, or a change in location, that results in substantial safety risks?

The Plant is 0.75 mile south-southeast of the Van Nuys Airport. The project area is not in the runway protection zone for the Van Nuys Airport (ALUC 2004), nor is it in the runway approach area identified in the Van Nuys Airport Master Plan (LADCP 2006). The project would not cause a change in air traffic levels, introduce flight obstructions, or have any other effects that would impact air safety. Therefore, there would be no impacts.

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

There would be no changes to the location or alignment of roadways as a result of the project. Construction traffic would follow designated truck routes to minimize potential safety hazards on area roadways. MPB construction and dike rehabilitation would not introduce hazards such as sharp curves or dangerous intersections. However, the use of Woodley Ave. to access the Proposed Project could increase traffic hazard concerns due to the addition of slow-moving trucks requiring access from the construction site to Woodley Ave. However, the low number of daily trips makes this potential impact minor. Also, there would be no design changes to Woodley Ave. associated with the Proposed Project. Therefore, there would be no significant impacts.

TRA (e): Result in inadequate emergency access?

During construction, temporary closures affecting one lane of the roadway would be required at the northwest entrance to the Plant on Niwa Road, the northeast entrance on Niwa Road and at the entrance to the area north of the cricket fields off of Teibo Drive for the installation of the bump-ramp systems. Construction would occur in the closed lane, while traffic would be allowed to pass in the open lane. When construction was completed on the closed lane, it would be reopened and the other lane would be closed. These closures would last approximately 1 week each and would not be simultaneous. Flaggers or signage would be implemented to ensure traffic would flow smoothly around the work area and to ensure access to the Plant. In addition, no changes would be made to the configuration of the main entrance, allowing normal access to the Plant through this entrance. The construction of the proposed dike and dike modifications would not affect roadways or evacuation routes aside from minor and short-term increases in traffic associated with construction. For these reasons, there would be no impairment of emergency access to the Plant and no impacts would occur.

Installation of the Niwa Road sewer extension would temporarily diminish the width of Niwa Road during a 9-month period. As only LASAN operations vehicles use this road, public transportation uses would not be affected. Despite the narrowed width, Niwa Road would be passable by service and

emergency vehicles during the construction period. Installation of the sewer extension would not impair emergency access to the Plant. There would be no impact.

During construction of the MPB, staging and construction laydown areas, as well as construction worker parking would be provided in the construction laydown area on the east side of the Plant (Figure 2-3). Construction access would be primarily from Woodley Ave. via the main entrance to the Plant and by Densmore Ave. off of Victory Blvd. Transit of construction equipment and materials between the staging area and the construction site through the main entrance and through the northeast entrances would not impede emergency access. There would be a less than significant impact.

The Plant has a well-rehearsed Flood Evacuation Plan in place with procedures for communicating the potential for flood waters, evacuating visitors, contractors and employees, and shutting down Plant operations if necessary. The Plant conducts annual evacuation drills to ensure that personnel are up to date on these procedures. Closure of one side of the entrance roadways, as described above, would not limit emergency egress from the Plant.

TRA (f): Conflict with adopted policies, plans, or programs regarding public transit or bicycle or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

Within the Plant, pedestrian facilities include the paved paths of the Japanese Gardens, which allow for public access. These paths are ADA-compliant and allow access for visitors in wheelchairs. Construction of the MPB would temporarily impact the northern portion of the parking lot for the Japanese Garden. While some parking spaces would be retained, it is possible that some visitors would be required to park at other on-site or off-site locations, such as along Woodley Ave. However, at least two ADA-accessible parking spots would be preserved during construction, and visitors would retain access to the roadway loop abutting the eastern edge of the Japanese Garden parking lot, so that visitors requiring ADA-accessibility could also be dropped off at the entrance to the gardens. Therefore, construction of the MPB would have temporary and less than significant impacts on public pedestrian facilities within the Plant. Dike rehabilitation, installation of the Niwa Road sewer extension, and construction of the new maintenance vaults would not have any impact on pedestrian access to the Japanese Garden paths.

The closest off-site public bicycle and pedestrian path is the bike path adjacent to Woodley Ave., which provides bicycle access to the Plant. This path is designated as a low-stress bicycle path in the Mobility Element of the City of Los Angeles General Plan (LADCP 2016). The Proposed Project would have no impact on this path and would not alter its performance.

Additional paved paths are located within the operations area of the Plant, both between facilities and along the tops of the southern and eastern dikes. However, the operations area is not open to public access, and these paths are not used by pedestrians or cyclists. Therefore, although the Proposed Project would temporarily prevent use of the paths along the top of the south and east dikes, there would be no impact to public bicycle or pedestrian facilities.

The closest public transit access point is the Woodley Ave. Orange Line Bus Station, located just south of the intersection of Woodley Ave. and Victory Blvd. Truck access to the Plant along Woodley Ave. would have no impact on the function or safety of this transit facility, and would not impede public access to it. Tables 4-21 through 4-24 show that the impacts to function of this bus line would be less than significant.

Impacts to the public transit system or to public bicycle or pedestrian facilities would be less than significant and there would be no conflict with plans, programs, or policies related to these facilities adopted in the Mobility Element of the City of Los Angeles General Plan (LADCP 2016).

4.16.4 Mitigation

TRA-1. The contractor would prepare a Traffic Management Plan (TMP) for the Proposed Project in coordination with the local jurisdictions having authority over specific roadways. The Plan would be prepared by a registered traffic or civil engineer, as appropriate, based on City of Los Angeles permit guidelines. The TMP would be submitted to LADOT and LABOE for review and approval. The TMP would consist of traffic control plans for each distinct construction area showing any temporary modifications to intersections or roadways (such as lane closures or modifications to the timing of traffic signals) and how these would be implemented and controlled. The TMP would also include the following:

- Identification of temporary traffic control devices in accordance with Caltrans' California Manual on Uniform Traffic Control Devices. This could include slow-moving-vehicle warning signs, barriers for separating construction and non-construction traffic, use of traffic control flagmen, and any additional measures required for safely passing non-construction traffic through and around construction areas and access points.
- Scheduling of worker shift changes to minimize existing background traffic peak periods if feasible.
- Establishment of procedures for coordinating with local emergency response agencies to ensure dissemination of information regarding emergency response vehicle routes affected by Project construction. Proper notification and coordination with the local emergency response agencies would be critical for these road closures to ensure that emergency vehicle access was not affected.
- Methods to inform the public about construction impacts and alternate routes.
- Details on effects on bicycle and pedestrian access and facilities, including signed detour routes to ensure continued through access during construction.
- Description of signage within the construction corridors for traffic, in advance of the first encountered work area, warning of potential delays ahead on the route.
- Description of signage that would be used to alert motorists to temporary or limited access points to adjacent properties; appropriate barricades for road closures; construction speed limit signage; and parking restrictions during construction.
- Specifications that, if additional haul routes were required, existing roadways would be selected that would result in the least amount of impact to existing background traffic.
- Requirements to provide dedicated turn lanes for vehicles entering and exiting the Proposed Project site from local roadways to minimize impacts to vicinity traffic.
- Mandates to observe and comply with the City's traffic plan, including using designated truck routes as applicable.
- Restrictions on deliveries made by large trucks during periods of high use, including Saturdays and special events.

The following conservation measures would also be implemented:

TRA-2. Public streets would be kept operational, particularly during the morning and evening peak hours of traffic. If required, any lane closures would be minimized during peak traffic hours.

TRA-3. Haul routes would be designed to minimize distances to the work site and avoid heavily congested areas or large residential communities to the maximum extent feasible.

TRA-4. If damage to roads occurred, the contractor would coordinate repairs with the affected public agencies to ensure that any impacts to area roads were adequately repaired. Roads disturbed by trucks or

equipment would be properly restored to ensure long-term protection of road surfaces. Such repairs would occur as part of the active construction period.

TRA-5. The contractor would obtain all applicable permits and clearances from appropriate agencies for transporting and hauling equipment and debris.

TRA-6. To the extent feasible, construction worker travel and all construction truck traffic to and from the site would avoid peak traffic hours.

TRA-7. Traffic would be controlled during construction by adhering to the guidelines contained in Standard Specifications for Public Works Construction used by many municipalities in California and the Caltrans Traffic Manual, Chapter 5, "Manual of Traffic Controls for Construction and Maintenance Work Zones" and applicable City requirements. These guidelines provide methods to minimize construction effects on traffic flow.

TRA-8. There would be coordination with the local transportation department of the applicable jurisdiction to implement standard construction traffic controls, such as the posting of notices, signage, detours, flag men, and other appropriate measures as needed.

TRA-9. If necessary during construction, temporary overflow parking could be provided in the Woodley Park parking lots adjacent to the Plant. Use of these parking lots by construction workers during the approximately 18-month construction period would be coordinated with the City of Los Angeles, Department of Recreation and Parks. Coordination and arrangement for alternate parking would occur prior to the start of construction.

TRA-10 Deliveries of materials by large trucks will be restricted on Saturdays and during special events, when traffic is likely to be heavier than under normal conditions.

4.17 Utilities and Service Systems (USS)

Utilities and Service Systems (USS)	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the Project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☒	☐
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐
d) Have sufficient water supply available to serve the project from existing entitlements and resources, or require new or expanded water supply resources or entitlements?	☐	☐	☒	☐
e) Result in a determination by the wastewater treatment provider that would serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☒	☐
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☒	☐
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☒	☐

4.17.1 Environmental Setting

No utilities or pipelines are known to penetrate through the dikes, although several pipelines do pass beneath the dike embankments. Information on these pipelines taken from as-built plans is outlined below:

- A 108-inch diameter reinforced concrete pipe trends underneath the western portion of the southern dike with an invert elevation of roughly 687 ft. This line is the major outlet for the water reclamation facility.
- Two ductile iron pipes, one 30 inches in diameter and one 54 inches in diameter, cross underneath the eastern end of the southern dike at an invert elevation varying from roughly 693 to 691 ft. (the pipes are sloped at an angle of approximately 2.2 percent beneath the dike). These lines carry reclaimed water.

- A 24-inch diameter pipe of unknown material crosses beneath the central portion of the southern dike with an invert elevation of approximately 694 ft. This line carries reclaimed water to a nearby lake.
- A 16-inch diameter waterline of unknown material crosses beneath the central portion of the southern dike at an invert elevation of approximately 698 ft. This pipeline provides potable water to the Plant, provided by LADWP.

Primary utility features that are in place to serve the Plant are provided by the City of Los Angeles, and include:

- Wastewater: Although the Plant is a wastewater treatment plant, biosolids are released back into the City of Los Angeles sewer system for treatment downstream at HTP.
- Solid Waste collection is provided by the City of Los Angeles and is disposed at any of the three landfills that serve the City. Hazardous waste is disposed of at the Kettleman Hills Landfill. LASAN currently disposes of refuse at the Sunshine Canyon Landfill, located in the community of Sylmar, City of Los Angeles, approximately 9.6 miles north of the Plant.
- Electricity is provided by LADWP through overhead lines.
- Natural gas is used at the Plant for various functions related to its primary mission.

4.17.2 Regulatory Setting

No federal regulations are applicable to utilities and service systems associated with this project. Applicable California regulations include the Solid Waste Reuse and Recycling Access Act (PRC Sections 42900-42911) and the Integrated Waste Management Act (PRC Sections 41000-41460). The Board of Public Works is LASAN's oversight agency. Oversight for energy-related utilities at the state level is under the California Public Utilities Commission and the California Energy Commission.

California Integrated Waste Management Act of 1989. The California Integrated Waste Management Act of 1989 (PRC, Division 30), enacted through AB 939 and modified by subsequent legislation, requires all California cities and counties to implement programs to reduce, recycle, and compost at least 50 percent of wastes by the year 2000 (PRC §41780). The state determines compliance with this mandate to divert 50 percent of generated waste (which includes both disposed and diverted waste) through a complex formula. This formula requires cities and counties to conduct empirical studies to establish a "base year" waste generation rate against which future diversion is measured. The actual determination of the diversion rate in subsequent years is arrived at through deduction, not direct measurement; rather than counting the amount of material recycled and composted, a county tracks the amount of material disposed of at landfills, and then subtracts the disposed amount from the base-year amount (PRC §41780.2).

Title 8, Section 1541 of the California Code of Regulations. This requires excavators to determine the approximate locations of subsurface installations such as sewer, telephone, fuel, electric, and water lines (or any other subsurface installations that may reasonably be encountered during excavation work) prior to excavation.

California Government Code §4216 et seq. This law requires owners and operators of underground utilities to become members of and participate in a regional notification center. Underground Service Alert of Southern California covers Southern California, including Los Angeles County. This organization receives planned excavation reports from public and private excavators and transmits that information to all participating members who may have underground facilities at the location of excavation. Members mark or stake their facility, provide information, or give clearance to dig.

4.17.3 Potential Impacts

USS (a): Would the project exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

and

USS (b): Would the project require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Although the Plant processes wastewater generated throughout its service area, very little wastewater is generated at the Plant itself. Wastewater is generated at the Plant only through administrative uses or by workers and visitors to the Plant or the Japanese Garden.

During the construction period, an estimated average of 15 construction workers would be present, resulting in a slight increase in on-site generation of wastewater. This wastewater would be contained in portable sanitation facilities, and these facilities would likely be emptied directly at the Plant, as this service is offered at the Plant. The amount of wastewater generated by this method would be well within the Plant's capacity to treat under the Plant's existing NPDES permit according to the requirements of the LARWQCB and impacts from construction would be less than significant.

Construction of all components of the Proposed Project would be completed according to industry standards, with conservation measures for erosion control and stormwater management. Any runoff water would be contained by implementation of measures that would be specified in the project-specific SWPPP. Impacts to the environment would be less than significant.

The dike rehabilitation component of the Proposed Project is intended to provide a greater level of flood protection to the Plant and would not result in operational changes that would increase the amount of wastewater generated at the Plant. Completion of the four new maintenance vaults would not result in operational changes and would not increase the amount of water generated at the Plant.

Installation of the Niwa Road sewer extension would extend the internal Plant sewer system in order to provide sewer service to the Japanese Garden facilities, replacing the existing septic tank system. The sewer system would be installed along Niwa Road, north of the gardens, and would extend to the restrooms located on the west side of the gardens. The new sewer line would be connected to the treatment facilities at the Plant, and would not require the construction of new water or wastewater treatment facilities or the expansion of existing treatment facilities, other than extension of the conveyance pipes.

Construction of the MPB would require the installation of standard sewer and water facilities for the new structure. The facilities would be connected to the existing internal Plant water supply and sewer system. Wastewater generated at the MPB following its completion would be treated by the Plant itself. No new workers would be employed as a result of MPB construction, and the net increase in the volume of wastewater associated with operations of the MPB would be minor (see response to *USS (e)*, below). No additional employees would be needed as a result of the dike rehabilitation, Niwa Road sewer project, or vault installation. No new treatment facilities would need to be constructed, and no existing treatment facilities would need to be expanded.

All wastewater generated on-site at the MPB or Japanese Garden facilities would be treated at the Plant alongside incoming commercial and residential wastewater, and the treated effluent would be discharged under the Plant's current NPDES permit according to the requirements of the LARWQCB.

Impacts to wastewater treatment and to treatment facilities as a result of construction and operations associated with the Proposed Project would be less than significant.

USS (c): Would the project require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Installation of the Niwa Road sewer extension and the new maintenance vaults and construction of the MPB would not increase on-site generation of stormwater (see Section 4.9.3 for details).

Installation of the north perimeter wall would increase the area of impervious surfaces at the northern edge of the Plant and could lead to a minor increase in stormwater runoff generation along its length (see Section 4.9.3 for details). Existing storm drain facilities would be sufficient to accommodate this runoff and to serve the raised dikes. As part of the larger dike rehabilitation construction project, relocation of storm drains would be completed according to industry standards. Any runoff water would be contained by implementation of measures that would be specified in the project-specific SWPPP.

Following the completion of the Proposed Project, any runoff generated throughout the Plant – including additional runoff generated along the northern perimeter – would be captured by the existing Plant stormwater collection system and diverted to the Los Angeles River, as under existing conditions. Impacts to stormwater drainage facilities at the Plant would be less than significant.

USS (d): Is there sufficient water supply available to serve the project from existing entitlements and resources, or require new or expanded water supply resources or entitlements?

During the construction period, water use could increase due to use of water by water trucks to reduce fugitive dust, but the amount of water used would be relatively minimal and would not require new or expanded water supplies. Up to 1,000 gallons of water per day could be required for ground watering and other uses during construction, and recycled water would be used to the degree possible. Existing water supplies would be sufficient to cover this use and would be consistent with existing entitlements. Impacts related to water entitlements and resources would be less than significant.

Following the completion of the Proposed Project, the new maintenance vaults, the Niwa Road sewer extension, and the heightened dikes would not increase the water needs of the Plant during operations. Although construction of the MPB would include new water supply and sewer connections within the building, water consumption may increase slightly as a result of a potential increase in the number of visitors to the facility, but this impact would be less than significant.

USS (e): Result in a determination by the wastewater treatment provider that would serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

During the construction period, minor increases in discharge would be expected due to the presence of up to 20 construction workers. This increase would be expected to amount to less than 500 gallons per day, which is well within the treatment capacity of the Plant.

Following the completion of the Proposed Project, the Niwa Road sewer line extension would convey additional raw sewage to the Plant treatment facilities, but the volume of that increase and of the concomitant discharge would be negligible in comparison to the volume of wastewater that is currently processed by the Plant and would not exceed the capacity of the Plant. The completed maintenance vaults and rehabilitated dikes would have no impact on wastewater production at the Plant. Use of restroom facilities contained in the completed MPB by visitors and existing Plant workers would generate wastewater that would be routed to the Plant's internal sewer system and treated on-site, but much of the

volume would be accounted for by the discontinued use of temporary trailer facilities that are currently on-site. No new workers would be employed at the completed MPB. The net increase in wastewater volume would be minor and would not exceed the treatment capacity of the Plant. Overall, impacts to wastewater generation and treatment on-site would be less than significant.

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

It is estimated that the Proposed Project would produce up to 1,000 cy of excavated material, some of which would be considered suitable for reuse on-site. The remaining materials would be disposed of at appropriate landfills. To the degree possible, excavated materials would be sent to the closest available landfill. Clean materials can be sent to one or more of the following landfills:

- Scholl Canyon Landfill is located at 3001 Scholl Canyon Road, Glendale, CA, approximately 20 miles from the project site. This facility has a maximum permitted throughput of 3,400 tons per day with a remaining capacity of 9,900,000 cy, and has an estimated closure date of 2030. The waste types accepted at this facility include construction and demolition debris, green materials, manure, tires, inert, and mixed municipal.
- Calabasas Sanitary Landfill is located at 5300 Lost Hills Road, Agoura, CA, approximately 34 miles from the project site. This facility has a maximum permitted throughput of 3,500 tons per day with a remaining capacity of 18,100,000 cy, and has an estimated closure date of 2025.

The following landfill accepts both clean and contaminated materials, and would therefore receive any contaminated materials generated or excavated during construction:

- Azusa Land Reclamation Co. Landfill is located at 1211 West Gladstone Street, Azusa, CA, approximately 25 miles from the project site and consists of several units (active and closed). This facility is the closest facility to the Proposed Project site that accepts contaminated materials, therefore any contaminated materials would be sent to this location. Unit 1 has a maximum permitted throughput of 8,000 tons per day with a remaining capacity of 51,512,201 cy, and has an estimated closure date of 2045. The waste types accepted at Unit 1 of this facility include asbestos, friable soils, inert materials, contaminated soils, and tires.

As reported above and according to CalRecycle's Solid Waste Information System (SWIS) database, there is sufficient inert waste disposal capacity available in Los Angeles County to adequately accommodate the anticipated excavated material. Because there is sufficient landfill capacity to accept the amount of materials that would be exported during construction, impacts associated with landfill capacity would be less than significant.

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

The small amount of solid waste generated during construction which could not be reused would be disposed of in accordance with all statutes and regulations related to solid waste. Most excavated materials would be reused as part of the project, and concrete, asphalt, and metal would be sent to a recycling facility to the degree feasible. Solid waste generated on-site would be disposed of by permitted haulers to regulated sites with adequate capacity and which are in compliance with all applicable regulations related to solid waste collection and disposal. Therefore, impacts associated with this criterion would be less than significant.

4.17.4 Mitigation

No mitigation would be required.

The following conservation measure would be implemented:

USS-1. Ensure the Plant provides water treatment services without interruption or reduction.

5 SUMMARY OF MITIGATION AND CONSERVATION MEASURES

The following mitigation measures would be implemented to keep or reduce any potential impacts to a less-than significant level. Conservation measures that would be implemented during construction of the Proposed Project are also listed below.

5.1 Aesthetics

5.1.1 Mitigation Measures

None.

5.1.2 Additional Conservation Measures

AES-1. Signs would be posted prohibiting trespassing within the "construction zone".

AES-2. Vehicular traffic would be confined to routes of travel to and from the project site, and cross-country vehicle and equipment use would be prohibited outside designated work and storage-staging areas.

AES-3. Work and staging areas would be kept orderly and free of trash and debris.

AES-4. A storage area for collection and storage of recyclable and green waste materials would be kept within the work area. All trash and debris would be removed from the work area at the end of each day.

AES-5. When not in use, large equipment would be concentrated in staging areas.

AES-6. A buffer zone would be established between the staging area and Haskell Creek.

AES-7. Fenced screening would be used as necessary.

5.2 Agriculture and Forest Resources (AFR)

5.2.1 Mitigation Measures

None.

5.2.2 Additional Conservation Measures

None.

5.3 Air Quality

5.3.1 Mitigation Measures

None.

5.3.2 Additional Conservation Measures

AIR-1. A Fugitive Dust Emission Control Plan would be developed and implemented. Measures to be incorporated into the plan would include, but would not be limited to, the following:

- Unpaved and other disturbed areas of the active sites would be watered at least two times per day, or apply CARB certified soil binders.

- Wheel washers/cleaners would be installed or the wheels of trucks and other heavy equipment would be washed where vehicles exited the site or used unpaved access roads.
- If equipment were operating on soils that cling to wheels, the contractor would be required to use a "grizzly" or other such device using rails, pipes, or grates to dislodge mud, dirt, and debris from the tires and undercarriage of vehicles on the road exiting the project site, immediately before the pavement in order to remove most of the soil from vehicle tires.
- Increased frequency of watering of all disturbed fugitive dust emission sources, or implementation of other additional fugitive dust conservation measures, if wind speeds (as instantaneous wind gusts) were to exceed 25 miles per hour.
- Activities and operations on unpaved roads and areas would be minimized to the extent feasible during high wind events
- Vehicle speeds would be limited to 15 miles per hour or less within the work areas.

Roadways next to the Proposed Project site would be kept clean and daily project-related accumulated silt and debris would frequently be removed.

AIR-2. All on-road construction vehicles would meet all applicable California on-road emission standards and would be licensed in the state of California.

AIR-3. All off-road construction diesel engines not registered under CARB's Statewide Portable Equipment Registration Program, which have a rating of 50 horsepower or more, would be required to meet, at a minimum, the Tier 3 California Emission Standards for Off-road Compression-Ignition Engines as specified in CCR, Title 13, Section 2423(b)(1). If a Tier 3 or Tier 3-equivalent engine were not available for a particular item of equipment, Tier 2 compliant engines would be allowed on a case by case basis.

