INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

Haynes Generating Station Intake Channel Infill Project

PREPARED BY

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ACRONYMS AND ABBREVIATIONS

Acronym/Abbreviation	Definition
AB	Assembly Bill
AQMP	Air Quality Management Plan
BMP	best management practice
CAAQS	California Ambient Air Quality Standards
CAL FIRE	California Department of Forestry and Fire Services
CalEEMod	California Emissions Estimator Model
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CCC	California Coastal Commission
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CH_4	methane
CHRIS	California Historical Resources Information System
CO	carbon monoxide
CO_2	carbon dioxide
CRHR	California Register of Historical Resources
CWA	Clean Water Act
dBA	A-weighted decibel
DDE	dichlorodiphenyldichloroethylene
DDT	dichlorodiphenyltrichloroethane
DTSC	Department of Toxic Substances Control
EDR	Environmental Data Resources
EFH	essential fish habitat
ER-L	Effects Range-Low
ER-M	Effects Range-Median
FEMA	Federal Emergency Management Agency
FHSZ	fire hazard severity zone
FHWA	Federal Highway Administration
FMP	Fishery Management Plan
GHG	greenhouse gas
GWP	global warming potential
HCM	Highway Capacity Manual
HFC	hydrofluorocarbon
HnGS	Haynes Generating Station

Acronym/Abbreviation	Definition
I	Interstate
IPCC	Intergovernmental Panel on Climate Change
LACM	Natural History Museum of Los Angeles County
LADWP	Los Angeles Department of Water and Power
L_{eq}	equivalent continuous sound level
LID	low impact development
LOS	level of service
LST	localized significance threshold
MM	mitigation measure
MND	mitigated negative declaration
MT CO_2e	metric tons of CO2 equivalent
MW	megawatts
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NF_3	nitrogen trifluoride
NMFS	National Marine Fisheries Service
NO_2	nitrogen dioxide
NO_x	oxides of nitrogen
NPDES	National Pollutant Discharge Elimination System
O_3	ozone
OTC	Once-Through Ocean Cooling
PAH	polycyclic aromatic hydrocarbon
PCB	polychlorinated biphenyl
PCE	passenger car equivalent
PFC	perfluorocarbon
PM_{10}	particulate matter with an aerodynamic diameter less than or equal to 10 microns
$PM_{2.5}$	particulate matter with an aerodynamic diameter less than or equal to 2.5 microns
RCNM	Roadway Construction Noise Model
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCS	Sustainable Communities Strategy
SEADIP	Southeast Area Development and Improvement Plan
SEASP	Southeast Area Specific Plan

Acronym/Abbreviation	Definition
SF_6	sulfur hexafluoride
SMP	Soil/Sediment Management Plan
SO_2	sulfur dioxide
SO_x	sulfur oxides
SR	State Route
SRA	Source Receptor Area
STLC	Soluble Threshold Limit Concentration
SWPPP	storm water pollution prevention plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
TIS	Transportation Impact Study
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
VOC	volatile organic compound
V/C	volume to capacity
WMP	Waste Management Plan

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1 INTRODUCTION

1.1 Project Overview

The Los Angeles Department of Water and Power (LADWP) proposes to fill the Haynes Generating Station (HnGS) Intake Channel located at 6801 Second Street in Long Beach, California (proposed project). The project would occur over two phases: Phase I would consist of filling the northern 475 feet of the Intake Channel, and Phase II would consist of filling the Intake Channel to approximately 2 feet south of the 2nd Street/Westminster Boulevard bridge, for a total length of approximately 2,150 feet (project or proposed project). The Intake Channel extends south from the 2nd Street/Westminster Boulevard bridge to its southern end near State Route (SR) 1 (Pacific Coast Highway) and the San Gabriel River; this southern portion of the channel is not part of the project and would remain. The HnGS Intake Channel bisects the HnGS property, with energy generating Units 1 through 6 to the west and fuel storage tanks to the east. Units 3 through 6 were operationally decommissioned and will be demolished. The demolition project was assessed separately in an initial study/mitigated negative declaration (MND) that was adopted by the Board of Commissioners in October 2017. The construction for the demolition is underway. The proposal to fill in 2,150 feet of the HnGS Intake Channel would provide space for a future energy project on the HnGS site. At this time, that future project is undecided.

The HnGS Intake Channel consists of an open, earthen trapezoidal channel that extends south to north approximately 1.23 miles (6,518 linear feet) from its southern end near the San Gabriel River and Pacific Coast Highway to its northern terminus within HnGS, east of Unit 6. The project site consists of 2,150 feet of the HnGS Intake Channel. The project site is approximately 165 feet wide at the top of the channel, averages 30 feet wide along the channel bottom invert, and is 27 to 29 feet deep (when measured to the top of the channel). The proposed project would require approximately 400,000 cubic yards of engineered fill, which would need to be transported to the site.

1.2 California Environmental Quality Act

The California Environmental Quality Act (CEQA) (PRC Section 21000 et seq.) is the main statutory basis for the environmental review of projects in California. CEQA emphasizes the need for public disclosure and identifying and mitigating any environmental impacts associated with proposed projects. Unless a project falls within exemptions set forth in CEQA or the CEQA Guidelines (14 CCR 15000 et seq.), it requires at least some level of environmental review under CEQA. The proposed project does not fall within any exemptions set forth in CEQA or the CEQA Guidelines.

An initial study has been prepared by LADWP as the lead agency, in accordance with the CEQA Guidelines, to evaluate potential environmental effects and to determine whether an environmental impact report, a negative declaration, or an MND should be prepared for the proposed project. Per Section 15070(b) of the CEQA Guidelines, an MND is prepared for a project when an initial study has identified potentially significant effects on the

environment, but (1) revisions in the project plans or proposals made by, or agreed to by, the applicant before the proposed MND is released for public review would avoid the effects or mitigate the effects to a point where clearly no significant effect on the environment would occur and (2) there is no substantial evidence in light of the whole record before the public agency that the project, as revised, may have a significant effect on the environment.

The initial study determined that the implementation of the proposed project could cause some potentially significant impacts on the environment, but as shown in the environmental analysis contained in this MND, all of the proposed project's potentially significant impacts would be reduced to less-than-significant levels through the implementation of mitigation measures. Consequently, the analysis contained herein concludes that an MND shall be prepared for the proposed project.

The environmental documentation and supporting analysis is subject to a public review period. The proposed project implementation requires an action by the California Department of Fish and Wildlife (CDFW), which is a responsible agency. Therefore, the document will be submitted to the State Clearinghouse for review, and the review period is determined to be 30 days in accordance with Section 15073 of the CEQA Guidelines. Following review of any comments received, LADWP will consider these comments as a part of the proposed project's environmental review and include them with this MND for consideration by LADWP in accordance with Section 15074(b) of the CEQA Guidelines.

Federal Regulation of Wetlands and Waters of the United States

The U.S. Army Corps of Engineers (USACE) has regulatory authority for activities within wetlands under the Clean Water Act (CWA) of 1977, as amended, which serves as the primary federal law protecting the quality of the nation's surface waters. Section 404 of the CWA establishes a program that is administered by USACE to regulate discharge of dredged or fill material into "waters of the United States." The term "waters" includes wetlands and non-wetland bodies of water that meet specific criteria, as defined in the Code of Federal Regulations. In general, a permit must be obtained under Section 404 of the CWA before fill can be placed in wetlands or other waters of the United States. The type of permit depends on the amount of acreage and the purpose of the proposed fill, subject to discretion of the USACE. Under Section 404, general permits may be issued on a nationwide, state, or regional basis for particular types of activities that will have only minimal adverse impacts. Individual permits are required for projects with potentially significant impacts.

USACE generally takes jurisdiction within tidal waters to the high tide line, which encompasses spring high tides and other high tides that occur with periodic frequency. For non-tidal rivers and streams, USACE takes jurisdiction to the "ordinary high water mark," which is determined by erosion, the deposition of vegetation or debris, and changes in vegetation. USACE defines jurisdictional wetlands as areas that contain hydrophytic vegetation, hydric soils, and wetland hydrology, in accordance with the procedures established in the Corps Wetland Delineation Manual (USACE 1987) and Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (USACE 2008). Additionally, USACE regulates the construction of structures, and the excavation and deposition of materials into navigable waters under

Section 10 of the Rivers and Harbors Act of 1899. Navigable waters include areas subject to the ebb and flow of the tide and/or are presently used, or have been used in the past to transport interstate or foreign commerce.

Under Section 401 of the CWA, the California Regional Water Quality Control Boards (RWQCBs) have regulatory authority over actions in waters of the United States through issuance of Water Quality Certifications, which are issued in combination with permits issued by USACE under Section 404 of the CWA. A CWA Section 401 Water Quality Certification is required from the RWQCB whenever improvements are made within jurisdictional waters of the United States.

The Project Site contains 2,150 linear feet of jurisdictional aquatic resources that include 6.6 acres of USACE/RWQCB jurisdictional non-wetland waters of the United States and CDFW/California Coastal Commission (CCC) jurisdictional non-wetland streambed (unvegetated). However, final determinations of jurisdictional extents cannot be made until the resource agencies have verified the findings of this investigation.

All required federal permitting will be processed separately from this IS/MND.

1.3 Document Organization

This MND is composed of the following four chapters:

- Chapter 1, Introduction, provides a general overview of the project, CEQA requirements related to the project, the organization of this MND, and documents incorporated by reference.
- Chapter 2, Project Description, includes a description of the project location, environmental setting, proposed project components, construction, and required approvals.
- Chapter 3, Initial Study Checklist, provides the CEQA Initial Study checklist, which provides an assessment of potential environmental impacts and identifies mitigation measures to reduce potentially significant impacts to less than significant.
- Chapter 4, Report Preparers, includes a list of LADWP staff and consultants involved in preparing the MND.

The MND also includes several appendices that contain technical data related to air quality and greenhouse gas (GHG) emissions, biological resources, cultural resources, noise, and traffic.

1.4 Project Location

Proposed Project Site

The project site is located within the HnGS at 6801 East 2nd Street in the City of Long Beach (Figure 1, Project Location). The HnGS is located immediately inland from the Pacific Ocean, immediately south of SR-22 (Garden Grove Freeway) and approximately 1 mile east of SR-1 (Pacific Coast Highway). Access to the HnGS is provided

from 2nd Street, which forms the southern site boundary. Seventh Street (SR-22) serves as the northern boundary; only emergency access is provided from this street. The San Gabriel River channel borders the west boundary, and an Orange County flood control channel forms the eastern boundary.

Although a portion of HnGS property is located in the City of Seal Beach, proposed project activities would be limited to the southern portion of the HnGS property, which is located entirely within the City of Long Beach. The proposed project site consists of 2,150 feet of the HnGS Intake Channel (Figure 2, Project Site). The project site is surrounded by HnGS Units 8 through 10 to the north, the remainder of the Intake Channel and the 2nd Street/Westminster Boulevard bridge to the south, storage tanks A through C and decommissioned HnGS fuel storage tanks D and E to the east, and HnGS Units 1 and 2 and decommissioned HnGS Units 3 through 6 to the west. The HnGS Intake Channel is located northeast of Alamitos Bay Marina and the Pacific Coast Highway Bridge that crosses the San Gabriel River.

Existing Conditions

HnGS was constructed in the 1960s to meet Los Angeles' growing demand for power. It is a 160-acre site with 11 operating generating units with a rated net capacity of 1,613 megawatts (MW) of power.

Units 1 and 2 are natural-gas-powered steam boiler generators that are currently operational. These units originally came into operation in 1962 and 1963, respectively. They provide a 444-MW generating capacity (222 MW per each unit). The primary structures of Units 1 and 2 are approximately 150 feet tall. The exhaust stack for each unit is approximately 250 feet tall. Units 1 and 2 use an ocean water once-through cooling system.

Units 3 through 6 have been decommissioned and will be demolished. Demolition of these units has been separately analyzed in an initial study/MND that was adopted by the LADWP Board of Commissioners in October 2017. The generators of Units 3 and 4 are approximately 150 feet tall, while the exhaust stacks are approximately 250 feet tall. Units 3 and 4 came into operation in 1964 and 1965, respectively, and were decommissioned in 2004. The generators of Units 5 and 6 are approximately 150 feet tall. The exhaust stacks are approximately 250 feet tall. Units 5 and 6 came into operation in 1966 and 1967, respectively. They were decommissioned in 2013.

Unit 7 is a small, 2-MW emergency backup power supply that went into operation in 1970. It is located immediately north of Units 1 and 2.

Units 8, 9, and 10 are currently operational as a combined-cycle generating system with a net capacity of 575 MW. They came into operation in 2004. Units 9 and 10 are natural-gas-fired combustion turbine generators, and Unit 8 is a steam turbine generator. Unit 8 uses an ocean water once-through cooling system. Excluding the exhaust stacks, the tallest portion of Units 9 and 10 are 75 feet in height. The exhaust stack for each unit is approximately 150 feet tall.

Units 11 through 16 are simple-cycle generating units that came into operation in 2013. Combined, these natural-gas-fired combustion turbine generators have a total net generating capacity of 592 MW (approximately 100 MW per each generator).

Excluding the exhaust stacks, the tallest portion of Units 11 through 16 are 60 feet in height, and the exhaust stack for each is approximately 160 feet tall. Water pipelines connect each generator unit to an individual dry-cooling unit to dissipate heat from the intercooler system. The cooling units, which are located northwest of the generators, are open lattice steel structures where water circulated in the pipelines is cooled using an induced mechanical draft created by a series of fans.

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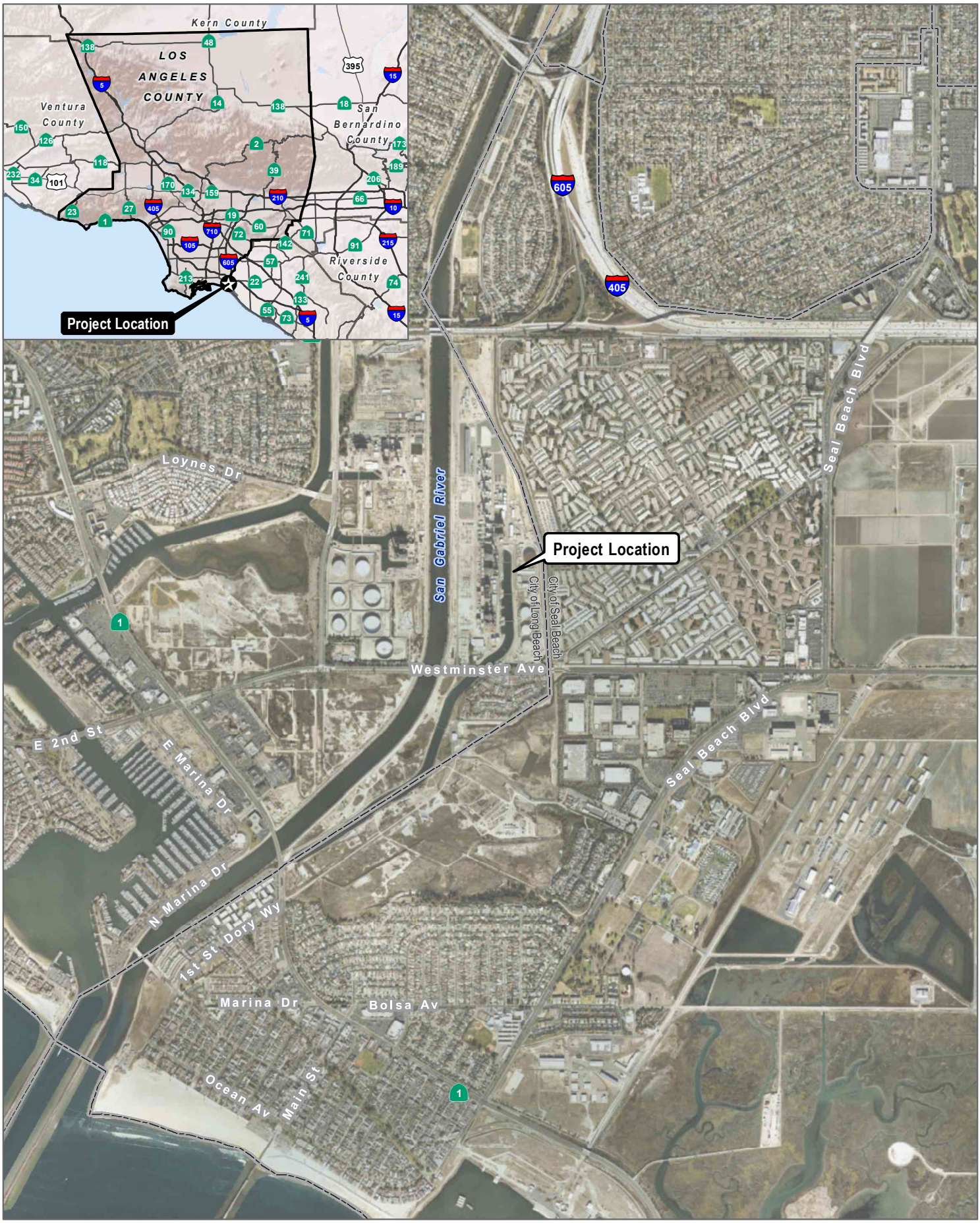

SOURCE: Port of Long Beach 2017

Los Angeles Department of Water & Power

0 1,000 2,000 Feet

FIGURE 1

Project Location

Haynes Generating Station Intake Channel Infill

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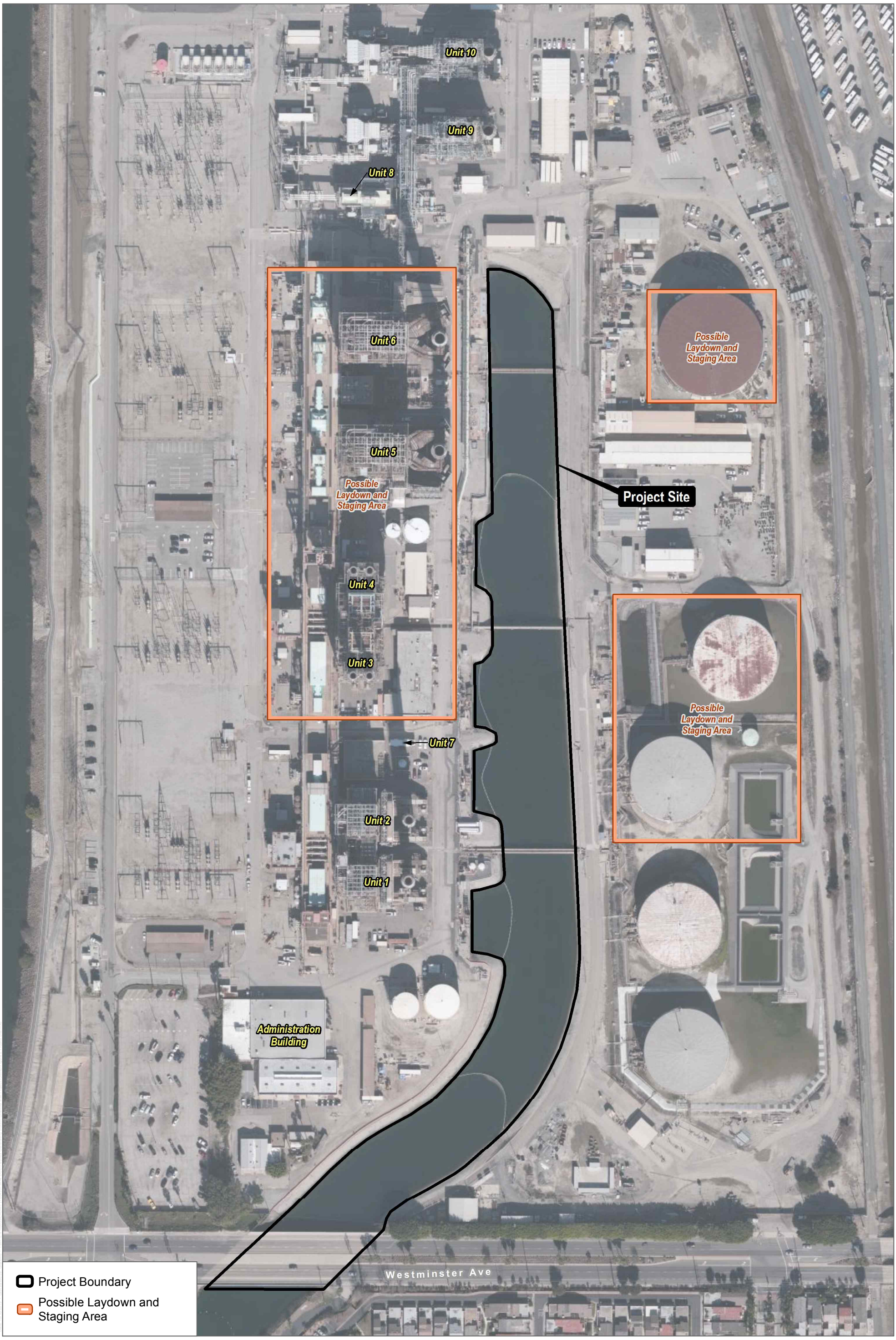

SOURCE: Port of Long Beach 2017

Los Angeles Department of Water & Power

0 80 160 Feet

FIGURE 2

Project Site

Haynes Generating Station Intake Channel Infill

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The HnGS Intake Channel, used for once-through cooling, divides the generating units from the fuel tanks located in the eastern portion of the site. The project site consists of 2,150 feet of the HnGS Intake Channel, east of Units 3 through 6. In the once-through cooling process, water is pulled from the circulating water HnGS Intake Channel through pump and screen chambers. The used water from each unit is released through a discharge pipe and an outfall on the east bank of the San Gabriel River. Once-through cooling is used for Units 1, 2, and 8 (which is part of the combined-cycle generating system).

The southeastern portion of HnGS is occupied by five aboveground storage tanks, which were originally used for fuel oil storage. The southernmost tank (Tank A) is currently used to store diesel oil for emergency circumstances when natural gas is not available. Tanks B and C are used to detain stormwater as necessary. Tanks D and E will be empty, clean, and removed from the site. Settling basins for industrial process water are located east of Tanks A, B, and C and west of Tank D. An electrical switchyard is located west of the generating units and east of the San Gabriel River.

Surrounding Land Uses

The HnGS is located in the City of Long Beach, with a portion of the property in the City of Seal Beach. The project site is located in the southern portion of the HnGS site, entirely within the City of Long Beach. The project site is immediately surrounded on all sides by additional elements of the HnGS. Land uses near the HnGS include residential, industrial, open space, and recreational land uses. Further details concerning the surrounding land uses are as follows:

North: The northern portion of the HnGS property, containing Units 8 through 10, is located immediately north of the project site. A residential community (Leisure World) is located northeast of the HnGS. SR-22, which is a four-lane highway that runs east to west, forms the northern boundary of HnGS. A residential development (College Estates) and Edison Park are located north of SR-22.

South: The project site would extend approximately 2 feet south of the 2nd Street/Westminster Boulevard bridge, and the remaining portion of the intake channel continues to the south. Access to the HnGS is provided from 2nd Street, which forms the southern boundary of HnGS. Light industrial and commercial uses associated with the Boeing Integrated Defense Systems Specific Plan area are located to the southeast. A residential development (Island Village) is located to the south. The City of Seal Beach is located south of Island Village, and vacant land consisting of Los Alamitos Retarding Basin and Los Cerritos Wetlands are located to the south, within the City of Seal Beach.

East: The portion of the HnGS which contains large storage tanks is located immediately east of the project site. An Orange County flood control channel forms the eastern boundary of HnGS, and the City of Seal Beach is located immediately to the east. A residential development (Leisure World) consisting of an approximately 18-acre community is located east of the flood control channel within the City of Seal Beach. Commercial development is located south of Leisure World and southeast of the project site.

West: Units 1 through 6 and the administrative building are located immediately to the west of the project site, as are additional elements of the HnGS. The San Gabriel River channel borders the western boundary of the HnGS, and the AES Los Alamitos Generating Station is located to the west across the San Gabriel River. A regional bike trail runs along the upper bank of the San Gabriel River, adjacent to HnGS. Los Cerritos Channel and associated wetlands are west of Studebaker Road, which bounds the west side of the AES Los Alamitos Generating Station. Alamitos Bay Marina and surrounding commercial, recreational, and residential development is located southwest of the project site.

1.5 Environmental Setting

City of Long Beach

The City of Long Beach is located in southwestern Los Angeles County along the Pacific Ocean, where the Los Angeles and San Gabriel Rivers flow into San Pedro Bay. Downtown Long Beach is located approximately 24 miles south of downtown Los Angeles (City of Long Beach 2017). The City of Long Beach is approximately 51.5 square miles and is located within an urban setting with a variety of land uses consisting of residential, commercial, office, industrial, open space, recreational, public facilities, and educational institutions. The regional serving facilities within the City of Long Beach include the Port of Long Beach; the Long Beach Airport; colleges and universities, including California State University, Long Beach; healthcare facilities; and energy production facilities (further discussed as follows).

The City of Long Beach is bordered by the Pacific Ocean to the south; the Cities of Hawaiian Gardens, Lakewood, Paramount, and Compton to the north; the Cities of Carson and Los Angeles to the west; and Orange County to the east, including the Cities of Seal Beach, Los Alamitos, Cypress, and La Palma. The City of Signal Hill is located in the center of the City of Long Beach, and is completely surrounded by the City of Long Beach on all sides. Some unincorporated areas also border the City of Long Beach. Regional access to the City of Long Beach is provided by Interstate (I) 405, I-605, I-710, SR-1 (Pacific Coast Highway), SR-19, SR-22, and SR-91.

Energy Production Facilities

The City of Long Beach has several large power generation plants, including the AES Los Alamitos, the Southeast Resource Recovery Facility, and the HnGS, where the project site is located. AES Los Alamitos and the HnGS are located in the southeast corner of the City and the Southeast Resource Recovery Facility is located at the Port of Long Beach. AES Los Alamitos is a 2,000 MW natural gas–fueled power plant located west of the San Gabriel River between 7th and 2nd Streets that provides electricity to surrounding communities and the region. AES Los Alamitos generates enough power to light some two million California homes and businesses. In the early 2000s, AES upgraded emission control equipment to reduce mono-nitrogen oxides and carbon monoxide (CO) emissions. The Southeast Resource Recovery Facility, located on Terminal Island, supports City of Long Beach sanitation and the Sanitation Districts of Los Angeles County. The facility processes municipal solid waste to generate energy, with enough power to meet the needs of approximately 35,000 homes. The energy generated is used to power the facility, and the rest is sold to Southern California Edison (City of Long Beach 2017).

LADWP operates the HnGS. Built in the 1960s, the facility is a natural gas and steam power plant located across the San Gabriel River from AES Los Alamitos. The station consists of six generating units with a combined capacity of 1,600 MW. In 2005, LADWP modernized Units 3 and 4. In 2012, LADWP began taking old units (Units 5 and 6) out of commission and rebuilding new, more energy-efficient facilities. These improvements are aimed at increasing fuel efficiency, lowering fuel costs, and reducing the use of ocean water to cool the facility (City of Long Beach 2017).

The HnGS property has a general plan land use designation of Industrial/Energy/Storage and a zoning designation of Planned Development District 1 (PD-1) and is located within the Southeast Area Specific Plan (SEASP)(formerly the Southeast Area Development and Improvement Plan (SEADIP)) (City of Long Beach 2017; City of Long Beach 2018). The existing industrial use of HnGS is consistent with the Planned Development District ordinance.

1.6 References

USACE (U.S. Army Corps of Engineers). 1987. Corps of Engineers Wetlands Delineation Manual. Online ed. Environmental Laboratory, Wetlands Research Program Technical Report Y-87-1. Vicksburg, Mississippi: U.S. Army Engineer Waterways Experiment Station. January 1987.

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City of Long Beach. 2018. *Zoning Maps*. Accessed January 2019. http://www.lbds.info/civica/filebank/blobdload.asp?BlobID=2538.

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2 PROJECT DESCRIPTION

2.1 Background

The HnGS Intake Channel bisects the HnGS property, with generating units to the west and fuel storage tanks to the east. Located west of the HnGS Intake Channel, Units 3 and 4 are steam boiler generators that were decommissioned in 2004 and repowered (i.e., functionally replaced) with Units 8, 9, and 10, which are combined-cycle generating system units. Also west of the HnGS Intake Channel, Units 5 and 6 are steam boiler generators that were decommissioned in 2013 and repowered with Units 11 through 16, which are simple-cycle generating units. Although Units 3 through 6 were operationally decommissioned, the units were left physically in place. The proposed project would involve filling 2,150 feet of the HnGS Intake Channel, immediately east of Units 1 through 6. The HnGS Intake Channel was previously used for once-through cooling for Units 3 through 6 and is currently being used for once-through cooling for Units 1, 2, and 8. In the once-through cooling process, water is pulled from the circulating water HnGS Intake Channel through pump and screen chambers. The used water from each unit is released through a discharge pipe and an outfall on the east bank of the San Gabriel River.

As only Units 1, 2, and 8 currently use once-through cooling, and once-through cooling will be eliminated from the HnGS, the Intake Channel is no longer necessary for plant operations. Demolition of Units 3 through 6, the ancillary facilities, and the aboveground storage tanks would leave a vacant site. Filling 2,150 feet of the HnGS Intake Channel would eliminate stagnation in this part of the channel, as well as provide the opportunity for the space to be used in the future for new facilities at HnGS, including potential energy generation and/or energy storage projects. However, the need, timing, and nature of any future projects at HnGS is currently unknown, and if such projects are proposed in the future, they would be subject to additional environmental assessment prior to any approvals or implementation.

2.2 Purpose and Need

The project is necessary to facilitate compliance with the U.S. Supreme Court ruling confirming the legality of the California State Water Resources Control Board (SWRCB) mandate to eliminate the use of Once-Through Ocean Cooling (OTC) and to support the South Coast Air Quality Management District (SCAQMD) in reducing air pollutant emissions in the South Coast Air Basin (SCAB) under the provisions of the Regional Clean Air Incentives Market Program. LADWP has notified the SWRCB of its intention to eliminate the use of OTC at its coastal generating stations by December 31, 2029.

In addition to the SWRCB regulations, LADWP has committed to using 55% renewable energy by 2030, and the City of Los Angeles has committed to 100% renewable transition to meet its carbon-neutral target of 2050. This schedule will necessitate a means to store and distribute large quantities of renewable energy. This will likely, but not certainly, be accomplished by a battery storage array that will occupy a significantly larger footprint than an equivalent natural gas generating unit. Due to updated goals, constantly changing regulations and technology, the specifics of the future

project are currently unknown. LADWP will need to have energy storage capabilities at HnGS by the end of 2029 when the natural gas OTC units can no longer be operated. The area occupied by the Intake Channel will no longer be needed for OTC, and its area is essential to accommodate any future renewable projects. It is likely that any future proposed energy generation and/or energy storage projects would support or work in conjunction with the existing units, and therefore would need to be located within the HnGS property and in proximity to the existing units. There is limited vacant land within the HnGS property, as the majority of the property is already utilized. Upon demolition of Units 3 through 6 and completion of the proposed project, this area would provide adequate space for a future energy project that is otherwise unavailable within the HnGS property. Further, once the use of OTC is eliminated, the Intake Channel would no longer serve a functional purpose within the HnGS property, and as an open body of water, presents a critical safety concern.

As the details of a future project are unknown at this time, any future project on site would be separately evaluated for environmental impacts in the future. Table 2.2-1 below shows the anticipated timeline in order to prepare the site for a future energy project, which would facilitate LADWP in meeting state mandates and renewable energy goals.

Table 2.2-1. Approximate Project Timeline

Project Action	Date
Complete CEQA document for Intake Channel Infill	2019 - early 2020
Agency Permit Application Approvals for Intake Channel Infill	Early 2020
Construction Contractor Bid for Intake Channel Infill Phase I	Late 2020
Intake Channel Infill Project Construction Phase I	Late 2021 - 2023
Future Energy Project Design	2023
Future Energy Project CEQA and Permitting	2024 - 2025
Future Energy Project Selection	2026
Future Energy Project Construction Contractor Bid	2027
Future Energy Project Construction Future	2028
Future Energy Project goes into operation and elimination of OTC use	2029
Intake Channel Infill Project Phase II	2030 - 2031
Consideration and Development of Additional Future Energy Project(s)	2031-2050

2.3 Construction

LADWP is seeking to completely fill in 2,150 feet of the HnGS Intake Channel adjacent to Units 3 through 6 using engineered fill. The engineered fill is expected to be used as a structural base for potential future development within the project site. Earthwork would be performed in accordance with, at a minimum, the applicable sections of the City of Long Beach grading codes, the latest edition of the Standard Specifications for Public Works Construction (BNI Publications Inc. 2018), and recommendations of the geotechnical engineer of record and/or the LADWP Soils and Geology Group.

Filling of the Intake Channel is proposed to occur over two phases. The project site is 2,150 feet of the HnGS Intake Channel, which is approximately 165 feet wide at the top of the channel, averages 30 feet wide along the channel bottom invert, and is 27 to 29 feet deep (when measured to the top of the channel). The total surface area of the project site is approximately 354,750 square feet, or 8.14 acres. To enable the fill work and limit the potential indirect impacts to adjacent open water and associated marine biological resources, a cofferdam would be placed at the southern boundary of the project site. The cofferdam would be used to allow dewatering of the project site, which would entail pumping the water within the project site over the cofferdam and into the southern portion of the channel. Further details regarding installation of the cofferdam and dewatering of the site are included in Section 2.3.1 Construction Activities and Phasing.

2.3.1 Construction Activities and Phasing

The project would occur over two phases: Phase I would consist of filling the northern 475 feet of the Intake Channel, and Phase II would consist of filling the Intake Channel to approximately 2 feet south of the 2nd Street/Westminster Boulevard bridge, for a total of approximately 2,150 feet of the HnGS Intake Channel. The duration of Phase I construction activities would be approximately 15 months, with proposed construction scheduled to begin in fall 2021 and end in 2023. The duration of Phase II construction activities would be approximately 20 months, beginning no later than 2030 and ending in fall 2031. Construction would typically take place 5 days per week, Monday through Friday in 8-hour shifts, generally from 7:00 a.m. to 3:00 p.m. (workers would arrive on site by 6:30 a.m. for safety meetings and planning, but no active work would occur before 7:00 a.m.).

All required staging, storage, and laydown areas related to the project would be located within the existing HnGS boundaries. In addition, construction contractors and LADWP would require temporary trailers on site for construction management activities. Potential staging areas within the HnGS property include areas occupied by the previously decommissioned Units 3 through 6, immediately west of the Intake Channel, and previously decommissioned Tanks D and E, immediately east of the Intake Channel. These facilities would be demolished prior to approval of the project.

During each phase, the general sequence of work would occur as follows:

Preparatory Work

All existing equipment in the Intake Channel that would be in conflict with cofferdam installation and backfilling operations would be removed or abandoned. For instance, the four existing pipes along the western edge of the Intake Channel would need to be abandoned and rerouted in order to provide access to the Intake Channel for the cofferdam installation equipment. The Unit 5 and 6 cooling water intake pumps that were on the west side of the Intake Channel were previously removed, and the existing concrete foundations and intake structures in this area will be demolished and removed prior to implementation of the project.

Cofferdam Installation and Dewatering

A temporary cofferdam would be installed and the Intake Channel to the north of it would be dewatered. Dewatering would be necessary to ensure a dry and stable work area behind the temporary cofferdam for backfilling. In order to install the cofferdam, a section of the rip-rap lining the channel would be removed at the location of the sheet pile cofferdam installation. The sheet pile cofferdam would be installed in an east-west configuration across the entire width of the Intake Channel to the existing finished grades on each side at the top of the existing Channel slopes.

The selected contractor would be responsible for designing and operating a dewatering system such that erosion would be prevented. Erosion and sediment control measures would adhere to local and state regulations, codes and standards in order avoid siltation and sedimentation to the adjacent tidal water flows. Proper erosion control measures including the use of silt fences, sand bags and seeding would be employed during construction to control erosion of embankments, temporary material stockpile(s), and to limit sediment runoff.

The selected contractor would provide, operate, and maintain all ditches, basins, site grading, and pumping facilities to divert, collect, and remove all water from the work area. Dewatering would be accomplished so as to prevent siltation into water bodies. A Stormwater Pollution Prevention Plan (SWPPP) would be prepared in compliance with all federal, state and local stormwater laws, regulations and ordinances. Further, in compliance with the National Pollutant Discharge Elimination System (NPDES) groundwater dewatering permit obtained by LADWP, LADWP's Wastewater Quality and Compliance group (WQCG) would conduct all permit required sampling, analysis, and reporting prior to the discharge of any wastewater. Water contaminated by any deleterious substances or fluids, as determined by LADWP, would be pumped to a holding tank and removed from the project site. All work areas would be kept free of water during demolition, equipment installation, installation of repair grout, placing and curing of concrete, unless required for the construction.

Channel Infill

Once the cofferdam is in place and the site has been dewatered, the Intake Channel would be excavated and backfilled with engineered fill to existing grades (i.e., to match existing elevations on either side of the Intake Channel). Excavated material may be used for backfill provided the materials are determined to be suitable for structural fill. Excavated materials determined to be uncontaminated and unsuitable for structural fill or another project use would be disposed of offsite. Materials determined to be contaminated would be stored in a temporary designated disposal area onsite, to be hauled off site for appropriate disposal.

The project site would be uniformly paved to a smooth surface, free from irregular surface changes, and providing a smooth transition between adjacent existing grades and new grades.

2.3.2 Construction Equipment, Truck Trips and Personnel

Phase I

During peak project construction periods, approximately 50 workers would be present at the site on the same day. The project would require approximately 80,000 cubic yards of engineered fill, which would be transported to the project site via approximately 8,000 round-trip truck trips. It is anticipated that engineered fill would come from on site, and the rest will be imported. The imported fill material will either come from quarries or be borrowed from other sites under protocols set forth in the Department of Toxic Substances Control (DTSC) regulations. The project would also require approximately 16,000 cubic yards of over-excavated soil to be hauled off site in 1,600 truck trips. During peak grading activities, 50 round-trip truck trips would occur per day. Surface-street truck traffic access the site via 2nd Street west of the HnGS entry drive and Studebaker Road between 2nd Street and the freeway onramps at 7th Street.

Phase II

During peak project construction periods, approximately 100 workers would be present at the site on the same day. The project would require approximately 320,000 cubic yards of engineered fill, which would be transported to the project site via 32,000 round-trip truck trips. It is anticipated that engineered fill would come from on site, and the rest will be imported. The imported fill material will either come from quarries or be borrowed from other sites under protocols set forth in the DTSC regulations. The project would also require approximately 63,000 cubic yards of over-excavated soil to be hauled off site in 6,300 round-trip truck trips. During peak grading activities, 100 round-trip truck trips would occur per day. Surface-street truck traffic access the site via 2nd Street west of the HnGS entry drive and Studebaker Road between 2nd Street and the freeway onramps at 7th Street.

2.4 Operations and Maintenance

Filling of the Intake Channel would create vacant land within the HnGS property. Thus, there would be no operational or maintenance activities associated with the project. As previously discussed, the project site may be used in the future for new facilities at HnGS. However, the need, timing, and nature of any future projects at HnGS is currently unknown. If such projects are proposed in the future, they would be subject to additional environmental assessment prior to any approvals or implementation.

2.5 Discretionary Approvals Required for the Project

The following discretionary permits and approvals may be required for the proposed project:

Federal

- Rivers and Harbors Act Section 10/CWA Section 404 permit issued by the U.S. Army Corps of Engineers

State

- CWA Section 401 Water Quality Certification issued by the RWQCB
- California Fish and Game Code Section 1602 Streambed Alteration Agreement issued by the CDFW
- Coastal Development Permit issued by the CCC
- Groundwater Dewatering Permit, under Order No. R4-2013-0095 and General National Pollutant Discharge Elimination System (NPDES) Permit No. CAG994004 with the RWQCB, if groundwater is encountered
- Construction General Permit Order 2009-0009-DWQ coverage with the RWQCB
- Notice of Intent
- Construction Stormwater Pollution Prevention Plan

Local

City of Los Angeles Department of Water and Power

- Adoption of the MND by the Board of Commissioners
- Approval of the proposed project by the Board of Commissioners

2.6 References

BNI Publications Inc. 2018. *The Greenbook: Standard Specifications for Public Works Construction.* Vista, California: BNI Publications.

3 INITIAL STUDY CHECKLIST

The following discussion of potential environmental effects was completed in accordance with Section 15063(d)(3) of the CEQA Guidelines (2019) to determine if the proposed project may have a significant effect on the environment.

1. Project title:

Haynes Generating Station Intake Channel Infill Project

2. Lead agency name and address:

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

3. Contact person and phone number:

Jane Hauptman
Environmental Planning and Assessment
Los Angeles Department of Water and Power
213-367-0968

4. Project location:

The project site is located within the HnGS at 6801 East 2nd Street in the City of Long Beach. The HnGS is located immediately inland from the Pacific Ocean, immediately south of SR-22 (Garden Grove Freeway) and approximately 1 mile east of SR-1 (Pacific Coast Highway).

Although a portion of HnGS is located in the City of Seal Beach, proposed project activities would be limited to the southern portion of the HnGS property, which is located entirely within the City of Long Beach.

5. Project sponsor's name and address:

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

6. City Council District:

District 3

7. General plan designation:

Industrial/Energy/Storage

8. Zoning:

Planned Development District 1 (PD-1)

9. Description of project:

Refer to Section 2 of this Initial Study

10. Surrounding land uses and setting:

Refer to Section 1.4 of this Initial Study

11. Other public agencies whose approval is required:

- U.S. Army Corps, Rivers and Harbors Act Section 10/CWA Section 404 Permit
- CCC, Coastal Development Permit
- CDFW, Section 1602 Streambed Alteration Agreement
- SCAQMD, Fugitive Dust Abatement Plan Approval (Rule 403)
- SWRCB and Los Angeles RWQCB, CWA Section 401 Water Quality Certification, General Storm Water Permit Associated with Construction Activities, Groundwater Dewatering Permit, under Order No. R4-2013-0095 and General NPDES Permit No. CAG994004

13. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?

Refer to Section 3.18 of this Initial Study.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact," as indicated by the checklists on the following pages.

☐ Aesthetics	☐ Agriculture and Forestry Resources	☐ Air Quality
☒ Biological Resources	☒ Cultural Resources	☐ Energy
☐ Geology and Soils	☐ Greenhouse Gas Emissions	☒ Hazards and Hazardous Materials
☒ Hydrology and Water Quality	☐ Land Use and Planning	☐ Mineral Resources
☐ Noise	☐ Population and Housing	☐ Public Services
☐ Recreation	☒ Transportation	☒ Tribal Cultural Resources
☐ Utilities and Service Systems	☐ Wildfire	☒ Mandatory Findings of Significance

DETERMINATION

On the basis of this initial evaluation:

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

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

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

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

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

Madan J Parker for — 12-3-19

Signature — Date

EVALUATION OF ENVIRONMENTAL IMPACTS

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 (e.g., 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 (e.g., 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, then 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 environmental impact report 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 environmental impact report, or other CEQA process, an effect has been adequately analyzed in an earlier environmental impact report or negative declaration. 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 (e.g., general plans, zoning ordinances). 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 is only a suggested form, 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.

3.1 Aesthetics

Except as provided in Public Resources Code Section 21099, would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☐	☒
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☐	☒

a) Would the project have a substantial adverse effect on a scenic vista?

Less-than-Significant Impact. The proposed project would be located within the interior of the existing HnGS property, a fully developed industrial complex that began operations in the early 1960s and consists of large generator units, fuel tanks, and other facilities related to electrical power generation. The City's General Plan Draft Urban Design Element (2018) identifies important visual resources within the City. Important vistas in the vicinity of the project site include views to the Pacific Ocean, downtown Long Beach, the marinas, and to the distant San Gabriel and Santa Ana Mountains to the northeast, as well as vistas to the southwest from high points, such as near Signal Hill (City of Long Beach 2018).

The Scenic Routes Element of the General Plan that the City adopted in 1975 also identifies scenic assets within the City, such as the Pacific Ocean, port facilities, oil islands, Bixby Park, Bluff Park, and flood control channels. However, the Scenic Routes Element does not identify any designated and or protected scenic vistas (City of Long Beach 1975). The project site is located within the SEASP (formerly SEADIP). Figure 4-2 of the SEASP

establishes view corridors along 2nd Street, Pacific Coast Highway, and Studebaker Road, which are defined as "roadway areas that provide special distinguishing features for the SEASP area" (City of Long Beach 2017b). The SEASP identifies view corridors as having views of wetlands resources, entry views from elevated bridges into the area, and the views created by the built environment that create a sense of arrival into the SEASP, particularly the proposed mixed-use activity center located at the heart of the SEASP (2nd Street and Pacific Coast Highway) (City of Long Beach 2017b). The view corridors closest to the project site include Studebaker Road (approximately 0.5 miles west of the project site) and 2nd Street (immediately south of the project site). Additionally, a "gateway" is identified at the intersection of 2nd Street and Studebaker Road. Further, Figure 4-3 of the SEASP identifies public viewsheds and view opportunities to water and wetlands resources (City of Long Beach 2017b).

The project site is located on East 2nd Street in the southeastern portion of the City and sits at approximately 3 feet above mean sea level. Therefore, the project site is not located in an elevated part of the City that would provide views to scenic vistas. The project would not contribute to increased view blockage as the project consists of filling 2,150 feet of the Intake Channel but does not include the construction of additional facilities. The Intake Channel is not visible from public vantage points with the exception of views into the southern portion of the Intake Channel from East 2nd Street. The City's General Plan indicates that views "along rivers and channels" could be considered to have scenic quality (City of Long Beach 2017a). The Intake Channel is located north of East 2nd Street and curves to the northeast into the HnGS property, precluding views to the northern portion of the channel from East 2nd Street. Therefore, Phase I of the project would not be visible from the view corridor and would not obstruct views from East 2nd Street. Phase II includes filling the portion of the Intake Channel immediately north of East 2nd Street and would be visible from the roadway. However, as designated in the SEASP, the view corridor from East 2nd Street is focused toward views of the Los Cerritos Wetlands, the San Gabriel River and Alamitos Bay. As important views are focused on the Los Cerritos Channel, the Cerritos Wetlands, the San Gabriel River, and Alamitos Bay, views of the Intake Channel are not considered particularly meaningful or striking.

During project construction, construction equipment may be visible to motorists traveling on East 2nd Street. However, views of construction equipment would be temporary and would not obstruct views to a designated scenic vista. Since the project does not involve the development of new features within the project area, it would not lead to obstruction or adverse impacts to scenic vistas within the City. Therefore, the project would result in less-than-significant impacts to scenic vistas.

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

No Impact. There are no officially designated state scenic highways near the proposed project site. SR-1 (Pacific Coast Highway) is an eligible (although not officially designated) state scenic highway (Caltrans 2018).

It is located approximately 1 mile west of the project site. There are no other scenic highways in the vicinity of the project site. The Intake Channel is located within an existing fully developed industrial site and, from viewpoints along SR-1, would either be screened from view or not substantially noticeable given the existing large generator units and other facilities within HnGS and intervening development. The proposed project would not require removal of, or impact views of, any scenic resources such as trees, rock outcroppings, or historic buildings within a state scenic highway. Therefore, the proposed project would result in no impact to scenic resources within a state scenic highway.

c) In non-urbanized areas, would the project substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

No Impact. The project site is located in an urbanized area within the City of Long Beach. The project site and immediately surrounding areas consist of industrial uses. The HnGS property has a general plan land use designation of Industrial/Energy/Storage and a zoning designation of Planned Development District 1 (PD-1) and is located within the SEASP (formerly SEADIP) (City of Long Beach 2017a; City of Long Beach 2018). The SEASP establishes view corridors in the City that provide views of special distinguishing features in the SEASP area, such as wetlands resources and entry views from elevated bridges into the area. As previously discussed in 3.1(a), the project would not result in adverse impacts to established view corridors or visual resources in the City. The project does not involve the construction of additional features on the project site, and the existing industrial use of the site is consistent with the PD-1 zoning designation of the site. Therefore, the project would not conflict with applicable zoning or other regulations governing scenic quality. The project would result in no impact.

d) Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

No Impact. Project construction is not anticipated to occur at night; therefore, no new sources of substantial light or glare would be added that would adversely affect day or nighttime views in the area during construction. Lighting already exists on site to provide for the safety of workers who are at the facility at night, and to provide for security of the plant. The project does not involve the development of new features or new lighting on site. Therefore, no new sources of light or glare would be added to the project site, and no change in lighting or glare is anticipated as a result of the proposed project. Therefore, there would be no impact.

References

Caltrans (California Department of Transportation). 2018. *Scenic Highways*. Accessed April 2019. http://www.dot.ca.gov/design/lap/livability/scenic-highways/.

City of Long Beach 2017a. *General Plan, Land Use Element.* Accessed April 2019. http://www.longbeach.gov/globalassets/city-news/media-library/documents/lue/november-2017/draft_longbeachlanduseelement_11-2017_sml.

City of Long Beach 2017b. *Southeast Area Specific Plan.* Accessed April 2019. http://www.lbds.info/civica/filebank/blobdload.asp?BlobID=6926.

City of Long Beach 2018. *Zoning Map.* Accessed April 2019. http://www.lbds.info/civica/filebank/blobdload.asp?BlobID=7265.

3.2 Agriculture and Forestry Resources

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
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?	☐	☐	☐	☒

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

No Impact. The proposed project would be located within an existing fully developed industrial site that does not meet the definition of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance as shown on maps pursuant to the California Department of Conservation's Farmland Mapping and Monitoring Program (DOC 2016). Further, surrounding land uses do not include agricultural uses. No impact would occur.

b) Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?

No Impact. The proposed project would be located within the existing HnGS property, which is industrially developed and zoned PD-1 (Planned Development) (City of Long Beach 2018). Based on the existing and historical uses at the HnGS property, the proposed project site is not subject to a Williamson Act contract. Therefore, there would be no conflict with zoning for agricultural uses or a Williamson Act contract. No impact would occur.

c) Would the project 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))?

No Impact. The proposed project would be located within the existing HnGS property, which is industrially developed and zoned PD-1 (Planned Development) (City of Long Beach 2018). The HnGS property is not forestland or timberland, and is not zoned for timberland production. Therefore, there would be no conflict with zoning for forest land or timber production. No impact would occur.

d) Would the project result in the loss of forest land or conversion of forest land to non-forest use?