AIR-4. Diesel catalytic converters, diesel oxidation catalysts and diesel particulate filters as certified and/or verified by the USEPA or CARB would be installed on equipment operating on-site.

AIR-5. Idling of heavy-duty diesel trucks during loading and unloading would be limited to five minutes; auxiliary power units would be used whenever possible.

AIR-6. All equipment would be maintained as recommended by manufacturers' manuals.

AIR-7. Any equipment not in use for more than 30 minutes would be shut down.

AIR-8. Electric equipment would be substituted whenever possible for diesel- or gasoline-powered equipment.

5.4 Biological Resources

5.4.1 Mitigation Measures

BIO-1. Pre-Construction Nesting Bird Surveys. LASAN would conduct pre-construction surveys for work conducted between March 1 and September 15, to determine if active nests of the federally and state listed endangered least Bell's vireo were present within 500 ft. of construction work areas. Up to eight surveys would be performed, consistent with survey protocols of the USFWS.

BIO-2. Breeding Bird Avoidance. Construction activities with the potential to generate noise levels in excess of 60 dB Leq or ambient (if ambient is greater than 60 dB Leq) within 500 ft. of areas determined

to support nesting least Bell's vireos or MBTA species would be postponed until (1) all nesting (or breeding/nesting behavior) had ceased, as determined by a qualified biologist, or until after September 15; or (2) temporary noise attenuation (e.g., construction of a noise wall, noise berm, noise blankets, equipment baffles, etc.) and monitoring measures were implemented at the edge of the construction footprint to ensure that noise levels did not exceed 60 dB Leq or ambient (if ambient is greater than 60 dB Leq), as measured from the location of the active nest(s) under the direction of a qualified biologist and acoustician. Alternatively, the duration of construction equipment operation could be controlled to keep noise levels below 60 dB Leq or ambient in lieu of or in concert with a wall or other sound attenuation barrier. If noise levels could not be reduced below 60 dB Leq or ambient at the location of the nest(s), then the construction activities causing the excess noise would be postponed until all nesting (or breeding /nesting behavior) had ceased, as determined by a qualified biologist. All grading permits and improvement plans would specify these restrictions.

BIO-3. 100-ft. wide buffer zones would be established between Haskell Creek and any construction activity areas.

5.4.2 Additional Conservation Measures

None.

5.5 Cultural Resources

5.5.1 Mitigation Measures

CUL-1. LASAN would retain an archaeologist who meets the Secretary of the Interior's Professional Qualification Standards to oversee preparation of the CRMP, construction monitoring, and preparation of a final monitoring report. The CRMP would be based on Project design plans, the results of the Phase I archaeological study prepared for the Proposed Project (ArchaeoPaleo 2017), input from Native American representatives, Secretary of the Interior's standards for identification and evaluation of historic properties, NRHP Bulletins, California SHPO guidance, and other relevant information.

CUL-2. LASAN would retain a Native American monitor who is traditionally and culturally affiliated with the Proposed Project site to accomplish monitoring as required by the CRMP in mitigation measure CUL-1. The Native American monitor would also be empowered to halt and re-direct work in the event of a discovery until it was assessed for significance, consultation was completed, and treatment implemented, if necessary. The provisions of the Native American monitoring plan would be included in the CRMP.

CUL-3. The CRMP would include protocols for the identification, assessment, and treatment of known resources and any unanticipated discoveries of archaeological resources during Project implementation, including notification procedures, significance evaluation procedures, reporting procedures, and other prescribed actions. The CRMP would state that avoidance or preservation in place would be the preferred means to avoid effects to historic properties but would provide procedures to follow should avoidance not be feasible. The CRMP would specify the roles and responsibilities of involved parties, and the location, duration, and timing of monitoring until a depth at which the potential to encounter buried archaeological deposits was greatly reduced. The buffered areas would be identified on construction plans to guide monitoring. The CRMP would outline procedures for determining when/where monitoring could be reduced or discontinued in consultation among the Corps, LASAN, qualified archaeologist, and appropriate Native American representatives.

CUL-4. Surface grading and shallow excavations would be unlikely to produce significant fossil specimens (McLeod 2015). Older, Pleistocene age alluvium, which has the potential to yield significant

fossils, may occur at an unknown depth beneath the surficial sediments. Therefore, paleontological monitoring of excavations that encounter undisturbed native alluvial sediment or bedrock of Pleistocene age or older within any part of the easement area would be performed by a qualified paleontological resources monitor (SVP 2010). Such monitoring would be conducted full-time until the Paleontologist assigned to the Proposed Project determined that such excavations would be unlikely to yield significant paleontological resources, and thus such monitoring was no longer required. Sediment samples would be collected and processed for wet screening in order to determine the potential for microfossils (significant vertebrate fossils too small to be "readily visible within the sedimentary matrix" and "non-vertebrate paleoenvironmental indicators" such as single-celled organisms, mollusks, and plant remains). If the qualified paleontological resources monitor determined that the sediment uncovered by project excavations had the potential for microfossils, then a test sample (about 600 lbs of sediment or matrix) would be collected from the project and screen washed (SVP 2010). The monitor could determine that a larger standard sample (at least 6,000 lbs) from each locality or deposit was required.

5.5.2 Additional Conservation Measures

None.

5.6 Geology and Soils

5.6.1 Mitigation Measures

None.

5.6.2 Additional Conservation Measures

GEO-1. An Erosion and Sedimentation Control Plan (Plan) would be prepared. The Plan would identify measures to be implemented to minimize the erosion effects of grading and excavation. Erosion control methods to be described in the Plan and implemented would include:

- Avoiding soil disturbance during periods of heavy precipitation or high winds.
- Keeping disturbed areas to the minimum necessary for construction.
- Reducing surface water flows across graded or exposed areas.
- Using straw bales, soil mats, or silt fences to stabilize disturbed areas.
- Using culvert, ditches, water bars and sediment traps to control runoff and erosion.
- Bioengineering techniques for erosion control.

GEO-2. All requirements would be shown on grading plans. Conditions would be adhered to throughout all grading and construction periods.

GEO-3. If a significant rain event occurred during construction activities, activities would cease.

GEO-4. Slope stability measures would be implemented at each construction and borrow site.

GEO-5. All suitable excavated fill material would be stockpiled for the shortest period of time possible. If any unsuitable material was found or generated, it would be disposed at a commercial landfill or approved site.

GEO-6. All clearing, grading, earth moving, and excavation would cease during periods of winds greater than 20 miles per hour (averaged over one hour) when disturbed material is easily windblown, or when dust plumes of 20 percent or greater opacity impacted public roads, occupied structures, or neighboring property.

GEO-7. Watering would take place a minimum of twice daily on unpaved/untreated roads and on disturbed soil areas with active operations to minimize fugitive dust.

GEO-8. All fine material transported off-site would be sufficiently watered or securely covered to prevent excessive dust.

GEO-9. Stockpiles of soil or other fine loose material would be stabilized by watering or other appropriate method to prevent windblown fugitive dust.

GEO-10. Areas temporarily disturbed by construction would be returned to pre-construction conditions by grading and re-vegetating. Barren areas would be seeded and /or planted with native vegetation to reduce potential erosion.

5.7 Greenhouse Gas Emissions (GHG)

5.7.1 Mitigation Measures

None.

5.7.2 Additional Conservation Measures

None specific to GHG emissions. However, conservation measures AIR-2, AIR-3, AIR-4, AIR-5, AIR-6, AIR-7, and AIR-8 (see Section 5.3.2) would help to reduce emissions of GHGs during project construction.

5.8 Hazardous Materials

5.8.1 Mitigation Measures

HAZ-1. To ensure that the routine transport, use, or disposal of hazardous materials would be done in compliance with federal, state, and local laws, ordinances, and regulations, and to help avoid and minimize potential accidents or spills during construction, a construction-specific Solid and Hazardous Materials and Waste Management Plan would be prepared by the construction contractor(s) prior to construction. All contractors would also prepare and implement a site-specific Worker Health and Safety Plan to be approved by the Corps' Safety Office prior to start of construction activities.

The plans would conform to applicable local, regional, state, and federal laws, policies, and regulations regarding the transportation, storage, handling, management, and disposal of hazardous materials and wastes and would detail relevant BMPs. They would be implemented for the duration of the construction. The plans would be on-site during construction and distributed to workers and managers prior to the start of construction.

The construction-specific Solid and Hazardous Materials and Waste Management Plan would contain these elements, at a minimum:

- Responsible personnel and clearly defined roles and responsibilities, including employee training requirements
- Emergency preparedness and prevention, including emergency contacts, emergency response equipment and procedures, procedures for responding to unanticipated soil contamination, contingency plans, spill prevention and containment, and spill response equipment and procedures

  - Contractors would have in place an accidental spill prevention and response plan for all hazardous materials that could be used on site. In the event of a spill or release of hazardous substances at the construction site, the contaminated soil would be immediately contained, excavated and treated per federal and state regulations developed by the USEPA, as well as local hazardous waste ordinances. All contaminated materials would be disposed of promptly and properly to prevent contamination of the site. Someone would be present to monitor refueling activities to ensure that spillage from overfilling, nozzle removal, or other action did not occur.
  - During construction, if an area of suspected contamination were encountered, construction activity in the area would cease and soil sampling would be conducted to determine the nature and extent of the potential contamination. If testing indicates that contamination did exist, the area would be cleaned up in accordance with applicable federal and state regulations.
- Hazardous materials and petroleum products management including inventory, inventory control procedures, storage details, hazard communication requirements, and reporting requirements
  - Construction and maintenance fluids (oils, antifreeze, fuels) would be stored in closed containers (no open buckets or pans) and disposed of promptly and properly away from the channel to prevent contamination of the site
- Waste management procedures including anticipated waste streams, waste minimization practices, criteria and process for characterizing hazardous waste, and waste storage, transport, and disposal procedures
- BMPs to be employed to reduce the risks associated with petroleum, oil, lubricants, paint, asphalt, and other potentially hazardous materials transport, storage, and use
  - Refueling of equipment would be accomplished on site least 50 ft. away from flowing water and with the use of liners. BMPs would be used and would include such actions as having hazardous waste clean-up equipment and spill kits staged on-site and using the appropriate size and gauge drip pans and absorbent diapers. Spill kits would be in close proximity to the fuel truck in case of fuel or other fluid spills. Contractor equipment would be checked for leaks prior to operation and repaired as necessary

The site-specific Worker Health and Safety Plan would contain these elements, at a minimum:

- Responsible personnel (name of the Site Safety Officer) and clearly defined roles and responsibilities, including a description of the work to be done
- Emergency contacts and emergency response procedures, including the address and contact information for the nearest hospital and a map showing the most direct route to a hospital and safe air ambulance landing zone
- Emergency evacuation routes and procedure
- Types of safety issues that could be encountered (e.g., slips, trips, falls, heat) and description of safe work practices
- List of chemicals used or stored on the site
- Designated heavy equipment traffic circulation route plans
- Employee training and all appropriate worker, public health, and environmental protection equipment and procedures
- Documentation that all workers had reviewed and signed the plan.

5.8.2 Additional Conservation Measures

HAZ-2. Only trained contractors or personnel would participate in the application of pesticides and herbicides. Such personnel would adhere to regulations and guidelines for the safe application of pesticides, including, but not limited to storage and handling of materials, operation of application equipment, suitable climatic conditions for application, and avoidance of sensitive receptors. The herbicides used would need to be approved for use in or near water.

5.9 Hydrology and Water Quality

5.9.1 Mitigation Measures

WAT-1. Construction of the southern bump ramp system at the entrance to the area north of the cricket fields off of Teibo Drive and installation of the concrete mat on the south and east faces of the dikes would result in a 150-cy decrease in flood storage capacity within the floodplain (see Section 4.9.3). To mitigate this loss, a total of 150 cy of earth would be excavated from the northeast area of the leased lands, located outside of the dike (see Figure 2-3). Fill removed would be transported to and deposited in a location outside of the Sepulveda Dam Reservoir.

5.9.2 Additional Conservation Measures

WAT-2. A SWPPP would be prepared to reduce the potential for accidental release of fuels and other toxic materials. Consistent with federal and state regulations, all other applicable permits for construction would be obtained. A Notice of Intent would be sent to the SWRCB in Sacramento. Workers would be educated on measures included in the SWPPP at the pre-construction meeting or prior to beginning work in the Proposed Project area. The SWPPP would include such actions as having hazardous waste clean-up equipment and spill kits staged on-site and using the appropriate size and gauge drip pans and absorbent diapers. Spill kits would be in close proximity to the fuel truck in case of fuel or other fluid spills. Contractor equipment would be checked for leaks prior to operation and repaired as necessary. “No-fueling zones” would be designated on construction plans. Fluids released because of spills, equipment failure (broken hose, punctured tank) or refueling would be immediately controlled, contained, and cleaned-up as per federal and state regulations. All contaminated materials would be disposed of promptly and properly to prevent contamination of the site. The barriers would be such that spills would be contained and easily cleaned up. Someone would be present to monitor refueling activities to ensure that spillage from overfilling, nozzle removal, or other action did not occur.

WAT-3. If a major storm event were forecast to occur within 48 hours, work would stop and all equipment and vehicles would be moved to an area not subject to flooding by the 100-year flood event (approximately 712 ft.).

5.10 Land Use and Land Use Planning

5.10.1 Mitigation Measures

None.

5.10.2 Additional Conservation Measures

USE-1. The Proposed Project would comply with local zoning requirements and guidelines for construction, including the Public Facilities General Plan and the Sepulveda Dam Basin Master Plan.

5.11 Mineral Resources

5.11.1 Mitigation Measures

None.

5.11.2 Additional Conservation Measures

None.

5.12 Noise

5.12.1 Mitigation Measures

None.

5.12.2 Additional Conservation Measures

NOISE-1. Activities would comply with local ordinances. Any nighttime or weekend activities would be coordinated with local ordinances and would require a noise permit.

NOISE-2. All equipment would include noise reduction measures, as applicable. These measures would include, but would not be limited to, properly operating and maintaining mufflers, correct placement of equipment engine covers, and ensuring that small loading equipment was equipped with rubber tires. Equipment would be maintained in accordance with manufacturer's recommendations. All machinery would be equipped with the best available exhaust mufflers and "hush kits," as applicable.

NOISE-3. Residents within 0.5 mile of construction activity would be notified 1 week prior to construction activity. The notifications would describe the character of the activities and their duration to enable local residents to modify their activities to reduce potential impacts.

NOISE-4. As part of the Proposed Project's advanced notification to all residences and property owners, a contact person name and phone number would be provided.

NOISE-5. Noise producing signals, including horns, whistles, alarms, and bells would be limited to safety warning purposes only.

5.13 Population and Housing

5.13.1 Mitigation Measures

None.

5.13.2 Additional Conservation Measures

None.

5.14 Public Services

5.14.1 Mitigation Measures

None.

5.14.2 Additional Conservation Measures

PUB-1. Contractor would prepare a *Public Safety Management Plan* to maintain public health and safety during all phases of construction. Components of the plan would include:

- Notifying the public of the location and duration of construction activities, closing pedestrian and bicycle paths and trails, and restricting other impacted recreation;
- Coordinating with the public and local jurisdictions to minimize impacts and plan contingencies for maintaining emergency response, emergency evacuation plans and capacity of emergency services during construction;
- Posting signs locating construction sites and warning of the presence of construction equipment;
- Fencing construction staging areas; and
- Providing temporary walkways (with appropriate markings, barriers, and signs to safely separate pedestrians from vehicular traffic) and posting detour signs where a sidewalk or pedestrian or bicycle path or trail would be closed during construction.

PUB-2. All contractors would prepare and implement a *Worker Health and Safety Plan* to be approved by the Corps' Safety Office prior to start of construction activities. At a minimum the plan would include:

- All appropriate worker, public health, and environmental protection equipment and procedures;
- Designated heavy equipment traffic circulation route plans;
- Emergency evacuation routes and procedures;
- Emergency response procedures;
- The most direct route to a hospital and safe air ambulance landing zone;
- Name of the Site Safety Officer; and
- Documentation that all workers had reviewed and signed the plan.

PUB-3. The contractor would consult with local jurisdictions to ensure that construction activities did not impede adopted emergency response plans.

PUB-4. Prior to construction activities, the Contractor would notify relevant fire and police of traffic management methods to be used to ensure access at all times.

PUB-5. A Communication Plan would be developed by The Corps' Public Affairs Office and would be implemented during all construction activities. The Communication Plan would describe how local authorities would be notified of public safety concerns, incidents, and emergencies.

PUB-6. Fluids released because of spills, equipment failure (broken hose, punctured tank) or refueling would be immediately controlled, contained, and cleaned-up per federal regulations. All contaminated materials would be disposed of promptly and properly to prevent contamination of the site. Someone would be present to monitor refueling activities to ensure that spillage from overfilling, nozzle removal, or other action did not occur.

PUB-7. Construction employees would strictly limit their activities, vehicles, equipment, and construction materials to the proposed footprint and designated staging areas and routes of travel. The construction area(s) would be the minimal area necessary to complete the project and would be specified in the construction plans. All people on site would be instructed that their activities are restricted to the construction areas.

PUB-8. Contractor would not allow ponding or puddles of standing water to remain within the construction area that would be subject to mosquito breeding.

PUB-9. All work and staging areas would be clearly marked and appropriately guarded to ensure public safety.

PUB-10. Signs would be posted prohibiting trespassing.

PUB-11. The contractor would be required to comply with OSHA and applicable LASAN safety standards.

5.15 Recreation

5.15.1 Mitigation Measures

None.

5.15.2 Additional Conservation Measures

REC-1. To maintain public access to the Japanese Garden throughout the duration of construction, LASAN would arrange for alternative temporary public parking and support facilities in Woodley Ave. Park south and west of the Plant and Garden. Pedestrian access from the alternative temporary parking to the Japanese Garden would be provided and maintained throughout the duration of construction. In addition, access to the Garden from the north would be considered. Coordination with the City Department of Recreation and Parks would be undertaken to secure adequate off-site parking prior to the start of construction.

REC-2. All recreation uses would be detoured from the area for safety of workers and the public.

REC-3. Notices and information on current recreation use status would be provided during the construction period through local media and signage.

5.16 Transportation and Circulation

5.16.1 Mitigation Measures

TRA-1. The contractor would prepare a TMP for the Proposed Project in coordination with the local jurisdictions having authority over specific roadways. The Plan would be prepared by a registered traffic or civil engineer, as appropriate, based on City of Los Angeles permit guidelines. The TMP would be submitted to LADOT and LABOE for review and approval. The TMP would consist of traffic control plans for each distinct construction area showing any temporary modifications to intersections or roadways (such as lane closures or modifications to the timing of traffic signals) and how these would be implemented and controlled. The TMP would also include the following:

- Identification of temporary traffic control devices in accordance with Caltrans' California Manual on Uniform Traffic Control Devices. This could include slow-moving-vehicle warning signs, barriers for separating construction and non-construction traffic, use of traffic control flagmen, and any additional measures required for safely passing non-construction traffic through and around construction areas and access points.
- Scheduling of worker shift changes to minimize existing background traffic peak periods if feasible.
- Establishment of procedures for coordinating with local emergency response agencies to ensure dissemination of information regarding emergency response vehicle routes affected by Project

construction. Proper notification and coordination with the local emergency response agencies would be critical for these road closures to ensure that emergency vehicle access was not affected.

- Methods to inform the public about construction impacts and alternate routes.
- Details on effects on bicycle and pedestrian access and facilities, including signed detour routes to ensure continued through access during construction.
- Description of signage within the construction corridors for traffic, in advance of the first encountered work area, warning of potential delays ahead on the route.
- Description of signage that would be used to alert motorists to temporary or limited access points to adjacent properties; appropriate barricades for road closures; construction speed limit signage; and parking restrictions during construction.
- Specifications that, if additional haul routes were required, existing roadways would be selected that would result in the least amount of impact to existing background traffic.
- Requirements to provide dedicated turn lanes for vehicles entering and exiting the Proposed Project site from local roadways to minimize impacts to vicinity traffic.
- Mandates to observe and comply with the City's traffic plan, including using designated truck routes as applicable.
- Restrictions on deliveries made by large trucks during periods of high use, including Saturdays and special events.

5.16.2 Additional Conservation Measures

TRA-2. Public streets would be kept operational, particularly during the morning and evening peak hours of traffic. If required, any lane closures would be minimized during peak traffic hours.

TRA-3. Haul routes would be designed to minimize distances to the work site and avoid heavily congested areas or large residential communities to the maximum extent feasible.

TRA-4. If damage to roads occurred, the contractor would coordinate repairs with the affected public agencies to ensure that any impacts to area roads were adequately repaired. Roads disturbed by trucks or equipment would be properly restored to ensure long-term protection of road surfaces. Such repairs would occur as part of the active construction period.

TRA-5. The contractor would obtain all applicable permits and clearances from appropriate agencies for transporting and hauling equipment and debris.

TRA-6. To the extent feasible, construction worker travel and all construction truck traffic to and from the site would avoid peak traffic hours.

TRA-7. Traffic would be controlled during construction by adhering to the guidelines contained in Standard Specifications for Public Works Construction used by many municipalities in California and the Caltrans Traffic Manual, Chapter 5, "Manual of Traffic Controls for Construction and Maintenance Work Zones" and applicable City requirements. These guidelines provide methods to minimize construction effects on traffic flow.

TRA-8. There would be coordination with the local transportation department of the applicable jurisdiction to implement standard construction traffic controls, such as the posting of notices, signage, detours, flag men, and other appropriate measures as needed.

TRA-9. If necessary during construction, temporary overflow parking could be provided in the Woodley Park parking lots adjacent to the Plant. Use of these parking lots by construction workers during the approximately 18-month construction period would be coordinated with the City of Los Angeles, Department of Recreation and Parks. Coordination and arrangement for alternate parking would occur prior to the start of construction.

TRA-10 Deliveries of materials by large trucks will be restricted on Saturdays and during special events when traffic is likely to be heavier than under normal conditions.

5.17 Utilities and Service Systems

5.17.1 Mitigation Measures

None.

5.17.2 Additional Conservation Measures

USS-1. Ensure the Plant provides water treatment services without interruption or reduction.

6 MANDATORY FINDINGS OF SIGNIFICANCE (MFS)

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

The Proposed Project would not degrade the quality of the environment. Construction impacts would be temporary and mitigable, and operations impacts would be either beneficial or less than significant. While construction of the Proposed Project could have significant impacts on biological resources, cultural resources, hazardous materials, hydrology, and transportation and circulation, LASAN would implement the mitigation measures identified in this IS to reduce all potentially significant project-related impacts to a less than significant level. Therefore, the Proposed Project's impacts would be less than significant, with mitigation.

MFS (b): Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time (40 CFR 1508.7). A cumulative impact includes the total effect on a natural resource, ecosystem, or human community due to past, present, and future activities or action of federal, non-federal, public, and private entities. Cumulative impacts may also include the effects of natural processes and events. Accordingly, there may be different cumulative impacts on different resources. Significant cumulative impacts would occur if incremental impacts of the Proposed Project, in addition to the impacts of past, present, and reasonably foreseeable future actions resulted in significant adverse impacts to resources assessed in this IS.

Present and reasonably foreseeable future actions within a 2-mile radius of the Plant (LABOE 2017) and present and future actions within the Plant property were considered alongside the Proposed Project when evaluating potential cumulative effects. Over a 10-year term starting in 2018, LASAN is likely to implement additional projects needed for maintenance of the plant or to increase the capacity of the Plant and the quality of the water that it treats. The majority of these projects are associated with routine maintenance of the Plant facilities. For those projects that would involve improvements or expansion beyond the scope of O&M, additional, project-specific documentation to fulfill CEQA requirements would be prepared prior to their implementation. It is unlikely that implementation of the Proposed Project would coincide with the projects planned for the Plant property in time or occur in the same immediate vicinity as those projects such that cumulative effects would occur.

Analysis of the potential impacts of these projects on resources within the Plant property, Sepulveda Dam Reservoir, and the surrounding area indicated that there would be no cumulative effect on agriculture and forest resources, mineral resources, population and housing, or public services. The cumulative effects on aesthetics, air quality, geology and soils, GHG emissions, water quality, land use and land use planning, noise, recreation, transportation and circulation, and utilities and service systems would be less than significant. With the implementation of the mitigation measures for the Proposed Project identified in Section 5, cumulative impacts to biological resources, cultural resources, hazardous materials, and hydrology would also be less than significant. No significant cumulative impacts to any of the resources assessed in this IS would occur as a result of implementation of the Proposed Project and implementation

of present and reasonable foreseeable future actions planned for the Plant Property and the surrounding area, within a 2-mile radius.

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

As identified and described in this IS, the Proposed Project would have potentially-significant impacts on biological resources, cultural resources, hazardous materials, hydrology, and transportation and circulation that would be mitigated from potentially significant to less than significant. The Proposed Project would have less than significant impacts on aesthetics, air quality, geology and soils, GHG emissions, water quality, noise, public services, recreation, and utilities and service systems. The Proposed Project would have no impact on agriculture and forest resources, land use and land use planning, mineral resources, and population and housing. As a result, the Proposed Project would have no environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly.

7 LIST OF PREPARERS

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ACRONYMS

AB	Assembly Bill
acre-ft.	acre-feet
ADA	Americans with Disabilities Act
APE	area of potential effect
AQMP	Air Quality Management Plan
ASTM	ASTM International
Ave.	Avenue
Basin Plan	LARWQCB Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties
Blvd.	Boulevard
BMPs	Best Management Practices
CA	California
CAA	federal Clean Air Act
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
CalEPA	California Environmental Protection Agency
CalRecycle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
CANG	California Air National Guard
CARB	California Air Resources Board
CAS	Chemical Abstracts Service Number
CCAA	California Clean Air Act
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CDMG	California Department of Conservation, Division of Mines and Geology
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
cfs	cubic feet per second
CGP	Construction General Permit
CH_4	methane
CHSC	California Health and Safety Code
City	City of Los Angeles
CMP	Congestion Management Plan
CNDDB	California Natural Diversity Database
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	CO_2 equivalent emissions
Corps	United States Army Corps of Engineers
CRHR	California Register of Historical Resources

CRMP	Cultural Resources Monitoring Plan
CUPA	Certified Unified Program Agency
CWA	Clean Water Act
cy	cubic yards
dB	decibels
dBA	A-weighted decibel
DDD	dichlorodiphenyldichloroethane
DDE	dichlorodiphenyldichloroethylene
DDT	dichlorodiphenyltrichloroethane
DPW	Los Angeles County Department of Public Works
DTSC	California Department of Toxic Substances Control
EBS	environmental baseline survey
EFZ	Earthquake Fault Zone
EIR	Environmental Impact Report
ESA	federal Endangered Species Act
FCA	Flood Control Act
FEMA	Federal Emergency Management Agency
ft.	feet
$ft.^2$	square feet
$ft.^3$	cubic feet
GHG	greenhouse gas
HFCs	hydrofluorocarbons
HHMD	Los Angeles County Fire Department Health Hazardous Materials Division
HTP	Hyperion Treatment Plant
I-10	Interstate 10
I-105	Interstate 105
I-210	Interstate 210
I-405	Interstate 405/San Diego Freeway
I-5	Interstate 5
I-605	Interstate 605
I-710	Interstate 710
IS	Initial Study
kg	kilograms
LABOE	City of Los Angeles Department of Public Works, Bureau of Engineering
LADOT	City of Los Angeles Department of Transportation
LADWP	City of Los Angeles Department of Water and Power
LAFD	City of Los Angeles Fire Department
LAPD	City of Los Angeles Police Department
LARWQCB	Los Angeles Regional Water Quality Control Board
LASAN	City of Los Angeles Department of Public Works, Bureau of Sanitation
lbs	pounds

lbs/day	pounds per day
LEED	Leadership in Energy and Environmental Design
Leq	equivalent continuous level
LOS	level of service
LST	localized significance threshold
MBTA	Migratory Bird Treaty Act
Metro	Los Angeles County Metropolitan Transportation Authority
mg/L	milligrams per liter
MLC	Mineral Land Classification
MLD	most likely descendant
MND	Mitigated Negative Declaration
MPB	Multi-Purpose Building
MRZ	Mineral Resource Zone
MS4s	municipal separate storm sewer systems
MT	metric ton
N/A	not available
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NAVD88	North American Vertical Datum of 1988
NCA	federal Noise Control Act
ND	Negative Declaration
NGVD29	National Geodetic Vertical Datum of 1929
No.	Number
NO_2	nitrogen dioxide
NO_x	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
NWI	National Wetlands Inventory
O&M	operations and maintenance
O_3	ozone
OSHA	Occupational Safety and Health Administration
PFCs	perfluorocarbons
Plant	Donald C. Tillman Water Reclamation Plant
PM	particulate matter
PM 2.5	particulate matter 2.5 microns or less
PM10	particulate matter 10 microns or less
PPV	peak particle velocity
PRC	California Public Resources Code
RCRA	Resource Conservation and Recovery Act
RMS	root mean square
ROG	Reactive Organic Gases

SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCCIC	South Central Coastal Information Center
Sepulveda Dam Reservoir	Sepulveda Dam Flood Control Reservoir
SF_6	sulfur hexafluoride
SHPO	State Historic Preservation Officer
SIP	State Implementation Plan
SMARA	Surface Mining and Reclamation Act
SMGB	California Department of Conservation, State Mining and Geology Board
SO_2	sulfur dioxide
SO_x	sulfur oxides
SPF	standard project flood
SWIS	Solid Waste Information System
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TDS	total dissolved solids
TMDL	Total Maximum Daily Load
TMP	Traffic Management Plan
U.S.	United States
Unified Program	California's Unified Hazardous Waste and Hazardous Materials Management Regulatory Program
US-101	United States Highway 101/Ventura Freeway
USC	United States Code
USDOT	United States Department of Transportation
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
UST	underground storage tank
V/C	volume-to-capacity ratio
WOUS	Waters of the United States
WQOs	Water Quality Objectives
WY	water year: October 1 - September 30

APPENDICES

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Appendix A: CalEEMod output files

Donald C Tillman

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	150.00	User Defined Unit	3.44	150,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	12			**Operational Year**	2026
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Library = MPB
General Light Industry = AWFP
User Defined = Levee

Construction Phase - Project Specific Schedule

Off-road Equipment -

Off-road Equipment - Project Specific Eq. List

Off-road Equipment - Project Specific Eq. List

Trips and VMT - Project Specific Worker and truck Trips

Demolition -

Grading - Material export over four months, grading over one month as default acres = 10

Architectural Coating - Building footage times two

Vehicle Trips - Project Specific Trip Data

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Construction Off-road Equipment Mitigation - Commit to tier three

On-road Fugitive Dust -

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Parking	3024	0
tblLandUse	BuildingSpaceSquareFeet	0.00	150,000.00
tblLandUse	LandUseSquareFeet	0.00	150,000.00
tblLandUse	LotAcreage	0.00	3.44
tblProjectCharacteristics	OperationalYear	2018	2026
tblTripsAndVMT	VendorTripNumber	65.00	57.00
tblTripsAndVMT	WorkerTripNumber	167.00	146.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2017	0.1292	1.1262	0.8305	1.6700e-003	0.1112	0.0598	0.1710	0.0460	0.0558	0.1018	0.0000	152.6444	152.6444	0.0257	0.0000	153.2874
2018	0.3662	3.0440	2.6355	5.7900e-003	0.1910	0.1525	0.3435	0.0515	0.1434	0.1949	0.0000	527.2324	527.2324	0.0723	0.0000	529.0387
Maximum	**0.3662**	**3.0440**	**2.6355**	**5.7900e-003**	**0.1910**	**0.1525**	**0.3435**	**0.0515**	**0.1434**	**0.1949**	**0.0000**	**527.2324**	**527.2324**	**0.0723**	**0.0000**	**529.0387**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2017	0.1292	1.1262	0.8305	1.6700e-003	0.0674	0.0598	0.1272	0.0235	0.0558	0.0793	0.0000	152.6443	152.6443	0.0257	0.0000	153.2873
2018	0.3662	3.0440	2.6355	5.7900e-003	0.1910	0.1525	0.3435	0.0515	0.1434	0.1949	0.0000	527.2321	527.2321	0.0723	0.0000	529.0385
Maximum	**0.3662**	**3.0440**	**2.6355**	**5.7900e-003**	**0.1910**	**0.1525**	**0.3435**	**0.0515**	**0.1434**	**0.1949**	**0.0000**	**527.2321**	**527.2321**	**0.0723**	**0.0000**	**529.0385**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**14.49**	**0.00**	**8.51**	**23.08**	**0.00**	**7.59**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		Highest		

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.7029	2.0000e-005	1.9100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.7200e-003	3.7200e-003	1.0000e-005	0.0000	3.9600e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	48.0642	0.0000	48.0642	2.8405	0.0000	119.0770
Water						0.0000	0.0000		0.0000	0.0000	13.0065	304.1319	317.1384	1.3431	0.0330	360.5579
Total	**0.7029**	**2.0000e-005**	**1.9100e-003**	**0.0000**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**61.0707**	**304.1356**	**365.2063**	**4.1836**	**0.0330**	**479.6389**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.7029	2.0000e-005	1.9100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.7200e-003	3.7200e-003	1.0000e-005	0.0000	3.9600e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	48.0642	0.0000	48.0642	2.8405	0.0000	119.0770
Water						0.0000	0.0000		0.0000	0.0000	13.0065	304.1319	317.1384	1.3431	0.0330	360.5579
Total	**0.7029**	**2.0000e-005**	**1.9100e-003**	**0.0000**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**61.0707**	**304.1356**	**365.2063**	**4.1836**	**0.0330**	**479.6389**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Levee Grading	Grading	10/1/2017	10/28/2017	5	20	
2	Levee Construction	Building Construction	10/29/2017	9/30/2018	5	240	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
	Air Compressors	1	6.00	78	0.48
	Air Compressors	1	6.00	78	0.48
	Cranes	1	7.00	231	0.29
	Cranes	1	7.00	231	0.29
	Cranes	1	7.00	231	0.29
	Excavators	1	8.00	158	0.38
	Excavators	1	8.00	158	0.38
	Excavators	2	8.00	158	0.38
	Forklifts	3	8.00	89	0.20
	Forklifts	3	8.00	89	0.20
	Forklifts	2	8.00	89	0.20
	Generator Sets	1	8.00	84	0.74
	Generator Sets	1	8.00	84	0.74
	Graders	1	8.00	187	0.41
	Graders	1	8.00	187	0.41
	Rubber Tired Dozers	1	8.00	247	0.40
	Rubber Tired Dozers	1	8.00	247	0.40
	Tractors/Loaders/Backhoes	3	7.00	97	0.37
	Tractors/Loaders/Backhoes	3	7.00	97	0.37

	Tractors/Loaders/Backhoes	3	8.00	97	0.37
	Tractors/Loaders/Backhoes	3	8.00	97	0.37
	Tractors/Loaders/Backhoes	2	7.00	97	0.37
	Welders	1	8.00	46	0.45
	Welders	1	8.00	46	0.45
Levee Grading	Excavators	1	8.00	158	0.38
Levee Grading	Graders	1	8.00	187	0.41
Levee Grading	Rubber Tired Dozers	1	8.00	247	0.40
Levee Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Levee Construction	Cranes	1	7.00	231	0.29
Levee Construction	Forklifts	3	8.00	89	0.20
Levee Construction	Generator Sets	1	8.00	84	0.74
Levee Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Levee Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Levee Grading	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Levee Construction	9	146.00	57.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Levee Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0655	0.0000	0.0655	0.0337	0.0000	0.0337	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0307	0.3389	0.1710	3.0000e-004		0.0178	0.0178		0.0164	0.0164	0.0000	27.5595	27.5595	8.4400e-003	0.0000	27.7706
Total	**0.0307**	**0.3389**	**0.1710**	**3.0000e-004**	**0.0655**	**0.0178**	**0.0833**	**0.0337**	**0.0164**	**0.0500**	**0.0000**	**27.5595**	**27.5595**	**8.4400e-003**	**0.0000**	**27.7706**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.4000e-004	8.2000e-004	8.7500e-003	2.0000e-005	1.6400e-003	2.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.6793	1.6793	7.0000e-005	0.0000	1.6810
Total	**9.4000e-004**	**8.2000e-004**	**8.7500e-003**	**2.0000e-005**	**1.6400e-003**	**2.0000e-005**	**1.6600e-003**	**4.4000e-004**	**1.0000e-005**	**4.5000e-004**	**0.0000**	**1.6793**	**1.6793**	**7.0000e-005**	**0.0000**	**1.6810**

3.2 Levee Grading - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0217	0.0000	0.0217	0.0112	0.0000	0.0112	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0307	0.3389	0.1710	3.0000e-004		0.0178	0.0178		0.0164	0.0164	0.0000	27.5594	27.5594	8.4400e-003	0.0000	27.7705
Total	**0.0307**	**0.3389**	**0.1710**	**3.0000e-004**	**0.0217**	**0.0178**	**0.0395**	**0.0112**	**0.0164**	**0.0275**	**0.0000**	**27.5594**	**27.5594**	**8.4400e-003**	**0.0000**	**27.7705**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.4000e-004	8.2000e-004	8.7500e-003	2.0000e-005	1.6400e-003	2.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.6793	1.6793	7.0000e-005	0.0000	1.6810
Total	**9.4000e-004**	**8.2000e-004**	**8.7500e-003**	**2.0000e-005**	**1.6400e-003**	**2.0000e-005**	**1.6600e-003**	**4.4000e-004**	**1.0000e-005**	**4.5000e-004**	**0.0000**	**1.6793**	**1.6793**	**7.0000e-005**	**0.0000**	**1.6810**

3.3 Levee Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0701	0.5975	0.4091	6.1000e-004		0.0402	0.0402		0.0378	0.0378	0.0000	54.1109	54.1109	0.0133	0.0000	54.4442
Total	**0.0701**	**0.5975**	**0.4091**	**6.1000e-004**		**0.0402**	**0.0402**		**0.0378**	**0.0378**	**0.0000**	**54.1109**	**54.1109**	**0.0133**	**0.0000**	**54.4442**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.8100e-003	0.1711	0.0499	3.4000e-004	8.0800e-003	1.4100e-003	9.4900e-003	2.3300e-003	1.3500e-003	3.6800e-003	0.0000	32.5193	32.5193	2.3400e-003	0.0000	32.5779
Worker	0.0206	0.0179	0.1917	4.1000e-004	0.0360	3.4000e-004	0.0363	9.5600e-003	3.2000e-004	9.8800e-003	0.0000	36.7755	36.7755	1.5300e-003	0.0000	36.8139
Total	**0.0275**	**0.1890**	**0.2416**	**7.5000e-004**	**0.0441**	**1.7500e-003**	**0.0458**	**0.0119**	**1.6700e-003**	**0.0136**	**0.0000**	**69.2948**	**69.2948**	**3.8700e-003**	**0.0000**	**69.3917**

3.3 Levee Construction - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0701	0.5975	0.4091	6.1000e-004		0.0402	0.0402		0.0378	0.0378	0.0000	54.1108	54.1108	0.0133	0.0000	54.4441
Total	**0.0701**	**0.5975**	**0.4091**	**6.1000e-004**		**0.0402**	**0.0402**		**0.0378**	**0.0378**	**0.0000**	**54.1108**	**54.1108**	**0.0133**	**0.0000**	**54.4441**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.8100e-003	0.1711	0.0499	3.4000e-004	8.0800e-003	1.4100e-003	9.4900e-003	2.3300e-003	1.3500e-003	3.6800e-003	0.0000	32.5193	32.5193	2.3400e-003	0.0000	32.5779
Worker	0.0206	0.0179	0.1917	4.1000e-004	0.0360	3.4000e-004	0.0363	9.5600e-003	3.2000e-004	9.8800e-003	0.0000	36.7755	36.7755	1.5300e-003	0.0000	36.8139
Total	**0.0275**	**0.1890**	**0.2416**	**7.5000e-004**	**0.0441**	**1.7500e-003**	**0.0458**	**0.0119**	**1.6700e-003**	**0.0136**	**0.0000**	**69.2948**	**69.2948**	**3.8700e-003**	**0.0000**	**69.3917**

3.3 Levee Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2613	2.2805	1.7141	2.6200e-003		0.1462	0.1462		0.1375	0.1375	0.0000	231.8231	231.8231	0.0568	0.0000	233.2430
Total	**0.2613**	**2.2805**	**1.7141**	**2.6200e-003**		**0.1462**	**0.1462**		**0.1375**	**0.1375**	**0.0000**	**231.8231**	**231.8231**	**0.0568**	**0.0000**	**233.2430**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0260	0.6960	0.1957	1.4500e-003	0.0350	4.8300e-003	0.0398	0.0101	4.6200e-003	0.0147	0.0000	140.4194	140.4194	9.6300e-003	0.0000	140.6602
Worker	0.0789	0.0675	0.7257	1.7200e-003	0.1560	1.4200e-003	0.1574	0.0414	1.3100e-003	0.0427	0.0000	154.9899	154.9899	5.8300e-003	0.0000	155.1356
Total	**0.1049**	**0.7635**	**0.9214**	**3.1700e-003**	**0.1910**	**6.2500e-003**	**0.1973**	**0.0515**	**5.9300e-003**	**0.0575**	**0.0000**	**295.4093**	**295.4093**	**0.0155**	**0.0000**	**295.7958**

3.3 Levee Construction - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2613	2.2805	1.7141	2.6200e-003		0.1462	0.1462		0.1375	0.1375	0.0000	231.8228	231.8228	0.0568	0.0000	233.2427
Total	**0.2613**	**2.2805**	**1.7141**	**2.6200e-003**		**0.1462**	**0.1462**		**0.1375**	**0.1375**	**0.0000**	**231.8228**	**231.8228**	**0.0568**	**0.0000**	**233.2427**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0260	0.6960	0.1957	1.4500e-003	0.0350	4.8300e-003	0.0398	0.0101	4.6200e-003	0.0147	0.0000	140.4194	140.4194	9.6300e-003	0.0000	140.6602
Worker	0.0789	0.0675	0.7257	1.7200e-003	0.1560	1.4200e-003	0.1574	0.0414	1.3100e-003	0.0427	0.0000	154.9899	154.9899	5.8300e-003	0.0000	155.1356
Total	**0.1049**	**0.7635**	**0.9214**	**3.1700e-003**	**0.1910**	**6.2500e-003**	**0.1973**	**0.0515**	**5.9300e-003**	**0.0575**	**0.0000**	**295.4093**	**295.4093**	**0.0155**	**0.0000**	**295.7958**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Industrial	0.544210	0.044379	0.208611	0.117175	0.014456	0.006301	0.020907	0.032661	0.002589	0.001903	0.005267	0.000705	0.000834

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.7029	2.0000e-005	1.9100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.7200e-003	3.7200e-003	1.0000e-005	0.0000	3.9600e-003
Unmitigated	0.7029	2.0000e-005	1.9100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.7200e-003	3.7200e-003	1.0000e-005	0.0000	3.9600e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1607					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5420					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.8000e-004	2.0000e-005	1.9100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.7200e-003	3.7200e-003	1.0000e-005	0.0000	3.9600e-003
Total	**0.7029**	**2.0000e-005**	**1.9100e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**3.7200e-003**	**3.7200e-003**	**1.0000e-005**	**0.0000**	**3.9600e-003**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1607					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5420					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.8000e-004	2.0000e-005	1.9100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.7200e-003	3.7200e-003	1.0000e-005	0.0000	3.9600e-003
Total	**0.7029**	**2.0000e-005**	**1.9100e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**3.7200e-003**	**3.7200e-003**	**1.0000e-005**	**0.0000**	**3.9600e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	317.1384	1.3431	0.0330	360.5579
Unmitigated	317.1384	1.3431	0.0330	360.5579

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	40.293 / 0	304.9959	1.3199	0.0324	347.6561
Library	0.704 / 1.10113	12.1425	0.0232	6.0000e-004	12.9018
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**317.1384**	**1.3431**	**0.0330**	**360.5579**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	40.293 / 0	304.9959	1.3199	0.0324	347.6561
Library	0.704 / 1.10113	12.1425	0.0232	6.0000e-004	12.9018
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**317.1384**	**1.3431**	**0.0330**	**360.5579**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	48.0642	2.8405	0.0000	119.0770
Unmitigated	48.0642	2.8405	0.0000	119.0770

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	216.06	43.8582	2.5920	0.0000	108.6569
Library	20.72	4.2060	0.2486	0.0000	10.4201
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**48.0642**	**2.8405**	**0.0000**	**119.0770**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	216.06	43.8582	2.5920	0.0000	108.6569
Library	20.72	4.2060	0.2486	0.0000	10.4201
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**48.0642**	**2.8405**	**0.0000**	**119.0770**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Donald C Tillman

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Library	22.50	1000sqft	0.52	22,500.00	0
Parking Lot	126.00	Space	1.13	50,400.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	12			**Operational Year**	2026
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Library = MPB
General Light Industry = AWFP
User Defined = Levee

Construction Phase - Project Specific Schedule

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - Project Specific Eq. List

Off-road Equipment - e

Trips and VMT - Project Specific Worker and truck Trips

Demolition -

Grading - Material export over four months, grading over one month as default acres = 10

Architectural Coating - Building footage times two

Vehicle Trips - Project Specific Trip Data

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Water And Wastewater -

Construction Off-road Equipment Mitigation - Commit to tier three

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	11,250.00	36,400.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	33,750.00	36,400.00
tblArchitecturalCoating	ConstArea_Parking	3,024.00	0.00
tblAreaCoating	Area_Nonresidential_Exterior	11250	173370
tblAreaCoating	Area_Nonresidential_Interior	33750	520110
tblAreaCoating	Area_Parking	3024	0
tblConstructionPhase	NumDays	10.00	20.00

tblConstructionPhase	NumDays	200.00	352.00
tblConstructionPhase	NumDays	4.00	20.00
tblGrading	MaterialExported	0.00	752.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	6.00	7.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	7.00
tblProjectCharacteristics	OperationalYear	2018	2026
tblTripsAndVMT	HaulingTripNumber	74.00	75.00
tblTripsAndVMT	VendorTripNumber	12.00	57.00
tblTripsAndVMT	WorkerTripNumber	31.00	146.00
tblTripsAndVMT	WorkerTripNumber	6.00	29.00
tblVehicleTrips	ST_TR	46.55	8.90
tblVehicleTrips	SU_TR	25.49	8.90
tblVehicleTrips	WD_TR	56.24	8.90