No Impact. The proposed project would be located within the existing HnGS property, which is industrially developed and zoned PD-1 (Planned Development) (City of Long Beach 2018). The HnGS property is not forest land that would be converted to non-forest use. Further, surrounding land uses do not include forest land. Therefore, the project would not result in the loss or conversion of forest land. No impact would occur.

e) Would the project 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?

No Impact. The proposed project would be located within the existing HnGS property, which is industrially developed and zoned PD-1 (Planned Development) (City of Long Beach 2018). As previously discussed, surrounding land uses do not include agricultural uses, forest land or timberland, and therefore, the proposed

project would not involve other changes to the environment that would result in the conversion of farmland to non-agricultural use or forest land to non-forest use. Therefore, there would be no impact.

References

City of Long Beach. 2018. *Zoning Maps*. Accessed January 2019. http://www.longbeach.gov/lbds/planning/advance/maps/zoning/.

DOC (Department of Conservation). 2016. *Los Angeles County Important Farmland 2014*. Farmland Mapping and Monitoring Program. Map published April 2016. ftp://ftp.consrv.ca.gov/pub/dlrp/FMMP/pdf/2014/los14.pdf.

3.3 Air Quality

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations.				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	☐	☐	☒	☐
c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☒	☐

a) Would the project conflict with or obstruct implementation of the applicable air quality plan?

Less than Significant. The project site is located within the SCAB, which includes the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties, and all of Orange County, and is within the jurisdictional boundaries of SCAQMD.

The SCAQMD administers the Air Quality Management Plan (AQMP) for the SCAB, which is a comprehensive document outlining an air pollution control program for attaining all California Ambient Air Quality Standards (CAAQS) and National Ambient Air Quality Standards (NAAQS). The most recent adopted AQMP is the 2016 AQMP (SCAQMD 2017), which was adopted by the SCAQMD Governing Board in March 2017. The 2016 AQMP represents a new approach, focusing on available, proven, and cost-effective alternatives to traditional strategies while seeking to achieve multiple goals in partnership with other entities promoting reductions in GHGs and toxic risk, as well as efficiencies in energy use, transportation, and goods movement (SCAQMD 2017).

The purpose of a consistency finding is to determine if a project is inconsistent with the assumptions and objectives of the regional air quality plans, and, thus, if it would interfere with the region's ability to comply with federal and state air quality standards. The SCAQMD has established criteria for determining consistency with the currently applicable AQMP in Chapter 12, Sections 12.2 and 12.3, in the SCAQMD CEQA Air Quality Handbook. The criteria are as follows (SCAQMD 1993):

- Whether the project would 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 the ambient air quality standards or interim emission reductions in the AQMP.
- Whether the project would exceed the assumptions in the AQMP or increments based on the year of project buildout and phase.

To address the first criterion regarding the project's potential to 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 the ambient air quality standards or interim emission reductions in the AQMP, project-generated criteria air pollutant emissions were estimated and analyzed for significance and are addressed under Section 3.3(b). Detailed results of this analysis are included in Appendix A. As presented in Section 3.3(b), project construction would not generate criteria air pollutant emissions that would exceed the SCAQMD thresholds, and the project is not anticipated to generate operational criteria air pollutant emissions.

The second criterion regarding the project's potential to exceed the assumptions in the AQMP or increments based on the year of project buildout and phase is primarily assessed by determining consistency between the project's land use designations and potential to generate population growth. In general, projects are considered consistent with, and would not conflict with or obstruct implementation of, the AQMP if the growth in socioeconomic factors is consistent with the underlying regional plans used to develop the AQMP (per Consistency Criterion No. 2 of the SCAQMD CEQA Air Quality Handbook). The SCAQMD primarily uses demographic growth forecasts for various socioeconomic categories (e.g., population, housing, employment by industry) developed by the Southern California Association of Governments (SCAG) for its Regional Transportation Plan (RTP)/Sustainable Communities Strategy

(SCS) (SCAG 2016), which is based on general plans for cities and counties in the SCAB, for the development of the AQMP emissions inventory (SCAQMD 2017).[1] The SCAG 2016 RTP/SCS, and associated Regional Growth Forecast, are generally consistent with the local plans; therefore, the 2016 AQMP is generally consistent with local government plans.

As discussed in Section 2 of this IS/MND, the project would occur entirely within the existing footprint of the HnGS. The filling in of the intake channel would not change or affect the existing zoning or land use designations in the project area. Accordingly, the project is consistent with the SCAG RTP/SCS forecasts used in the SCAQMD AQMP development.

In summary, based on the considerations presented for the two criteria, impacts relating to the project's potential to conflict with or obstruct implementation of the applicable AQMP would be less than significant.

b) Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

Less-than-Significant Impact. Air pollution is largely a cumulative impact. The nonattainment status of regional pollutants is a result of past and present development, and the SCAQMD develops and implements plans for future attainment of ambient air quality standards. Based on these considerations, project-level thresholds of significance for criteria pollutants are used in the determination of whether a project's individual emissions would have a cumulatively considerable contribution on air quality. If a project's emissions would exceed the SCAQMD significance thresholds, it would be considered to have a cumulatively considerable contribution. Conversely, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant (SCAQMD 2003).

A quantitative analysis was conducted to determine whether proposed construction activities would result in a cumulatively considerable net increase in emissions of criteria air pollutants for which the SCAB is designated as nonattainment under the NAAQS or CAAQS. Criteria air pollutants include ozone (O_3), nitrogen dioxide (NO_2), CO, sulfur dioxide (SO_2), particulate matter with an aerodynamic diameter less than or equal to 10 microns (PM_{10}), particulate matter with an aerodynamic diameter less than or equal to 2.5 microns ($PM_{2.5}$), and lead. Pollutants that

[1] Information necessary to produce the emission inventory for the SCAB is obtained from the SCAQMD and other governmental agencies, including the California Air Resources Board (CARB), the Caltrans, and SCAG. Each of these agencies is responsible for collecting data (e.g., industry growth factors, socioeconomic projections, travel activity levels, emission factors, emission speciation profile, and emissions) and developing methodologies (e.g., model and demographic forecast improvements) required to generate a comprehensive emissions inventory. SCAG incorporates these data into its Travel Demand Model for estimating/projecting vehicle miles traveled and driving speeds. SCAG's socioeconomic and transportation activities projections in their 2016 RTP/SCS are integrated in the 2016 AQMP (SCAQMD 2017).

are evaluated herein include volatile organic compounds (VOCs) and oxides of nitrogen (NO_x), which are important because they are precursors to O_3, as well as CO, sulfur oxides (SO_x), PM_{10}, and $PM_{2.5}$.

Regarding NAAQS and CAAQS attainment status,[2] the SCAB is designated as a nonattainment area for national and California O_3 and $PM_{2.5}$ standards (CARB 2017; EPA 2017). The SCAB is designated as a nonattainment area for California PM_{10} standards; however, it is designated as an attainment area for national PM_{10} standards. The SCAB nonattainment status of O_3, $PM_{10,}$ and $PM_{2.5}$ standards is the result of cumulative emissions from various sources of air pollutants and their precursors within the SCAB, including motor vehicles, off-road equipment, and commercial and industrial facilities. The SCAB is designated as an attainment area for national and California NO_2, CO, and SO_2 standards. Although the SCAB has been designated as partial nonattainment (Los Angeles County) for the federal rolling 3-month average lead standard, it is designated attainment for the state lead standard.[3]

Appendix G of the CEQA Guidelines indicates that, where available, the significance criteria established by the applicable air district may be relied upon to determine whether a project would have a significant impact on air quality. The SCAQMD has established Air Quality Significance Thresholds, as revised in March 2015, which set forth quantitative emissions significance thresholds below which a project would not have a significant impact on ambient air quality (SCAQMD 2015). The quantitative air quality analysis provided herein applies the SCAQMD thresholds to determine the potential for the project to result in a significant impact under CEQA. The SCAQMD mass daily construction thresholds are as follows: 75 pounds per day for VOC, 100 pounds per day for NO_x, 550 pounds per day for CO, 150 pounds per day for SO_x, 150 pounds per day for PM_{10}, and 55 pounds per day for $PM_{2.5}$.

The following discussion quantitatively evaluates project-generated construction impacts and qualitatively evaluates operational impacts that would result from implementation of the proposed project.

Construction Emissions

Proposed construction activities would result in the temporary addition of pollutants to the local airshed caused by on-site sources (i.e., off-road construction equipment and soil disturbance) and off-site sources

[2] An area is designated as in attainment when it is in compliance with the NAAQS and/or the CAAQS. The NAAQS and CAAQS are set by the Environmental Protection Agency and CARB, respectively, for the maximum level of a given air pollutant that can exist in the outdoor air without unacceptable effects on human health or the public welfare. Attainment = meets the standards; attainment/maintenance = achieve the standards after a nonattainment designation; nonattainment = does not meet the standards.

[3] Re-designation of the lead NAAQS designation to attainment for the Los Angeles County portion of the SCAB is expected based on current monitoring data. The phase out of leaded gasoline started in 1976. Since gasoline no longer contains lead, the project is not anticipated to result in impacts related to lead; therefore, it is not discussed in this analysis.

(i.e., on-road haul trucks, delivery trucks, and worker vehicle trips). Construction emissions can vary substantially from day to day, depending on the level of activity; the specific type of operation; and, for dust, the prevailing weather conditions. Therefore, such emission levels can only be approximately estimated with a corresponding uncertainty in precise ambient air quality impacts.

The California Emissions Estimator Model (CalEEMod) Version 2016.3.2 was used to estimate emissions for construction of the proposed project. CalEEMod is a statewide computer model developed in cooperation with air districts throughout the state to quantify criteria air pollutant emissions associated with construction activities from a variety of land use projects, such as residential, commercial, and industrial facilities. CalEEMod input parameters, including the land use type used to represent the project and size, construction schedule, and anticipated construction equipment utilization, were based on information provided by LADWP and default model assumptions when project-specific data was not available.

For the purpose of conservatively estimating project emissions, it is assumed that Phase I of construction of the project would start in November 2021[4] and would last approximately 14 months and Phase II of construction of the project would start in January 2030 and would last approximately 21 months. The construction phasing schedule and duration, vehicle trip assumptions and construction equipment mix used for estimating the project-generated emissions are shown in Table 3.3-1.

Table 3.3-1 Construction Scenario Assumptions

Construction Phase	Start Date	Finish Date	One-Way Vehicle Trips			Equipment		
			Average Daily Workers	*Average Daily Vendor Trucks*	*Total Haul Trucks*	*Type*	*Quantity*	*Usage Hours*
Phase I: Site Preparation	11/01/2021	11/31/2021	100	0	0	Grader	1	8
						Excavators	3	8
						Rubber-Tired Dozers	1	7
						Tractors/Loaders/ Backhoes	1	8
Phase I: Dewatering	12/01/2021	01/31/2022	100	0	0	Excavators	1	8
						Generator Sets	1	8
						Pump	2	8

[4] The analysis assumes a construction start date of November 2021, which represents the earliest date construction would initiate. Assuming the earliest start date for construction represents the worst-case scenario for criteria air pollutant and GHG emissions, because equipment and vehicle emission factors for later years would be slightly less due to more stringent standards for in-use off-road equipment and heavy-duty trucks, as well as fleet turnover replacing older equipment and vehicles in later years.

Table 3.3-1 Construction Scenario Assumptions

Construction Phase	Start Date	Finish Date	One-Way Vehicle Trips			Equipment		
			Average Daily Workers	*Average Daily Vendor Trucks*	*Total Haul Trucks*	*Type*	*Quantity*	*Usage Hours*
						Tractors/Loaders/ Backhoes	1	7
Phase I: Grading	02/01/2022	01/31/2023	100	0	6,200[a]	Graders	1	6
						Rubber-Tired Dozers	1	6
						Tractors/Loaders/ Backhoes	1	7
Phase II: Site Preparation	01/01/2030	03/31/2030	200	0	0	Graders	1	8
						Excavators	6	8
						Rubber Tired Dozers	2	7
						Tractors/Loaders/ Backhoes	1	8
Phase II: Dewatering	04/01/2030	0701/2030	200	0	0	Excavators	2	6
						Generator Sets	2	6
						Pumps	2	8
						Rubber Tired Dozers	2	7
						Tractors/Loaders/ Backhoes	2	7
Phase II: Grading	07/02/2030	09/30/2031	200	0	28,000	Graders	1	6
						Rubber Tired Dozers	1	6
						Tractors/Loaders/ Backhoes	1	7

Source: LADWP 2019.
Notes: See Appendix A for details**.**
[a] For maximum daily criteria air pollutant emissions modeling, a maximum of 100 and 200 one-way haul truck trips per day was assumed for Phase I Grading and Phase II Grading, respectively .

Internal combustion engines used by construction equipment, trucks, and worker vehicles would result in emissions of VOCs, NO_x, CO, PM_{10}, and $PM_{2.5}$. PM_{10} and $PM_{2.5}$ emissions would also be generated by entrained dust, which results from the exposure of earth surfaces to wind from the direct disturbance and movement of soil. It is anticipated that during Phase I grading, the project would require import of 60,000 CY of fill and export of 12,000 CY of material. During Phase II grading, it is anticipated that the project would require import of 240,000 CY of fill and export of 48,000 CY of material.. It was conservatively assumed there would be a peak of 50 haul trucks (100 one-way haul truck trips) per day during the Phase I grading phase to import and export material.

During Phase II grading, it was conservatively assumed there would be a peak of 100 haul trucks (200 one-way haul truck trips) per day during to import and export material. The project would be required to comply with SCAQMD Rule 403 to control dust emissions during any dust-generating activities. Standard construction practices that would be employed to reduce fugitive dust emissions include watering of the active grading areas two times per day, with additional watering depending on weather conditions.

Estimated maximum daily construction criteria air pollutant emissions from all on-site and off-site emission sources is provided in Table 3.3-2.

Table 3.3-2 Estimated Maximum Daily Construction Emissions

Year	VOC	NO_x	CO	SO_x	PM_{10}[a]	$PM_{2.5}$[a]
	pounds per day					
2021	2.72	24.41	21.40	0.04	4.82	2.63
2022	3.36	64.48	25.76	0.18	7.84	3.15
2023	2.61	45.10	23.78	0.18	36.13	9.97
2030	3.45	39.11	34.06	0.20	14.49	5.15
2031	3.41	38.81	29.40	0.20	12.33	4.62
Maximum Daily Emissions	**3.45**	**64.48**	**34.06**	**0.20**	**36.13**	**9.97**
SCAQMD Threshold	*75*	*100*	*550*	*150*	*150*	*55*
Threshold exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

Source: SCAQMD 2015.
Notes: VOC = volatile organic compound; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = sulfur oxides; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter; SCAQMD = South Coast Air Quality Management District.
See Appendix A for detailed results.
[a] These estimates reflect control of fugitive dust (watering two times daily) required by SCAQMD Rule 403 (SCAQMD 2005).

As shown in Table 3.3-2, daily construction emissions would not exceed the SCAQMD significance thresholds for VOC, NO_x, CO, SO_x, PM_{10}, or $PM_{2.5}$ during project construction.

As discussed in previously, the SCAB has been designated as a federal nonattainment area for O_3 and $PM_{2.5}$ and a state nonattainment area for O_3, PM_{10}, and $PM_{2.5}$. Proposed construction activities of the project would generate VOC and NO_x emissions (which are precursors to O_3) and emissions of PM_{10} and $PM_{2.5}$. However, as indicated in Table 3.3-2, project-generated construction emissions would not exceed the SCAQMD emission-based significance thresholds for VOC, NO_x, PM_{10}, or $PM_{2.5}$, and therefore the project would not cause a cumulatively significant impact.

Cumulative localized impacts would potentially occur if a construction project were to occur concurrently with another off-site project. Construction schedules for potential future projects near the project site are currently unknown; therefore, potential construction impacts associated with two or more simultaneous projects would

be considered speculative.[5] However, future projects would be subject to CEQA and would require air quality analysis and, where necessary, mitigation. Criteria air pollutant emissions associated with construction activity of future projects would be reduced through implementation of control measures required by the SCAQMD. Cumulative PM_{10} and $PM_{2.5}$ emissions would also be reduced because all future projects would be subject to SCAQMD Rule 403 (Fugitive Dust), which sets forth general and specific requirements for all construction sites in the SCAQMD. Based on the previous considerations, the project would not result in a cumulatively considerable increase in emissions of nonattainment pollutants, and impacts would be less than significant.

Operational Emissions

Once project construction is complete, no operational activities associated with the proposed project would occur (no routine daily equipment operation or vehicle trips would be required). Because the project would not result in any long-term operational activities, there would be no potential air quality impacts associated with operational air pollutant emissions.

c) Would the project expose sensitive receptors to substantial pollutant concentrations?

Less-than-Significant Impact. Localized project impacts associated with construction criteria air pollutants emissions are assessed as follows.

Sensitive Receptors

Sensitive receptors are those individuals more susceptible to the effects of air pollution than the population at large. People most likely to be affected by air pollution include children, the elderly, and people with cardiovascular and chronic respiratory diseases. According to the SCAQMD, sensitive receptors include residences, schools, playgrounds, childcare centers, long-term healthcare facilities, rehabilitation centers, convalescent centers, and retirement homes (SCAQMD 1993). The closest sensitive receptor land uses are residences located approximately 650 feet to the west of the project site.

Localized Significance Thresholds

The SCAQMD recommends a localized significance threshold (LST) analysis to evaluate localized air quality impacts to sensitive receptors in the immediate vicinity of the project site as a result of construction activities. The impacts were analyzed using methods consistent with those in the SCAQMD's Final Localized Significance Threshold Methodology (SCAQMD 2009). The project is located in Source Receptor Area (SRA) 4 (South Coastal Los Angeles County). The project's construction activities would occur over an 8.14-acre area; therefore,

[5] The CEQA Guidelines state that if a particular impact is too speculative for evaluation, the agency should note its conclusion and terminate discussion of the impact (14 CCR 15145). This discussion is nonetheless provided in an effort to show good-faith analysis and comply with CEQA's information disclosure requirements.

for the purposes of the LST analysis, emissions thresholds based on a two-acre site were utilized, which was estimated using the SCAQMD's .*Fact Sheet for Applying CalEEMod to Localized Significance Threshold* (SCAQMD 2011). This is a conservative approach, as LSTs increase with the size of project site. As mentioned previously, the closest sensitive receptors are residences located approximately 650 feet to the west of the project site. The closest receptor distance available in the SCAQMD LST Methodology is 200 meters (656 feet) and is what was assumed for this analysis.

Project construction activities would result in temporary sources of on-site criteria air pollutant emissions associated with construction equipment exhaust and dust-generating activities. The maximum daily on-site construction emissions generated during construction of the proposed project is presented in Table 3.3-3, and compared to the SCAQMD localized significance criteria for SRA 4 to determine whether project-generated on-site construction emissions would result in potential LST impacts.

Table 3.3-3 Construction Localized Significance Thresholds Analysis

Year	NO_2	CO	PM_{10}	$PM_{2.5}$
	pounds per day (on site)			
2021	23.88	17.38	3.69	2.32
2022	13.78	9.19	2.83	1.69
2023	11.73	8.81	2.72	1.59
2030	14.27	29.75	3.34	3.04
2031	8.52	13.5	4.75	2.57
Maximum Daily On Site Emissions	**23.88**	**2.75**	**4.75**	**3.04**
SCAQMD LST Criteria	*106*	*2,869*	*70*	*8*
Threshold Exceeded?	**No**	**No**	**No**	**No**

Source: SCAQMD 2009.
Notes: NO_2 = nitrogen dioxide; CO = carbon monoxide; PM_{10} = particulate matter; $PM_{2.5}$ = fine particulate matter; SCAQMD = South Coast Air Quality Management District; LST = localized significance threshold.
See Appendix A for detailed results.
Localized significance thresholds are shown for a 2-acre project site corresponding to a distance to a sensitive receptor of 200 meters.

As shown in Table 3.3-3, proposed construction activities would not generate emissions in excess of site-specific LSTs; therefore, localized project construction impacts would be less than significant.

CO Hotspots

Traffic-congested roadways and intersections have the potential to generate localized high levels of CO. Localized areas where ambient concentrations exceed federal and/or state standards for CO are termed CO "hotspots." CO transport is extremely limited, because CO disperses rapidly with distance from the source. Under certain extreme meteorological conditions, however, CO concentrations near a congested roadway or intersection may reach unhealthy levels, affecting sensitive receptors. Typically, high CO concentrations are associated with severely congested intersections. Projects contributing to adverse traffic impacts may result in

the formation of a CO hotspot. Additional analysis of CO hotspot impacts would be conducted if a project would result in a significant impact or contribute to an adverse traffic impact at a signalized intersection that would potentially subject sensitive receptors to CO hotspots. During construction of the project, construction traffic would affect the intersections near the project site. However, the proposed project would be temporary and would not be a source of daily, long-term mobile-source emissions. In addition, due to continued improvement in vehicular emissions at a rate faster than the rate of vehicle growth and/or congestion, the potential for CO hotspots in the SCAB is steadily decreasing. Finally, as discussed in Section 3.17 of this IS/MND, transportation impacts would be less than significant with mitigation. Furthermore, as discussed in Section 2.4 of this IS/MND, the project would not require operational staff because the project would consist of vacant land once complete. Therefore, the project would not generate additional traffic volumes and impacts related to CO hot spots would be less than significant.

Toxic Air Contaminants

Toxic air contaminants (TACs) are defined as substances that may cause or contribute to an increase in deaths or in serious illness, or that may pose a present or potential hazard to human health. As discussed under the LST analysis, the nearest sensitive receptors to the proposed project are residences located adjacent to the project as it passes through residential neighborhoods.

Health effects from carcinogenic air toxics are usually described in terms of cancer risk. The SCAQMD recommends an incremental cancer risk threshold of 10 in 1 million. "Incremental cancer risk" is the net increased likelihood that a person continuously exposed to concentrations of TACs resulting from a project over a 9-, 30-, and 70-year exposure period will contract cancer based on the use of standard Office of Environmental Health Hazard Assessment risk-assessment methodology (OEHHA 2015). In addition, some TACs have non-carcinogenic effects. The SCAQMD recommends a Hazard Index of 1 or more for acute (short-term) and chronic (long-term) non-carcinogenic effects.[6] TACs that would potentially be emitted during construction activities associated with the proposed project would be diesel particulate matter.

Diesel particulate matter emissions would be emitted from heavy equipment operations and heavy-duty trucks. Heavy-duty construction equipment is subject to a California Air Resources Board (CARB) Airborne Toxics Control Measure for in-use diesel construction equipment to reduce diesel particulate emissions. As described for the LST analysis, PM_{10} and $PM_{2.5}$ (representative of diesel particulate matter) exposure would be minimal. According to the Office of Environmental Health Hazard Assessment, health risk assessments (which determine the exposure of sensitive receptors to toxic emissions) should be based on a 30-year

[6] Non-cancer adverse health risks are measured against a hazard index, which is defined as the ratio of the predicted incremental exposure concentrations of the various non-carcinogens from the project to published reference exposure levels that can cause adverse health effects.

exposure period for the maximally exposed individual resident; however, such assessments should also be limited to the period/duration of activities associated with the project. The duration of the proposed construction activities would constitute a small percentage of the total 30-year exposure period. The construction period for the proposed project would be approximately 35 months, after which construction-related TAC emissions would cease. Due to this relatively short period of exposure and minimal particulate emissions on site, TACs generated during construction would not be expected to result in concentrations causing significant health risks.

Following completion of on-site construction activities, the project would not involve routine operational activities that would generate TAC emissions. Operation of the proposed project would not result in any non-permitted direct emissions (e.g., those from a point source such as diesel generators). For the reasons previously described, the project would not result in substantial TAC exposure to sensitive receptors in the vicinity of the proposed project, and impacts would be less than significant.

Health Effects of Criteria Air Pollutants

Construction emissions of the project would not exceed the SCAQMD thresholds for any criteria air pollutants, including VOC, NO_x, CO, SO_x, PM_{10}, and $PM_{2.5}$.

Health effects associated with O_3 include respiratory symptoms, worsening of lung disease leading to premature death, and damage to lung tissue (CARB 2019). VOCs and NO_x are precursors to O_3, for which the SCAB is designated as nonattainment with respect to the NAAQS and CAAQS. The contribution of VOCs and NO_x to regional ambient O_3 concentrations is the result of complex photochemistry. The increases in O_3 concentrations in the SCAB due to O_3 precursor emissions tend to be found downwind of the source location because of the time required for the photochemical reactions to occur. Further, the potential for exacerbating excessive O_3 concentrations would also depend on the time of year that the VOC emissions would occur, because exceedances of the O_3 NAAQS and CAAQS tend to occur between April and October when solar radiation is highest. Due to the lack of quantitative methods to assess this complex photochemistry, the holistic effect of a single project's emissions of O_3 precursors is speculative. That being said, because the proposed project would not exceed the SCAQMD thresholds, the proposed project would not contribute to health effects associated with O_3.

Health effects associated with NO_x include lung irritation and enhanced allergic responses (CARB 2019). Because project-related NO_x emissions would not exceed the SCAQMD mass daily thresholds, and because the SCAB is a designated attainment area for NO_2 and the existing NO_2 concentrations in the area are well below the NAAQS and CAAQS standards, it is not anticipated that the proposed project would cause an exceedance of the NAAQS and CAAQS for NO_2 or result in potential health effects associated with NO_2 and NO_x.