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.2148	1.8330	2.0984	5.2100e-003	0.2392	0.0705	0.3097	0.0805	0.0662	0.1467	0.0000	468.4538	468.4538	0.0664	0.0000	470.1126
2024	0.3589	1.5909	1.9541	4.9400e-003	0.1765	0.0564	0.2330	0.0476	0.0531	0.1007	0.0000	444.3339	444.3339	0.0579	0.0000	445.7823
Maximum	**0.3589**	**1.8330**	**2.0984**	**5.2100e-003**	**0.2392**	**0.0705**	**0.3097**	**0.0805**	**0.0662**	**0.1467**	**0.0000**	**468.4538**	**468.4538**	**0.0664**	**0.0000**	**470.1126**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.2148	1.8330	2.0984	5.2100e-003	0.1954	0.0705	0.2659	0.0580	0.0662	0.1242	0.0000	468.4535	468.4535	0.0664	0.0000	470.1123
2024	0.3589	1.5909	1.9541	4.9400e-003	0.1765	0.0564	0.2330	0.0476	0.0531	0.1007	0.0000	444.3336	444.3336	0.0579	0.0000	445.7821
Maximum	**0.3589**	**1.8330**	**2.0984**	**5.2100e-003**	**0.1954**	**0.0705**	**0.2659**	**0.0580**	**0.0662**	**0.1242**	**0.0000**	**468.4535**	**468.4535**	**0.0664**	**0.0000**	**470.1123**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**10.53**	**0.00**	**8.07**	**17.56**	**0.00**	**9.10**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
22	**1-2-2023**	**4-1-2023**	0.0073	0.0073
23	**4-2-2023**	**7-1-2023**	0.1965	0.1965
		Highest	0.1965	0.1965

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.2455	2.0000e-005	1.8900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.6900e-003	3.6900e-003	1.0000e-005	0.0000	3.9300e-003
Energy	2.2000e-003	0.0200	0.0168	1.2000e-004		1.5200e-003	1.5200e-003		1.5200e-003	1.5200e-003	0.0000	188.2396	188.2396	4.3500e-003	1.2100e-003	188.7098
Mobile	0.0427	0.2051	0.5195	2.1100e-003	0.1918	1.6100e-003	0.1934	0.0514	1.4900e-003	0.0529	0.0000	195.7133	195.7133	9.1200e-003	0.0000	195.9413
Waste						0.0000	0.0000		0.0000	0.0000	4.2060	0.0000	4.2060	0.2486	0.0000	10.4201
Water						0.0000	0.0000		0.0000	0.0000	0.2234	11.9192	12.1425	0.0232	6.0000e-004	12.9018
Total	**0.2904**	**0.2251**	**0.5382**	**2.2300e-003**	**0.1918**	**3.1400e-003**	**0.1950**	**0.0514**	**3.0200e-003**	**0.0544**	**4.4293**	**395.8758**	**400.3051**	**0.2853**	**1.8100e-003**	**407.9770**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.2455	2.0000e-005	1.8900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.6900e-003	3.6900e-003	1.0000e-005	0.0000	3.9300e-003
Energy	2.2000e-003	0.0200	0.0168	1.2000e-004		1.5200e-003	1.5200e-003		1.5200e-003	1.5200e-003	0.0000	188.2396	188.2396	4.3500e-003	1.2100e-003	188.7098
Mobile	0.0427	0.2051	0.5195	2.1100e-003	0.1918	1.6100e-003	0.1934	0.0514	1.4900e-003	0.0529	0.0000	195.7133	195.7133	9.1200e-003	0.0000	195.9413
Waste						0.0000	0.0000		0.0000	0.0000	4.2060	0.0000	4.2060	0.2486	0.0000	10.4201
Water						0.0000	0.0000		0.0000	0.0000	0.2234	11.9192	12.1425	0.0232	6.0000e-004	12.9018
Total	**0.2904**	**0.2251**	**0.5382**	**2.2300e-003**	**0.1918**	**3.1400e-003**	**0.1950**	**0.0514**	**3.0200e-003**	**0.0544**	**4.4293**	**395.8758**	**400.3051**	**0.2853**	**1.8100e-003**	**407.9770**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	MPB Grading	Grading	4/1/2023	4/28/2023	5	20	
2	MPB Construction	Building Construction	4/29/2023	9/3/2024	5	352	
3	MPB Coating	Architectural Coating	9/4/2024	10/1/2024	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 1.13

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 36,400; Non-Residential Outdoor: 36,400; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
	Air Compressors	1	6.00	78	0.48
	Air Compressors	1	6.00	78	0.48
	Cranes	1	7.00	231	0.29
	Cranes	1	7.00	231	0.29
	Cranes	1	7.00	231	0.29
	Excavators	1	8.00	158	0.38
	Excavators	1	8.00	158	0.38
	Excavators	2	8.00	158	0.38
	Forklifts	3	8.00	89	0.20
	Forklifts	3	8.00	89	0.20
	Forklifts	2	8.00	89	0.20
	Generator Sets	1	8.00	84	0.74
	Generator Sets	1	8.00	84	0.74
	Graders	1	8.00	187	0.41
	Graders	1	8.00	187	0.41
	Rubber Tired Dozers	1	8.00	247	0.40
	Rubber Tired Dozers	1	8.00	247	0.40
	Tractors/Loaders/Backhoes	3	7.00	97	0.37

	Tractors/Loaders/Backhoes	3	7.00	97	0.37
	Tractors/Loaders/Backhoes	3	8.00	97	0.37
	Tractors/Loaders/Backhoes	3	8.00	97	0.37
	Tractors/Loaders/Backhoes	2	7.00	97	0.37
	Welders	1	8.00	46	0.45
	Welders	1	8.00	46	0.45
MPB Grading	Excavators	1	8.00	158	0.38
MPB Grading	Graders	1	8.00	187	0.41
MPB Grading	Rubber Tired Dozers	1	8.00	247	0.40
MPB Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
MPB Construction	Cranes	1	7.00	231	0.29
MPB Construction	Forklifts	3	8.00	89	0.20
MPB Construction	Generator Sets	1	8.00	84	0.74
MPB Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
MPB Construction	Welders	1	8.00	46	0.45
MPB Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
MPB Grading	6	15.00	0.00	75.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
MPB Construction	9	146.00	57.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
MPB Coating	1	29.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 MPB Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0655	0.0000	0.0655	0.0337	0.0000	0.0337	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0171	0.1794	0.1475	3.0000e-004		7.7500e-003	7.7500e-003		7.1300e-003	7.1300e-003	0.0000	26.0606	26.0606	8.4300e-003	0.0000	26.2713
Total	**0.0171**	**0.1794**	**0.1475**	**3.0000e-004**	**0.0655**	**7.7500e-003**	**0.0733**	**0.0337**	**7.1300e-003**	**0.0408**	**0.0000**	**26.0606**	**26.0606**	**8.4300e-003**	**0.0000**	**26.2713**

3.2 MPB Grading - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.0000e-004	6.3200e-003	2.1700e-003	3.0000e-005	6.4000e-004	1.0000e-005	6.6000e-004	1.8000e-004	1.0000e-005	1.9000e-004	0.0000	2.7070	2.7070	1.8000e-004	0.0000	2.7115
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.7000e-004	4.1000e-004	4.8100e-003	2.0000e-005	1.6400e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.3789	1.3789	4.0000e-005	0.0000	1.3798
Total	**7.7000e-004**	**6.7300e-003**	**6.9800e-003**	**5.0000e-005**	**2.2800e-003**	**2.0000e-005**	**2.3200e-003**	**6.2000e-004**	**2.0000e-005**	**6.4000e-004**	**0.0000**	**4.0858**	**4.0858**	**2.2000e-004**	**0.0000**	**4.0913**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0217	0.0000	0.0217	0.0112	0.0000	0.0112	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0171	0.1794	0.1475	3.0000e-004		7.7500e-003	7.7500e-003		7.1300e-003	7.1300e-003	0.0000	26.0606	26.0606	8.4300e-003	0.0000	26.2713
Total	**0.0171**	**0.1794**	**0.1475**	**3.0000e-004**	**0.0217**	**7.7500e-003**	**0.0295**	**0.0112**	**7.1300e-003**	**0.0183**	**0.0000**	**26.0606**	**26.0606**	**8.4300e-003**	**0.0000**	**26.2713**

3.2 MPB Grading - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.0000e-004	6.3200e-003	2.1700e-003	3.0000e-005	6.4000e-004	1.0000e-005	6.6000e-004	1.8000e-004	1.0000e-005	1.9000e-004	0.0000	2.7070	2.7070	1.8000e-004	0.0000	2.7115
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.7000e-004	4.1000e-004	4.8100e-003	2.0000e-005	1.6400e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.3789	1.3789	4.0000e-005	0.0000	1.3798
Total	**7.7000e-004**	**6.7300e-003**	**6.9800e-003**	**5.0000e-005**	**2.2800e-003**	**2.0000e-005**	**2.3200e-003**	**6.2000e-004**	**2.0000e-005**	**6.4000e-004**	**0.0000**	**4.0858**	**4.0858**	**2.2000e-004**	**0.0000**	**4.0913**

3.3 MPB Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1376	1.2587	1.4214	2.3600e-003		0.0612	0.0612		0.0576	0.0576	0.0000	202.8292	202.8292	0.0483	0.0000	204.0354
Total	**0.1376**	**1.2587**	**1.4214**	**2.3600e-003**		**0.0612**	**0.0612**		**0.0576**	**0.0576**	**0.0000**	**202.8292**	**202.8292**	**0.0483**	**0.0000**	**204.0354**

3.3 MPB Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0108	0.3533	0.1133	1.2100e-003	0.0314	4.1000e-004	0.0318	9.0700e-003	3.9000e-004	9.4600e-003	0.0000	118.0454	118.0454	6.4300e-003	0.0000	118.2062
Worker	0.0485	0.0350	0.4093	1.3000e-003	0.1400	1.0900e-003	0.1411	0.0372	1.0000e-003	0.0382	0.0000	117.4328	117.4328	3.0200e-003	0.0000	117.5084
Total	**0.0593**	**0.3883**	**0.5226**	**2.5100e-003**	**0.1714**	**1.5000e-003**	**0.1729**	**0.0463**	**1.3900e-003**	**0.0476**	**0.0000**	**235.4782**	**235.4782**	**9.4500e-003**	**0.0000**	**235.7146**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1376	1.2587	1.4214	2.3600e-003		0.0612	0.0612		0.0576	0.0576	0.0000	202.8289	202.8289	0.0483	0.0000	204.0352
Total	**0.1376**	**1.2587**	**1.4214**	**2.3600e-003**		**0.0612**	**0.0612**		**0.0576**	**0.0576**	**0.0000**	**202.8289**	**202.8289**	**0.0483**	**0.0000**	**204.0352**

3.3 MPB Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0108	0.3533	0.1133	1.2100e-003	0.0314	4.1000e-004	0.0318	9.0700e-003	3.9000e-004	9.4600e-003	0.0000	118.0454	118.0454	6.4300e-003	0.0000	118.2062
Worker	0.0485	0.0350	0.4093	1.3000e-003	0.1400	1.0900e-003	0.1411	0.0372	1.0000e-003	0.0382	0.0000	117.4328	117.4328	3.0200e-003	0.0000	117.5084
Total	**0.0593**	**0.3883**	**0.5226**	**2.5100e-003**	**0.1714**	**1.5000e-003**	**0.1729**	**0.0463**	**1.3900e-003**	**0.0476**	**0.0000**	**235.4782**	**235.4782**	**9.4500e-003**	**0.0000**	**235.7146**

3.3 MPB Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1302	1.1898	1.4308	2.3900e-003		0.0543	0.0543		0.0511	0.0511	0.0000	205.1865	205.1865	0.0485	0.0000	206.3995
Total	**0.1302**	**1.1898**	**1.4308**	**2.3900e-003**		**0.0543**	**0.0543**		**0.0511**	**0.0511**	**0.0000**	**205.1865**	**205.1865**	**0.0485**	**0.0000**	**206.3995**

3.3 MPB Construction - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0107	0.3560	0.1111	1.2200e-003	0.0318	4.1000e-004	0.0322	9.1700e-003	3.9000e-004	9.5600e-003	0.0000	118.9188	118.9188	6.4100e-003	0.0000	119.0791
Worker	0.0464	0.0323	0.3855	1.2700e-003	0.1416	1.0800e-003	0.1427	0.0376	1.0000e-003	0.0386	0.0000	115.0922	115.0922	2.8000e-003	0.0000	115.1623
Total	**0.0571**	**0.3883**	**0.4966**	**2.4900e-003**	**0.1734**	**1.4900e-003**	**0.1749**	**0.0468**	**1.3900e-003**	**0.0482**	**0.0000**	**234.0110**	**234.0110**	**9.2100e-003**	**0.0000**	**234.2413**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1302	1.1898	1.4308	2.3900e-003		0.0543	0.0543		0.0511	0.0511	0.0000	205.1862	205.1862	0.0485	0.0000	206.3992
Total	**0.1302**	**1.1898**	**1.4308**	**2.3900e-003**		**0.0543**	**0.0543**		**0.0511**	**0.0511**	**0.0000**	**205.1862**	**205.1862**	**0.0485**	**0.0000**	**206.3992**

3.3 MPB Construction - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0107	0.3560	0.1111	1.2200e-003	0.0318	4.1000e-004	0.0322	9.1700e-003	3.9000e-004	9.5600e-003	0.0000	118.9188	118.9188	6.4100e-003	0.0000	119.0791
Worker	0.0464	0.0323	0.3855	1.2700e-003	0.1416	1.0800e-003	0.1427	0.0376	1.0000e-003	0.0386	0.0000	115.0922	115.0922	2.8000e-003	0.0000	115.1623
Total	**0.0571**	**0.3883**	**0.4966**	**2.4900e-003**	**0.1734**	**1.4900e-003**	**0.1749**	**0.0468**	**1.3900e-003**	**0.0482**	**0.0000**	**234.0110**	**234.0110**	**9.2100e-003**	**0.0000**	**234.2413**

3.4 MPB Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.1687					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.8100e-003	0.0122	0.0181	3.0000e-005		6.1000e-004	6.1000e-004		6.1000e-004	6.1000e-004	0.0000	2.5533	2.5533	1.4000e-004	0.0000	2.5569
Total	**0.1705**	**0.0122**	**0.0181**	**3.0000e-005**		**6.1000e-004**	**6.1000e-004**		**6.1000e-004**	**6.1000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.4000e-004**	**0.0000**	**2.5569**

3.4 MPB Coating - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0400e-003	7.2000e-004	8.6500e-003	3.0000e-005	3.1800e-003	2.0000e-005	3.2000e-003	8.4000e-004	2.0000e-005	8.7000e-004	0.0000	2.5831	2.5831	6.0000e-005	0.0000	2.5847
Total	**1.0400e-003**	**7.2000e-004**	**8.6500e-003**	**3.0000e-005**	**3.1800e-003**	**2.0000e-005**	**3.2000e-003**	**8.4000e-004**	**2.0000e-005**	**8.7000e-004**	**0.0000**	**2.5831**	**2.5831**	**6.0000e-005**	**0.0000**	**2.5847**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.1687					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.8100e-003	0.0122	0.0181	3.0000e-005		6.1000e-004	6.1000e-004		6.1000e-004	6.1000e-004	0.0000	2.5533	2.5533	1.4000e-004	0.0000	2.5568
Total	**0.1705**	**0.0122**	**0.0181**	**3.0000e-005**		**6.1000e-004**	**6.1000e-004**		**6.1000e-004**	**6.1000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.4000e-004**	**0.0000**	**2.5568**

3.4 MPB Coating - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0400e-003	7.2000e-004	8.6500e-003	3.0000e-005	3.1800e-003	2.0000e-005	3.2000e-003	8.4000e-004	2.0000e-005	8.7000e-004	0.0000	2.5831	2.5831	6.0000e-005	0.0000	2.5847
Total	**1.0400e-003**	**7.2000e-004**	**8.6500e-003**	**3.0000e-005**	**3.1800e-003**	**2.0000e-005**	**3.2000e-003**	**8.4000e-004**	**2.0000e-005**	**8.7000e-004**	**0.0000**	**2.5831**	**2.5831**	**6.0000e-005**	**0.0000**	**2.5847**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0427	0.2051	0.5195	2.1100e-003	0.1918	1.6100e-003	0.1934	0.0514	1.4900e-003	0.0529	0.0000	195.7133	195.7133	9.1200e-003	0.0000	195.9413
Unmitigated	0.0427	0.2051	0.5195	2.1100e-003	0.1918	1.6100e-003	0.1934	0.0514	1.4900e-003	0.0529	0.0000	195.7133	195.7133	9.1200e-003	0.0000	195.9413

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Parking Lot	0.00	0.00	0.00		
Library	200.25	200.25	200.25	505,568	505,568
Total	200.25	200.25	200.25	505,568	505,568

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Library	16.60	8.40	6.90	52.00	43.00	5.00	44	44	12

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Library	0.544210	0.044379	0.208611	0.117175	0.014456	0.006301	0.020907	0.032661	0.002589	0.001903	0.005267	0.000705	0.000834
Parking Lot	0.544210	0.044379	0.208611	0.117175	0.014456	0.006301	0.020907	0.032661	0.002589	0.001903	0.005267	0.000705	0.000834

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	166.4351	166.4351	3.9300e-003	8.1000e-004	166.7758
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	166.4351	166.4351	3.9300e-003	8.1000e-004	166.7758
NaturalGas Mitigated	2.2000e-003	0.0200	0.0168	1.2000e-004		1.5200e-003	1.5200e-003		1.5200e-003	1.5200e-003	0.0000	21.8045	21.8045	4.2000e-004	4.0000e-004	21.9340
NaturalGas Unmitigated	2.2000e-003	0.0200	0.0168	1.2000e-004		1.5200e-003	1.5200e-003		1.5200e-003	1.5200e-003	0.0000	21.8045	21.8045	4.2000e-004	4.0000e-004	21.9340

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Library	408600	2.2000e-003	0.0200	0.0168	1.2000e-004		1.5200e-003	1.5200e-003		1.5200e-003	1.5200e-003	0.0000	21.8045	21.8045	4.2000e-004	4.0000e-004	21.9340
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**2.2000e-003**	**0.0200**	**0.0168**	**1.2000e-004**		**1.5200e-003**	**1.5200e-003**		**1.5200e-003**	**1.5200e-003**	**0.0000**	**21.8045**	**21.8045**	**4.2000e-004**	**4.0000e-004**	**21.9340**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Library	408600	2.2000e-003	0.0200	0.0168	1.2000e-004		1.5200e-003	1.5200e-003		1.5200e-003	1.5200e-003	0.0000	21.8045	21.8045	4.2000e-004	4.0000e-004	21.9340
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**2.2000e-003**	**0.0200**	**0.0168**	**1.2000e-004**		**1.5200e-003**	**1.5200e-003**		**1.5200e-003**	**1.5200e-003**	**0.0000**	**21.8045**	**21.8045**	**4.2000e-004**	**4.0000e-004**	**21.9340**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Library	254475	141.7328	3.3500e-003	6.9000e-004	142.0229
Parking Lot	44352	24.7024	5.8000e-004	1.2000e-004	24.7529
Total		**166.4352**	**3.9300e-003**	**8.1000e-004**	**166.7758**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Library	254475	141.7328	3.3500e-003	6.9000e-004	142.0229
Parking Lot	44352	24.7024	5.8000e-004	1.2000e-004	24.7529
Total		**166.4352**	**3.9300e-003**	**8.1000e-004**	**166.7758**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.2455	2.0000e-005	1.8900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.6900e-003	3.6900e-003	1.0000e-005	0.0000	3.9300e-003
Unmitigated	0.2455	2.0000e-005	1.8900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.6900e-003	3.6900e-003	1.0000e-005	0.0000	3.9300e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1607					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0846					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.7000e-004	2.0000e-005	1.8900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.6900e-003	3.6900e-003	1.0000e-005	0.0000	3.9300e-003
Total	**0.2454**	**2.0000e-005**	**1.8900e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**3.6900e-003**	**3.6900e-003**	**1.0000e-005**	**0.0000**	**3.9300e-003**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1607					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0846					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.7000e-004	2.0000e-005	1.8900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.6900e-003	3.6900e-003	1.0000e-005	0.0000	3.9300e-003
Total	**0.2454**	**2.0000e-005**	**1.8900e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**3.6900e-003**	**3.6900e-003**	**1.0000e-005**	**0.0000**	**3.9300e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	12.1425	0.0232	6.0000e-004	12.9018
Unmitigated	12.1425	0.0232	6.0000e-004	12.9018

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Library	0.704 / 1.10113	12.1425	0.0232	6.0000e-004	12.9018
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**12.1425**	**0.0232**	**6.0000e-004**	**12.9018**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Library	0.704 / 1.10113	12.1425	0.0232	6.0000e-004	12.9018
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**12.1425**	**0.0232**	**6.0000e-004**	**12.9018**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	4.2060	0.2486	0.0000	10.4201
Unmitigated	4.2060	0.2486	0.0000	10.4201

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Library	20.72	4.2060	0.2486	0.0000	10.4201
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**4.2060**	**0.2486**	**0.0000**	**10.4201**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Library	20.72	4.2060	0.2486	0.0000	10.4201
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**4.2060**	**0.2486**	**0.0000**	**10.4201**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

3.0 Construction Detail

3.4 Vault Grading - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0655	0.0000	0.0655	0.0337	0.0000	0.0337	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.0400e-003	0.0325	0.0344	5.0000e-005		1.5800e-003	1.5800e-003		1.4500e-003	1.4500e-003	0.0000	4.9493	4.9493	1.5400e-003	0.0000	4.9878
Total	**3.0400e-003**	**0.0325**	**0.0344**	**5.0000e-005**	**0.0655**	**1.5800e-003**	**0.0671**	**0.0337**	**1.4500e-003**	**0.0351**	**0.0000**	**4.9493**	**4.9493**	**1.5400e-003**	**0.0000**	**4.9878**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.0000e-004	3.3400e-003	6.9000e-004	1.0000e-005	1.7000e-004	1.0000e-005	1.8000e-004	5.0000e-005	1.0000e-005	6.0000e-005	0.0000	0.7888	0.7888	6.0000e-005	0.0000	0.7902
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7000e-004	1.5000e-004	1.6100e-003	0.0000	3.5000e-004	0.0000	3.5000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.3430	0.3430	1.0000e-005	0.0000	0.3433
Total	**2.7000e-004**	**3.4900e-003**	**2.3000e-003**	**1.0000e-005**	**5.2000e-004**	**1.0000e-005**	**5.3000e-004**	**1.4000e-004**	**1.0000e-005**	**1.5000e-004**	**0.0000**	**1.1317**	**1.1317**	**7.0000e-005**	**0.0000**	**1.1334**