Health effects associated with CO include chest pain in patients with heart disease, headache, light-headedness, and reduced mental alertness (CARB 2019). CO tends to be a localized impact associated with congested intersections. The associated potential for CO hotspots was discussed previously and determined to be less than significant. Thus, the project's CO emissions would not contribute to significant health effects associated with CO.

Health effects associated with PM_{10} include premature death and hospitalization, primarily for worsening of respiratory disease (CARB 2019). Construction of the project would not exceed thresholds for PM_{10} or $PM_{2.5}$, would not contribute to exceedances of the NAAQS and CAAQS for particulate matter, and would not obstruct the SCAB from coming into attainment for these pollutants. The project would also not result in substantial diesel particulate matter emissions during construction. Additionally, the project would be required to comply with SCAQMD Rule 403, which limits the amount of fugitive dust generated during construction. Due to the minimal contribution of particulate matter during construction, the project is not anticipated to result in health effects associated with PM_{10} or $PM_{2.5}$.

In summary, construction and operation of the proposed project would not result in exceedances of the SCAQMD significance thresholds for criteria pollutants, and potential health effects associated with criteria air pollutants would be less than significant.

d) Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Less-than-Significant Impact. The occurrence and severity of potential odor impacts depend on numerous factors. The nature, frequency, and intensity of the source; wind speed and direction; and the sensitivity of receiving location each contribute to the intensity of the impact. Although offensive odors seldom cause physical harm, they can be annoying, cause distress among the public, and generate citizen complaints.

During project construction, exhaust from equipment may produce discernible odors typical of most construction sites. Potential odors produced during construction would be attributable to concentrations of unburned hydrocarbons from tailpipes of construction equipment. However, such odors would disperse rapidly from the project site and generally occur at magnitudes that would not affect substantial numbers of people. Accordingly, impacts associated with odors during construction would be less than significant.

Land uses and industrial operations associated with odor complaints include agricultural uses, wastewater treatment plants, food-processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding (SCAQMD 1993). Operation of the proposed project would not entail any of these potentially odor-causing land uses. Rather, filling of the channel would create vacant land. Thus, there would be no operational or activities associated with the project. Therefore, the proposed project would not create any new sources of odor during operation, and proposed project operations would result in an odor impact that is less than significant.

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3.4 Biological Resources

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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 Wildlife 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 Wildlife or U.S. Fish and Wildlife Service?	☐	☐	☒	☐
c) Have a substantial adverse effect on state or federally protected wetlands (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?	☐	☐	☐	☒

The following analysis is based on a Marine Biological Resources Report prepared for the HnGS Intake Channel in November 2018 and updated October 2019, and included as Appendix B. The report focuses on marine biological

resources occurring or potentially occurring within the intake channel, and evaluates the area for potential impacts to marine biological resources.

The report includes a review of available literature and data regarding species occurrences within the HnGS Intake Channel, San Gabriel River, and Los Alamitos Bay. Data sources were consulted with regard to eelgrass, fish, invertebrates, and special-status biological resources for focused surveys. The Marine Biological Studies, Haynes Unit 5 and 6 Repower Project (MBC 2009), the Haynes Units 5 and 6 Repowering Project Environmental Impact Report (LADWP and AECOM 2010), CDFW's California Natural Diversity Database (CDFW 2018), the California Native Plant Society Inventory of Rare and Endangered Plants (CNPS 2018), and the U.S. Fish and Wildlife Service's (USFWS's) Species Occurrence and Critical Habitat Data were reviewed to identify the potential of special-status species to occur within the project site.

Following the literature review, focused surveys were conducted in July and October 2018, and September 2019. Focused surveys included in-field water quality sampling and testing, subsurface eelgrass bed mapping, marine fishes and invertebrates survey, essential fish habitat (EFH) assessment, marine bird survey, and jurisdictional wetland assessment and mapping. Survey areas are identified in Figure 2 of Appendix B. During these focused efforts, all observed terrestrial and aquatic wildlife, algae, and plant species, including special-status species, were recorded to generate full marine and terrestrial inventories. A list of plant/algae species and wildlife species observed within the project site and surrounding vicinity, as well as those likely to occur, is also presented in Appendix B.

Results for the eelgrass surveys within the project site and Potential Mitigation Site show mapped eelgrass beds with a 38.5% average cover, and 50% average cover, respectively. Eelgrass beds in the project site are primarily located on the sloped, steep sides of the channel, which is likely due to turbidity during plant operation and lack of light availability at depth. In the Potential Mitigation Site, eelgrass was distributed along the channel bottom from depths of 15 to 23 feet, likely due to less turbidity and better water clarity since this area is further from the intakes. In addition to the eelgrass, four species of marine algae were found in project site and Potential Mitigation Site. Of these species, three were native: acid weed (*Desmarestia species*), red algae (*Plocamium cartilagineum*), and sea lettuce (*Ulva lactuca*); and one was non-native and invasive: Japanese wireweed (*Sargassum muticum*).

In compliance with the Magnuson–Stevens Act (16 USC Sections 1801−1884), and in accordance with National Marine Fisheries Service (NMFS) regulations, the project site was assessed and surveyed for EFH. The project site is composed of soft bottom substrate and contains the seagrasses habitat area of particular concern type, specifically eelgrass (*Zostera marina*) beds. Eelgrass has been designated as EFH for various fish species managed under the Magnuson-Stevens Act and the Coastal Pelagic and Pacific Coast Groundfish Fishery Management Plans (FMPs). Few of the species covered by applicable FMPs are likely to occur in or near the project site. One FMP managed species was directly observed during the field survey: top smelt. Other FMP covered species that were not observed during the survey, but have been observed in the past near the project site or that occur in similar coastal conditions as the project site.

Fourteen native marine bird species were observed within the project site and vicinity during the field survey. Of the seven bird species observed, one is considered special-status by California: great blue heron (*Ardea herodias*). However,

great blue heron is only considered a special-status species when it occurs as a nesting colony. Because the project site provides only foraging habitat, this occurrence of great blue heron would not be considered special-status.

One special-status bird species that has a high potential to occur within the project site is the American peregrine falcon (*Falco peregrinus anatum*). Although no nesting habitat occurs within the project site, this species may use the vicinity for foraging. A nesting pair of American peregrine falcons was previously detected during Spring 2017 approximately 120 feet from the project site and 130 feet above ground on the upper level of Unit 5 (northwest corner) during a general inspection of the cooling towers (Dudek 2017).

The project site contains 2,150 linear feet of jurisdictional aquatic resources that include 6.6 acres of USACE/RWQCB jurisdictional non-wetland waters of the United States and CDFW/CCC jurisdictional non-wetland streambed (unvegetated). However, final determinations of jurisdictional extents cannot be made until the resource agencies have verified the findings of this investigation.

The types of impacts that could result from project implementation and analyzed below include direct (permanent and temporary) and indirect impacts. For purposes of the analysis, all biological resources within the project site were considered directly impacted. Indirect impacts primarily occur from adverse edge effects, either short-term indirect impacts related to construction or long-term or chronic indirect impacts associated with changes in flow rates or other physicochemical parameters away from the project site.

Impacts to EFH are typically determined based on whether a project would reduce quality or quantity of EFH, regardless of the degree to which that impact occurs. Based on the Magnuson-Stevens Act, adverse effects may include direct or indirect physical, chemical, or biological alterations of the waters or substrate, or loss of, or injury to, benthic organisms, prey species, and their habitat, and other ecosystem components, if such modifications reduce the quality and/or quantity of the EFH. Because the proposed project would occur within EFH, consultation with NMFS under the Magnuson-Stevens Act may be necessary and would be initiated by USACE during the permitting process for the proposed project. Direct and indirect effects on EFH are therefore evaluated herein to assist in the potential consultation process.

a) Would the project 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 and Managed Species

Less-Than-Significant Impact with Mitigation Incorporated. Based on the results of the literature review and focused surveys, 18 special-status species identified as protected, rare, sensitive, threatened, or endangered by the USFWS, NMFS, or CDFW have the potential to occur in the project site. Special-status species directly observed included eelgrass (EFH/habitat area of particular concern) and great blue heron (California Department of Forestry Sensitive Species). However, great blue heron is only considered a special-status species when it occurs as

a nesting colony. Because the project site provides only foraging habitat, this occurrence of great blue heron would not be considered special-status. One special-status bird species that has a high potential to occur within the project site is the American peregrine falcon (*Falco peregrinus anatum*). Although no nesting habitat occurs within the project site, this species may use the vicinity for foraging. A nesting pair of American peregrine falcons was previously detected during Spring 2017 approximately 120 feet from the project site (Dudek 2017). Only one managed species, topsmelt, was observed on site during the survey. Topsmelt is not a true smelt, but considered a silverside (*Atherinopsidae* sp.). Silverside impacts are guided by the two FMPs (PFMC 2016, 2018). Silversides have the ability to move away from the construction activity, so impacts to this managed species found on site should be minimal. Nonetheless, since special-status species and managed species have the potential to occur in the project site, direct impacts by the proposed project could occur, and impacts are potentially significant. With implementation of standard avoidance and minimization recommendations, included as part of Mitigation Measure (MM) BIO-1 through MM-BIO-4, direct impacts to special-status species would be less than significant.

MM-BIO-1 Before any in-water work begins under the proposed project, a qualified biologist will survey the area for species that may be removed and/or relocated, including sea turtles and shorebirds. Species observed within the project site, except sea turtles, will be flushed or relocated to suitable habitat outside of the project site to the extent feasible. In the unlikely event that sea turtles are present, the qualified biologist will contact National Marine Fisheries Service to determine the best course of action.

MM-BIO-2 Prior to commencement of the proposed project, limits of work and staging areas will be established and clearly delineated. All work and associated construction materials/equipment will be confined to these designated areas. No sediment, trash, discharge, or other materials will leave the work limits or associated staging areas and enter the surrounding terrestrial or sensitive marine environment outside the project site. Best management practices and compliance with Storm Water Pollution Prevention Plan requirements will be implemented.

MM-BIO-3 To avoid impacting breeding and nesting birds in accordance with the Migratory Bird Treaty Act, a breeding/nesting bird survey should be conducted prior to construction activities if they are to occur during the nesting season (January 15 through August 31). Nests that are detected within the project site will be avoided with an established buffer zone until nesting is completed. A nesting survey is considered valid for a 72-hour timeframe; should construction activities within the area be halted for any reason extending past this 72 hour window, a follow-up nesting bird survey would need to be completed before work can commence again. The buffer zone will be established around any identified active nests in coordination with the monitoring biologist.

MM-BIO-4 A qualified biologist will be present to monitor the project site during placement and removal of any flow diversions and cofferdams, and during dewatering to ensure that adverse effects to special-status or managed species are minimized. The biologist will be present during any dewatering events, including dewatering that may be needed to account for groundwater intrusion inside the cofferdam.

Potential indirect impacts resulting from the proposed project would likely occur as a result of short-term construction activities, including noise and water quality impacts. Construction noise would likely increase as a result of work in the project site. The water column is already subject to increased unnatural noise from HnGS operations. Additional construction noise would be short-term during construction activities, and therefore, is unlikely to lead to reduced survival of any species potentially occurring in the vicinity of the project site. If effects do occur, only a small percentage of individuals within fish populations would potentially be affected. Fish eggs and larval, juvenile fish, and adult fish would likely experience few to no effects due to construction activities within the project site. Fish eggs and larval fish are found in the water column and are occasionally drawn into generating stations through the once-through cooling process (EPRI 2007; MBC 2009). Short-term water quality impacts (e.g., turbidity) may temporarily have minor effects on resident fish; however, these impacts would likely not affect the success of fish populations due to the ability of the juvenile and adult fish to relocate to adjacent areas. Temporary relocation of these mobile species would not result in biologically significant impacts with regard to competition, predation, or spawning. Therefore, indirect impacts to special-status species and managed species would be less than significant.

Essential Fish Habitat and Eelgrass Habitat

Less-Than-Significant Impact with Mitigation Incorporated. The proposed project would result in direct impacts to 0.93 acres of eelgrass habitat, and as such, EFH is proposed to be impacted as a result of the proposed project. As such, impacts to eelgrass resulting from the proposed project would require in-kind compensatory mitigation consisting of the creation, restoration, or enhancement of eelgrass habitat in another location. This type of in-kind mitigation should achieve a final habitat replacement ratio of 1.5:1. Additionally, mitigation for impacts to eelgrass habitat should commence within 135 days following the initiation of the in-water construction, such

that mitigation commences within the same eelgrass growing season as impacts occur to minimize temporal loss. If possible, mitigation should be initiated prior to or concurrent with impacts (MM-BIO-5). With implementation of MM-BIO-5, impacts to eelgrass habitat would be considered less than significant.

MM-BIO-5 In-kind mitigation in the form of creation, restoration or enhancement of eelgrass habitat at another location will be implemented at a final habitat replacement ratio of 1.5:1.

The proposed project could also result in indirect impacts to EFH and eelgrass habitat through construction activities. Construction in the water column may cause a temporary increase in localized sedimentation. Sediments could become suspended in the available water column, which would increase turbidity. Increased turbidity decreases the water quality and is less suitable for eelgrass habitat. The water column is already consistently subject to sedimentation and high levels of turbidity due to water movement through the HnGS Intake Channel so a temporary increase in suspended sediments would likely cause short-term, indirect effects. Any introduced sedimentation would be subjected to adjacent open waters and would likely mix and settle with receiving waters and quickly dissipate. As such, measures such as a cofferdam to control turbidity would be employed to avoid disturbing eelgrass habitat adjacent to the project site.

Oils and similar substances from construction equipment can contain a wide variety of polynuclear aromatic hydrocarbons and metals. However, construction equipment for the proposed project would not enter the water. Spill containment and remediation material would be nearby, and vehicles would not be fueled or otherwise serviced adjacent to the HnGS Intake Canal. Due to these measures, accidents and toxic chemical contamination of the project site would be minimized.

Therefore, to minimize potential direct and indirect impacts to EFH and eelgrass habitat, MM-BIO-5 is required to reduce impacts to less than significant.

b) Would the project 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?

Less-Than-Significant Impact. The project site was mapped on the USGS Topographic Map as developed land with structures and tanks associated with the power plant. The HnGS Intake Channel is mapped as an open water feature (Appendix B). The proposed project does not contain riparian habitat or other sensitive natural communities identified by CDFW or USFWS. Additionally, the HnGS property is surrounded by light industrial, residential, and commercial development, within which adjacent drainages are well-defined, concrete-lined channels that do not support riparian habitat. Therefore, impacts associated with riparian or sensitive vegetation communities would be less than significant.

c) Would the project have a substantial adverse effect on state or 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?

Less-Than-Significant Impact with Mitigation Incorporated. The project site contains 2,150 linear feet of jurisdictional aquatic resources that include 6.6 acres of USACE/RWQCB jurisdictional non-wetland waters of the United States and CDFW/CCC jurisdictional non-wetland streambed (unvegetated). The proposed project involves filling the project site with earthen material, which would result in the direct loss of approximately 6.6 acres of jurisdictional wetlands. Impacts to jurisdictional waters would require review and approval by the resources agencies. The following agency permits would need to be obtained for the proposed project in compliance with state and federal regulations for all proposed project impacts to jurisdictional waters:

- Rivers and Harbors Act Section 10/CWA Section 404 permit issued by the USACE
- CWA Section 401 Water Quality Certification issued by the RWQCB
- CFGC Section 1602 Streambed Alteration Agreement issued by the CDFW
- Coastal Development Permit issued by the CCC

Impacts to jurisdictional waters are considered significant and require mitigation. As such, MM-BIO-1 through 5 would be required to ensure that the proposed project does not adversely affect state or federally protected wetlands and waters, and if it does, to assure that the appropriate level of compensatory mitigation is provided to offset such impacts. Therefore, with the incorporation of mitigation, impacts associated with federally protected wetlands would be less than significant.

d) Would the project 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?

Less-Than-Significant Impact with Mitigation Incorporated. The San Gabriel River is adjacent to the western boundary of the HnGS property and may support fish movement. Due to the proximity of the HnGS Intake Channel to the San Gabriel River, the project site may support migratory fish species. Two FMP managed species were observed during the field survey: top smelt and diamond turbot. Other FMP covered species that were not observed during the survey, but have been observed in the past near the project site or that occur in similar coastal conditions as the project site. Additionally, as previously discussed in Section 3.4(a), a nesting pair of American peregrine falcons was previously detected during Spring 2017 approximately 120 feet from the project site. Therefore, the project site could be used by migratory birds for foraging, and nearby elements within the HnGS property could be used for breeding and nesting. Incorporation of avoidance and minimization measures, included in MM-BIO-1 through MM-BIO-4 would lessen and may eliminate the likelihood that managed species, unmanaged invertebrate and fish species, and EFH habitat outside of the direct impact areas would be adversely affected. With implementation of MM-BIO-1 through MM-BIO-4, impacts to migratory fish or wildlife species would be less than significant.

e) Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

No Impact. No trees are proposed to be removed as part of the proposed project. Therefore, implementation of the proposed project would not conflict with any local policies or ordinances protecting biological resources.

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

No Impact. The study area is not located within any adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved regional or state habitat conservation plan areas. Thus, the proposed project would not be subject to the provisions of any such conservation plans. Accordingly, implementation of the proposed project would not conflict with any Habitat Conservation Plan; Natural

Community Conservation Plan; or other approved local, regional, or state habitat conservation plans, and no impact would occur.

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3.5 Cultural Resources

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	☐	☐	☒	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☒	☐	☐
c) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☒	☐

a) Would the project cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?

Less-than-Significant Impact. A cultural resources study was completed for the HnGS property in 2017. The South Central Coastal Information Center conducted a CHRIS records search on November 22, 2016, for the proposed project site and the surrounding 0.5 miles. This search included a review of its collection of mapped prehistoric, historic, and built-environment resources; Department of Parks and Recreation Site Records; technical reports; and ethnographic references. Additional consulted sources included historical maps of the project site; the National Register of Historic Places; the California Register of Historical Resources (CRHR); the California Historic Property Data File; and the lists of California State Historical Landmarks, California Points of Historical Interest, and Archaeological Determinations of Eligibility.

Historical photographs of the Haynes Steam Plant, available online through the Los Angeles Public Library, were also reviewed. The library hosts a digital collection of photographs and notes called the Department of Water and Power Photograph Archive, which comprises more than 20,000 historic photographs that reflect the early history of LADWP, documenting major events from as early as 1908. The collection includes several photographs of the Haynes Steam Plant in its early years and during its construction (Los Angeles Public Library 2017).

Other sources of information regarding the history and development of the plant included the Los Angeles Times (1923–present), accessed via ProQuest Historical Newspapers (Los Angeles Times 2017), and historical aerial photograph research from the years 1952, 1953, 1963, 1972, 1994, 2002, 2003, 2004, 2005, 2009, 2010, and 2012 (NETR 2011).

A pedestrian survey of the project site was conducted on November 21, 2016. The HnGS property is entirely developed with an active power plant. Therefore, intensive-level archaeological survey methods (i.e., regularly spaced pedestrian transects) were not warranted. The original steam plant (i.e., the southern portion of the plant encompassing the project site) was surveyed for cultural resources. The survey involved walking the B and C Street access roads and examining equipment located between the generating units. This encompassed all portions of the plant between 2nd and 4th Streets to the north and south, and B and C Streets to the east and west. Major elements surveyed included Units 3, 4, 5, and 6; the generator deck that spans the area directly west of the units; the two associated control houses (Control Buildings B and C); associated GSU transformers and buildings; the polishing and contaminated condensate tanks; buildings and structures located on the west side of C Street (including the butler storage building, warehouse and maintenance building, and chemical storage canopy); and the fuel tank storage area on the eastern side of the circulating water intake channel (specifically Tanks D and E).

The criteria for listing resources in the CRHR were developed to be in accordance with previously established criteria developed for listing in the National Register of Historic Places. According to PRC Section 5024.1(c)(1–4), a resource is considered historically significant if it (i) retains "substantial integrity," and (ii) meets at least one of the CRHR criteria. A resource less than 50 years old may be considered for listing in the CRHR if it can be demonstrated that sufficient time has passed to understand its historical importance and to obtain a scholarly perspective on events and individuals associated with the resource (see 14 CCR 4852(d)(2)).

CRHR Criterion 1: Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.

Units 1 through 6 of the Haynes Steam Plant were constructed between 1963 and 1967 to meet the energy demands of a rapidly growing post–World War II population in Los Angeles. Most power plants in the United States are constructed in response to population increases and a demand for more electricity. Because of the important function these plants provide, it may be concluded that most power plants have a high level of significance to the communities they serve. Therefore, it was necessary to evaluate the Haynes Steam Plant in the context of similar property types to distinguish between power plants that were designed expressly for the purpose of providing electricity to a given service area and plants that have made a significant contribution within the context of the property type. Although the Haynes Steam Plant played an important role in meeting the rapidly increasing demand for electricity in Los Angeles, it is not associated with specific events that influenced broad patterns of history. The Haynes Steam Plant was constructed to replace the significantly older Seal Beach Steam Plant, which operated from 1925 to 1962 and was demolished in 1967. The Haynes Steam Plant is relatively recent in comparison to other Southern California power plants that were built during the 1940s and 1950s (e.g., LADWP's Harbor, Valley, and Scattergood plants, and Southern California Edison's Redondo Beach, Etiwanda, and El Segundo plants), and it cannot be credited as a pioneer of any specific type of steam generating technology. Therefore, the plant does not appear eligible under CRHR Criterion 1.

CRHR Criterion 2: Is associated with the lives of persons important in our past.

No important historical figures were found to be associated with the Haynes Steam Plant. Although the plant does bear the name of a significant figure in the history of Los Angeles and the struggle for municipal ownership of utilities, John R. Haynes is not directly associated with the plant, as he died almost 30 years before its construction and well before its conception. Therefore, the plant does not appear eligible under CRHR Criterion 2.

CRHR Criterion 3: Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.

The big utility companies in California (i.e., LADWP, Southern California Edison, San Diego Gas & Electric, and Pacific Gas & Electric) embarked on a massive steam plant building campaign from the late 1940s to the late 1960s, and many of these plants were similar to each other. The Haynes Steam Plant follows the same general design criteria for steam power plants in California at the time, which included reducing transmission costs by constructing facilities close to load centers; close to fuel supplies; close to the ocean for cooling; and on a site suitable for a good, solid foundation and with enough land to allow for future expansion (most plants were constructed in phases over the course of many years). Although the number of generating units and associated infrastructure varied by plant, most plants also shared the same general list of equipment. As such, the Haynes Steam Plant does not appear to represent new aspects of plant siting or construction techniques. Further, there is no evidence that the Haynes Steam Plant was revolutionary in terms of steam generating technology. The original 1960s steam generating equipment appears to have been catalog ordered from well-known manufacturers like Hitachi, General Electric, and Brown Boveri, and does not appear to be unique to the Haynes Steam Plant, nor does this equipment appear to represent the last of its kind. For all of the reasons described herein, the plant does not appear eligible under CRHR Criterion 3.

CRHR Criterion 4: Has yielded, or may be likely to yield, information important in prehistory or history.

The Haynes Steam Plant is unlikely to yield any information important to prehistory or history, nor is it associated with any archaeological resources. Therefore, the plant does not appear eligible for listing under CRHR Criterion 4.

The Haynes Steam Plant is not listed as a City historic landmark, and it has never been evaluated for local landmark designation. There is no discussion of the Haynes Steam Plant or LADWP in the City of Long Beach's Historic Context Statement (City of Long Beach 2009), which examines the City from prehistory up to 1965. Steam-generated electrical power is discussed only in the context of port and harbor development, specifically the Southern California Edison plants in Long Beach Harbor. The plant is located on easternmost edge of the City, at the Orange County line, in an area that was not annexed as part of the City of Long Beach until after 1955. Because the City's landmark designation criteria mirror that of the CRHR, a separate evaluation is not required. An evaluation of the plant's significance based on the City's landmark designation criteria indicates that the property is not eligible for local listing.

Based on the significance evaluation, HnGS does not appear to be eligible for listing in the CRHR or as a City of Long Beach historical landmark. As a result, the proposed project would have a less-than-significant impact on historical resources as defined in Section 15064.5.

b) Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

Less-than-Significant Impact with Mitigation Incorporated. South Central Coastal Information Center records indicate that 34 cultural resources investigations have been conducted within a 0.5-mile search radius of the project site. Of these, 14 studies were mapped as overlapping the project site; however, these studies are general overview reports that do not specifically address the project site. The remaining 20 studies focused on areas in the vicinity of the project site, but none overlap the site.

There are no previously recorded cultural resources on the project site; however, a historic-age flood control channel (P-30-177074) is close to the eastern border of the project site. The channel was previously evaluated in support of a Los Alamitos Channel maintenance project (Dice 2013). The evaluation determined that the resource appears ineligible for listing in the National Register of Historic Places or the CRHR.

There are 10 additional previously recorded cultural resources within the surrounding 0.5-mile search radius. These resources include six prehistoric sites (P-19-001821, P-30-001539, P-30-001540, P-30-001541, P-30-001544, and P-30-001644), one multicomponent prehistoric and historic archaeological site (P-30-001542), one historic archaeological site (P-30-001543), and two historic built environment resources (P-19-186880 and P-19-186926). An additional 24 unmapped built environment resources included in the California Historic Property Data File are also within 0.5 miles of the project site.

The prehistoric sites are generally located south of the project site within the San Gabriel River watershed. The sites consist of a surficial shell scatter (P-30-001539) and buried deposit shell middens (P-19-001821, P-30-001540, P-30-001541, P-30-001544, and P-30-001644). There was no testing conducted at any of the sites; therefore, the eligibility status of the sites remains unknown (Dudek 2017).

The multicomponent site (P-30-001542) is south of the project site within the San Gabriel River watershed. The site consists of a prehistoric surficial shell scatter mixed with an early 20th century historic trash scatter. A second prehistoric component consisting of a buried prehistoric shell midden was also identified at this site location within a trench wall. No subsurface testing was conducted at this site.

The historic archaeological site (P-30-001543) consists of an early- to mid-20th century refuse scatter. The majority of the historic material consists of household debris that was attributed to refuse from the nearby Hellman Ranch. The historic site was not subject to subsurface testing.

The two built environment resources consist of elements of the Southern California Edison Alamitos Electrical Generating Station. The Alamitos Generating Station Tank Farm (P-19-186880) was constructed in the late 1950s. Although the tank farm and associated fuel oil pumping station possess integrity, the property

was determined not eligible for listing in the CRHR (Strudwick 2004). The Los Alamitos Pump Station (P-19-186926), constructed in 1957, has not been evaluated for historical significance.

The project site is entirely developed with power generating equipment and ancillary facilities and has no ground surface visibility. No surface-level archaeological resources were identified within the project site. However, the project site is situated in a geographic location that was considered ideal for prehistoric human occupation, located only 1.5 miles north of Alamitos Bay and the Pacific Ocean and directly adjacent to the eastern bank of the San Gabriel River. The project site's proximity to the wetlands that once lined the coast of Seal Beach would provide easy access to rich sources of food found in salt marsh estuary and bay environments, as evidenced at nearby prehistoric archaeological site CA-LAN-263, which yielded evidence of fish and sea mammal procurement activities along the beach and coastal strand (Koerper 2006). The project site's potential for archaeological sensitivity is further supported by the CHRIS records search results, which indicate the presence of multiple prehistoric shell midden sites located less than 0.5 miles southeast of the project site.

Other known archaeological resources in proximity to the project site that were not included as part of the CHRIS records search include the prehistoric Gabrieleño village site of Puvungna, located on the present-day California State Long Beach campus, less than 2 miles northwest of the project site. This village once contained more than a dozen archaeological sites, most of which were destroyed by development. Other nearby areas of archaeological sensitivity include Naval Weapons Station Seal Beach, which is located less than 1 mile east of the project site, and which has yielded numerous prehistoric archaeological deposits. Also less than 1 mile from the project site at the county line between Naval Weapons Station Seal Beach and the San Gabriel River is the Hellman Ranch site (CA-LAN-263), which revealed dozens of inhumations, cremations, and a variety of funerary artifacts.

In summary, the project site is located within an area of high sensitivity for archaeological resources, and impacts to archaeological resources would be considered potentially significant.

Over excavation of the channel to create a defined fill area has the potential to significantly impact subsurface archaeological deposits near the channel.

Therefore, the following mitigation measures would reduce impacts to archaeological resources below a level of significance.

MM-CUL-1 A qualified archaeologist shall be present to monitor all ground-disturbing activities, including excavation activities, and any site grading, scraping, or leveling activities associated with the proposed project. The archaeological monitor shall work under the direction of a qualified principal investigator (i.e., an archaeologist who meets the Secretary of the Interior's Professional Qualification Standards). Before initiating ground-disturbing activities,

the archaeological monitor or principal investigator shall conduct a brief awareness training session for the benefit of all construction workers and supervisory personnel. The training, which could be held in conjunction with the project's initial on-site safety meeting, shall explain the importance of and legal basis for the protection of significant archaeological resources. Each worker shall also learn the proper procedures to follow in the event that cultural resources or human remains are uncovered during ground-disturbing activities. These procedures include work curtailment or redirection, and the immediate contact of the site supervisor and archaeological monitor.

MM-CUL-2 In the event that archaeological resources (sites, features, or artifacts) are exposed during construction activities for the proposed project, all construction work occurring within 100 feet of the find shall immediately stop until a qualified archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards, can evaluate the significance of the find and determine whether or not additional study is warranted. Depending on the significance of the find using California Environmental Quality Act (14 California Code of Regulations 15064.5(f); Public Resources Code Section 21082) thresholds of significance, the archaeologist may simply record the find and allow work to continue, or may recommend to the Los Angeles Department of Water and Power that additional evaluation, testing, and/or data recovery is warranted. If required, the treatment plan established for the resources shall be in accordance with CEQA Guidelines Section 15064.5(f) for historical resources and Public Resources Code Section 21083.2(b) for unique archaeological resources. Preservation in place (i.e., avoidance) is the preferred manner of treatment. If preservation in place is not feasible, treatment may include implementation of archaeological data recovery excavations to remove the resource along with subsequent laboratory processing and analysis.

c) Would the project disturb any human remains, including those interred outside of dedicated cemeteries?

Less-than-Significant Impact. As previously discussed, there are no previously recorded cultural resources on the project site. Since the site has been previously developed, ground-disturbing activities associated with the project are unlikely to uncover previously unknown archaeological resources. However, if human skeletal remains are uncovered during ground-disturbing activities, project contractors are required by law to stop work and contact the County Coroner. California Health and Safety Code Section 7050.5 requires that, if human remains are discovered in any place other than a dedicated cemetery, no further disturbance or excavation of the site or nearby area reasonably suspected to contain human remains can occur until the County Coroner has determined, within 2 working days of notification of the discovery, the appropriate treatment and disposition of the human remains. Furthermore, if the coroner determines or has reason to believe that the remains are those of a Native American, the coroner must contact the California Native American Heritage Commission within 24 hours (California Health and Safety Code, Section 7050.5c), and

the California Native American Heritage Commission must notify the most likely descendant. The most likely descendant shall complete their inspection within 48 hours of being granted access to the site. The designated Native American representative would then determine, in consultation with the property owner, the disposition of the human remains.

Therefore, if Native American remains were uncovered during ground-disturbing activities associated with the proposed project, compliance with existing regulations would ensure that the appropriate authorities are notified and that discovered remains are treated with the appropriate respect and dignity. As such, impacts would be less than significant.

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3.6 Energy

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☒	☐
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☒	☐

a) Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Less-than-Significant Impact. The service providers, supply sources, and estimated consumption for electricity, natural gas, and petroleum is discussed as follows.

Energy Overview

Electricity

LADWP is the utility provider for the City. LADWP provides electric services to 1.5 million customers, located in the City and in the Owens Valley. According to LADWP, customers consumed approximately 24 billion kilowatt-hours (kWh) of electricity in 2016 (CEC 2018). LADWP receives electric power from a variety of sources. According to the LADWP Briefing Book 2017–2018, 29% of LADWP's power came from renewable energy sources in 2016, including biomass/waste, geothermal, small hydroelectric, solar, and wind sources (LADWP 2017). Due to the state's energy efficiency building standards and efficiency and conservation programs, California's electricity use per capita has remained stable for more than 30 years, while the national average has steadily increased (CEC 2015).

Natural Gas

SoCalGas serves the City (including the proposed project area). SoCalGas serves 21.6 million customers in a 20,000-square-mile service area that includes over 500 communities (SoCalGas 2018). In 2016 (the most recent year for which data is available), SoCalGas delivered 5,123 million therms of natural gas, with the majority going to residential uses. Demand for natural gas can vary depending on factors such as weather, price of electricity, the health of the economy, environmental regulations, energy-efficiency programs, and the

availability of alternative renewable energy sources. Natural gas is available from a variety of in-state and out-of-state sources and is provided throughout the state in response to market supply and demand.

Petroleum

Transportation accounts for the majority of California's total energy consumption (CEC 2018). According to the EIA, California used approximately 672 million barrels of petroleum in 2016 (EIA 2018). This equates to a daily use of approximately 1.8 million barrels of petroleum. There are 42 U.S. gallons in a barrel, so California consumes approximately 77 million gallons of petroleum per day, adding up to an annual consumption of 28 billion gallons of petroleum. However, technological advances, market trends, consumer behavior, and government policies could result in significant changes in fuel consumption by type and in total. At the federal and state levels, various policies, rules, and regulations have been enacted to improve vehicle fuel efficiency, promote the development and use of alternative fuels, reduce transportation-source air pollutants and GHG emissions, and reduce vehicle miles traveled.

Construction Energy Use

Electricity

Temporary electric power for as-necessary lighting and electronic equipment would be provided by LADWP. The amount of electricity used during construction would be minimal, because typical demand would stem from electrically powered hand tools. The electricity used for construction activities would be temporary and minimal; therefore, proposed project construction would not result in wasteful, inefficient, or unnecessary consumption of electricity. Impacts would be less than significant.

Natural Gas

Natural gas is not anticipated to be required during construction of the proposed project. Fuels used for construction would primarily consist of diesel and gasoline, which are discussed under the subsection "Petroleum." Any minor amounts of natural gas that may be consumed as a result of proposed project construction would be temporary and negligible and would not have an adverse effect; therefore, proposed project construction would not result in wasteful, inefficient, or unnecessary consumption of natural gas. Impacts would be less than significant.

Petroleum

Petroleum would be consumed throughout construction. Fuel consumed by construction equipment would be the primary energy resource expended over the course of construction. Transportation of construction materials and construction workers would also result in petroleum consumption. Heavy-duty construction equipment, vendor trucks, and haul trucks would use diesel fuel. Construction workers would likely travel to and from the project area in gasoline-powered vehicles. Construction is expected to take approximately 35 months, beginning in 2021 and ending in 2023 for Phase I and starting in 2030 and ending in 2031 for Phase II of construction. Once construction activities

cease, petroleum use from off-road equipment and transportation vehicles would end. Because of the short-term nature of construction and relevantly small scale of the project, impacts would be less than significant.

Operational Energy Use

As discussed in Section 2.4, filling of the channel would create vacant land. Thus, there would be no operational or maintenance activities associated with the area. Therefore, there would be no operational energy use associated with the project.

b) Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Less-than-Significant Impact. The proposed project would follow applicable energy standards and regulations during the construction phases. At this time, there is no specific project proposed for this land, it is proposed for a future energy storage project which will be assessed in a separate CEQA document when the details are known. As such, impacts related to the project's potential to conflict with plans for renewable energy and energy efficiency would be less than significant.

References

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3.7 Geology and Soils

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Directly or indirectly cause 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 (1994), creating substantial direct or indirect risks to life or property?	☐	☐	☐	☒
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	☒

a) Would the project directly or indirectly cause 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.

No Impact. The closest active earthquake fault in the vicinity of HnGS is the Newport–Inglewood Fault, located approximately 3,000 feet southwest of the project site at the closest point (CDMG 1986; City of Long Beach 1988). Portions of this fault, including the section nearest to the project site, are contained within an Alquist-Priolo Earthquake Fault Zone. This zone extends approximately 500 feet on either side of the fault. The California Geological Survey (formerly the California Division of Mines and Geology) has established Alquist-Priolo Special Study Zones around faults identified by the State Geologist as being active. The Alquist-Priolo Special Studies Zone Act limits development along the surface trace of active faults to reduce the potential for structural damage and/or injury due to fault rupture. In addition, the active Palos Verdes Fault is located approximately 8 miles southwest of the project site, at the closest point. However, no active or potentially active faults are known to underlie the site (CGS 2007, 2010). In addition, the project would not exacerbate the potential for fault rupture to occur, or directly or indirectly cause potential substantial adverse effects involving rupture of a known earthquake fault. Therefore, no impacts would occur.

ii) Strong seismic ground shaking?

Less-than-Significant Impact. HnGS is located within the seismically active Southern California region, and, as with all locations within the area, is potentially subject to strong seismically induced ground shaking. Two major active earthquake faults are located within the vicinity of HnGS. The Palos Verdes Fault is located approximately 8 miles southwest of the site, at the closest point, and the Newport–Inglewood Fault is located approximately 3,000 feet southwest of the site, at the closest point. Numerous other active faults are located within a 50-mile radius of the project site (CGS 2010; City of Long Beach 1988).

The proposed project would include filling 2,150 feet of the HnGS Intake Channel. The proposed project would not exacerbate the potential for seismic ground shaking to occur, and would not directly or indirectly cause substantial adverse effects involving strong seismic ground shaking. As a result, impacts would be less than significant.

iii) Seismic-related ground failure, including liquefaction?

Less-than-Significant Impact. HnGS would be subject to seismic-related ground failure related to liquefaction (CDMG 1999; City of Long Beach 2006). The soil at the site consists of marine tidal deposits and alluvial deposits. These deposits include layers of sand and silt below the groundwater table, which is present at approximately 12 feet below the ground surface in some locations (City of Long Beach 2006). Such conditions are generally conducive to liquefaction. The California Geological Survey indicates that the project site is located within an area where historic occurrence of liquefaction, or local geological, geotechnical, and groundwater conditions indicate a potential for permanent ground displacements (CDMG 1999). However, the proposed backfilling of the HnGS Intake Channel within the existing HnGS boundaries would not exacerbate the potential for liquefaction to occur, and would not directly or indirectly cause substantial adverse effects involving liquefaction. Further, the project would not increase exposure of people or structures to substantial adverse effects, including the risk from seismic-related ground failure such as liquefaction, because the project does not involve the construction of any new structures. As a result, impacts would be less than significant.

iv) Landslides?

No Impact. The project site and surrounding area are flat, and the potential for landslides is minimal. No landslide hazards have been mapped in the vicinity of the site (CDMG 1998). Therefore, the project would result in no impact related to landslides.

b) Would the project result in substantial soil erosion or the loss of topsoil?

Less-than-Significant Impact. The proposed project would completely fill 2,150 feet of the Intake Channel within the existing HnGS property. The project site is located in an area that has been substantially altered by prior grading, excavations, and construction. Channel filling activities would result in temporary soil disturbance. However, filling activities would comply with all applicable state and local regulations for erosion control. The project site is greater than 1 acre and would be subject to NPDES General Construction Permit requirements. Earthwork would be performed in accordance with, at a minimum, the applicable sections of the City of Long Beach grading codes, the latest edition of the Standard Specifications for Public Works Construction (BNI Publications Inc. 2018), and recommendations of the geotechnical engineer of record and/or the LADWP Soils and Geology Group.

Filling activities would be required to incorporate various temporary best management practices (BMPs) designed to prevent erosion and siltation. No long-term erosion impacts would occur because the site would be covered by concrete and there would be no exposure of soils on the site such that substantial soil erosion or loss of topsoil would occur. Therefore, short-term and long-term impacts associated with erosion would be less than significant.

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

Less-than-Significant Impact. As previously discussed (3.7 a-ii and a-iii), the site is located in the seismically active Southern California region and could be subject to strong seismically induced ground movement. In the absence of proper geotechnical engineering during channel backfill design and construction, liquefaction, lateral spreading, subsidence, differential settlement, and soil collapse could occur as a result of the project. However, earthwork would be performed in accordance with, at a minimum, the applicable sections of the City of Long Beach grading codes, the latest edition of the Standard Specifications for Public Works Construction (BNI Publications Inc. 2018), and recommendations of the geotechnical engineer of record and/or the LADWP Soils and Geology Group. As a result, impacts would be less than significant.

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

No Impact. The project site is located in an area that has been substantially altered by prior grading, excavations, and construction. The project site is located on urban land with underlying fill and alluvial deposits, which are not expansive. Regardless, the proposed project would not include construction of new buildings, the foundations of which could be adversely impacted by expansive soil, and would not create direct or indirect risks to life or property. Therefore, no impacts would occur.

e) Would the project have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

No Impact. HnGS is connected to the municipal sewer system. The proposed project would not increase the number of personnel on site or require an expansion of an existing wastewater treatment facility for sanitary waste purposes. No septic tanks or alternative wastewater disposal system would be included as part of the proposed project. Therefore, no impacts would occur.

f) Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

No Impact. The project site is located in the City of Long Beach, within the flat-lying areas east of the San Gabriel River. In this area, surface-mapped sedimentary deposits derived as alluvial deposits from the San Gabriel Mountains to the north were transported to their current location by the San Gabriel River to the west (McLeod 2016; Morton and Miller 1981; Morton et al. 1976). The entire project site is mapped as younger Quaternary alluvium, consisting of alluvial gravel and sand, according to published mapping by Morton and Miller (1981) and Morton et al. (1976). These Holocene, or Recent, deposits presumably overlie older, Pleistocene, or "Ice Age," deposits at an unknown depth (McLeod 2016; Morton and Miller 1981; Morton et al. 1976). The coarse-grained, younger, alluvial deposits have a low paleontological resource sensitivity. However, older, finer-grained Pleistocene age deposits in this area have produced scientifically significant vertebrates, and have a moderate to high paleontological resource sensitivity (McLeod 2016).

Past excavation and trenching activities in the area surrounding the project site have encountered paleontological resources in older Quaternary alluvial deposits. According to the records search results received from the Natural History Museum of Los Angeles County (LACM), the closest fossil locality to the project site within older Quaternary alluvial deposits is located west-northwest of the project site, south of 7th Street and east of Pacific Coast Highway. This locality, LACM 3757, yielded a diverse assemblage of fossilized cartilaginous fish (e.g., ray, skate, and shark), reptiles (e.g., turtle), birds (e.g., duck and loon), and mammals (e.g., dog, sea otter, horse, camel, and gopher) (McLeod 2016). A specimen of fossil mammoth was recovered from locality LACM 6746 farther west-northwest of the project site, along 7th Street and west of Pacific Coast Highway close to the surface (McLeod 2016). Additional localities are documented in the vicinity of or on the beach. These include locality LACM 2031, which produced a fossil bison at approximately 25 feet from the top of the bluff (McLeod 2016). At approximately 55 feet below the surface, near the parking lot at Bluff Park, a marine vertebrate fossil assemblage was recovered, yielding a variety of cartilaginous and bony fishes, as well as undetermined mammalian remains (McLeod 2016). Across from Bixby Park, LACM 1005 yielded fossil specimens of mammoth and sloth at a depth of approximately 60 feet below the ground surface (McLeod 2016).

No paleontological resources were identified within the project site as a result of the institutional records search or desktop geological review. Furthermore, the project site is located within an area that has been previously developed and is underlain by fill materials, at least in part. At the maximum 10-foot-depth of excavation required for the project, older Pleistocene age deposits are not anticipated, and as such, unique paleontological resources or geologic features are unlikely to be encountered. Therefore, there would be no impact to paleontological resources or unique geological features.

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3.8 Greenhouse Gas Emissions

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

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Less-than-Significant Impact. Climate change refers to any significant change in measures of climate, such as temperature, precipitation, or wind patterns, lasting for an extended period of time (decades or longer). The Earth's temperature depends on the balance between energy entering and leaving the planet's system, and many factors (natural and human) can cause changes in Earth's energy balance. The greenhouse effect is the trapping and build-up of heat in the atmosphere (troposphere) near the Earth's surface. The greenhouse effect is a natural process that contributes to regulating the Earth's temperature, and it creates a livable environment on Earth. Human activities that emit additional GHGs to the atmosphere increase the amount of infrared radiation that gets absorbed before escaping into space, thus enhancing the greenhouse effect and causing the Earth's surface temperature to rise. Global climate change is a cumulative impact; a project contributes to this impact through its incremental contribution combined with the cumulative increase of all other sources of GHGs. Thus, GHG impacts are recognized exclusively as cumulative impacts (CAPCOA 2008).

A GHG is any gas that absorbs infrared radiation in the atmosphere; in other words, GHGs trap heat in the atmosphere. As defined in California Health and Safety Code Section 38505(g) for purposes of administering many of the state's primary GHG emissions reduction programs, GHGs include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF_6), and nitrogen trifluoride (NF_3) (see also 14 CCR 15364.5). The three GHGs evaluated herein are CO_2, CH_4, and N_2O. Emissions of HFCs, PFCs, SF_6, and NF_3 are generally associated with industrial activities including the manufacturing of electrical components, heavy duty air conditioning units, and insulation of electrical transmission equipment (substations, power lines, and switch gears.). Therefore, emissions of these GHGs were not evaluated or estimated in this analysis because the project would not include these activities or components and would not generate HFCs, PFCs, SF_6, and NF_3 in measurable quantities.

Gases in the atmosphere can contribute to climate change both directly and indirectly.[7] The Intergovernmental Panel on Climate Change developed the global warming potential (GWP) concept to compare the ability of each GHG to trap heat in the atmosphere relative to another gas. The reference gas used is CO_2; therefore, GWP-weighted emissions are measured in metric tons of CO_2 equivalent (MT CO_2e). Consistent with CalEEMod Version 2016.3.2, this GHG emissions analysis assumed the GWP for CH_4 is 25 (emissions of 1 MT of CH_4 are equivalent to emissions of 25 MT of CO_2), and the GWP for N_2O is 298, based on the Intergovernmental Panel on Climate Change Fourth Assessment Report (IPCC 2007).

As discussed in Section 3.3 of this IS/MND, the project is located within the jurisdictional boundaries of the SCAQMD. In October 2008, the SCAQMD proposed recommended numeric CEQA significance thresholds for GHG emissions for lead agencies to use in assessing GHG impacts of residential and commercial development projects as presented in its *Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold* (SCAQMD 2008). This document, which builds on the previous guidance prepared by the California Air Pollution Control Officers Association, explored various approaches for establishing a significance threshold for GHG emissions. The draft interim CEQA thresholds guidance document was not adopted or approved by the Governing Board. However, in December 2008, the SCAQMD adopted an interim 10,000 MT CO_2e per-year screening level threshold for stationary source/industrial projects for which the SCAQMD is the lead agency (see SCAQMD Resolution No. 08-35, December 5, 2008).

The SCAQMD formed a GHG CEQA Significance Threshold Working Group to work with SCAQMD staff on developing GHG CEQA significance thresholds until statewide significance thresholds or guidelines are established. From December 2008 to September 2010, the SCAQMD hosted working group meetings and revised the draft threshold proposal several times, although it did not officially provide these proposals in a subsequent document. The SCAQMD has continued to consider adoption of significance thresholds for residential and general land use development projects. The most recent proposal, issued in September 2010, uses the following tiered approach to evaluate potential GHG impacts from various uses (SCAQMD 2010):

Tier 1. Determine if CEQA categorical exemptions are applicable. If not, move to Tier 2.

Tier 2. Consider whether or not the proposed project is consistent with a locally adopted GHG reduction plan that has gone through public hearing and CEQA review, that has an approved inventory, includes monitoring, etc. If not, move to Tier 3.

[7] Direct effects occur when the gas itself absorbs radiation. Indirect radiative forcing occurs when chemical transformations of the substance produce other GHGs, when a gas influences the atmospheric lifetimes of other gases, and/or when a gas affects atmospheric processes that alter the radiative balance of the Earth (e.g., affect cloud formation or albedo) (EPA 2017).

Tier 3. Consider whether the project generates GHG emissions in excess of screening thresholds for individual land uses. The 10,000 MT CO_2e per-year threshold for industrial uses would be recommended for use by all lead agencies. Under option 1, separate screening thresholds are proposed for residential projects (3,500 MT CO_2e per year), commercial projects (1,400 MT CO_2e per year), and mixed-use projects (3,000 MT CO_2e per year). Under option 2, a single numerical screening threshold of 3,000 MT CO_2e per year would be used for all non-industrial projects. If the project generates emissions in excess of the applicable screening threshold, move to Tier 4.

Tier 4. Consider whether the project generates GHG emissions in excess of applicable performance standards for the project service population (population plus employment). The efficiency targets were established based on the goal of Assembly Bill (AB) 32 to reduce statewide GHG emissions to 1990 levels by 2020. The 2020 efficiency targets are 4.8 MT CO_2e per-service population for project-level analyses and 6.6 MT CO_2e per-service population for plan-level analyses. If the project generates emissions in excess of the applicable efficiency targets, move to Tier 5.

Tier 5. Consider the implementation of CEQA mitigation (including the purchase of GHG offsets) to reduce the project efficiency target to Tier 4 levels.

Section 15064.7(c) of the CEQA Guidelines specifies that "[w]hen adopting thresholds of significance, a lead agency may consider thresholds of significance previously adopted or recommended by other public agencies, or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence." The CEQA Guidelines do not prescribe specific methodologies for performing an assessment, establish specific thresholds of significance, or mandate specific mitigation measures. Rather, the CEQA Guidelines emphasize the lead agency's discretion to determine the appropriate methodologies and thresholds of significance that are consistent with the manner in which other impact areas are handled in CEQA (CNRA 2009).

To determine the project's potential to generate GHG emissions that would have a significant impact on the environment, the project's GHG emissions were compared to the non-industrial land project quantitative threshold of 3,000 MT CO_2e per year. Because the project does not include operational sources of emissions, and because the project does not conform to the standard land use types, the 3,000 MT CO_2e per year threshold, which was identified under Tier 3 Option 1, was applied herein. Per the SCAQMD guidance, construction emissions should be amortized over the operational life of the project, which is assumed to be 30 years (SCAQMD 2008). This impact analysis, therefore, compares amortized construction emissions to the proposed SCAQMD threshold of 3,000 MT CO_2e per year.