3.4 Vault Grading - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0217	0.0000	0.0217	0.0112	0.0000	0.0112	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.0400e-003	0.0325	0.0344	5.0000e-005		1.5800e-003	1.5800e-003		1.4500e-003	1.4500e-003	0.0000	4.9493	4.9493	1.5400e-003	0.0000	4.9878
Total	**3.0400e-003**	**0.0325**	**0.0344**	**5.0000e-005**	**0.0217**	**1.5800e-003**	**0.0233**	**0.0112**	**1.4500e-003**	**0.0126**	**0.0000**	**4.9493**	**4.9493**	**1.5400e-003**	**0.0000**	**4.9878**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.0000e-004	3.3400e-003	6.9000e-004	1.0000e-005	1.7000e-004	1.0000e-005	1.8000e-004	5.0000e-005	1.0000e-005	6.0000e-005	0.0000	0.7888	0.7888	6.0000e-005	0.0000	0.7902
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7000e-004	1.5000e-004	1.6100e-003	0.0000	3.5000e-004	0.0000	3.5000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.3430	0.3430	1.0000e-005	0.0000	0.3433
Total	**2.7000e-004**	**3.4900e-003**	**2.3000e-003**	**1.0000e-005**	**5.2000e-004**	**1.0000e-005**	**5.3000e-004**	**1.4000e-004**	**1.0000e-005**	**1.5000e-004**	**0.0000**	**1.1317**	**1.1317**	**7.0000e-005**	**0.0000**	**1.1334**

3.7 Niwa Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0623	0.0000	0.0623	0.0320	0.0000	0.0320	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0603	0.5679	0.7520	1.6000e-003		0.0228	0.0228		0.0210	0.0210	0.0000	140.3675	140.3675	0.0454	0.0000	141.5024
Total	**0.0603**	**0.5679**	**0.7520**	**1.6000e-003**	**0.0623**	**0.0228**	**0.0851**	**0.0320**	**0.0210**	**0.0530**	**0.0000**	**140.3675**	**140.3675**	**0.0454**	**0.0000**	**141.5024**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.4500e-003	1.7700e-003	0.0207	7.0000e-005	7.0700e-003	5.0000e-005	7.1200e-003	1.8800e-003	5.0000e-005	1.9300e-003	0.0000	5.9291	5.9291	1.5000e-004	0.0000	5.9329
Total	**2.4500e-003**	**1.7700e-003**	**0.0207**	**7.0000e-005**	**7.0700e-003**	**5.0000e-005**	**7.1200e-003**	**1.8800e-003**	**5.0000e-005**	**1.9300e-003**	**0.0000**	**5.9291**	**5.9291**	**1.5000e-004**	**0.0000**	**5.9329**

3.7 Niwa Grading - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0206	0.0000	0.0206	0.0106	0.0000	0.0106	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0603	0.5679	0.7520	1.6000e-003		0.0228	0.0228		0.0210	0.0210	0.0000	140.3673	140.3673	0.0454	0.0000	141.5023
Total	**0.0603**	**0.5679**	**0.7520**	**1.6000e-003**	**0.0206**	**0.0228**	**0.0435**	**0.0106**	**0.0210**	**0.0316**	**0.0000**	**140.3673**	**140.3673**	**0.0454**	**0.0000**	**141.5023**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.4500e-003	1.7700e-003	0.0207	7.0000e-005	7.0700e-003	5.0000e-005	7.1200e-003	1.8800e-003	5.0000e-005	1.9300e-003	0.0000	5.9291	5.9291	1.5000e-004	0.0000	5.9329
Total	**2.4500e-003**	**1.7700e-003**	**0.0207**	**7.0000e-005**	**7.0700e-003**	**5.0000e-005**	**7.1200e-003**	**1.8800e-003**	**5.0000e-005**	**1.9300e-003**	**0.0000**	**5.9291**	**5.9291**	**1.5000e-004**	**0.0000**	**5.9329**

3.8 Vault Build - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0273	0.2762	0.2350	3.5000e-004		0.0150	0.0150		0.0138	0.0138	0.0000	31.2932	31.2932	9.9000e-003	0.0000	31.5407
Total	**0.0273**	**0.2762**	**0.2350**	**3.5000e-004**		**0.0150**	**0.0150**		**0.0138**	**0.0138**	**0.0000**	**31.2932**	**31.2932**	**9.9000e-003**	**0.0000**	**31.5407**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	7.0000e-005	2.1700e-003	4.6000e-004	1.0000e-005	1.6000e-004	1.0000e-005	1.7000e-004	4.0000e-005	1.0000e-005	5.0000e-005	0.0000	0.5336	0.5336	4.0000e-005	0.0000	0.5346
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0100e-003	8.5000e-004	9.1900e-003	2.0000e-005	2.2200e-003	2.0000e-005	2.2400e-003	5.9000e-004	2.0000e-005	6.1000e-004	0.0000	2.1331	2.1331	7.0000e-005	0.0000	2.1349
Total	**1.0800e-003**	**3.0200e-003**	**9.6500e-003**	**3.0000e-005**	**2.3800e-003**	**3.0000e-005**	**2.4100e-003**	**6.3000e-004**	**3.0000e-005**	**6.6000e-004**	**0.0000**	**2.6667**	**2.6667**	**1.1000e-004**	**0.0000**	**2.6694**

3.8 Vault Build - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0273	0.2762	0.2350	3.5000e-004		0.0150	0.0150		0.0138	0.0138	0.0000	31.2931	31.2931	9.9000e-003	0.0000	31.5407
Total	**0.0273**	**0.2762**	**0.2350**	**3.5000e-004**		**0.0150**	**0.0150**		**0.0138**	**0.0138**	**0.0000**	**31.2931**	**31.2931**	**9.9000e-003**	**0.0000**	**31.5407**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	7.0000e-005	2.1700e-003	4.6000e-004	1.0000e-005	1.6000e-004	1.0000e-005	1.7000e-004	4.0000e-005	1.0000e-005	5.0000e-005	0.0000	0.5336	0.5336	4.0000e-005	0.0000	0.5346
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0100e-003	8.5000e-004	9.1900e-003	2.0000e-005	2.2200e-003	2.0000e-005	2.2400e-003	5.9000e-004	2.0000e-005	6.1000e-004	0.0000	2.1331	2.1331	7.0000e-005	0.0000	2.1349
Total	**1.0800e-003**	**3.0200e-003**	**9.6500e-003**	**3.0000e-005**	**2.3800e-003**	**3.0000e-005**	**2.4100e-003**	**6.3000e-004**	**3.0000e-005**	**6.6000e-004**	**0.0000**	**2.6667**	**2.6667**	**1.1000e-004**	**0.0000**	**2.6694**

3.8 Vault Build - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0111	0.1090	0.1067	1.6000e-004		5.9000e-003	5.9000e-003		5.4300e-003	5.4300e-003	0.0000	14.0593	14.0593	4.5500e-003	0.0000	14.1729
Total	**0.0111**	**0.1090**	**0.1067**	**1.6000e-004**		**5.9000e-003**	**5.9000e-003**		**5.4300e-003**	**5.4300e-003**	**0.0000**	**14.0593**	**14.0593**	**4.5500e-003**	**0.0000**	**14.1729**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.0000e-005	9.3000e-004	2.1000e-004	0.0000	1.4000e-004	0.0000	1.5000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.2426	0.2426	2.0000e-005	0.0000	0.2430
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.3000e-004	3.5000e-004	3.8300e-003	1.0000e-005	1.0200e-003	1.0000e-005	1.0300e-003	2.7000e-004	1.0000e-005	2.8000e-004	0.0000	0.9499	0.9499	3.0000e-005	0.0000	0.9506
Total	**4.6000e-004**	**1.2800e-003**	**4.0400e-003**	**1.0000e-005**	**1.1600e-003**	**1.0000e-005**	**1.1800e-003**	**3.1000e-004**	**1.0000e-005**	**3.2000e-004**	**0.0000**	**1.1924**	**1.1924**	**5.0000e-005**	**0.0000**	**1.1936**

3.8 Vault Build - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0111	0.1090	0.1067	1.6000e-004		5.9000e-003	5.9000e-003		5.4300e-003	5.4300e-003	0.0000	14.0592	14.0592	4.5500e-003	0.0000	14.1729
Total	**0.0111**	**0.1090**	**0.1067**	**1.6000e-004**		**5.9000e-003**	**5.9000e-003**		**5.4300e-003**	**5.4300e-003**	**0.0000**	**14.0592**	**14.0592**	**4.5500e-003**	**0.0000**	**14.1729**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.0000e-005	9.3000e-004	2.1000e-004	0.0000	1.4000e-004	0.0000	1.5000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.2426	0.2426	2.0000e-005	0.0000	0.2430
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.3000e-004	3.5000e-004	3.8300e-003	1.0000e-005	1.0200e-003	1.0000e-005	1.0300e-003	2.7000e-004	1.0000e-005	2.8000e-004	0.0000	0.9499	0.9499	3.0000e-005	0.0000	0.9506
Total	**4.6000e-004**	**1.2800e-003**	**4.0400e-003**	**1.0000e-005**	**1.1600e-003**	**1.0000e-005**	**1.1800e-003**	**3.1000e-004**	**1.0000e-005**	**3.2000e-004**	**0.0000**	**1.1924**	**1.1924**	**5.0000e-005**	**0.0000**	**1.1936**

3.9 Niwa - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0495	0.4681	0.5928	9.3000e-004		0.0240	0.0240		0.0222	0.0222	0.0000	80.4335	80.4335	0.0249	0.0000	81.0547
Total	**0.0495**	**0.4681**	**0.5928**	**9.3000e-004**		**0.0240**	**0.0240**		**0.0222**	**0.0222**	**0.0000**	**80.4335**	**80.4335**	**0.0249**	**0.0000**	**81.0547**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.2000e-003	3.2700e-003	0.0369	1.1000e-004	0.0107	9.0000e-005	0.0108	2.8400e-003	8.0000e-005	2.9200e-003	0.0000	9.6419	9.6419	2.8000e-004	0.0000	9.6490
Total	**4.2000e-003**	**3.2700e-003**	**0.0369**	**1.1000e-004**	**0.0107**	**9.0000e-005**	**0.0108**	**2.8400e-003**	**8.0000e-005**	**2.9200e-003**	**0.0000**	**9.6419**	**9.6419**	**2.8000e-004**	**0.0000**	**9.6490**

3.9 Niwa - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0495	0.4681	0.5928	9.3000e-004		0.0240	0.0240		0.0222	0.0222	0.0000	80.4334	80.4334	0.0249	0.0000	81.0546
Total	**0.0495**	**0.4681**	**0.5928**	**9.3000e-004**		**0.0240**	**0.0240**		**0.0222**	**0.0222**	**0.0000**	**80.4334**	**80.4334**	**0.0249**	**0.0000**	**81.0546**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.2000e-003	3.2700e-003	0.0369	1.1000e-004	0.0107	9.0000e-005	0.0108	2.8400e-003	8.0000e-005	2.9200e-003	0.0000	9.6419	9.6419	2.8000e-004	0.0000	9.6490
Total	**4.2000e-003**	**3.2700e-003**	**0.0369**	**1.1000e-004**	**0.0107**	**9.0000e-005**	**0.0108**	**2.8400e-003**	**8.0000e-005**	**2.9200e-003**	**0.0000**	**9.6419**	**9.6419**	**2.8000e-004**	**0.0000**	**9.6490**

3.11 Vault - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0133	0.1406	0.1110	2.1000e-004		6.8600e-003	6.8600e-003		6.3200e-003	6.3200e-003	0.0000	18.7256	18.7256	6.0600e-003	0.0000	18.8770
Total	**0.0133**	**0.1406**	**0.1110**	**2.1000e-004**		**6.8600e-003**	**6.8600e-003**		**6.3200e-003**	**6.3200e-003**	**0.0000**	**18.7256**	**18.7256**	**6.0600e-003**	**0.0000**	**18.8770**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.4000e-003	0.1093	0.0295	2.9000e-004	7.3400e-003	2.1000e-004	7.5500e-003	2.1200e-003	2.0000e-004	2.3200e-003	0.0000	28.4891	28.4891	1.7000e-003	0.0000	28.5316
Worker	0.0121	9.0500e-003	0.1043	3.2000e-004	0.0328	2.6000e-004	0.0331	8.7100e-003	2.4000e-004	8.9500e-003	0.0000	28.5483	28.5483	7.9000e-004	0.0000	28.5680
Total	**0.0155**	**0.1184**	**0.1338**	**6.1000e-004**	**0.0401**	**4.7000e-004**	**0.0406**	**0.0108**	**4.4000e-004**	**0.0113**	**0.0000**	**57.0374**	**57.0374**	**2.4900e-003**	**0.0000**	**57.0996**

3.11 Vault - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0133	0.1406	0.1110	2.1000e-004		6.8600e-003	6.8600e-003		6.3200e-003	6.3200e-003	0.0000	18.7256	18.7256	6.0600e-003	0.0000	18.8770
Total	**0.0133**	**0.1406**	**0.1110**	**2.1000e-004**		**6.8600e-003**	**6.8600e-003**		**6.3200e-003**	**6.3200e-003**	**0.0000**	**18.7256**	**18.7256**	**6.0600e-003**	**0.0000**	**18.8770**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.4000e-003	0.1093	0.0295	2.9000e-004	7.3400e-003	2.1000e-004	7.5500e-003	2.1200e-003	2.0000e-004	2.3200e-003	0.0000	28.4891	28.4891	1.7000e-003	0.0000	28.5316
Worker	0.0121	9.0500e-003	0.1043	3.2000e-004	0.0328	2.6000e-004	0.0331	8.7100e-003	2.4000e-004	8.9500e-003	0.0000	28.5483	28.5483	7.9000e-004	0.0000	28.5680
Total	**0.0155**	**0.1184**	**0.1338**	**6.1000e-004**	**0.0401**	**4.7000e-004**	**0.0406**	**0.0108**	**4.4000e-004**	**0.0113**	**0.0000**	**57.0374**	**57.0374**	**2.4900e-003**	**0.0000**	**57.0996**

3.11 Vault - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.4600e-003	0.0671	0.0573	1.1000e-004		3.1600e-003	3.1600e-003		2.9000e-003	2.9000e-003	0.0000	9.7918	9.7918	3.1700e-003	0.0000	9.8710
Total	**6.4600e-003**	**0.0671**	**0.0573**	**1.1000e-004**		**3.1600e-003**	**3.1600e-003**		**2.9000e-003**	**2.9000e-003**	**0.0000**	**9.7918**	**9.7918**	**3.1700e-003**	**0.0000**	**9.8710**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.3200e-003	0.0432	0.0138	1.5000e-004	3.8400e-003	5.0000e-005	3.8900e-003	1.1100e-003	5.0000e-005	1.1600e-003	0.0000	14.4258	14.4258	7.9000e-004	0.0000	14.4455
Worker	5.9300e-003	4.2800e-003	0.0501	1.6000e-004	0.0171	1.3000e-004	0.0173	4.5500e-003	1.2000e-004	4.6700e-003	0.0000	14.3769	14.3769	3.7000e-004	0.0000	14.3862
Total	**7.2500e-003**	**0.0475**	**0.0640**	**3.1000e-004**	**0.0210**	**1.8000e-004**	**0.0212**	**5.6600e-003**	**1.7000e-004**	**5.8300e-003**	**0.0000**	**28.8027**	**28.8027**	**1.1600e-003**	**0.0000**	**28.8316**

3.11 Vault - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.4600e-003	0.0671	0.0573	1.1000e-004		3.1600e-003	3.1600e-003		2.9000e-003	2.9000e-003	0.0000	9.7918	9.7918	3.1700e-003	0.0000	9.8710
Total	**6.4600e-003**	**0.0671**	**0.0573**	**1.1000e-004**		**3.1600e-003**	**3.1600e-003**		**2.9000e-003**	**2.9000e-003**	**0.0000**	**9.7918**	**9.7918**	**3.1700e-003**	**0.0000**	**9.8710**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.3200e-003	0.0432	0.0138	1.5000e-004	3.8400e-003	5.0000e-005	3.8900e-003	1.1100e-003	5.0000e-005	1.1600e-003	0.0000	14.4258	14.4258	7.9000e-004	0.0000	14.4455
Worker	5.9300e-003	4.2800e-003	0.0501	1.6000e-004	0.0171	1.3000e-004	0.0173	4.5500e-003	1.2000e-004	4.6700e-003	0.0000	14.3769	14.3769	3.7000e-004	0.0000	14.3862
Total	**7.2500e-003**	**0.0475**	**0.0640**	**3.1000e-004**	**0.0210**	**1.8000e-004**	**0.0212**	**5.6600e-003**	**1.7000e-004**	**5.8300e-003**	**0.0000**	**28.8027**	**28.8027**	**1.1600e-003**	**0.0000**	**28.8316**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	4.8000e-003	0.0226	0.0723	3.1000e-004	0.0293	2.4000e-004	0.0295	7.8500e-003	2.2000e-004	8.0600e-003	0.0000	28.4902	28.4902	1.3100e-003	0.0000	28.5229
Unmitigated	4.8000e-003	0.0226	0.0723	3.1000e-004	0.0293	2.4000e-004	0.0295	7.8500e-003	2.2000e-004	8.0600e-003	0.0000	28.4902	28.4902	1.3100e-003	0.0000	28.5229

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	17.42	17.42	17.42	77,158	77,158
User Defined Industrial	0.00	0.00	0.00		
Total	17.42	17.42	17.42	77,158	77,158

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	16.60	8.40	6.90	59.00	28.00	13.00	92	5	3
User Defined Industrial	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.547726	0.045437	0.201480	0.122768	0.016614	0.006090	0.019326	0.029174	0.002438	0.002359	0.005005	0.000677	0.000907
User Defined Industrial	0.547726	0.045437	0.201480	0.122768	0.016614	0.006090	0.019326	0.029174	0.002438	0.002359	0.005005	0.000677	0.000907

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,097.5787	1,097.5787	0.0259	5.3600e-003	1,099.8250
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,097.5787	1,097.5787	0.0259	5.3600e-003	1,099.8250
NaturalGas Mitigated	0.0171	0.1551	0.1303	9.3000e-004		0.0118	0.0118		0.0118	0.0118	0.0000	168.8537	168.8537	3.2400e-003	3.1000e-003	169.8571
NaturalGas Unmitigated	0.0171	0.1551	0.1303	9.3000e-004		0.0118	0.0118		0.0118	0.0118	0.0000	168.8537	168.8537	3.2400e-003	3.1000e-003	169.8571

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Light Industry	3.1642e+006	0.0171	0.1551	0.1303	9.3000e-004		0.0118	0.0118		0.0118	0.0118	0.0000	168.8537	168.8537	3.2400e-003	3.1000e-003	169.8571
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0171**	**0.1551**	**0.1303**	**9.3000e-004**		**0.0118**	**0.0118**		**0.0118**	**0.0118**	**0.0000**	**168.8537**	**168.8537**	**3.2400e-003**	**3.1000e-003**	**169.8571**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Light Industry	3.1642e+006	0.0171	0.1551	0.1303	9.3000e-004		0.0118	0.0118		0.0118	0.0118	0.0000	168.8537	168.8537	3.2400e-003	3.1000e-003	169.8571
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0171**	**0.1551**	**0.1303**	**9.3000e-004**		**0.0118**	**0.0118**		**0.0118**	**0.0118**	**0.0000**	**168.8537**	**168.8537**	**3.2400e-003**	**3.1000e-003**	**169.8571**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	1.97065e+006	1,097.5787	0.0259	5.3600e-003	1,099.8250
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**1,097.5787**	**0.0259**	**5.3600e-003**	**1,099.8250**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	1.97065e+006	1,097.5787	0.0259	5.3600e-003	1,099.8250
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**1,097.5787**	**0.0259**	**5.3600e-003**	**1,099.8250**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.3328	4.0000e-005	4.1600e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	8.0500e-003	8.0500e-003	2.0000e-005	0.0000	8.5900e-003
Unmitigated	1.3328	4.0000e-005	4.1600e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	8.0500e-003	8.0500e-003	2.0000e-005	0.0000	8.5900e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1607					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.1716					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.9000e-004	4.0000e-005	4.1600e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	8.0500e-003	8.0500e-003	2.0000e-005	0.0000	8.5900e-003
Total	**1.3327**	**4.0000e-005**	**4.1600e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**8.0500e-003**	**8.0500e-003**	**2.0000e-005**	**0.0000**	**8.5900e-003**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1607					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.1716					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.9000e-004	4.0000e-005	4.1600e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	8.0500e-003	8.0500e-003	2.0000e-005	0.0000	8.5900e-003
Total	**1.3327**	**4.0000e-005**	**4.1600e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**8.0500e-003**	**8.0500e-003**	**2.0000e-005**	**0.0000**	**8.5900e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	304.9959	1.3199	0.0324	347.6561
Unmitigated	304.9959	1.3199	0.0324	347.6561

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	40.293 / 0	304.9959	1.3199	0.0324	347.6561
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**304.9959**	**1.3199**	**0.0324**	**347.6561**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	40.293 / 0	304.9959	1.3199	0.0324	347.6561
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**304.9959**	**1.3199**	**0.0324**	**347.6561**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	43.8582	2.5920	0.0000	108.6569
Unmitigated	43.8582	2.5920	0.0000	108.6569

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	216.06	43.8582	2.5920	0.0000	108.6569
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**43.8582**	**2.5920**	**0.0000**	**108.6569**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	216.06	43.8582	2.5920	0.0000	108.6569
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**43.8582**	**2.5920**	**0.0000**	**108.6569**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Appendix B: Tribal outreach letters

STATE OF CALIFORNIA Edmund G. Brown, Jr., Governor

NATIVE AMERICAN HERITAGE COMMISSION
1550 Harbor Blvd., ROOM 100
West SACRAMENTO, CA 95691
(916) 373-3710
Fax (916) 373-5471

March 26, 2015

Robin Turner
Archaeo Paleo Resource Management
1531 Pontius Ave, Suite 200
Los Angeles, CA 90025

Sent By Fax: (424) 248-3417
Number of Pages: 3

RE: Donald C. Tillman Water Reclamation Plant Project, Los Angeles County.

Dear Ms. Turner,

A record search of the sacred land file has failed to indicate the presence of Native American cultural resources in the immediate project area. The absence of specific site information in the sacred lands file does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Enclosed is a list of Native Americans individuals/organizations who may have knowledge of cultural resources in the project area. The Commission makes no recommendation or preference of a single individual, or group over another. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated, if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe or group. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from any of these individuals or groups, please notify me. With your assistance we are able to assure that our lists contain current information. If you have any questions or need additional information, please contact me at (916) 373-3712.

Sincerely,

Katy Sanchez

Katy Sanchez
Associate Government Program Analyst

Native American Contact List
Los Angeles County
March 24, 2015

Beverly Salazar Folkes
1931 Shadybrook Drive
Thousand Oaks CA 91362
folkes9@msn.com
(805) 492-7255
(805) 558-1154 Cell
Chumash
Tataviam
Fernandeño

Richard Angulo
P.O. Box 935
Salome , AZ 85348
Chumash

Barbareno/Ventureno Band of Mission Indians
Julie Lynn Tumamait-Stennslie, Chair
365 North Poli Ave
Ojai , CA 93023
jtumamait@hotmail.com
(805) 646-6214
Chumash

Carol A. Pulido
165 Mountainview Street
Oak View , CA 93022
Chumash

Patrick Tumamait
992 El Camino Corto
Ojai , CA 93023
(805) 640-0481
(805) 216-1253 Cell
Chumash

Melissa M. Parra-Hernandez
119 North Balsam Street
Oxnard , CA 93030
envyy36@yahoo.com
(805) 983-7964
(805) 248-8463 Cell
Chumash

Randy Guzman - Folkes
4676 Walnut Avenue
Simi Valley , CA 93063
ndnRandy@yahoo.com
(805) 905-1675 Cell
(805) 520-5915 Fax
Chumash
Fernandeño
Tataviam
Shoshone Paiute
Yaqui

Frank Arredondo
P.O. Box 161
Santa Barbara CA 93102
ksen_sku_mu@yahoo.com
Chumash

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

Distribution of this list does not relieve any person of the statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting locative Americans with regard to cultural resources for the proposed Donald C. Tillman Water Reclamation Plant Multi-Use Facility Project, Los Angeles County.

Native American Contact List
Los Angeles County
March 24, 2015

Barbareno/Vantureno Band of Mission Indians
Kathleen Pappo
2762 Vista Mesa Drive Chumash
Rancho Palos Verdes CA 90275
(310) 831-5295

Barbareno/Vantureno Band of Mission Indians
Raudel Joe Banuelos, Jr.
331 Mira Flores Court Chumash
Camarillo , CA 93012
(805) 987-5314

PeuYoKo Perez
5501Stanford Street Chumash
Ventura , CA 93003
grndowl4U@yahoo.com
(805) 231 -0229 Cell

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

Distribution of this list does not relieve any person of the statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting locative Americans with regard to cultural resources for the proposed Donald C. Tillman Water Reclamation Plant Multi-Use Facility Project, Los Angeles County.

ArchaeoPaleo Resource Management, Inc.

A full service Archaeology and Paleontology company
SBE/WBE/DBE/UDBE/LBE/CBE/VSBE/MicroBE Certified

March 30, 2015

Mr. Richard Angulo
P. O. Box 935
Salome, AZ 85348

Re: Tillman Water Reclamation Plant, Sepulveda Basin, San Fernando Valley, Los Angeles County

Dear Mr. Angulo,

The City of Los Angeles's Bureau of Sanitation has approved the implementation of the Donald C. Tillman Water Reclamation Plant Lease Renewal Project. Attached to this letter are the project map, project description, and additional information for you. This Project involves the upgrading of the Tillman Plant's levees in order to bring them up to the U.S. Army Corps of Engineer's standards as part of the Environmental Assessment required for renewal of the lease between the Corps and the Bureau of Sanitation set to expire in October 2019. The specific dimensions of any soil removal have not been determined yet, so the depth of excavation, if any, is unknown at this time.

The Native American Heritage Commission conducted a record search of sacred sites within the area and determined that there are no known sacred sites within the project boundaries. However, our research conducted at the South Central Coastal Information Center housed at California State University at Fullerton, found that there are sites located within a mile of the project, and that Los Encinos State Historical Monument (Park) and the "Lost Village of Encino" are located just outside the mile radius.

Your name was given to us by the Native American Heritage Commission as being an interested party and/or contact. Since your ancestral homeland is part of this general vicinity, and even though an EIR/EIS is not required for this project at this moment, the Bureau of Sanitation and ArchaeoPaleo would like your input and views to see if you feel that there is ancestral significance on or close by this project site on which you and/or your family would like to comment. Please send your written responses to my attention at the address at the bottom of this letter. I look forward to hearing from you.

Sincerely,

Robin Turner
President/Principal

1531 Pontius Ave., Suite 200
Los Angeles, CA 90025

(424) 248-3316 ph
(424) 248-3417 fax

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March 30, 2015

Frank Arredondo
P.O. Box 161
Santa Barbara, CA 93102

Re: Tillman Water Reclamation Plant, Sepulveda Basin, San Fernando Valley, Los Angeles County

Dear Mr. Arredondo,

The City of Los Angeles's Bureau of Sanitation has approved the implementation of the Donald C. Tillman Water Reclamation Plant Lease Renewal Project. Attached to this letter are the project map, project description, and additional information for you. This Project involves the upgrading of the Tillman Plant's levees in order to bring them up to the U.S. Army Corps of Engineer's standards as part of the Environmental Assessment required for renewal of the lease between the Corps and the Bureau of Sanitation set to expire in October 2019. The specific dimensions of any soil removal have not been determined yet, so the depth of excavation, if any, is unknown at this time.

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Sincerely,

Robin D. Turner

Robin Turner
President/Principal

1531 Pontius Ave., Suite 200
Los Angeles, CA 90025

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March 30, 2015

Barbareño/Ventureño Band of Mission Indians
Raudel Joe Banuelos, Jr.
331 Mira Flores Court
Camarillo, CA 93012

Re: Tillman Water Reclamation Plant, Sepulveda Basin, San Fernando Valley, Los Angeles County

Dear Mr. Banuelos,

The City of Los Angeles's Bureau of Sanitation has approved the implementation of the Donald C. Tillman Water Reclamation Plant Lease Renewal Project. Attached to this letter are the project map, project description, and additional information for you. This Project involves the upgrading of the Tillman Plant's levees in order to bring them up to the U.S. Army Corps of Engineer's standards as part of the Environmental Assessment required for renewal of the lease between the Corps and the Bureau of Sanitation set to expire in October 2019. The specific dimensions of any soil removal have not been determined yet, so the depth of excavation, if any, is unknown at this time.

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Sincerely,

Robin Turner
President/Principal

1531 Pontius Ave., Suite 200
Los Angeles, CA 90025

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SBE/WBE/DBE/UDBE/LBE/CBE/VSBE/MicroBE Certified

March 30, 2015

Randy Guzman-Folkes
4676 Walnut Avenue
Simi Valley, CA 93063

Re: Tillman Water Reclamation Plant, Sepulveda Basin, San Fernando Valley, Los Angeles County

Dear Mr. Guzman-Folkes,

The City of Los Angeles's Bureau of Sanitation has approved the implementation of the Donald C. Tillman Water Reclamation Plant Lease Renewal Project. Attached to this letter are the project map, project description, and additional information for you. This Project involves the upgrading of the Tillman Plant's levees in order to bring them up to the U.S. Army Corps of Engineer's standards as part of the Environmental Assessment required for renewal of the lease between the Corps and the Bureau of Sanitation set to expire in October 2019. The specific dimensions of any soil removal have not been determined yet, so the depth of excavation, if any, is unknown at this time.

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Sincerely,

Robin Turner
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March 30, 2015

Barbareño/Ventureño Band of Mission Indians
Kathleen Pappo
2762 Vista Mesa Drive
Rancho Palos Verdes, CA 90275

Re: Tillman Water Reclamation Plant, Sepulveda Basin, San Fernando Valley, Los Angeles County

Dear Ms. Pappo,

The City of Los Angeles's Bureau of Sanitation has approved the implementation of the Donald C. Tillman Water Reclamation Plant Lease Renewal Project. Attached to this letter are the project map, project description, and additional information for you. This Project involves the upgrading of the Tillman Plant's levees in order to bring them up to the U.S. Army Corps of Engineer's standards as part of the Environmental Assessment required for renewal of the lease between the Corps and the Bureau of Sanitation set to expire in October 2019. The specific dimensions of any soil removal have not been determined yet, so the depth of excavation, if any, is unknown at this time.

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Your name was given to us by the Native American Heritage Commission as being an interested party and/or contact. Since your ancestral homeland is part of this general vicinity, and even though an EIR/EIS is not required for this project at this moment, the Bureau of Sanitation and ArchaeoPaleo would like your input and views to see if you feel that there is ancestral significance on or close by this project site on which you and/or your family would like to comment. Please send your written responses to my attention at the address at the bottom of this letter. I look forward to hearing from you.

Sincerely,

Robin Turner
President/Principal

1531 Pontius Ave., Suite 200
Los Angeles, CA 90025

(424) 248-3316 ph
(424) 248-3417 fax

ArchaeoPaleo Resource Management, Inc.

A full service Archaeology and Paleontology company
SBE/WBE/DBE/UDBE/LBE/CBE/VSBE/MicroBE Certified

March 30, 2015

Melissa M. Parra-Hernandez
119 North Balsam Street
Oxnard, CA 93030

Re: Tillman Water Reclamation Plant, Sepulveda Basin, San Fernando Valley, Los Angeles County

Dear Ms. Parra-Hernandez,

The City of Los Angeles's Bureau of Sanitation has approved the implementation of the Donald C. Tillman Water Reclamation Plant Lease Renewal Project. Attached to this letter are the project map, project description, and additional information for you. This Project involves the upgrading of the Tillman Plant's levees in order to bring them up to the U.S. Army Corps of Engineer's standards as part of the Environmental Assessment required for renewal of the lease between the Corps and the Bureau of Sanitation set to expire in October 2019. The specific dimensions of any soil removal have not been determined yet, so the depth of excavation, if any, is unknown at this time.

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March 30, 2015

PeuYoKo Perez
5501 Stanford Street
Ventura, CA 93003

Re: Tillman Water Reclamation Plant, Sepulveda Basin, San Fernando Valley, Los Angeles County

Dear PeuYoKo Perez,

The City of Los Angeles's Bureau of Sanitation has approved the implementation of the Donald C. Tillman Water Reclamation Plant Lease Renewal Project. Attached to this letter are the project map, project description, and additional information for you. This Project involves the upgrading of the Tillman Plant's levees in order to bring them up to the U.S. Army Corps of Engineer's standards as part of the Environmental Assessment required for renewal of the lease between the Corps and the Bureau of Sanitation set to expire in October 2019. The specific dimensions of any soil removal have not been determined yet, so the depth of excavation, if any, is unknown at this time.

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March 30, 2015

Carol A. Pulido
165 Mountainview Street
Oak View, CA 93022

Re: Tillman Water Reclamation Plant, Sepulveda Basin, San Fernando Valley, Los Angeles County

Dear Ms. Pulido,

The City of Los Angeles's Bureau of Sanitation has approved the implementation of the Donald C. Tillman Water Reclamation Plant Lease Renewal Project. Attached to this letter are the project map, project description, and additional information for you. This Project involves the upgrading of the Tillman Plant's levees in order to bring them up to the U.S. Army Corps of Engineer's standards as part of the Environmental Assessment required for renewal of the lease between the Corps and the Bureau of Sanitation set to expire in October 2019. The specific dimensions of any soil removal have not been determined yet, so the depth of excavation, if any, is unknown at this time.

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Sincerely,

Robin D. Turner

Robin Turner
President/Principal

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Los Angeles, CA 90025

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March 30, 2015

Beverly Salazar Folkes
1931 Shadybrook Drive
Thousand Oaks, CA 91362

Re: Tillman Water Reclamation Plant, Sepulveda Basin, San Fernando Valley, Los Angeles County

Dear Ms. Folkes,

The City of Los Angeles's Bureau of Sanitation has approved the implementation of the Donald C. Tillman Water Reclamation Plant Lease Renewal Project. Attached to this letter are the project map, project description, and additional information for you. This Project involves the upgrading of the Tillman Plant's levees in order to bring them up to the U.S. Army Corps of Engineer's standards as part of the Environmental Assessment required for renewal of the lease between the Corps and the Bureau of Sanitation set to expire in October 2019. The specific dimensions of any soil removal have not been determined yet, so the depth of excavation, if any, is unknown at this time.

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March 30, 2015

Patrick Tumamait
992 El Camino Corto
Ojai, CA 93023

Re: Tillman Water Reclamation Plant, Sepulveda Basin, San Fernando Valley, Los Angeles County

Dear Mr. Tumamait,

The City of Los Angeles's Bureau of Sanitation has approved the implementation of the Donald C. Tillman Water Reclamation Plant Lease Renewal Project. Attached to this letter are the project map, project description, and additional information for you. This Project involves the upgrading of the Tillman Plant's levees in order to bring them up to the U.S. Army Corps of Engineer's standards as part of the Environmental Assessment required for renewal of the lease between the Corps and the Bureau of Sanitation set to expire in October 2019. The specific dimensions of any soil removal have not been determined yet, so the depth of excavation, if any, is unknown at this time.

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March 30, 2015

Barbareño/Ventureño Band of Mission Indians
Julie Lynn Tumamait-Stennslie, Chair
365 North Poli Avenue
Ojai, CA 93023

Re: Tillman Water Reclamation Plant, Sepulveda Basin, San Fernando Valley, Los Angeles County

Dear Chairperson Tumamait-Stennslie,

The City of Los Angeles's Bureau of Sanitation has approved the implementation of the Donald C. Tillman Water Reclamation Plant Lease Renewal Project. Attached to this letter are the project map, project description, and additional information for you. This Project involves the upgrading of the Tillman Plant's levees in order to bring them up to the U.S. Army Corps of Engineer's standards as part of the Environmental Assessment required for renewal of the lease between the Corps and the Bureau of Sanitation set to expire in October 2019. The specific dimensions of any soil removal have not been determined yet, so the depth of excavation, if any, is unknown at this time.

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Appendix C: Field noise study

US Army Corps of Engineers®

LOS ANGELES COUNTY DRAINAGE AREA
SEPULVEDA DAM FLOOD CONTROL RESERVOIR

DONALD C. TILLMAN WATER RECLAMATION PLANT

Noise Technical Study Appendix

Prepared by
US Army Corps of Engineers
Los Angeles District
915 Wilshire Blvd.
Los Angeles, California 90017-3401

With Technical Assistance by
City of Los Angeles
Department of Public Works,
Bureau of Sanitation

CITY OF LOS ANGELES
SANITATION
DEPARTMENT OF
PUBLIC WORKS

April 2017

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NOISE TECHNICAL STUDY

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Appendix C: Noise levels at the South Japanese Gardens site during mid-morning (C1) and early-afternoon (C2)

Appendix D: Noise levels at the North Japanese Gardens site during mid-morning (D1) and early-afternoon (D2)

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1 INTRODUCTION

1.1 PURPOSE OF REPORT

The purpose of this report is to evaluate and document the existing noise conditions at the Donald C. Tillman Water Reclamation Plant (Plant). The existing noise conditions represent baseline conditions for the Proposed Action. The field analysis documented by this report serves as the technical documentation to the discussion in the noise section of the associated Initial Study (IS).

1.2 PROJECT LOCATION

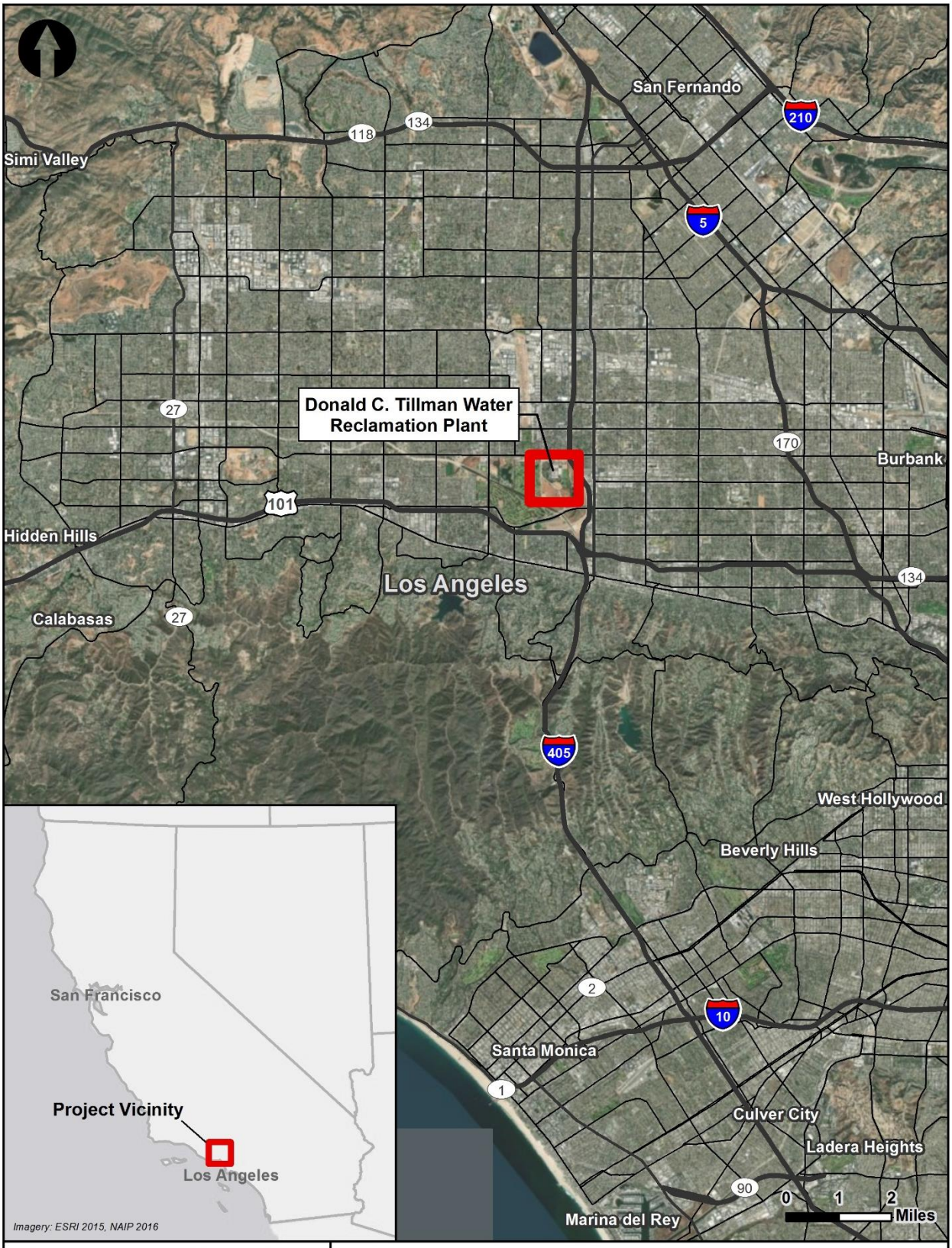
The Plant occupies approximately 90 acres within the Sepulveda Dam Reservoir, which comprises 2,000 acres of federally-owned land under the jurisdiction of the Corps, Los Angeles District. The Sepulveda Dam Reservoir is an integral part of the comprehensive plan for flood control in the Los Angeles County drainage area (Figure 1-1). The Sepulveda Dam regulates runoff from a drainage area of approximately 152 square miles, including the San Gabriel, Santa Monica, and Santa Susana mountains, and the Simi Hills. Historically, major inflow and impoundment events at the Sepulveda Dam Reservoir have resulted from winter storms.

The 2,000-acre Sepulveda Dam Reservoir, in addition to the Plant, contains the Sepulveda Dam Recreation Area, the Sepulveda Basin Wildlife Reserve, and the dam structure itself (Figure 1-2). Sepulveda Dam Recreation Area occupies the majority of the Sepulveda Dam Reservoir and includes a number of recreational facilities throughout the Sepulveda Dam Reservoir. These facilities include the Balboa Sports Center, the Balboa Golf Course, the Encino Golf Course, the Woodley Lakes Golf Course, Woodley Ave. Park, the Balboa Recreation Lake (Lake Balboa) and Lake Balboa Park (Figure 1-2). Additionally, open playfields, including a large cricket field, are located within the recreation area. The Sepulveda Basin Wildlife Reserve, located in the southeastern portion of the Sepulveda Dam Reservoir, is approximately 225 acres and consists of restored natural habitat, an educational staging area and amphitheater, and various pathways and pedestrian bridges. Wastewater from the Plant is of sufficient quality to be used as recycled water for irrigation of the Japanese Garden within the Plant grounds, for irrigation of the Woodley Lakes, Balboa, and Encino Municipal golf courses, and as source water for the Japanese Garden Lake, the Wildlife Lake, Lake Balboa, and the Los Angeles River.

1.3 PLANT OPERATIONS

The Plant is located in the northeast corner of Sepulveda Dam Reservoir and is an integral part of the City's wastewater system operated by LASAN (Figure 2-2). The Plant provides hydraulic relief for major interceptor sewers in the San Fernando Valley, as well as the North Outfall Sewer, the La Cienega-San Fernando Valley Relief Sewer tunnel through the Santa Monica Mountains, and downstream portions of the Hyperion system including the Hyperion Treatment Plant (HTP).

The Plant began operations in 1985 in the Sepulveda Dam Reservoir with the intent to relieve pressure on the major interceptor sewers in the San Fernando Valley as well as to relieve pressure on the HTP by treating sewage from the western portion of the San Fernando Valley. The Plant currently provides treatment of incoming wastewater for customers between Chatsworth and Van Nuys, producing about 80 million gallons of recycled water each day. About 40% of that wastewater comes from commercial uses, while 60% comes from residences. The treatment process includes grit removal, bar screens, primary sedimentation, activated sludge biological treatment, nitrification and denitrification treatment, secondary clarification, coagulation, dual media filtration, chlorination and dechlorination. The sludge from the primary and secondary treatment processes and filter backwash are returned to the interceptor and then transported to the HTP for further treatment.



DONALD C. TILLMAN WATER RECLAMATION PLANT EASEMENT IMPLEMENTATION INITIAL STUDY - NOISE TECHNICAL STUDY

FIGURE 1-1 PROJECT LOCATION


Van Nuys Golf Course
Donald C. Tillman Water Reclamation Plant
Japanese Gardens
Victory Blvd
Orange Line Busway
Bull Creek
Lake Balboa Park
Woodley Creek
Woodley Golf Course
405
Woodley Avenue Park
Woodley Ave
Sepulveda Blvd
White Oak Ave
Louise Ave
Balboa Sports Center
Balboa Blvd
Sepulveda Dam Recreation Area
Balboa Municipal Golf Course
Los Angeles River
Haskell Creek
Wildlife Reserve
101
Encino Municipal Golf Course
Burbank Blvd
Encino Creek
Sepulveda Dam
Hjelte Sports Center
Sepulveda Garden Center
Hayvenhurst Ave
Haskell Ave
0
0.25
0.5
Miles
Imagery: NAIP 2016
DONALD C. TILLMAN WATER RECLAMATION PLANT EASEMENT IMPLEMENTATION INITIAL STUDY - NOISE TECHNICAL STUDY
Legend
Project Area
FIGURE 1-2 DONALD C. TILLMAN WATER RECLAMATION PLANT AND THE SEPULVEDA DAM RECREATION AREA

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2 NOISE ASSESSMENT

2.1 TECHNICAL DEFINITION OF NOISE

Noise is generally defined as unwanted or excessive sound. The Los Angeles County Code of Ordinances Section 12.08.230 defines a noise disturbance as "an alleged intrusive noise which violates an applicable noise standard." Section 12.08.210 defines an intrusive noise as a noise "which intrudes over and above the existing ambient noise at the receptor property" (Los Angeles County 2017). The City of Los Angeles Municipal Code defines ambient noise as "the composite of noise from all sources near and far in a given environment" (City of Los Angeles 2017). The Noise Element of the City's General Plan further defines ambient noise as "the 'given' level of sound to which we are accustomed in our residential, work or other particular environments", and defines any sound above that sound level to be intrusive sound (LADCP 1999).

Sound is created when an object vibrates and radiates part of its energy as acoustic pressure waves through a medium such as air, water or a solid. The ear receives these sound pressure waves and converts them to neurological impulses which are transmitted to the brain for interpretation. Two parameters are used to describe the sound environment at any instant in time: amplitude (or sound power) and frequency (or pitch). Amplitude of a sound is a measure of the pressure or force that a sound can exert. This sound pressure is measured in the logarithmic units of decibels (dB). A "weighting" is sometimes added to the measurement to reflect that human hearing is less sensitive at low frequencies and extreme high frequencies than at mid-range frequencies. This is called "A" weighting, and the resulting weighted level is called the A-weighted sound level (dBA). Noise levels can be measured at a specific moment in time or over a long period of time. Table 1 below shows the noise levels associated with common indoor and outdoor activities and/or noise sources.