Construction Emissions

Construction of the project would result in GHG emissions primarily associated with the use of off-road construction equipment, on-road trucks, and worker vehicles. A depiction of expected construction schedules

(including information regarding phasing, equipment used during each phase, truck trips, and worker vehicle trips) assumed for the purposes of emissions estimation is provided in Table 3.3-1 and in Appendix A. On-site sources of GHG emissions include off-road equipment; off-site sources include trucks and worker vehicles. Table 3.8-1 presents construction GHG emissions for the project from on-site and off-site emissions sources.

Table 3.8-1 Estimated Annual Construction Greenhouse Gas Emissions

Year	CO_2	CH_4	N_2O	CO_2e
	Metric Tons per Year			
2021	87.74	0.01	0.00	88.11
2022	605.45	0.09	0.00	607.69
2023	50.63	0.01	0.00	50.82
2030	1,196.89	0.05	0.00	1,198.24
2031	1,083.86	0.06	0.00	1,085.29
Total	**3,012.14**	**0.22**	**0.00**	**3,030.15**
			Amortized Construction Emissions	**101.01**

Source: See Appendix A for complete results.
Notes: CO2 = carbon dioxide; CH4 = methane; N2O = nitrous oxide; CO2e = carbon dioxide equivalent.

As shown in Table 3.8-1, the estimated total GHG emissions in 2021, 2022, 2023, 2030, and 2031 would be approximately 88 MT CO_2e, 608 MT CO_2e 51 MT CO_2e, 1,198 MT CO_2e, and 1,085 MT CO_2e, respectively. Amortized over 30 years, total construction GHG emissions would be approximately 101 MT CO_2e per year. In addition, as with project-generated construction criteria air pollutant emissions, GHG emissions generated during proposed construction activities would be short term, lasting only for the duration of the construction period, and would not represent a long-term source of GHG emissions.

Operational Emissions

Once project construction is complete, no operational activities associated with the proposed project would occur (no routine daily equipment operation or vehicle trips would be required). Because the project would not result in any long-term operational activities, there would be no potential GHG emissions impacts associated with operational GHG emissions.

As shown in Table 3.8-1, amortized project-generated construction emissions would not exceed the 3,000 SCAQMD threshold. Therefore, GHG emissions impacts would be less than significant.

b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Less-than-Significant Impact. The proposed project would result in less-than-significant impacts related to conflicts with GHG emission reduction plans, for the reasons described as follows.

Consistency with CARB's Scoping Plan

The CARB Scoping Plan, approved by CARB in 2008 and updated in 2014 and 2017, provides a framework for actions to reduce California's GHG emissions and requires CARB and other state agencies to adopt regulations and other initiatives to reduce GHGs. The Scoping Plan is not directly applicable to specific projects, nor is it intended to be used for project-level evaluations.[8] Under the Scoping Plan, however, there are several state regulatory measures aimed at the identification and reduction of GHG emissions. CARB and other state agencies have adopted many of the measures identified in the Scoping Plan. Most of these measures focus on area source emissions (e.g., energy usage, high-GWP GHGs in consumer products) and changes to the vehicle fleet (i.e., hybrid, electric, and more fuel-efficient vehicles) and associated fuels (e.g., Low Carbon Fuel Standard), among others.

Consistency with the Southern California Association of Governments 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy

SCAG's 2016 RTP/SCS is a regional growth-management strategy that targets per capita GHG reduction from passenger vehicles and light-duty trucks in the Southern California region. The 2016 RTP/SCS incorporates local land use projections and circulation networks in city and county general plans. The 2016 RTP/SCS is not directly applicable to the project because the purpose of the 2016 RTP/SCS is to provide direction and guidance by making the best transportation and land use choices for future development. The proposed project would not conflict with implementation of the strategies identified in the 2016 RTP/SCS that would reduce GHG emissions.

Consistency with Senate Bill 32 and Executive Order S-3-05

The project would not impede the attainment of the GHG reduction goals for 2030 or 2050 identified in Senate Bill (SB) 32 and Executive Order S-3-05, respectively. Executive Order S-3-05 establishes the following goals: GHG emissions should be reduced to 2000 levels by 2010, to 1990 levels by 2020, and to 80% below 1990 levels by 2050. SB 32 establishes a statewide GHG emissions reduction target whereby CARB, in adopting rules and regulations to achieve the maximum technologically feasible and cost-effective GHG emissions reductions, shall ensure that statewide GHG emissions are reduced to at least 40% below 1990 levels by December 31, 2030. While there are no established protocols or thresholds of significance for that future year analysis, CARB forecasts that compliance with the current Scoping Plan puts the state on a trajectory of meeting these long-term GHG goals, although the specific path to compliance is unknown (CARB 2014).

[8] The Final Statement of Reasons for the amendments to the CEQA Guidelines reiterates the statement in the Initial Statement of Reasons that "[t]he Scoping Plan may not be appropriate for use in determining the significance of individual projects because it is conceptual at this stage and relies on the future development of regulations to implement the strategies identified in the Scoping Plan" (CNRA 2009).

CARB has expressed optimism with regard to both the 2030 and 2050 goals. It states in the First Update to the Climate Change Scoping Plan that "California is on track to meet the near-term 2020 GHG emissions limit and is well positioned to maintain and continue reductions beyond 2020 as required by AB 32" (CARB 2014). With regard to the 2050 target for reducing GHG emissions to 80% below 1990 levels, the First Update to the Climate Change Scoping Plan states that the level of reduction is achievable in California (CARB 2014). CARB believes that the state is on a trajectory to meet the 2030 and 2050 GHG reduction targets set forth in AB 32, SB 32, and Executive Order S-3-05. This is confirmed in the *2017 Scoping Plan*, which states (CARB 2017):

> The Scoping Plan builds upon the successful framework established by the Initial Scoping Plan and First Update, while identifying new, technologically feasible and cost-effective strategies to ensure that California meets its GHG reduction targets in a way that promotes and rewards innovation, continues to foster economic growth, and delivers improvements to the environment and public health, including in disadvantaged communities.

The project would not interfere with implementation of any of the previously described GHG reduction goals for 2030 or 2050 because the project would not exceed the SCAQMD's recommended threshold of 3,000 MT CO_2e per year (SCAQMD 2008). Because the project would not exceed the threshold, this analysis provides support for the conclusion that the project would not impede the state's trajectory toward the previously described statewide GHG reduction goals for 2030 or 2050.

The project's consistency with the state's Scoping Plan would assist in meeting the City's contribution to GHG emission reduction targets in California. With respect to future GHG targets under SB 32 and Executive Order S-3-05, CARB has also made clear its legal interpretation that it has the requisite authority to adopt whatever regulations are necessary, beyond the AB 32 horizon year of 2020, to meet the SB 32 40% reduction target by 2030 and the Executive Order S-3-05 80% reduction target by 2050. This legal interpretation by an expert agency provides evidence that future regulations will be adopted to continue the trajectory toward meeting these future GHG targets.

Based on the considerations previously outlined, the project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. This impact would be less than significant.

References

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3.9 Hazards and Hazardous Materials

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	☐	☒	☐	☐

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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 that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
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 or excessive noise for people residing or working in the project area?	☐	☐	☐	☒
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☐	☒

Information regarding potential environmental impacts at the proposed project site was obtained via a regulatory records review conducted by Environmental Data Resources (EDR) and review of existing and available sediment and water quality data for the Intake Channel and environs. Additional information specific to chemical storage and use at the HnGS was included in the 2017 IS/MND prepared for the decommissioning of Units 3-6 (Dudek 2017).

3.9.1 Regulatory Records Review

A search of regulatory records was conducted by EDR on March 25, 2019 (Appendix D). This search identified the target property as a portion of the Intake Channel, with an address of 6800 Westminster Avenue. A second search of regulatory records was conducted on September 25, 2019 (Appendix D). The second search identified the target property as the entire Intake Channel within the HnGS property, to the south side of Westminster Avenue, with an

address of 6801 E. 2nd Street. Both searches were conducted for the target property and included up to a 1-mile search radius as defined in the records review requirements of the ASTM E1527-13 standard. The EDR reports provide a listing of sites within the defined search radii that are listed on one or more environmental regulatory databases. Information in these listings includes the site name, location of the site relative to the project site, regulatory database listing, and the status of the listed site. This section discusses the combined findings of both EDR reports.

Twenty-eight listings were identified in the first EDR report and 78 additional listings were identified in the second EDR report. Many sites were listed more than once. For example, the addresses associated with the project site (6800 Westminster Avenue, 6801 Westminster Avenue, and 6801 2nd Street) account for 70 of the 106 total listings. The majority of the 70 listings were for the Haynes Generating Station, the Long Beach Desal Prototype, or the Alamitos Barrier, which are likely due to activities on the land adjacent to the project site. However, as the Haynes Generating Station and the Long Beach Desal project used water from the project site, these listings could be on or adjacent to the project site. The listings and their proximity to the project site are as follows:

- 70 listings were identified on or adjacent to the proposed project site. These are evaluated in Table 3.9.1, below.
- 9 listings were identified within a 0.25-mile radius of the proposed project.
- 15 listings were identified within a 0.25-mile to 0.5-mile radius of the proposed project.
- 12 listings were identified within a 0.5-mile to 1-mile radius of the proposed project.

Of the 36 listings located more than 0.25 miles from the project site, 9 were identified in databases that are used for permitting, inventory, and regulatory compliance purposes, and do not indicate a release of hazardous substances or petroleum products to the environment. The remaining listings were identified in regulatory databases that identify sites with known or suspected environmental contamination. Dudek reviewed the listings, the distance from the project site, known environmental conditions (e.g., groundwater depth and flow direction), and determined that the other listed sites are unlikely to have impacted the environmental conditions of the project site.

Table 3.9-1 Project Site or Adjacent Regulatory Database Listings – 6801 2nd Street or 6800-6801 Westminster Avenue

Site Name	Database(s)	Details	Identified Environmental Concern
Tank E Area, Haynes	ICIS FINDS ECHO CA ENF CA WDS CA CIWQS	The Tank E Area is adjacent to the HnGS Intake Channel and is identified in multiple databases. Dudek reviewed the information in the EDR Radius Report about the Tank E Area. As per the EDR Report, the site held NPDES stormwater permits. The report indicates a few violations/non-compliance associated with NPDES permits. Based on the October 25, 2001, RWQCB Executive Officer's Report (RWQCB 2001), two violations in	No

Table 3.9-1 Project Site or Adjacent Regulatory Database Listings – 6801 2nd Street or 6800-6801 Westminster Avenue

Site Name	Database(s)	Details	Identified Environmental Concern
		2001 were related to exceeding the NPDES effluent limits for total suspended solids and turbidity. The receiving water for the stormwater is the Los Alamitos Channel. The Site is in Active status under Waste Discharge Requirements with primary waste type being stormwater runoff.	
Haynes Generating Station	RCRA-TSDF, RCRA-LQG, CA UST, Hist UST, CA WMUDS/SWAT, CA WDS, CA Toxic Pits NPDES, AST, EMI, ENF, CHMIRS, CIWQS, CERS, RMP, FINDS, ECHO, ICIS	The facility, which surrounds and encompasses the project site, generated and treated wastes and reported asbestos-related releases. The facility stored ammonia in aboveground storage. The facility maintained diesel, product, gasoline, and waste oil USTs. The facility maintained NPDES permits related to stormwater.	No known subsurface release. The presence of USTs indicates the potential for releases.
LA Department of Water and Power	CA HWP, FINDS, RCRA-LQG, RCRA-TSDF, HAZNET	The facility, which surrounds and encompasses the project site, generated and treated wastes.	No
Haynes 5 And 6 Repowering Project	RCRA-SQG, HAZNET, FINDS, ECHO	Units 5 and 6 are located adjacent to northern end of project site. Wastes, including solvents, were generated in this area of the facility.	No
None given	ERNS	Oil spill to storm drain (500 gal) in 2016, ammonia spill (30-50 gal) in 2011, and ammonia spill into secondary containment (100 gal) in 2003. The spills were mitigated at the time.	The location of the oil spill is not known. It is possible that it impacted the project site.
Alamitos Barrier	NPDES,CIWQS, CERS, FINDS, ECHO	The listings are associated with NPDES permits.	No
None given	CHMIRS	Asbestos-related releases were reported.	No
Haynes Gen. Repowering Project	FINDS, CERS	The listings are associated with NPDES permits.	No

Table 3.9-1 Project Site or Adjacent Regulatory Database Listings – 6801 2nd Street or 6800-6801 Westminster Avenue

Site Name	Database(s)	Details	Identified Environmental Concern
Haynes Tank Farm	CERS, NPDES	The listings are associated with NPDES permits.	No
Tank F and G Area Haynes Plant Long Beach	FINDS,ICIS,ECHO	The listings are associated with NPDES permits.	No
Haynes Tank Farm Tanks A-J	FINDS	Administrative listing	No
Long Beach Prototype Seawater Desalination Research	CERS, FINDS,ICIS, ECHO, ENF,CIWQS, WDS	The Long Beach Desal Facility operated adjacent to the project site, but potentially collected water from the project site. The listings are associated with NPDES permits.	No
Groome Industrial Service	HAZNET,WDS,CHMIRS	500 gallons of oil were spilled to storm drain containment in 2016. The release was secured.	No
Tank F,G Area, Haynes Plant, Long Beach	CERS	The listings are associated with NPDES permits.	No
Berkel & Co Contractor Inc	HAZNET	The listing is associated with waste oil storage.	No
Tank H, J Area, Haynes Plant, Long Beach	CERS, WDS, UST,WDS,WMUDS/ SWAT, ENF,CIWQS	The listings are associated with NPDES permits. Violations of effluent limits were reported.	No
LADW&P-Haynes Steam	ICIS,US AIRS	The listing is associated with air emissions.	No
Haynes Generating Station Trench Work	NPDES,CHMIRS	Asbestos-related releases were reported.	No

Notes: ICIS = Integrated Compliance Information System; FINDS = Facility Index System; ECHO = Enforcement and Compliance History Online; CA ENF = State Enforcement Action Listing; CA WDS = State Waste Discharge System; CA CIWQS = California Integrated Water Quality System; EDR = Environmental Data Resources; NPDES = National Pollutant Discharge Elimination System; RCRA-SQG = Small Quantity Generator; RCRA-LQG = Large Quantity Generator; RCRA-TSDF = Treatment, Storage, Disposal Facility; RWQCB = Regional Water Quality Control Board, UST = underground storage tank; ERNS = Emergency Response Notification System; AST = aboveground storage tank; EMI = Emissions Inventory Data; ENF = Enforcement Action Listing; CHMIRS = California Hazardous Material Incident Report System; CERS = CalEPA Regulated Site Portal Data; HWP = .Envirostor Permitted Facilities Listing; RMP = Risk Management Plan; US AIRS = Aerometric Information Retrieval System; WMUDS/SWAT = Waste Management Unit Database

Based on the proposed project components and detailed review of the EDR Report, there are no known environmental impacts to the project site from hazardous wastes and materials; however, a potential exists for subsurface impacts due to the known surface oil spills and the presence of USTs.

3.9.2 Existing Water Quality and Sediment Data

Dudek reviewed available reports regarding existing water quality and sediment data for the proposed project site or vicinity. The source water for the Intake Channel is Alamitos Bay. The majority of available environmental data was for Alamitos Bay; however, water quality samples were collected by Dudek from the Intake Channel in 2018.

As per the Marine Biological Resource Report (Appendix B) prepared by Dudek in November 2018, the pH of water in the Intake Channel ranged from 7.83 to 8.65 during two seasonal sampling events. The summer pH measurements (July 2018) were at the higher end of this range due to the use of bleach to clean the water intake screens in the channel prior to the water quality sampling. Some of the pH values exceeded the secondary drinking water maximum contaminant level for pH of greater than 8.5; however, none of the concentrations exceeded the hazardous waste levels. There is no available sediment data for the Intake Channel/proposed project site.

Review of the Supplemental Sampling and Analysis Report for the Alamitos Bay Marina Basin, prepared by Anchor in 2009, indicated elevated mercury concentrations in dredge materials in portions of Basin 1 of Alamitos Bay, when compared to the Soluble Threshold Limit Concentration (STLC). The report included a recommendation to remove the dredge materials from the site and dispose of the materials at an approved landfill facility (City of Long Beach 2009).

Additional analysis of sediment data in Alamitos Bay was included in the Environmental Impact Statement for the Los Angeles Regional Dredge Material Management Plan, December 2008. The data indicated detections of metals, polychlorinated biphenyls (PCBs), pesticides, and polycyclic aromatic hydrocarbons (PAHs) in the sediment in Alamitos Bay. Concentrations of these components were generally lower than hazardous waste levels (STLC and Total Threshold Limit Concentration). There could be a possible exceedance of the STLC levels for chromium and lead, as the total chromium and lead concentrations were greater than 10 times the STLC limits (STLC analysis was not conducted). Concentrations of PAHs were detected but were below marine toxicity levels (Effects Range-Low (ER-L) and Effects Range-Median (ER-M)) and hazardous waste levels. Dichlorodiphenyltrichloroethane (DDT) and derivatives were detected but were generally lower than marine toxicity levels. PCB and dichlorodiphenyldichloroethylene (DDE) detections exceeded ER-L levels but were below ER-M levels (USACE 2008). As per Southern California Bight Studies (2003 and 2008), the sediment quality data indicated chlordane concentrations higher than ER-M levels and DDT and metals (copper, lead, and zinc) concentrations above ER-L levels (City of Long Beach 2016).

The sediment quality data in Alamitos Bay can be used as an indicator of sediment quality in the Intake Channel, due to the lack of data for the Intake Channel. The data for Alamitos Bay indicate that the sediment to be removed from the Intake Channel under the proposed project possibly contain concentrations of various contaminants greater than hazardous waste levels and marine toxicity levels.

3.9.3 Impact Analysis

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

Less-Than-Significant Impact With Mitigation Incorporated. A variety of hazardous substances and wastes would be transported, stored, used, and generated on the project site during the proposed project. These would include fuels for machinery and vehicles, new and used motor oils, and storage containers and applicators containing such materials.

Potential hazardous wastes would be generated during the proposed project, as a result of the proposed excavation activities. Additionally, if the proposed project includes removal of the pipelines that run across the project site from the tank farm to the HnGS units, additional wastes from the pipelines would be generated. These wastes could include potential hazardous building materials, such a lead paint, on the pipelines and potential contents of the pipelines (likely fuel or oil).

If not transported, used, or disposed of in a safe manner, hazardous materials used or generated represent a potential threat to the public and the environment. However, these materials would be transported, used, and disposed of in accordance with all federal, state, and local laws regulating the management and use of hazardous materials. For example, hazardous materials would not be disposed of or released onto the ground or into the underlying groundwater or any surface water during the proposed project, and completely enclosed containment would be provided for all refuse generated on the project site. Furthermore, all construction waste, including trash, litter, garbage, solid waste, petroleum products, and any other potentially hazardous materials, would be removed and transported to a permitted waste facility for treatment, storage, or disposal.

To ensure proper handling of generated waste, specifically, soil and sediment excavated and any pipelines removed as part of the proposed project, MM-HAZ-1 and MM-HAZ-2 are provided and would be implemented to ensure potential impacts are reduced to less than significant.

MM-HAZ-1 A Soil/Sediment Management Plan (SMP) shall be developed and implemented prior to excavation activities. The SMP shall include a discussion of the anticipated/possible soil/sediment concentrations based on sediment sampling data from Alamitos Bay. The SMP will also require sampling to be conducted to characterize the excavated soil and sediment from the intake channel, the decision process to be used to characterize the waste based on the sampling conducted, the proposed management of the soil/sediment including discussion of material segregation, temporary storage locations, containers, and labeling, and possible disposal facilities/locations.

In addition, the SMP shall also include a discussion of adjacent chemical storage areas that could potentially impact the site area; these include the adjacent tank farm, the pipelines that cross the project site, and former chemical storage areas associated with the adjacent Haynes Generating Station **(**HnGS) units. While no known releases from these chemical and fuel storage areas have occurred, there is a potential that potential releases from these areas could have impacted the project site. The SMP would include strategies for identification and management of contaminated soil, if encountered during excavation.

Finally, the plan will also discuss procedures to be implemented if a sheen is observed in the channel/dewatering water during the proposed project.

A project-specific Health and Safety Plan shall be prepared in accordance with the Occupational Safety and Health Administration standards, included in the SMP, and implemented during excavation activities. Copies of the SMP shall be maintained on site during excavation activities at the project site. All workers on the project site should be familiar with the SMP and Health and Safety Plan.

MM-HAZ-2 A Waste Management Plan (WMP) shall be developed and implemented during construction activities. The WMP shall include a discussion of the anticipated non-soil/sediment wastes that may be generated during the proposed project, the locations of these potential wastes, details of special handling, proposed storage locations, containers and labeling, testing for waste characterization, and possible disposal/recycling facilities. Copies of the WMP shall be maintained on site during construction and removal of materials from the project site. All workers on the project site should be familiar with the WMP.

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

Less Than Significant With Mitigation Incorporated. As discussed under Section 3.8.3(a), a variety of hazardous substances and wastes would be stored, used, and generated on the project site during the proposed project. Accidental spills, leaks, fires, explosions, or pressure releases involving hazardous materials represent a potential threat to human health and the environment if not properly treated. Accident prevention and containment would be the responsibility of the construction contractors, and provisions to properly manage hazardous substances and wastes are typically included in contract specifications.

The plans included in MM-HAZ-1 and MM-HAZ-2 would be implemented in order to identify and properly manage hazardous materials, such that potential releases to the environment are properly controlled.

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

No Impact. The nearest schools to HnGS are Rosie the Riveter Charter High School (Long Beach Unified School District) which is approximately 0.5 miles to the west; Kettering Elementary School (Long Beach Unified School District), which is approximately 0.7 miles to the west; Hill Middle School (Long Beach Unified School District), which is approximately 1 mile to the northwest; and Hopkinson Elementary School (Los Alamitos Unified School District), which is approximately 1 mile to the northeast. No schools are located within one-quarter mile of HnGS and no impact would occur.

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

No Impact. Government Code Section 65962.5 requires the California Environmental Protection Agency to compile and update the hazardous waste and substances sites list (Cortese List). The Cortese List was designed to comply with Government Code Section 65962.5. While the Cortese List is no longer maintained as a single list, the following databases provide information regarding sites identified as meeting the Cortese List requirements:

1) List of Hazardous Waste and Substances sites from DTSC Envirostor database (Health and Safety Codes 25220, 25242, 25356, and 116395)
2) List of Leaking Underground Storage Tank Sites by County and Fiscal Year from the SWRCB GeoTracker database (Health and Safety Code 25295)
3) List of solid waste disposal sites identified by the SWRCB with waste constituents above hazardous waste levels outside the waste management unit (Water Code Section 13273 subdivision (e) and California Code of Regulations Title 14 Section 18051))
4) List of "active" Cease and Desist Orders and Cleanup and Abatement Orders from the SWRCB (Water Code Sections 13301 and 13304)
5) List of hazardous waste facilities subject to corrective action pursuant to Section 25187.5 of the Health and Safety Code, identified by DTSC.

A review of the facilities and/or sites identified in these five databases was performed to determine if the proposed project site is listed on the Cortese List.

Hazardous Waste and Substances Site list

On April 2, 2019, the Hazardous Waste and Substances site list on DTSC's Envirostor online database was accessed. The proposed project site is not listed on the DTSC Envirostor database. Additionally, no adjacent sites (also within HnGS) were listed in the database (Envirostor 2019).

Leaking Underground Storage Tank Sites

On April 2, 2019, the SWRCB's GeoTracker database was accessed to obtain the list of leaking underground storage tank sites located in the vicinity of the proposed project. The proposed project site was not listed in the GeoTracker database (Geotracker 2015a).

The nearest listed site was the Golden Rain Foundation at 1280 Golden Rain, approximately 500 feet east of the proposed project site. A release of waste oil (motor, hydraulic, lubricating) occurred at this site; however, the release case was closed in 1987 (Geotracker 2015b). It is unlikely that this site has impacted the environmental conditions at the proposed project site.

Solid Waste Disposal Sites

On April 2, 2019, the list of solid waste disposal sites identified by SWRCB with waste constituents above hazardous waste levels outside the waste management unit were accessed. A total of 25 sites were listed in California; however, none of the sites were listed in Long Beach/Seal Beach (CalEPA 2019).

Active Cease and Desist Orders and/or Cleanup and Abatement Orders

On February 27, 2017, the SWRCB list of active cease and desist orders and cleanup and abatement orders for California was accessed. No sites were listed in Long Beach/Seal Beach (CalEPA 2019).

Hazardous Waste Facilities Subject to Corrective Action

The California Environmental Protection Agency Cortese List was accessed to obtain information on hazardous waste facilities identified in the Health and Safety Code 25187.5. Facilities identified under HSC 25187 are those that DTSC determined required immediate corrective action to "abate imminent or substantial endangerment." Two sites were listed in California. None of the sites were listed within Long Beach/Seal Beach.

Based on this review, the proposed project site is not included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and no impact would occur.

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 or excessive noise for people residing or working in the project area?