Table 1. Representative Noise Sources and Levels

Common Outdoor Activities	Noise Levels (dbA)	Common Indoor Activities
	110	Rock Band
Jet Fly-over at 1000 ft Gas Lawnmower at 3 ft	100 – 110	Inside Subway Train
Diesel Truck at 50 ft Noisy Urban Daytime	90 – 100	Food Blender at 3 ft
	80 – 90	Garbage Disposal at 3 ft Shouting at 3 ft
Gas Lawn Mower at 100 ft Commercial Area	70 – 80	Vacuum Cleaner at 10 ft
Heavy Traffic at 300 ft	60 – 70	Normal Speech at 3 ft Large Business Office
Quiet Urban Daytime	50 - 60	Dishwasher next room
Quiet Urban Nighttime Quiet Suburban Nighttime	40 - 50	Small Theater/Conference Room (background)
	30 – 40	Library Bedroom at Night
Quiet Rural Nighttime	20 – 30	Concert hall (background) Broadcast & Recording Studio
	10 - 20	
	0	Lowest Threshold of Human Hearing

Source: LADCP 1999.

2.2 SOURCES OF NOISE AT SITE

Noise within and around the Plant is characteristic of a densely populated urban area. Major noise sources in the vicinity include the Interstate 405 (I-405) freeway, located just east of the Plant; Victory Blvd., located just north of the Plant; and aircraft taking off and landing at the Van Nuys Airport, which is located approximately two miles northwest of the Plant.

Operation of the Plant generates noise that contributes to ambient noise levels in the vicinity of the Plant. This noise is generated 24 hours per day, 7 days per week. Elevated noise levels occur immediately adjacent to some of the equipment used at the Plant, but this equipment is housed indoors and sound levels are greatly attenuated as a result. Ambient noise is noticeable in areas immediately adjacent to the Plant, but is well below any applicable noise thresholds and does not constitute a major noise source. Operational noise from the Plant is audible to the north at the California Air National Guard site, but during previous field visits sounds levels were low enough to not be disruptive (Tetra Tech 2014).

2.3 FIELD DOCUMENTATION OF AMBIENT NOISE IN AREA SURROUNDING PLANT

A field noise measurement study was performed in the Plant vicinity the week of November 28, 2016.

2.3.1 Methods

A SoundPro DL sound level meter was used to monitor noise levels at four locations surrounding the Plant: 1) In the residential community on the north side of Victory Blvd. adjacent to Blewett Ave., 2) In Woodley Park approximately adjacent to the Plant entrance, 3) Just inside the entrance to the Japanese gardens at the southern end of the gardens, and 4) At the northeast corner of the gardens adjacent to the Plant (Figure 2-1). Measurements were made during mid-morning and early afternoon hours to capture peak noise levels during off-peak traffic conditions. Measurements were made in duplicate to ensure that the quantified sound levels were representative.

2.3.2 Results

Results of the noise measurement study are provided in Table 2. Among the four locations, recorded noise levels were highest north of Victory Blvd., within the adjacent residential community. Noise levels at this site were 78.3 dB mid-morning and 78.5 dB in the early afternoon (Table 2). The second highest sound levels were recorded just south of the main entrance, in Woodley Park, where sound levels were 60.2 dB in mid-morning and 61.1 dB in the early afternoon. Recorded sound levels were lowest at the two sites along the western edge of the Plant (Figure 2-1). At the northern Japanese garden site, recorded sound levels were 58.7 dB mid-morning and 61.2 dB in the early afternoon. Recorded noise levels at the southern site were 57.7 dB mid-morning and 56.4 dB in the early afternoon (Table 2).

Table 2. Results of noise monitoring conducted the week of November 28, 2016

Location	Number on Figure 2-1	Sound level at mid-morning (dB)	Sound level in early afternoon (dB)	Level Average (dB)
Community	1	78.3	78.5	78.4
Woodley Park	2	60.3	61.1	60.7
South Japanese Gardens	3	55.0	57.7	56.4
North Japanese Gardens	4	58.7	61.2	60.0

LEGEND
- Project Site Boundary
- # Noise Monitoring Locations
  1. Single-Family Residence
  2. Woodley Park
  3. Japanese Garden - Southeast Corner
  4. Japanese Garden - Northeast Corner

Source: TAHA 2016.

Approx. Scale
0 440 880 feet

Figure 2-1. Location of noise monitoring sites near the Donald C. Tillman Water Reclamation Plant

2.4 DISCUSSION

Of the four monitoring sites, the community site in the residential area north of Victory Blvd. had the highest sounds levels during the two monitoring periods (mid-morning, and in the early afternoon). Sound levels at this site were likely elevated in comparison to the other three sites due to the proximity of this site to Victory Blvd., the Orange Line busway, and I-405 (Figure 2-1). The Woodley Park site, which had the next highest sound levels, was the furthest site from both Victory Blvd. and I-405. However, sound levels at this site were higher than at the remaining two sites likely as a result of the proximity of this site to Woodley Ave. and the lack of structures between this site and I-405, to the east (Figure 2-1). The Plant structures and landscaping appear to attenuate noise from the nearby roadways (as well as from within the Plant itself), as the lowest recorded sound levels among the four sites occurred at the two sites along the western edge of the plant, at the northern and southern ends of the Japanese Garden (Table 2). Sound levels were slightly higher at the northern site in the northeastern corner of the gardens than at the southern site at the entrance to the gardens. Noise levels at the southern site are likely reduced by the presence of landscaped vegetative cover to the north, the wall to the west, and the Plant buildings to the east (Figure 2-1). The northern site is also sheltered by these features, but to a lesser extent.

2.5 CONCLUSIONS

Some land uses are considered more sensitive to ambient noise levels than others because of the level of noise exposure (in terms of both exposure duration and insulation from noise) and the types of activities typically involved. Residences, hotels, schools, rest homes, and hospitals are generally considered more sensitive to noise than commercial and industrial land uses. The closest sensitive receptors to the Plant are residences on the north side of Victory Blvd., located at least 800 feet north of the Plant; and residences on the east side of I-405, which are a quarter mile east of the Plant. Results of the field noise assessment suggest that the current operations at the Plant do not increase ambient noise in nearby residential areas, and that even during off-peak traffic conditions, roadways (in particular Victory Blvd. and I-405) exert the greatest influence on noise levels in the portions of the Sepulveda Dam Reservoir that surround the Plant.

3 REFERENCES

City of Los Angeles. 2017. Los Angeles Charter and Administrative Code and Los Angeles Municipal Code. Available at http://library.amlegal.com/nxt/gateway.dll/California/lamc/municipalcode?f=templates$fn=default.htm$3.0$vid=amlegal:losangeles_ca_mc. Accessed on April 5, 2017.

City of Los Angeles Department of City Planning (LADCP). 1999. Noise Element of the City of Los Angeles General Plan. Available at https://planning.lacity.org/cwd/gnlpln/noiseElt.pdf. Accessed on April 5, 2017.

Tetra Tech. 2014. Personal observations by Tetra Tech staff during field reconnaissance surveys at the DC Tillman WWTP, October 5, 2014.

ACRONYMS

Ave.	Avenue
Blvd.	Boulevard
City	City of Los Angeles
Corps	United States Army Corps of Engineers
dB	Decibel
dBA	A-weighted decibel
HTP	Hyperion Treatment Plant
I-405	Interstate 405
IS	Initial Study
LASAN	City of Los Angeles Department of Public Works, Bureau of Sanitation
Plant	Donald C. Tillman Water Reclamation Plant
Sepulveda Dam Reservoir	Sepulveda Dam Flood Control Reservoir
U.S.	United States

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APPENDICES

Raw Data from Noise Monitoring Sessions

APPENDIX A1

Noise levels at the community site during mid-morning

Session Report

12/2/2016

General Information

Name	S006_BLN070008_28112016_211656
Comments	
Start Time	11/28/2016 1:00:30 PM
Stop Time	11/28/2016 1:15:36 PM
Run Time	00:15:06
Model Type	SoundPro DL
Serial Number	BLN070008
Device Firmware Rev	R.13H
Company Name	
Description	
Location	
User Name	

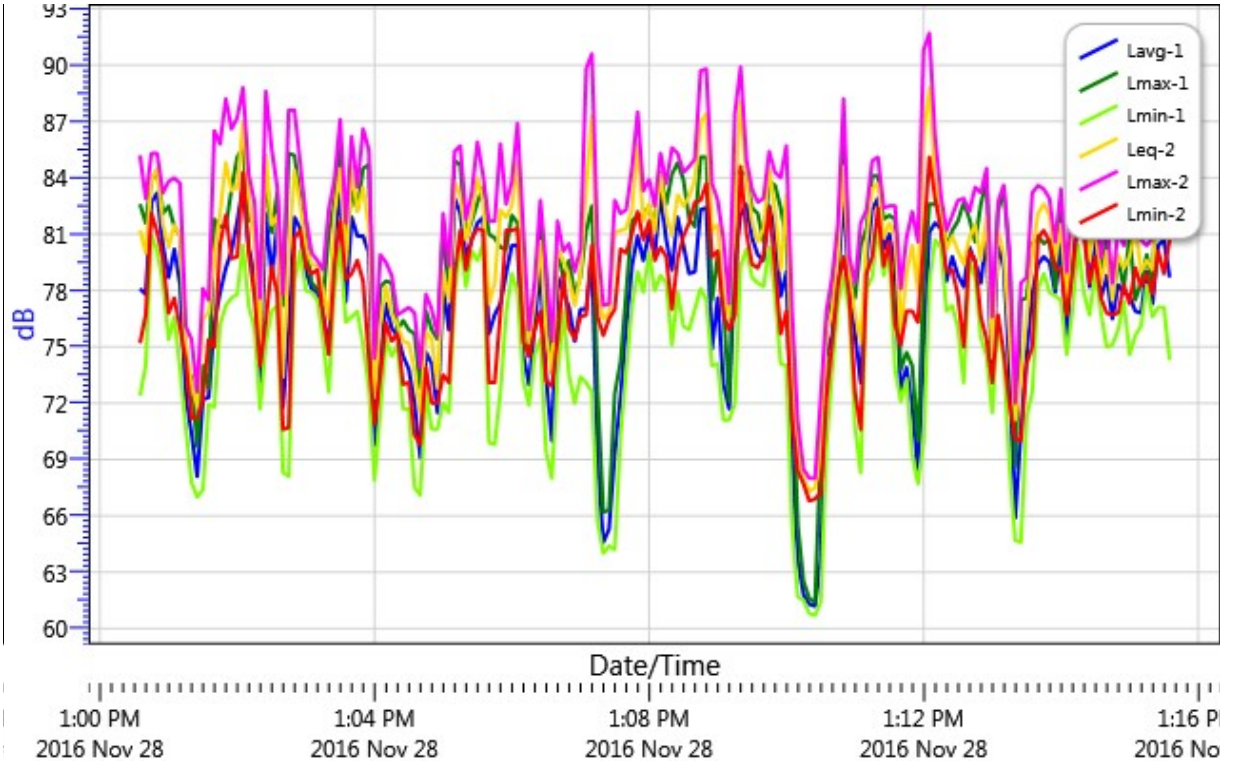
Summary Data

Description	Meter	Value	Description	Meter	Value
Dose	1	1.3 %	Pdose (8:00)	1	39.8 %
Lavg	1	78.3 dB	Lpk	1	98.5 dB
Leq	1	--	TWA	1	53.3 dB
UL Time	1	00:00:00	SEL	1	127.4 dB
ProjectedTWA (8:00)	1	78.3 dB	Mntime	1	11/28/2016 1:10:18 PM
Mxtime	1	11/28/2016 1:12:00 PM	PKtime	1	11/28/2016 1:00:33 PM
Weighting	1	--	Range Ceiling	1	--
Criterion Level	1	--	ULL	1	--
Dynamic Range	1	--	Exchange Rate	1	--
Response	1	--	Int Threshold	1	--
Alarm Level 1	1	--	AlarmLevel2	1	--
Dosimeter Name	1	--			
Dose	2	1.4 %	Pdose (8:00)	2	43.5 %
Lavg	2	--	Lpk	2	98.5 dB
Leq	2	81.3 dB	TWA	2	66.3 dB
UL Time	2	00:01:09	SEL	2	110.9 dB

ProjectedTWA (8:00)	2	81.3 dB	Mntime	2	11/28/2016 1:10:22 PM
Mxtime	2	11/28/2016 1:10:46 PM	PKtime	2	11/28/2016 1:00:33 PM
Weighting	2	C	Range Ceiling	2	--
Criterion Level	2	85 dB	ULL	2	85 dB
Dynamic Range	2	--	Exchange Rate	2	3 dB
Response	2	SLOW	Integrating Threshold	2	80 dB
Alarm Level 1	2	--	AlarmLevel2	2	--
Dosimeter Name	2	--			

Logged Data Chart

S006_BLN070008_28112016_211656: Logged Data Chart - Read Only



APPENDIX A2

Noise levels at the community site during early-afternoon

Session Report

12/2/2016

General Information

Name	S008_BLN070008_28112016_211706
Comments	
Start Time	11/28/2016 2:28:42 PM
Stop Time	11/28/2016 2:43:52 PM
Run Time	00:15:10
Model Type	SoundPro DL
Serial Number	BLN070008
Device Firmware Rev	R.13H
Company Name	
Description	
Location	
User Name	

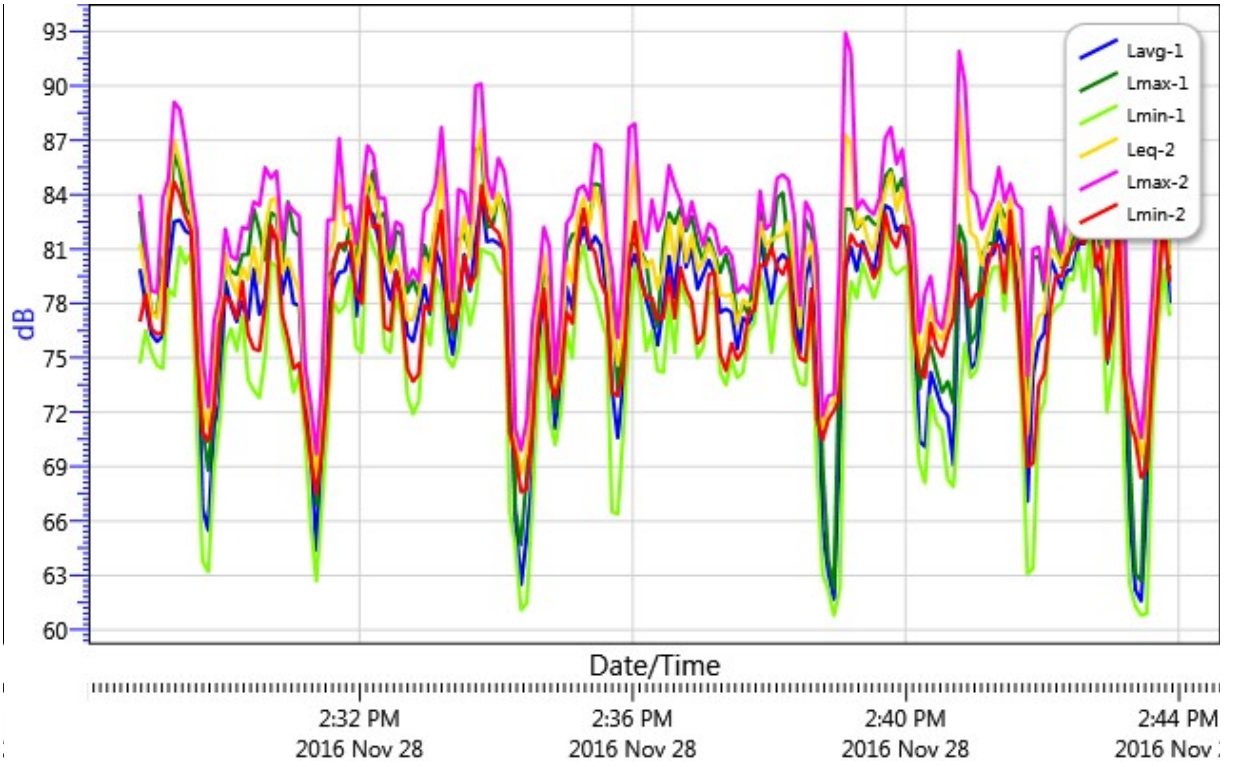
Summary Data

Description	Meter	Value	Description	Meter	Value
Dose	1	1.3 %	Pdose (8:00)	1	40.8 %
Lavg	1	78.5 dB	Lpk	1	98.5 dB
Leq	1	--	TWA	1	53.6 dB
UL Time	1	00:00:00	SEL	1	127.6 dB
ProjectedTWA (8:00)	1	78.5 dB	Mntime	1	11/28/2016 2:31:19 PM
Mxtime	1	11/28/2016 2:39:06 PM	PKtime	1	11/28/2016 2:29:13 PM
Weighting	1	--	Range Ceiling	1	--
Criterion Level	1	--	ULL	1	--
Dynamic Range	1	--	Exchange Rate	1	--
Response	1	--	Int Threshold	1	--
Alarm Level 1	1	--	AlarmLevel2	1	--
Dosimeter Name	1	--			
Dose	2	1.4 %	Pdose (8:00)	2	44.4 %
Lavg	2	--	Lpk	2	98.5 dB
Leq	2	81.4 dB	TWA	2	66.4 dB
UL Time	2	00:01:01	SEL	2	111 dB

ProjectedTWA (8:00)	2	81.4 dB	Mntime	2	11/28/2016 2:38:55 PM
Mxtime	2	11/28/2016 2:33:42 PM	PKtime	2	11/28/2016 2:29:15 PM
Weighting	2	C	Range Ceiling	2	--
Criterion Level	2	85 dB	ULL	2	85 dB
Dynamic Range	2	--	Exchange Rate	2	3 dB
Response	2	SLOW	Integrating Threshold	2	80 dB
Alarm Level 1	2	--	AlarmLevel2	2	--
Dosimeter Name	2	--			

Logged Data Chart

S008_BLN070008_28112016_211706: Logged Data Chart - Read Only



APPENDIX B1

Noise levels at the Woodley Park site during mid-morning

Session Report

12/2/2016

General Information

Name	S003_BLN070008_28112016_211947
Comments	
Start Time	11/28/2016 12:13:09 PM
Stop Time	11/28/2016 12:28:51 PM
Run Time	00:15:42
Model Type	SoundPro DL
Serial Number	BLN070008
Device Firmware Rev	R.13H
Company Name	
Description	
Location	
User Name	

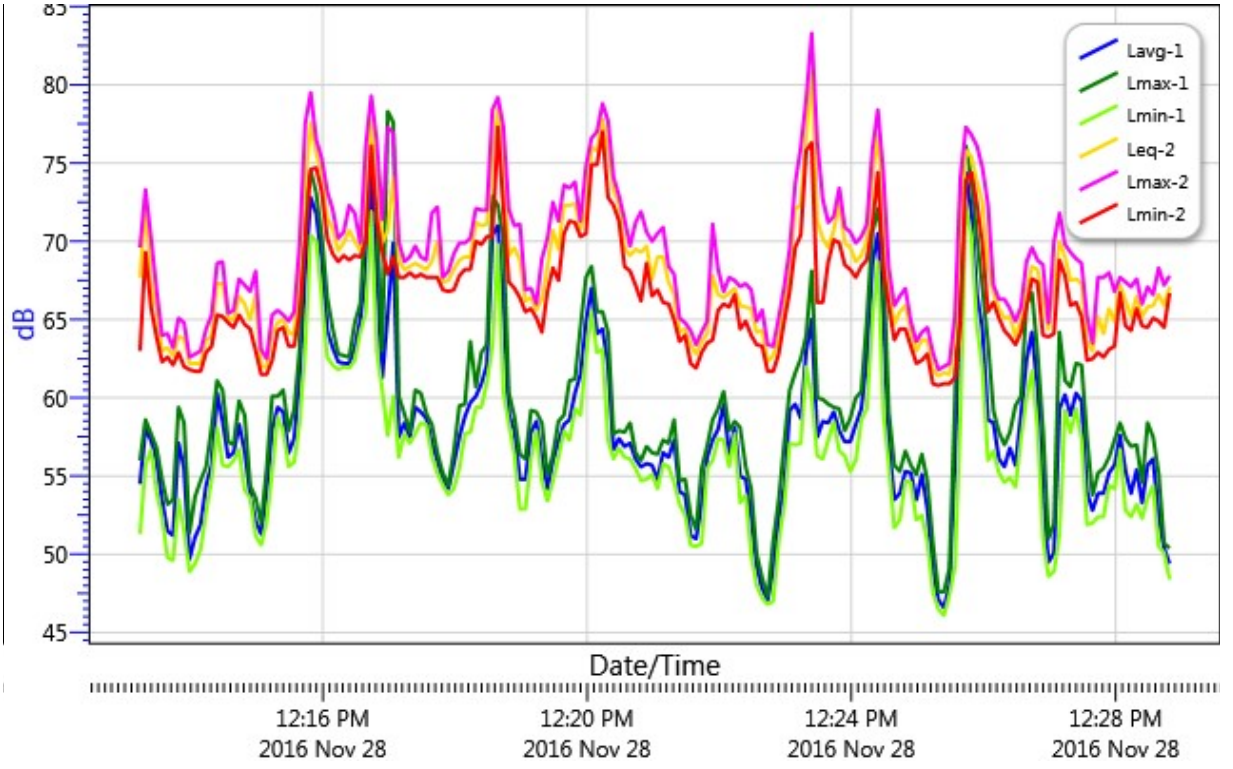
Summary Data

Description	Meter	Value	Description	Meter	Value
Dose	1	0.1 %	Pdose (8:00)	1	3.3 %
Lavg	1	60.3 dB	Lpk	1	97.7 dB
Leq	1	--	TWA	1	35.7 dB
UL Time	1	00:00:00	SEL	1	109.7 dB
ProjectedTWA (8:00)	1	60.3 dB	Mntime	1	11/28/2016 12:25:15 PM
Mxtime	1	11/28/2016 12:23:20 PM	PKtime	1	11/28/2016 12:16:58 PM
Weighting	1	--	Range Ceiling	1	--
Criterion Level	1	--	ULL	1	--
Dynamic Range	1	--	Exchange Rate	1	--
Response	1	--	Int Threshold	1	--
Alarm Level 1	1	--	AlarmLevel2	1	--
Dosimeter Name	1	--			
Dose	2	0.1 %	Pdose (8:00)	2	3.3 %
Lavg	2	--	Lpk	2	96 dB
Leq	2	70.1 dB	TWA	2	55.3 dB
UL Time	2	00:00:00	SEL	2	99.9 dB

ProjectedTWA (8:00)	2	70.1 dB	Mntime	2	11/28/2016 12:25:20 PM
Mxtime	2	11/28/2016 12:16:58 PM	PKtime	2	11/28/2016 12:16:58 PM
Weighting	2	C	Range Ceiling	2	--
Criterion Level	2	85 dB	ULL	2	85 dB
Dynamic Range	2	--	Exchange Rate	2	3 dB
Response	2	SLOW	Integrating Threshold	2	80 dB
Alarm Level 1	2	--	AlarmLevel2	2	--
Dosimeter Name	2	--			