No Impact. The proposed project is not located within an airport land use plan or within two miles of a public airport or public use airport. There are no general aviation airports or airstrips in the vicinity of HnGS. The Long Beach Municipal Airport is located approximately 3 miles to the northwest of HnGS. HnGS is located beneath the general approach pattern for Runway 30 and the departure pattern for Runway 12 at Long Beach Municipal Airport. However, the approach/departure elevations for aircraft are well above HnGS such that any project-related construction would not represent a potential obstruction to air navigation. The Joint Forces Training Base, Los Alamitos, (a non-public use airport) is located approximately 2 miles to the northeast of HnGS. However, the departure pattern for Runway 22L and the approach pattern for Runway 4R at the JTFB takes aircraft at least 1 mile east of HnGS. The proposed project would not interfere with air navigation or contribute to an increased safety hazard for HnGS personnel related to local air operations. No impact would occur.

f) Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Less-than-Significant Impact. The proposed project would be located in the interior of the existing HnGS site. It would not impair the implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan for any area outside the station. Procedures for emergency response and evacuation are provided to all LADWP employees at the station. These procedures would be updated as necessary in the Risk Management Plan for HnGS to account for the proposed construction activities.

All personnel involved in the construction activities would also receive training regarding emergency response and evacuation measures at the station. The impact would be less than significant.

g) Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

No Impact. The proposed project would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires. According to the City of Long Beach General Plan Land Use Map (City of Long Beach 2002), the project site and surrounding area are completely developed as an urban environment, and no wildlands exist within or adjacent to the project site. Therefore, no impacts would occur as a result of the project.

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3.10 Hydrology and Water Quality

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☒	☐	☐
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☒	☐

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
i) result in substantial erosion or siltation on or off site;	☐	☐	☒	☐
ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off site;	☐	☒	☐	☐
iii) 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; or	☐	☒	☐	☐
iv) impede or redirect flood flows?	☐	☐	☒	☐
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☒	☐
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☒	☐

a) Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Less-than-Significant Impact with Mitigation Incorporated. Short-term impacts to water quality, through exceedance of water quality standards, non-conformance with waste discharge requirements, or by other means, could potentially result from construction activities (e.g., erosion and sedimentation due to land disturbances, uncontained material and equipment storage areas, improper handling of hazardous materials). Similarly, long-term water quality impacts could occur as a result of alteration of drainage patterns and/or changes in impervious surfaces. This discussion generally focuses on the short-term impacts of construction activities and addresses the different types of water quality impacts in terms of the type of construction-related effects, including stormwater runoff from the construction site, management of construction activities and debris, and non-stormwater discharges. Long-term impacts related to changes in topography and

impervious surfaces are addressed under threshold (c) because those thresholds address the potential for alteration of drainage patterns to have adverse effects on erosion and/or flooding.

Stormwater Runoff - Construction

The project would involve filling 2,150 feet of the Intake Channel with engineered fill, leaving vacant space within the existing HnGS property. As discussed in Section 3.7, Geology and Soils, threshold (b), construction activities would result in temporary soil disturbance, which in turn could result in short-term erosion-induced siltation of the adjacent southern portion of the intake channel. In addition, spills or leaks from heavy equipment and machinery, staging areas, or construction areas could enter runoff. Typical pollutants could include incidental spills of petroleum products and hazardous materials from equipment, as well as pollutants such as solvents, and cleaning agents that could contain hazardous constituents. Leaks or spills from equipment or inadvertent releases of construction materials could result in water quality degradation if runoff containing the contaminants entered receiving waters in sufficient quantities to exceed water quality objectives.

As discussed in Section 3.7, Geology and Soils, (b), because implementation of the proposed project would require construction activities resulting in a land disturbance of more than 1 acre, LADWP would be required to obtain an NPDES Construction General Permit that addresses pollution associated with construction activities. Compliance with the permit would require LADWP to file a Notice of Intent with the SWRCB and to prepare a Storm Water Pollution Prevention Plan (SWPPP) prior to project construction. The contractor would prepare and implement a site-specific SWPPP. The SWPPP would incorporate BMPs to prevent or reduce, to the greatest feasible extent, adverse impacts to water quality from erosion-induced sedimentation and incidental spills of petroleum-based products and hazardous materials.

A copy of the SWPPP would be kept at the project site and would be available for review on request. The SWPPP would conform to the California Stormwater Quality Association's SWPPP template, and would include appropriate BMPs related to the proposed project. The following list includes examples of treatment-control BMPs that could be employed during construction (these features would appear as notes on final design plans):

- Silt fences installed along limits of work and/or the project site
- Stockpile containment (e.g., Visqueen plastic, fiber rolls, gravel bags)
- Street sweeping
- Tire washes for equipment
- Runoff control devices (e.g., drainage swales, gravel bag barriers/chevrons, velocity check dams) to be used during the rainy season

These standard procedures would prevent construction-related contaminants from reaching the adjacent southern portion of the intake channel. In addition, as discussed in Section 3.9, Hazards and Hazardous Materials, **MM-HAZ-1**, implementation of a soil management plan, and **MM-HAZ-2**, implementation of a WMP, would ensure proper handling of potentially contaminated soil and other wastes, such that runoff would not be polluted upon off-site discharge. In summary, required compliance with the Construction General Permit, including preparation and implementation of a SWPPP, as well as implementation of **MM-HAZ-1** and **MM-HAZ-2**, would ensure that short-term water quality impacts resulting from construction-related activities would be less than significant.

Dewatering

Dewatering of the project site would involve pumping the existing seawater in the northern portion of the Intake Channel over a cofferdam and into the southern portion of the channel. Pumping of the upper portions of the water column into the adjacent channel would not likely result in increased turbidity of the channel waters. However, the lower portions of the water column and the bottom sediments may contain contaminants. As indicated in Section 3.9.2, Existing Water Quality and Sediment Data, the sediment quality data in Alamitos Bay can be used as an indicator of sediment quality in the Intake Channel, due to the lack of data for the Intake Channel. The data for Alamitos Bay indicate that the sediment to be removed from the Intake Channel under the proposed project possibly contains concentrations of various contaminants greater than hazardous waste levels and marine toxicity levels. In addition, unconsolidated bottom sediments in the lower water column in the Intake Channel would result in downstream turbidity of channel waters during dewatering activities. Impacts are considered potentially significant but mitigable with implementation of **MM-HYD-1**.

In addition, as discussed in Section 3.7, Geology and Soils, groundwater is locally present at a depth of 12 feet below ground surface. The existing intake channel is 27–29 feet deep, indicating that groundwater seepage may be occurring into the channel bottom. If groundwater is present in the channel following seawater dewatering, a temporary dewatering system would be employed to maintain a safe and dry working environment during excavation and construction activities. As indicated in Section 2.5, Discretionary Approvals Required for the Project, project dewatering would occur in association with a groundwater dewatering permit, under Order No. R4-2013-0095 and General NPDES Permit No. CAG994004, if groundwater is encountered subsequent to seawater dewatering. In accordance with this permit, LADWP would be required to:

- Demonstrate that the discharges would not cause or contribute to a violation of any applicable water quality objective/criteria for the receiving waters.
- Perform reasonable potential analysis, using a representative sample of groundwater to be discharged.

- The samples shall be analyzed and the data compared to the water quality screening criteria for the applicable constituents listed in the dewatering permit.
- If the analytical test results of the discharge indicate that toxics exceed the water quality screening criteria, as specified in the dewatering permit, the discharger shall treat the wastewater prior to discharge, such that effluent limitations of the permit are met.

Dewatering in accordance with **MM-HYD-1,** implementation of a Dewatering Plan, and in accordance with the SWRCB-mandated groundwater dewatering permit would ensure that short-term water quality impacts resulting from dewatering would be less than significant.

Dust Control

Non-stormwater discharges during construction activities would include periodic application of water for dust control. Since dust control is necessary during windy and dry periods to prevent wind erosion and dust plumes, water would be applied in sufficient quantities to prevent dust plumes, but not so excessively as to produce runoff from the construction site. Water applied for dust control would quickly evaporate. Stipulations for dust control are routine in SWPPPs and other construction contract documents, stating that water would only be applied in a manner that does not generate runoff. Therefore, water applied for dust control would not result in appreciable impacts on groundwater or surface water features, and, thus, has little to no potential to cause or contribute to exceedances of water quality objectives contained in the relevant Basin Plan (i.e., the Los Angeles RWQCB Basin Plan).

Stormwater Runoff – Operations

Filling and paving over the existing channel would result in an increase in impervious surfaces of approximately 354,750 square feet, or 8.14 acres. LADWP shall obtain coverage under the SWRCB adopted General Industrial Storm Water Permit, Water Quality Order No. 2014-0057-DWQ, NPDES Permit No. CAS000001 for the project area.

The proposal to fill in 2,150 feet of the HnGS Intake Channel would provide space for a future energy project on the HnGS site. At this time, that future project is unknown. However, at a minimum, it is reasonable to assume that vehicles would likely park on and/or traverse the newly paved area and that the area would possibly be used for temporary storage. Vehicle use and storage could result in incidental spills of residual oil, grease, and other petroleum products, which in turn could result in adverse water quality impacts to the downstream Orange County (Los Alamitos) flood control channel, San Gabriel River, and the Pacific Ocean. Impacts are considered potentially significant but mitigable with incorporation of **MM-HYD-2a** and **MM-HYD-2b**.

Conclusion

In summary, standard construction procedures and compliance with the Construction General Permit, including implementation of a SWPPP and groundwater dewatering permit, would adequately protect the quality of receiving waters and would not violate Basin Plan objectives. For these reasons, and with incorporation of **MM-HAZ-1**, **MM-HAZ-2,** and **MM-HYD-1**, the short-term water quality impacts of the project during project demolition and construction would be less than significant. In addition, incorporation of **MM-HYD-2a** and **MM-HYD-2b** would reduce potential long-term, operational related water quality impacts to less than significant levels.

MM HYD-1 **Construction Dewatering.** A dewatering plan shall be prepared prior to beginning work and implemented during seawater and potential groundwater dewatering. The dewatering plan shall be designed and implemented such that discharges (1) meet water quality effluent limitations specified in the Regional Water Quality Control Board (RWQCB) Basin Plan, CWA Section 401 Water Quality Certification Order for the project (to be obtained), and/or National Pollutant Discharge Elimination System (NPDES) dewatering permit (Order No. R4-2013-0095, General NPDES Permit No. CAG994004), as appropriate, and (2) not cause sedimentation of downstream channel waters. Examples of dewatering design may include the following:

- Where dewatering pumps are required, intakes shall be screened to prevent other aquatic organisms from entering the pump. In addition, a filtration/settling system shall be included to reduce downstream turbidity (i.e., filter fabric, turbidity curtain). The selection of an appropriate system shall be based on the actual rate of discharge at time of construction and requirements identified in the In-Water Work or Diversions section of the project CWA section 401 Water Quality Certification Order (to be obtained).
- Sediment controls shall be provided to remove sediments generated during the dewatering activities.
- Discharges to Waters of the State shall conform to the water quality standards identified in the project CWA Section 401 Water Quality Certification Order (to be obtained).
- Pumped water shall be discharged in conformance with all applicable laws and permit requirements.

MM-HYD-2a **General Industrial Storm Water Permit.** LADWP shall obtain coverage under the State Water Resources Control Board (SWRCB) adopted General Industrial Storm Water Permit, Water Quality Order No. 2014-0057-DWQ, NPDES Permit No. CAS000001 for the project area: herein after identified as GISW Permit. This statewide GISW Permit was issued in response to the Federal Clean Water Act Amendments, which established a framework for regulating industrial (and municipal) storm water discharges pursuant to the NPDES

program. The GISW Permit applies to point source discharges of storm water from industrial facilities to waters of the United States. Accordingly, storm water discharges from the project site, which has the Standard Industrial Classification (SIC) code 4911 – Steam Electric Power Generating Facilities, is subject to the GISW Permit. HnGS has already obtained coverage for continued and future storm water discharge pursuant to the GISW permit. As such, HnGS will continue to eliminate unpermitted, non-storm water discharges; update the Storm Water Pollution Prevention Plan (SWPPP) to include the project area; and perform monitoring of storm water discharges.

MM-HYD-2b The SWPPP shall be revised to include the project area in accordance with the GISW permit and submitted to the SWRCB.

b) Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

Less-than-Significant Impact. The proposed project would involve filling 2,150 feet of the Intake Channel within the HnGS property. Although water would be used to suppress dust in compliance with SCAQMD Rule 403, the project would not use large amounts of water that would substantially deplete groundwater supplies or interfere with groundwater recharge. Further, the project does not involve construction of additional structures that would require the use of groundwater supplies and would leave vacant space within the HnGS property. Therefore, there would be less-than-significant impacts to groundwater supplies.

c) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

i) result in substantial erosion or siltation on or off site;

Less than Significant Impact. The project would involve filling the Intake Channel with engineered fill. Once dewatered and appropriately excavated, the Intake Channel would be backfilled with engineered fill, leaving flat, vacant space. The vacant space would consist of an impermeable concrete surface, which would be level with the surrounding HnGS property. As a result, both the filled area and surrounding on- and off-site areas would be paved and not susceptible to erosion. No existing surface or subsurface drains would be altered as part of the project and surface runoff flow patterns would not be substantially altered. Therefore, the project would not substantially alter the existing drainage pattern of the site such that substantial erosion and siltation impacts on or off site would occur. Impacts are considered less than significant, and no mitigation is required.

ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off site;

Less-than-Significant Impact with Mitigation Incorporated. The project involves filling the Intake Channel with engineered fill, and none of the existing surface or subsurface drains or catchment devices would be altered as part of the project. The Intake Channel would be backfilled to the existing grade of the surrounding HnGS property such that surface runoff flow patterns would not be substantially altered. However, filling and paving over the existing channel would result in an increase in impervious surfaces of approximately 354,750 square feet, or 8.14 acres, which would substantially increase the amount and possibly the rate of surface runoff in a manner would could result in flooding on or off site. Impacts are considered potentially significant**.** Implementation of **MM-HYD-3**, Flood Control, would require that post-construction stormwater runoff rates would be equal or less than existing rates, such that downstream flooding would not occur. Construction of drainage features to Los Angeles County Department of Public Works Hydrology Manual specifications would also ensure that on-site or downstream flooding would not occur as a result of increased impervious surfaces on site. As a result, long-term operational drainage impacts would be reduced to less-than-significant levels.

MM-HYD-3 Flood Control

In conjunction with MM-HYD-2a and MM-HYD-2b, GISW Permit coverage and associated SWPPP, the project shall include drainage facilities designed such that post-storm runoff rates would be less than or equal to existing conditions. In accordance with the Los Angeles County Department of Public Works Hydrology Manual, the design shall meet the Urban Flood level of protection, which is defined as runoff from a 25-year frequency storm falling on a saturated watershed. The combined capacity of the storm drain and street flow system must be enough to accommodate flow from a 50-year storm event.

iii) 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; or

Less-than-Significant Impact with Mitigation Incorporated. As previously discussed, filling and paving over the existing channel would result in an increase in impervious surfaces of approximately 354,750 square feet, or 8.14 acres, which could potentially contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems. Impacts are considered potentially significant**.** Implementation of **MM-HYD-3**, Flood Control, would require that post-construction stormwater runoff rates would be equal or less than existing rates, such that downstream flooding would not occur. Construction of drainage features

to Los Angeles County Department of Public Works Hydrology Manual specifications would also ensure that runoff would not exceed the capacity of existing or planned stormwater drainage systems. As a result, long-term operational drainage impacts would be reduced to less than significant levels.

As previously discussed for environmental threshold Section 3.10(a), during construction, potential spills or leaks from heavy equipment and machinery, staging areas, or construction areas could enter runoff. For potential short-term impacts, LADWP would be required to obtain an NPDES Construction General Permit that addresses pollution from demolition and construction activities. Construction activities would comply with applicable requirements of the Los Angeles RWQCB, including compliance with SWPPP-mandated BMPs, which would be employed to control any potential polluted runoff. In addition, as discussed in Section 3.9, Hazards and Hazardous Materials, **MM-HAZ-1**, implementation of a soil management plan, and **MM-HAZ-2**, implementation of a WMP, would ensure proper handling of potentially contaminated soil and other wastes, such that runoff would not be polluted upon off-site discharge. In summary, required compliance with the Construction General Permit, including preparation and implementation of a SWPPP, as well as implementation of **MM-HAZ-1** and **MM-HAZ-2**, would ensure that existing or planned stormwater drainage systems would not provide substantial additional sources of polluted runoff. Impacts would be less than significant.

iv) impede or redirect flood flows?

Less-than-Significant Impact. The project site is located within a 100-year flood hazard area as indicated on Federal Emergency Management Agency (FEMA) flood zone maps (FEMA 2008). However, the project involves filling the Intake Channel and leaving vacant space within the HnGS property. The project does not involve the construction of new structures or buildings that could impede or redirect flood flows. Impacts would be less than significant.

d) In flood hazard, tsunami, or seiche zones, would the project risk release of pollutants due to project inundation?

Less-than-Significant Impact. The project site is located within a 100-year flood hazard area (or areas with a 1% annual chance flood) as indicated on FEMA flood zone maps (FEMA 2008). The proposed project would include filling the Intake Channel and no additional buildings or structures would be built that could be inundated by flood, tsunami or seiche hazards. Therefore, the project would not result in an increase in the risk of inundation or the release of pollutants due to project inundation by seiche, tsunami, or flood hazards. Further, the area surrounding the project site within the HnGS property is located within

Zone X on the FEMA flood zone map. Zone X consists of areas that have a 0.2% annual chance of flood; areas of 1% chance of flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood (FEMA 2008). Therefore, inundation risks are low and the project would not risk release of pollutants due to project inundation; impacts would be less than significant.

e) Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Less-than-Significant Impact. The project site is located within the jurisdiction of the Los Angeles RWQCB Basin Plan (RWQCB 2014). As previously discussed in 4.10(b), LADWP would be required to obtain an NPDES Construction General Permit that addresses pollution from construction activities. Further, construction activities would comply with applicable requirements of the Los Angeles RWQCB, including compliance with SWPPP-mandated BMPs. The project would not use large amounts of water that would substantially deplete groundwater supplies or interfere with groundwater recharge. Further, the project does not involve the construction of additional buildings or structures that would result in the ongoing use of water resources. Therefore, the project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan; impacts would be less than significant.

References

FEMA (Federal Emergency Management Agency). 2008. *FEMA Flood Map Service Center*. Accessed April 2019. https://msc.fema.gov/portal/search?AddressQuery=long%20beach%2C%20ca#searchresultsanchor

RWQCB (Regional Water Quality Control Board). 2014. *Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties*. Accessed April 2019. https://www.waterboards.ca.gov/losangeles/water_issues/programs/basin_plan/basin_plan_documentation.html

3.11 Land Use and Planning

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Physically divide an established community?	☐	☐	☐	☒
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☒	☐

a) Would the project physically divide an established community?

No Impact. The proposed filling of the HnGS Intake Channel would be completely contained within the existing 160-acre HnGS property, which is owned by LADWP and occupied by facilities devoted to the production and transmission of electricity. Therefore, the proposed project would not result in physical division of any established communities. No impact would occur.

b) Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

Less-than-Significant Impact. The HnGS property has a general plan land use designation of Industrial/Energy/Storage and a zoning designation of Planned Development District 1 (PD-1) and is located within the SEASP (formerly SEADIP) (City of Long Beach 2017; City of Long Beach 2018). The proposed channel fill and the use of the space for a future energy project is consistent with the PD-1 zoning designation as well as the land use designation and the specific provisions of the SEASP and the General Plan.

As discussed in Appendix B, the channel infill project site is located within both the coastal zone and the CCC's permit jurisdiction. The California Coastal Act prohibits the fill of coastal waters unless: (a) there is no feasible alternative; (b) adverse impacts are minimized and appropriately mitigated; and (c) it is an allowable use such as a new or expanded energy facility. Since the proposed project includes filling 2,150 feet of the Intake Channel for an unknown future energy project, the proposed project would require a Coastal Development Permit issued by the CCC. Therefore, upon receipt of the appropriate permits and approvals, the proposed project would not conflict with any applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect and impacts would be less than significant.

References

City of Long Beach. 2017. *City of Long Beach General Plan, Land Use Element.* Accessed January 2019. http://www.longbeach.gov/globalassets/city-news/media-library/documents/lue/november-2017/draft_longbeachlanduseelement_11-2017_sml

City of Long Beach. 2018. *Zoning Maps*. Accessed January 2019. http://www.lbds.info/civica/filebank/blobdload.asp?BlobID=2538

3.12 Mineral Resources

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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 a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	☐	☒

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

No Impact. According to the City's General Plan Conservation Element, the primary mineral resources within the City have historically been oil and natural gas (City of Long Beach 1973). However, no oil, natural gas, or other mineral resources are known to exist on the project site that would be affected by the proposed project. No impact would occur.

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

No Impact. The proposed project would not result in the loss of a locally important mineral resource. The project site and vicinity are classified as MRZ-3: Areas containing construction aggregate deposits, the significance of which cannot be evaluated from available data. Therefore, the project site is not located on significant mineral or energy deposits as mapped by the City of Long Beach (City of Long Beach 1973) or the state (CDC 2017a, 2017b). No impact would occur.

References

CDC (California Department of Conservation). 2017a. Mineral Land Classification. Accessed March 2017. http://maps.conservation.ca.gov/cgs/informationwarehouse/ index.html?map=mlc.

CDC. 2017b. Division of Oil, Gas, & Geothermal Resources Well Finder. Accessed March 2017. http://maps.conservation.ca.gov/doggr/#close.

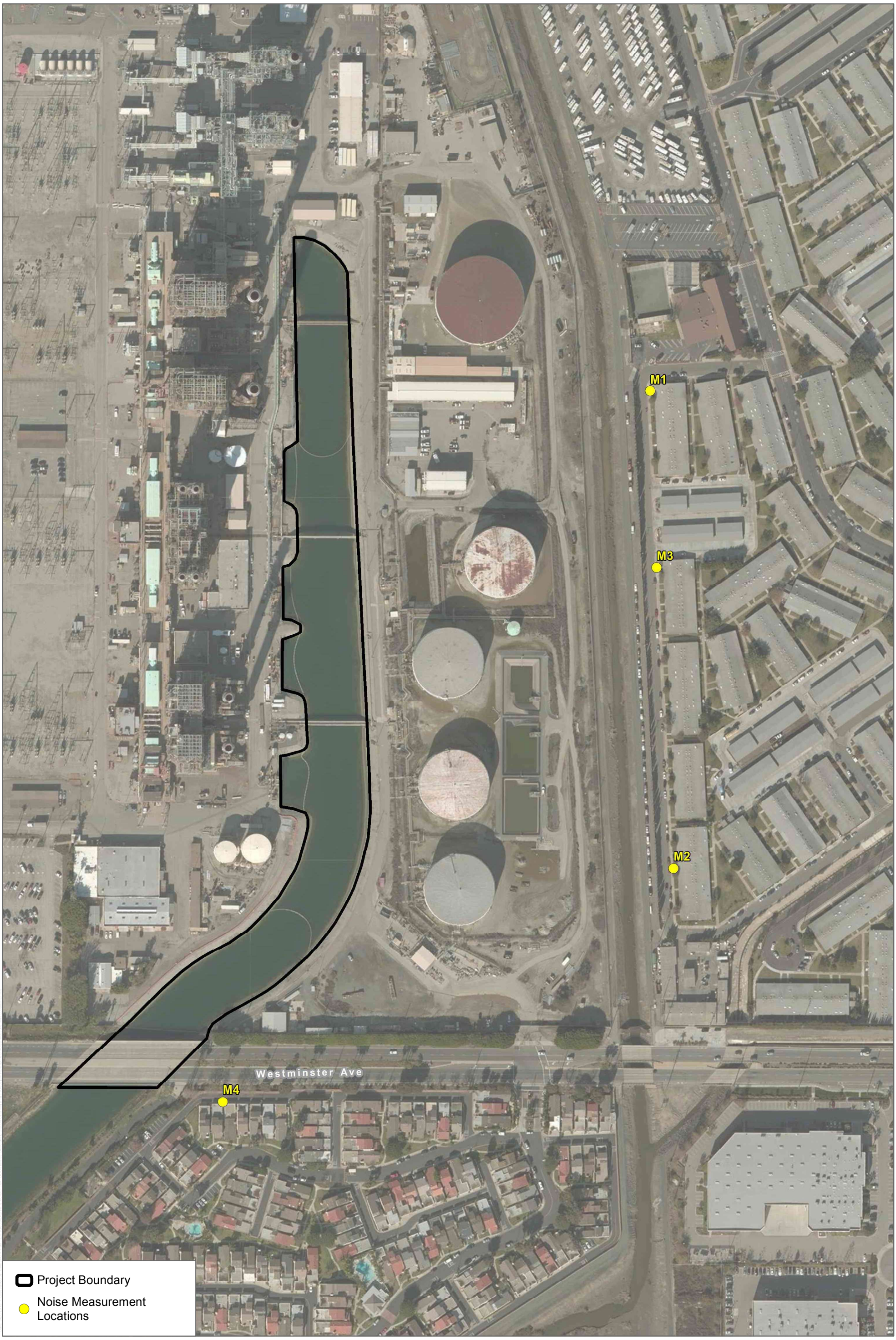
City of Long Beach. 1973. Long Beach General Plan Conservation Element. April 30, 1973. http://www.lbds.info/civica/filebank/blobdload.asp?BlobID=4092.