Logged Data Chart

S003_BLN070008_28112016_211947: Logged Data Chart - Read Only



APPENDIX B2

Noise levels at the Woodley Park site during early-afternoon

Session Report

12/2/2016

General Information

Name	S007_BLN070008_28112016_211701
Comments	
Start Time	11/28/2016 1:53:36 PM
Stop Time	11/28/2016 2:08:41 PM
Run Time	00:15:05
Model Type	SoundPro DL
Serial Number	BLN070008
Device Firmware Rev	R.13H
Company Name	
Description	
Location	
User Name	

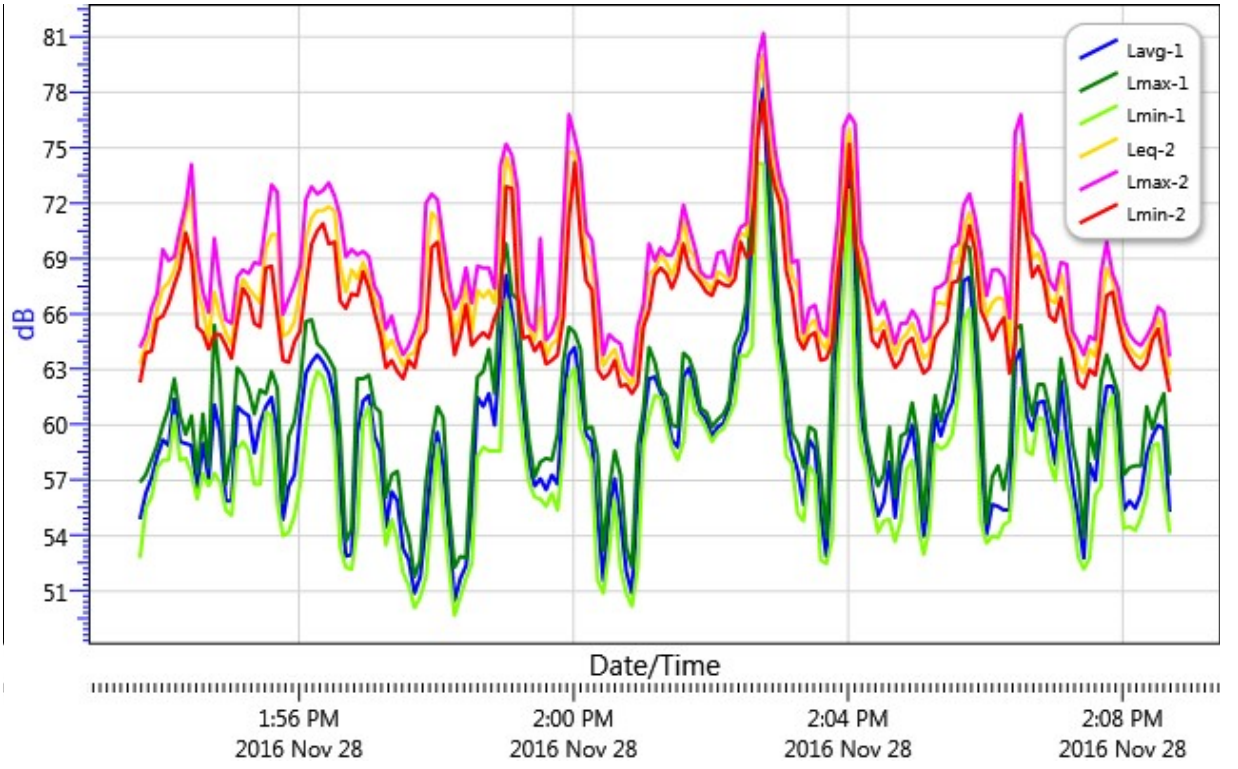
Summary Data

Description	Meter	Value	Description	Meter	Value
Dose	1	0.1 %	Pdose (8:00)	1	3.7 %
Lavg	1	61.1 dB	Lpk	1	94.4 dB
Leq	1	--	TWA	1	36.2 dB
UL Time	1	00:00:00	SEL	1	110.3 dB
ProjectedTWA (8:00)	1	61.1 dB	Mntime	1	11/28/2016 2:00:49 PM
Mxtime	1	11/28/2016 2:02:43 PM	PKtime	1	11/28/2016 2:02:40 PM
Weighting	1	--	Range Ceiling	1	--
Criterion Level	1	--	ULL	1	--
Dynamic Range	1	--	Exchange Rate	1	--
Response	1	--	Int Threshold	1	--
Alarm Level 1	1	--	AlarmLevel2	1	--
Dosimeter Name	1	--			
Dose	2	0.1 %	Pdose (8:00)	2	2.6 %
Lavg	2	--	Lpk	2	94.6 dB
Leq	2	69.1 dB	TWA	2	54 dB
UL Time	2	00:00:00	SEL	2	98.6 dB

ProjectedTWA (8:00)	2	69.1 dB	Mntime	2	11/28/2016 1:58:13 PM
Mxtime	2	11/28/2016 2:02:43 PM	PKtime	2	11/28/2016 2:02:43 PM
Weighting	2	C	Range Ceiling	2	--
Criterion Level	2	85 dB	ULL	2	85 dB
Dynamic Range	2	--	Exchange Rate	2	3 dB
Response	2	SLOW	Integrating Threshold	2	80 dB
Alarm Level 1	2	--	AlarmLevel2	2	--
Dosimeter Name	2	--			

Logged Data Chart

S007_BLN070008_28112016_211701: Logged Data Chart - Read Only



APPENDIX C1

Noise levels at the South Japanese Gardens site during mid-morning

Session Report

12/2/2016

General Information

Name	S011_BLN070008_01122016_081819
Comments	
Start Time	11/30/2016 11:58:27 AM
Stop Time	11/30/2016 12:13:43 PM
Run Time	00:15:16
Model Type	SoundPro DL
Serial Number	BLN070008
Device Firmware Rev	R.13H
Company Name	
Description	
Location	
User Name	

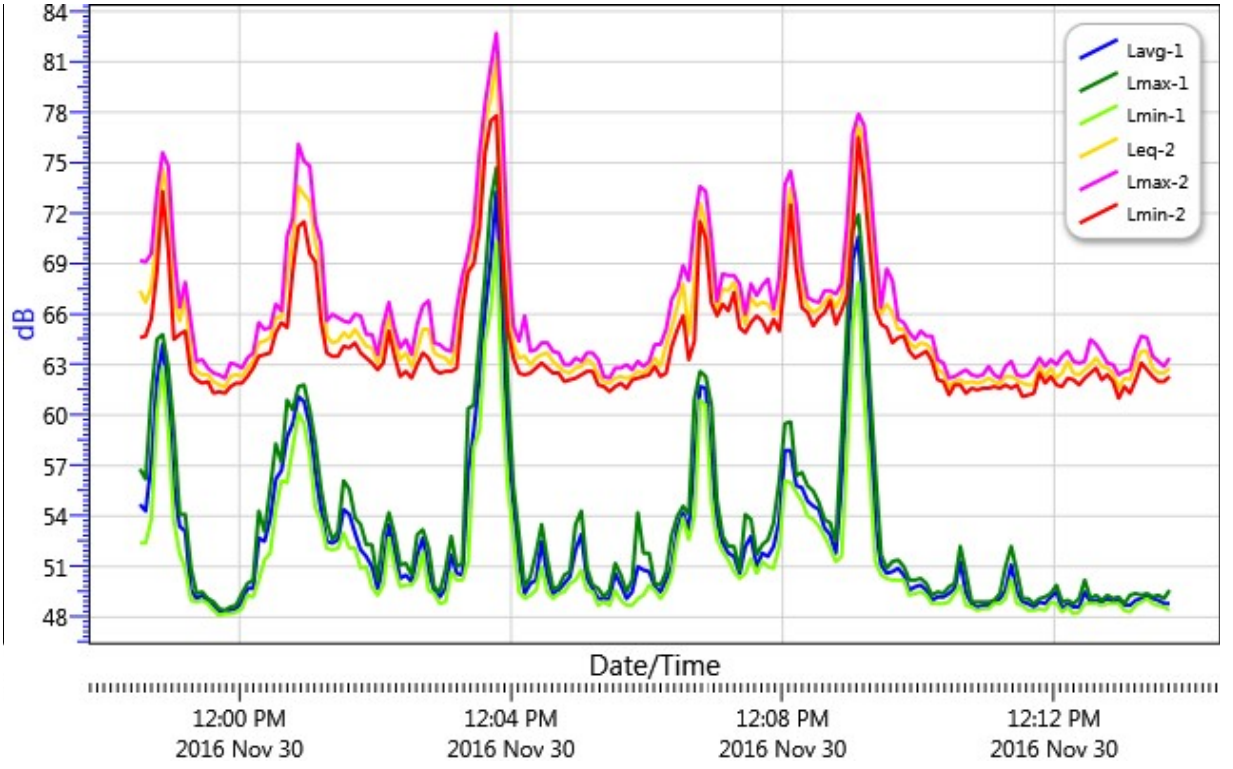
Summary Data

Description	Meter	Value	Description	Meter	Value
Dose	1	0 %	Pdose (8:00)	1	1.6 %
Lavg	1	55 dB	Lpk	1	89 dB
Leq	1	--	TWA	1	30.1 dB
UL Time	1	00:00:00	SEL	1	104.2 dB
ProjectedTWA (8:00)	1	55 dB	Mntime	1	11/30/2016 12:12:54 PM
Mxtime	1	11/30/2016 12:03:43 PM	PKtime	1	11/30/2016 12:03:43 PM
Weighting	1	--	Range Ceiling	1	--
Criterion Level	1	--	ULL	1	--
Dynamic Range	1	--	Exchange Rate	1	--
Response	1	--	Int Threshold	1	--
Alarm Level 1	1	--	AlarmLevel2	1	--
Dosimeter Name	1	--			
Dose	2	0.1 %	Pdose (8:00)	2	2 %
Lavg	2	--	Lpk	2	93.6 dB
Leq	2	67.9 dB	TWA	2	53 dB
UL Time	2	00:00:00	SEL	2	97.6 dB

ProjectedTWA (8:00)	2	67.9 dB	Mntime	2	11/30/2016 11:59:39 AM
Mxtime	2	11/30/2016 12:03:43 PM	PKtime	2	11/30/2016 12:03:42 PM
Weighting	2	C	Range Ceiling	2	--
Criterion Level	2	85 dB	ULL	2	85 dB
Dynamic Range	2	--	Exchange Rate	2	3 dB
Response	2	SLOW	Integrating Threshold	2	80 dB
Alarm Level 1	2	--	AlarmLevel2	2	--
Dosimeter Name	2	--			

Logged Data Chart

S011_BLN070008_01122016_081819: Logged Data Chart - Read Only



APPENDIX C2

Noise levels at the South Japanese Gardens site during early-afternoon

Session Report

12/2/2016

General Information

Name	S013_BLN070008_01122016_081829
Comments	
Start Time	11/30/2016 12:47:31 PM
Stop Time	11/30/2016 1:02:37 PM
Run Time	00:15:06
Model Type	SoundPro DL
Serial Number	BLN070008
Device Firmware Rev	R.13H
Company Name	
Description	
Location	
User Name	

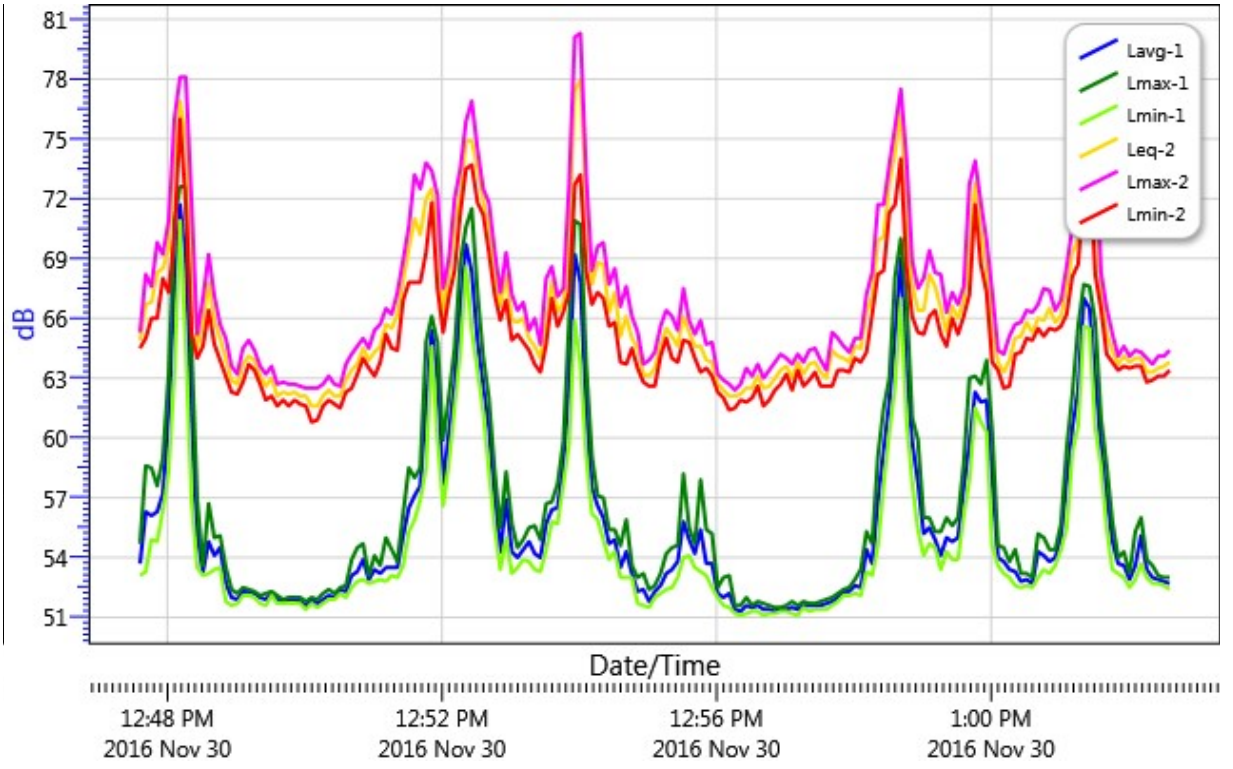
Summary Data

Description	Meter	Value	Description	Meter	Value
Dose	1	0.1 %	Pdose (8:00)	1	2.3 %
Lavg	1	57.7 dB	Lpk	1	87.4 dB
Leq	1	--	TWA	1	32.7 dB
UL Time	1	00:00:00	SEL	1	106.8 dB
ProjectedTWA (8:00)	1	57.7 dB	Mntime	1	11/30/2016 12:50:03 PM
Mxtime	1	11/30/2016 12:53:57 PM	PKtime	1	11/30/2016 12:53:56 PM
Weighting	1	--	Range Ceiling	1	--
Criterion Level	1	--	ULL	1	--
Dynamic Range	1	--	Exchange Rate	1	--
Response	1	--	Int Threshold	1	--
Alarm Level 1	1	--	AlarmLevel2	1	--
Dosimeter Name	1	--			
Dose	2	0.1 %	Pdose (8:00)	2	2.1 %
Lavg	2	--	Lpk	2	90.8 dB
Leq	2	68.2 dB	TWA	2	53.2 dB
UL Time	2	00:00:00	SEL	2	97.7 dB

ProjectedTWA (8:00)	2	68.2 dB	Mntime	2	11/30/2016 12:56:16 PM
Mxtime	2	11/30/2016 12:48:10 PM	PKtime	2	11/30/2016 12:48:10 PM
Weighting	2	C	Range Ceiling	2	--
Criterion Level	2	85 dB	ULL	2	85 dB
Dynamic Range	2	--	Exchange Rate	2	3 dB
Response	2	SLOW	Integrating Threshold	2	80 dB
Alarm Level 1	2	--	AlarmLevel2	2	--
Dosimeter Name	2	--			

Logged Data Chart

S013_BLN070008_01122016_081829: Logged Data Chart - Read Only



APPENDIX D1

Noise levels at the North Japanese Gardens site during mid-morning

Session Report

12/2/2016

General Information

Name	S010_BLN070008_01122016_081813
Comments	
Start Time	11/30/2016 11:32:28 AM
Stop Time	11/30/2016 11:47:56 AM
Run Time	00:15:28
Model Type	SoundPro DL
Serial Number	BLN070008
Device Firmware Rev	R.13H
Company Name	
Description	
Location	
User Name	

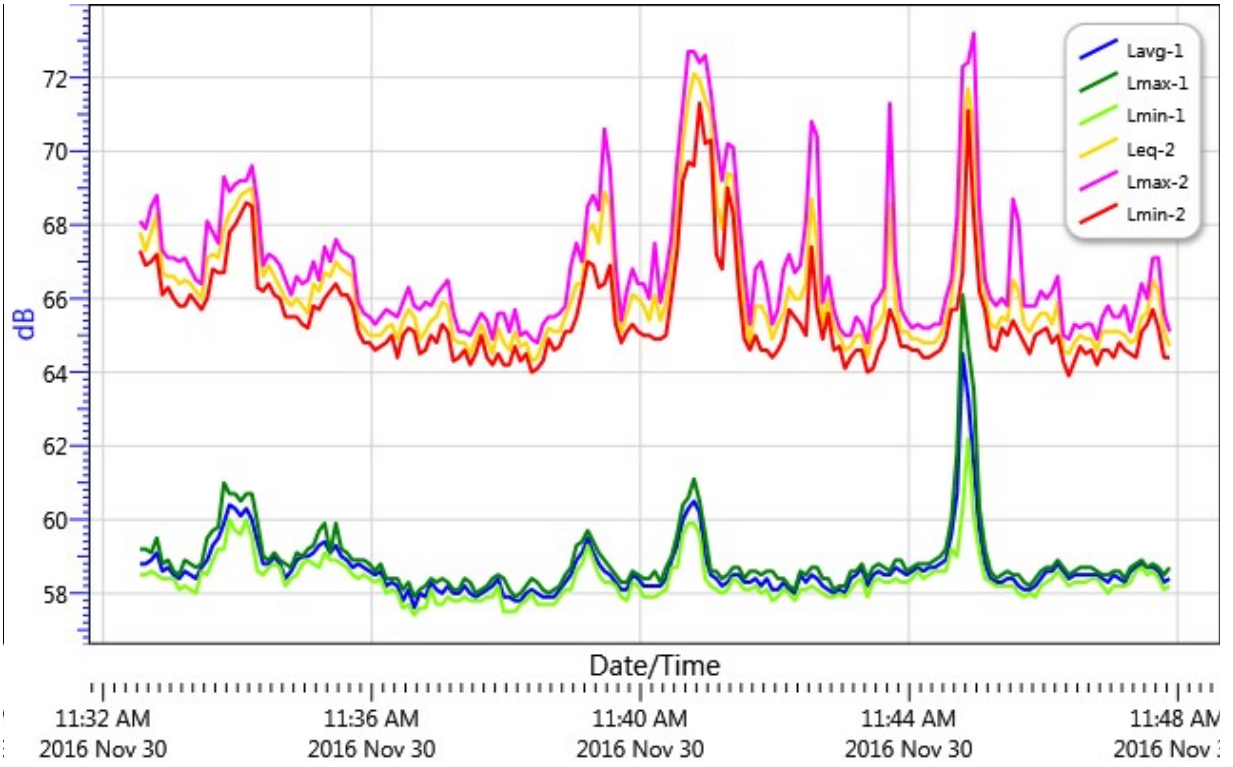
Summary Data

Description	Meter	Value	Description	Meter	Value
Dose	1	0.1 %	Pdose (8:00)	1	2.6 %
Lavg	1	58.7 dB	Lpk	1	81.7 dB
Leq	1	--	TWA	1	33.9 dB
UL Time	1	00:00:00	SEL	1	108 dB
ProjectedTWA (8:00)	1	58.7 dB	Mntime	1	11/30/2016 11:46:22 AM
Mxtime	1	11/30/2016 11:44:53 AM	PKtime	1	11/30/2016 11:44:52 AM
Weighting	1	--	Range Ceiling	1	--
Criterion Level	1	--	ULL	1	--
Dynamic Range	1	--	Exchange Rate	1	--
Response	1	--	Int Threshold	1	--
Alarm Level 1	1	--	AlarmLevel2	1	--
Dosimeter Name	1	--			
Dose	2	0 %	Pdose (8:00)	2	1.4 %
Lavg	2	--	Lpk	2	84.5 dB
Leq	2	66.5 dB	TWA	2	51.6 dB
UL Time	2	00:00:00	SEL	2	96.2 dB

ProjectedTWA (8:00)	2	66.5 dB	Mntime	2	11/30/2016 11:36:35 AM
Mxtime	2	11/30/2016 11:44:45 AM	PKtime	2	11/30/2016 11:33:11 AM
Weighting	2	C	Range Ceiling	2	--
Criterion Level	2	85 dB	ULL	2	85 dB
Dynamic Range	2	--	Exchange Rate	2	3 dB
Response	2	SLOW	Integrating Threshold	2	80 dB
Alarm Level 1	2	--	AlarmLevel2	2	--
Dosimeter Name	2	--			

Logged Data Chart

S010_BLN070008_01122016_081813: Logged Data Chart - Read Only



APPENDIX D2

Noise levels at the North Japanese Gardens site during early-afternoon

Session Report

12/2/2016

General Information

Name	S012_BLN070008_01122016_081824
Comments	
Start Time	11/30/2016 12:20:39 PM
Stop Time	11/30/2016 12:35:46 PM
Run Time	00:15:07
Model Type	SoundPro DL
Serial Number	BLN070008
Device Firmware Rev	R.13H
Company Name	
Description	
Location	
User Name	

Summary Data

Description	Meter	Value	Description	Meter	Value
Dose	1	0.1 %	Pdose (8:00)	1	3.7 %
Lavg	1	61.2 dB	Lpk	1	88.2 dB
Leq	1	--	TWA	1	36.2 dB
UL Time	1	00:00:00	SEL	1	110.3 dB
ProjectedTWA (8:00)	1	61.2 dB	Mntime	1	11/30/2016 12:34:25 PM
Mxtime	1	11/30/2016 12:25:32 PM	PKtime	1	11/30/2016 12:25:33 PM
Weighting	1	--	Range Ceiling	1	--
Criterion Level	1	--	ULL	1	--
Dynamic Range	1	--	Exchange Rate	1	--
Response	1	--	Int Threshold	1	--
Alarm Level 1	1	--	AlarmLevel2	1	--
Dosimeter Name	1	--			
Dose	2	0.1 %	Pdose (8:00)	2	4 %
Lavg	2	--	Lpk	2	92.6 dB
Leq	2	70.9 dB	TWA	2	55.9 dB
UL Time	2	00:00:00	SEL	2	100.5 dB

ProjectedTWA (8:00)	2	70.9 dB	Mntime	2	11/30/2016 12:30:22 PM
Mxtime	2	11/30/2016 12:27:51 PM	PKtime	2	11/30/2016 12:25:23 PM
Weighting	2	C	Range Ceiling	2	--
Criterion Level	2	85 dB	ULL	2	85 dB
Dynamic Range	2	--	Exchange Rate	2	3 dB
Response	2	SLOW	Integrating Threshold	2	80 dB
Alarm Level 1	2	--	AlarmLevel2	2	--
Dosimeter Name	2	--			

Logged Data Chart

S012_BLN070008_01122016_081824: Logged Data Chart - Read Only