3.13 Noise

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XII. NOISE – Would the project result in:				
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
b) Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☐	☒
c) For a project located within the vicinity of a private airstrip or 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?	☐	☐	☐	☒

Noise measurements were conducted at noise-sensitive land uses adjacent to the project site in October 2016 to characterize the existing acoustical environment. (At the time noise measurements were taken, only generation Units 8, 9, and 10 were running. Therefore, the ambient noise conditions reflected in the measurements are considered conservative (i.e., quieter) since they did not reflect a common condition when additional generation units may also be in operation.) The daytime, short-term (1 hour or less) sound level measurements were taken with a Rion NL-52 sound-level meter. This sound-level meter meets the current American National Standards Institute standard for a Type 1 precision sound-level meter. The calibration of the sound-level meter was verified before and after the measurements, and the measurements were conducted with the microphone positioned approximately 5 feet above the ground.

Four short-term noise measurement locations (M1–M4) were selected. Measurement locations M1, M2, and M3 represent the nearest noise-sensitive land uses to the east (residences at Leisure World Seal Beach), and M4 represents the nearest noise-sensitive land uses to the south (residences located in the City of Long Beach). There are no noise-sensitive land uses on the north or west side of the project site. Measurement locations are shown in Figure 3, Noise Measurement Locations. Noise measurement data is included in Appendix E. The primary noise sources at the locations consisted of traffic near and far; industrial noise, including HnGS Units 8, 9, and 10; distant aircraft; landscaping activities; rustling leaves; and neighborhood community noise. As shown in Table 3.13-1, the measured L_{eq} noise levels ranged from 55 A-weighted decibels (dBA) equivalent continuous sound level (L_{eq}) at M3 to 64 dBA L_{eq} at M4.



SOURCE: Port of Long Beach 2017

LA DWP Los Angeles Department of Water & Power

0 100 200 Feet

FIGURE 3

Noise Measurement Locations

Haynes Generating Station Intake Channel Infill

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Table 3.13-1 Measured Short-Term Noise Levels

Receptor	Location/Address	Date	Time	L_{eq} (dBA)	L_{max} (dBA)
M1	Residences east of project site, 3639 Canoe Brook Drive	October 14, 2016	2:32–2:42 p.m.	55.5	79.2
M2	Residences southeast of project site, 11997 Canoe Brook Drive	October 14, 2016	2:04–2:14 p.m.	56.8	75.3
M3	Residences southeast of project site, 6567 Canoe Brook Drive	October 14, 2016	2:18–2:28 p.m.	54.8	73.7
M4	Residences south of project site, Trident Way	October 14, 2016	2:53–3:03 p.m.	64.3	92.4

Source: Appendix E.
Note: L_{eq} = equivalent continuous sound level (time-averaged sound level); L_{max} = maximum sound level during the measurement interval

a) Would the project result in the generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

On-Site Noise

Less-than-Significant Impact. On-site noise-generating activities associated with the proposed project would include temporary on-site noise from construction activities. The proposed project would also generate temporary off-site traffic noise along nearby arterial roadways from trucks and worker vehicles during construction. The proposed project would not include any permanent activities; as such, there would be no permanent noise associated with the proposed project.

The City of Long Beach regulates noise from stationary (i.e., non-transportation) sources, such as construction noise, through its Municipal Code (City of Long Beach 1988). Long Beach Municipal Code Section 8.80.202 (Construction Activity Noise Regulations) prohibits the operation of any tools or equipment used for construction, alteration, repair, remodeling, drilling, demolition, or any other related building activity producing noise that annoys or disturbs a reasonable person of normal sensitivity, except on weekdays between 7:00 a.m. and 7:00 p.m., or on Saturdays between 9:00 a.m. and 6:00 p.m. Construction work is prohibited on Sundays or on federal holidays, except by special permit, and then only within limited hours. Emergency work is exempted from these limitations.

The residences to the east of the project site are located within the jurisdiction of the City of Seal Beach. Similar to the City of Long Beach, the Municipal Code for the City of Seal Beach exempts noise from construction activities between 7:00 a.m. and 8:00 p.m. on weekdays, and 8:00 a.m. and 8:00 p.m. on Saturdays (City of Seal Beach 2016). Outside of these hours, construction noise would need to comply with the applicable noise standards. For

industrial properties, the noise limit is 70 dBA at any time, and for residential properties, the noise limit is 55 dBA from 7:00 a.m. to 10:00 p.m., and 50 dBA from 10:00 p.m. to 7:00 a.m.

On-Site Noise

Noise and vibration levels during project construction would vary from hour to hour and day to day, depending on the equipment in use, the operations being performed, and the distance between the source and receptor. Phase I construction activities are anticipated to take place over approximately 15 months, and Phase II construction activities are anticipated to take place over approximately 20 months. Phases of the proposed project would include site preparation, dewatering and grading.

Equipment that would be in operation during construction would include excavators, graders, pumps, tractors, loaders and backhoes. The typical maximum noise levels for various pieces of construction equipment at a distance of 50 feet are presented in Table 3.13-2, Construction Equipment Maximum Noise Levels. The equipment noise levels presented in Table 3.13-2 are maximum noise levels. Typically, construction equipment operates in alternating cycles of full power and low power, producing average noise levels less than the maximum noise level. The average sound level of construction activity also depends on the amount of time that the equipment operates and the intensity of construction activities during that time.

Table 3.13-2 Construction Equipment Maximum Noise Levels

Equipment Type	Equipment Noise Level at 50 Feet (dBA)
Air Compressor[1]	81
Backhoe[1]	80
Crane, Derrick[1]	88
Crane, Mobile[1]	83
Dozer[1]	85
Front-End Loader[2]	80
Generator[1]	81
Grader[1]	85
Loader[1]	85
Mounted Impact Hammer (Hoe Ram)[2]	90
Pneumatic Tools[1]	85
Pump[1]	76
Saw[1]	76
Shears (on Backhoe)[2]	85
Shovel[1]	82
Truck[1]	88

Sources:
1 DOT 2018.
2 FHWA 2008.
Notes: dBA = A-weighted decibel.

The maximum noise levels at 50 feet for typical construction equipment would range up to 90 dBA for the type of equipment normally used for this type of construction project, although the hourly noise levels would vary. Construction noise in a well-defined area typically attenuates at approximately 6 dBA per doubling of distance. During Phase I, project-related construction activities would take place within approximately 680 feet of the nearest noise-sensitive uses (residences located to the east of the project site). The next-nearest noise-sensitive land uses are residences located approximately 1,470 feet to the south. During Phase II, project-related construction activities would take place within approximately 140 feet of the nearest noise-sensitive uses (residences located to the south of the project site). The next-nearest noise-sensitive land uses are residences located approximately 680 feet to the east.

The Federal Highway Administration's (FHWA's) Roadway Construction Noise Model (RCNM) (FHWA 2008) was used to estimate construction noise levels at the nearest noise-sensitive land uses, which consist of residences to the east and south of the project site. Although the model was funded and promulgated by the FHWA, the RCNM is often used for non-roadway projects because the same types of equipment used for roadway projects are also used for other project types. Input variables for the RCNM consist of the receiver/land use types, the equipment type and number of each (e.g., two graders, a loader, a tractor), the duty cycle for each piece of equipment (e.g., percentage of hours the equipment typically works per day), and the distance from the noise-sensitive receiver. No topographical or structural shielding was assumed in the modeling. The RCNM has default duty-cycle values for the various pieces of equipment, which were derived from an extensive study of typical construction activity patterns (FHWA 2008). Those default duty-cycle values were used for this noise analysis.

Using FHWA's RCNM construction noise model and construction information (types and number of construction equipment by phase), the estimated noise levels from project construction were calculated for the nearest receptor locations, as presented in Tables 3.13-3 and 3.13-4. The RCNM inputs and outputs are provided in Appendix E. Additionally, Tables 3.13-3 and 3.13-4 present the projected noise levels during construction activities for the receivers nearest to the east and south, respectively.

Table 3.13-3 Construction Noise Modeling and Projected Ambient Plus Construction Noise Summary – Nearest Receivers to the East

Construction Activity	Receiver M1 (nearest receiver to the east)	
	Construction Noise at Receiver M1 (dBA L_{eq})[1]	*Ambient Plus Construction Noise (dBA L_{eq}) at Receiver M1[2]*
Phase I		
Site Preparation	63	63
Dewatering	61	62
Grading	60	62

Table 3.13-3 Construction Noise Modeling and Projected Ambient Plus Construction Noise Summary – Nearest Receivers to the East

Construction Activity	Receiver M1 (nearest receiver to the east)	
	Construction Noise at Receiver M1 (dBA L_{eq})[1]	*Ambient Plus Construction Noise (dBA L_{eq}) at Receiver M1[2]*
Phase II		
Site Preparation	64	64
Dewatering	61	62
Grading	63	64

Notes: dBA = A-weighted decibel; L_{eq} = equivalent continuous sound level equivalent continuous sound level.

1 Construction noise calculated using Roadway Construction Noise Model (RCNM).

2 Using the ambient noise measurements for M1 (55.5 dBA L_{eq}), combined (ambient plus construction) noise levels for the closest receivers to the south during project construction were calculated with the following formula (Harris 1991):

Total L = 10 × log10((10^(M1 ambient L_{eq}/10))+(10^(M1 construction L_{eq}/10))).

Table 3.13-4 Construction Noise Modeling and Projected Ambient Plus Construction Noise Summary – Nearest Receivers to the South

Construction Activity	Receiver M4 (nearest receiver to the south)	
	Construction Noise at Receiver M4 (dBA L_{eq})[1]	*Ambient Plus Construction Noise (dBA L_{eq}) at Receiver M4[2]*
Phase I		
Site Preparation	56	65
Dewatering	55	65
Grading	54	65
Phase II		
Site Preparation	76	76
Dewatering	75	75
Grading	75	76

Notes: dBA = A-weighted decibel; L_{eq} = equivalent continuous sound level equivalent continuous sound level.

1 Construction noise calculated using Roadway Construction Noise Model (RCNM).

2 Using the ambient noise measurements for M4 (64.3 dBA L_{eq}), combined (ambient plus construction) noise levels for the closest receivers to the south during project construction were calculated with the following formula (Harris 1991):

Total L = 10 × log10((10^(M4 ambient L_{eq}/10))+(10^(M4 construction L_{eq}/10)))

As presented in Table 3.13-3, the highest noise levels at receivers to the east are predicted to occur during Phase II site preparation, when noise levels from the construction activity would be as high as 64 dBA L_{eq} at the residences located along the western boundary of Leisure World Seal Beach, approximately 680 feet away. The existing ambient noise measurement in that area was 56 dBA L_{eq}, and the predicted combined (ambient plus construction) noise level would be 64 dBA L_{eq}. While the temporary increase above ambient noise levels of 8 dB would be discernible, it is within the range of the ambient noise environment and is not considered to be a substantial increase.

As presented in Table 3.13-4, the highest noise levels at receivers to the south are predicted to occur during Phase II site preparation, when noise levels from construction activities would be as high as 76 dBA L_{eq} at the residences south of East 2nd Street, approximately 1,400 feet away. The existing ambient noise measurement in that area was 64 dBA L_{eq}, and the predicted combined (ambient plus construction) noise level would be 76 dBA L_{eq}. The increase above the existing ambient noise level, while readily discernable, would be relatively brief, because most of the work during Phase II would take place at greater distances from the residences to the south. Additionally, it is likely that the Westminster Boulevard/2nd Street bridge over the channel would provide some degree of acoustical shielding from the construction activities taking place on the north side. Therefore, the noise from project construction is considered to be a less-than-significant impact.

Off-Site Noise

The proposed project would result in temporary increases in traffic from worker vehicles and project-related trucks. The increase in vehicles along local arterials would correspond with an increase in traffic noise. Based on the Traffic Impact Analysis prepared for the project (Section 3.17), the project would result in 100 daily truck trips (50 round trips) and 100 daily one-way worker trips during the peak month of traffic related to the proposed project during Phase I, and 200 daily truck trips (100 round trips) and 200 daily one-way worker trips during Phase II.

The number of project-related vehicle trips was compared[9] to existing and future vehicle trips using the local arterials along which project-related traffic is expected to travel. The resultant calculations indicate that the proposed project would not result in a measurable or audible change in existing or future traffic noise. For example, the existing average daily traffic volume along 2nd Street south of HnGS is approximately 38,000 vehicles. Adding the project contribution, the resultant theoretical increase in noise would be 0.07 dBA, which is not an audible or measurable change. Therefore, noise impacts from off-site project-related vehicles would be less than significant.

b) Would the project result in the generation of excessive groundborne vibration or groundborne noise levels?

No Impact. Construction activities that might expose persons to excessive groundborne vibration or groundborne noise have the potential to cause a significant impact. Groundborne vibration information related to construction/heavy equipment activities has been collected by the California Department of Transportation (Caltrans). Information from the Caltrans indicates that transient vibrations (such as from

[9] Using the following equation: Delta (increase or decrease) in noise level = 10*Log (Volume2/Volume1), where, in this case, Volume 2 is the Existing plus Project (or Existing plus Cumulative Projects plus Project) traffic volume and Volume 1 is the Existing (or Existing plus Cumulative Projects) traffic volume, per Harris 1991.

demolition activity) with a peak particle velocity of approximately 0.035 inches per second may be characterized as barely perceptible, and vibration levels of 0.24 inches per second may be characterized as distinctly perceptible (Caltrans 2013). The heavier pieces of construction equipment, such as large bulldozers or hoe rams, would have peak particle velocities of up to approximately 0.089 inches per second at a distance of 25 feet, and a clam shovel drop would have peak particle velocities of up to approximately 0.202 inches per second at a distance of 25 feet (DOT 2018).

Ground-borne vibration is typically attenuated over relatively short distances. At the nearest existing residential use distance to the nearest construction area (approximately 140 feet) and with the anticipated construction equipment, the peak particle velocity would be approximately 0.007 inches per second. This vibration level would be well below the threshold of "barely perceptible" of 0.035 inches per second vibration.

The major concern with construction vibration is related to building damage. Construction-related vibration as a result of the proposed project would not result in structural building damage, which typically occurs at vibration levels of 0.5 inches per second or greater for buildings of reinforced-concrete, steel, or timber construction. There would be no impacts related to groundborne vibration.

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

No Impact. The project site is located approximately 2.1 miles southwest of Joint Forces Training Base, Los Alamitos, and approximately 3.5 miles southeast of Long Beach Airport. The project site is located outside of the 60 and 65 dBA noise contour impact zones of the Joint Forces Training Base (Orange County Airport Land Use Commission 2016) and outside of the airport influence area of Long Beach Airport (County of Los Angeles 2017). The project site is not located within 2 miles of a public airport or within planning area boundaries of a public airport. In addition, there are no private airstrips within the vicinity of the project site (Airnav.com 2019). Thus, the proposed project would not expose people residing or working in the project area to excessive noise levels from a private airstrip. Furthermore, the proposed project is within the boundaries of an existing power generation plant and would not provide any new facilities such that people residing or working in the project area would be exposed to increased noise levels from aircraft. Therefore, no impact would occur.

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3.14 Population and Housing

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Induce substantial unplanned 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 people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

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

No Impact. The proposed project would not directly induce unplanned population growth through the provision of new homes or businesses. Additionally, the project would not increase the power generating capacity at HnGS, and, therefore, the project would not indirectly induce population growth in the area. During Phase I, it is anticipated that a maximum of 50 construction workers would be on site at any one time, and construction would occur over a period of 15 months. During Phase II, it is anticipated that a maximum of 100 construction workers would be on site at any one time, and construction would occur over a period of 20 months. Given the temporary nature of construction industry jobs, the relatively large regional construction industry, and the relatively nominal number of construction workers needed, it is likely that the labor force from within the region would be sufficient to support the project without a substantial influx of new workers and their families. Accordingly, construction employment generated by the project would not impact population growth in the region. No impact would occur.

b) Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

No Impact. The proposed project is located within a fully developed industrial site owned by LADWP and would not displace any existing housing or people. No impact would occur.

3.15 Public Services

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:				
Fire protection?	☐	☐	☐	☒
Police protection?	☐	☐	☐	☒
Schools?	☐	☐	☐	☒
Parks?	☐	☐	☐	☒
Other public facilities?	☐	☐	☐	☒

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

Fire Protection

No Impact. HnGS is served by the City of Long Beach Fire Department. The proposed project would fill 2,150 feet of the HnGS Intake Channel, leaving vacant space for a future battery storage project, and no new or expanded fire protection services would be required at the site. Therefore, no impact would occur.

Police Protection

No Impact. HnGS is served by the City of Long Beach Police Department and LADWP security personnel. The proposed project would fill 2,150 feet of the Intake Channel within the HnGS property boundaries, and no new or expanded police protection services would be required at the site. Therefore, no impact would occur.

Schools

No Impact. The proposed project would fill 2,150 feet of the Intake Channel within the HnGS boundaries. During Phase I, it is anticipated that a maximum of 50 construction workers would be on site at any one time, and construction would occur over a period of 15 months. During Phase II, it is anticipated that a maximum of 100 construction workers would be on site at any one time, and construction would occur over a period of 20 months. The project would not involve employment of a new permanent workforce that would necessitate the expansion of school services to serve new residents. Therefore, no impact to schools would occur.

Parks

No Impact. The proposed project would fill 2,150 feet of the Intake Channel within the HnGS boundaries. During Phase I, it is anticipated that a maximum of 50 construction workers would be on site at any one time, and construction would occur over a period of 15 months. During Phase II, it is anticipated that a maximum of 100 construction workers would be on site at any one time, and construction would occur over a period of 20 months. The project would not involve employment of a new permanent workforce that would necessitate the expansion of parks or development of new parks to serve new residents. Therefore, no impacts to parks would occur.

Other Public Facilities

No Impact. The proposed project would fill 2,150 feet of the Intake Channel within the HnGS boundaries. During Phase I, it is anticipated that a maximum of 50 construction workers would be on site at any one time, and construction would occur over a period of 15 months. During Phase II, it is anticipated that a maximum of 100 construction workers would be on site at any one time, and construction would occur over a period of 20 months. The project would not involve employment of a new permanent workforce that would necessitate the expansion of other public facilities to serve new residents. Therefore, no impact to other public facilities would occur.

3.16 Recreation

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

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

No Impact. The proposed project would involve the filling 2,150 feet of the Intake Channel within the existing HnGS property boundaries. Construction workers would likely come from the region and would not need to relocate. Therefore, the project would not increase the use of existing neighborhood or regional parks or other recreational facilities. No impact would occur.

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

No Impact. The proposed project would involve filling 2,150 feet of the Intake Channel within the existing HnGS property boundaries. It would not include recreational facilities or require the construction or expansion of recreational facilities. No impact would occur.

3.17 Transportation

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	☐	☒	☐	☐
b) Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	☐	☐	☒	☐
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☒	☐
d) Result in inadequate emergency access?	☐	☐	☒	☐

This section is based on the Transportation Impact Study prepared by Dudek (October 2019), which is included as Appendix F.

a) Would the project conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?

Less than Significant with Mitigation Incorporated. The following assessment describes the existing**,** Year 2021 cumulative, Year 2030 and project traffic conditions and identifies construction-level impacts related to the traffic generated by workers and trucks that would be required to fill the existing channel in two phases. Phase I would consist of filling the northern 475 feet of the Intake Channel, and Phase II would consist of filling the Intake Channel to approximately 2 feet south of the 2nd Street/Westminster Boulevard Bridge, for a total of approximately 2,150 feet of the HnGS Intake Channel. A traffic analysis has been prepared that evaluated the proposed project pursuant to CEQA and in accordance with the City of Long

Beach and City of Seal Beach traffic impact study requirements, and is consistent with the current *Congestion Management Program (CMP) for Los Angeles County* (2010).

Study Area and Methodology

Based on the location of the project site and transportation network that provides regional and local access to it, the study area for assessing the construction-related traffic impacts of the proposed project was delineated. As illustrated in Figure 4, Study Area for Traffic Analysis, the study area is comprised of the following 13 intersections:

1. Studebaker Road/SR-22 westbound ramps (City of Long Beach, Caltrans)
2. Studebaker Road/SR-22 eastbound ramps (City of Long Beach, Caltrans)
3. Studebaker Road/Loynes Drive (City of Long Beach)
4. Pacific Coast Highway/2nd Street (City of Long Beach, Caltrans)
5. Studebaker Road/2nd Street (City of Long Beach)
6. LADWP Driveway/2nd Street (City of Long Beach)
7. Island Village Drive/2nd Street (City of Long Beach)
8. Seal Beach Boulevard/Westminster Avenue (City of Seal Beach)
9. Seal Beach Boulevard/St. Andrews Drive (City of Seal Beach)
10. Seal Beach Boulevard/Leisure World Driveway 1 (City of Seal Beach)
11. Seal Beach Boulevard /Leisure World Driveway 2 (City of Seal Beach)
12. Seal Beach Boulevard /SR-22 eastbound ramps (City of Seal Beach, Caltrans)
13. Seal Beach Boulevard/SR-22 westbound ramps (City of Seal Beach, Caltrans)

The study area intersections were analyzed for the following study scenarios:

- Existing Condition
- Existing plus Project Phase I
- Year 2021 Cumulative (includes existing traffic plus the addition of a 1% annual growth rate and traffic from cumulative projects in the City of Long Beach and Seal Beach)
- Year 2021 Cumulative plus Project Phase I
- Year 2030 (includes addition of a 0.17% annual growth rate over 2021 cumulative traffic)
- Year 2030 plus Project Phase II

The Intersection Capacity Utilization (ICU) evaluation methodology was used to assess transportation impacts for signalized intersections within the Cities of Long Beach and Seal Beach. For Caltrans intersections, methodologies consistent with the *Highway Capacity Manual 6th Edition (HCM 6th Edition)* were applied.

Table 3.17-1 shows the levels for level of service (LOS) per ICU methodology for volume-to-capacity (V/C) ratio. Table 3.17-2 shows the levels and ranges for LOS per HCM methodology for delay (in seconds).

Table 3.17-1 Levels of Service and Volume-to-Capacity Ratio for Intersections – Intersection Capacity Utilization Methodology

LOS	Description	V/C Ratio
A	Free flowing, virtually no delay. Minimal traffic	<0.600
B	Free low and choice of lanes. Delays are minimal. All cars clear intersection easily.	0.601–0.700
C	Stable flow. Queue at signal starting to get relatively long. Delays starting to become a factor but still within "acceptable" limits.	0.701–0.800
D	Approaching unstable flow. Queues at intersection are long, but most cars clear intersection on their green signal. Occasionally, several vehicles must wait for a second green signal. Congestion is moderate.	0.801–0.900
E	Severe congestion and delay. Most of the available capacity is used. Many cars must wait through a complete signal cycle to clear the intersection.	0.901–1.000
F	Excessive delay and congestion. Most cars must wait through more than one on one signal cycle. Queues are very long, and drivers are obviously irritated.	>1.000

Source: City of Long Beach 2004; City of Seal Beach 2010.
Notes: V/C = volume to capacity.

Table 3.17-2 Levels of Service and Delay for Intersections – Highway Capacity Manual Methodology

Level of Service	General Description	Delay (sec)
A	Traffic operations with a control delay of 10 seconds per vehicle or less and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is low, and either progression is exceptionally favorable, or the cycle length is very short. If LOS A is the result of favorable progression, most vehicles arrive during the green indication and travel through the intersection without stopping.	≤10.0
B	Traffic operations with control delay between 10 seconds per vehicle and 20 seconds per vehicle and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is low, and either progression is highly favorable, or the cycle length is short. More vehicles stop than with LOS A.	>10.0–20.0
C	Traffic operations with control delay between 20 and 35 seconds per vehicle and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when progression is favorable or the cycle length is moderate. Individual cycle failures (i.e., one or more queued vehicles are not able to depart as a result of the insufficient capacity during the cycle) may begin to appear at this level. The number of vehicles stopping is significant, although many vehicles still pass through the intersection without stopping.	>20.0–35.0

Table 3.17-2 Levels of Service and Delay for Intersections – Highway Capacity Manual Methodology

Level of Service	General Description	Delay (sec)
D	Traffic operations with control delay between 35 and 55 seconds per vehicle and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is high, and either progression is ineffective, or the cycle length is long. Many vehicles stop and individual cycle failures are noticeable.	>35.0–55.0
E	Traffic operations with control delay between 55 and 80 seconds per vehicle and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when volume-to-capacity ratio is high, progression is unfavorable, and the cycle length is long. Individual cycle failures are frequent.	>55.0–80.0
F	Traffic operations with control delay exceeding 80 seconds per vehicle or a volume-to-capacity ratio greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is very high, progression is very poor, and the cycle length is long. Most cycles fail to clear the queue.	>80.0

Source: Transportation Research Board 2016.
Notes: LOS = level of service.

Significance Criteria

The study area intersections are located within the jurisdictions of the Cities of Long Beach and Seal Beach, as well as Caltrans. Following significance criteria indicates whether the addition of project trips would cause a significant impact on signalized intersections within each jurisdiction.

City of Long Beach

- A signalized intersection to degrade from an acceptable LOS D or better to LOS E or LOS F, or
- The V/C ratio to increase by 0.02 or more at a signalized intersection that operates at LOS E or LOS F

City of Seal Beach

- A signalized intersection to degrade from an acceptable LOS D or better to LOS E or LOS F, or
- The V/C ratio to increase by 0.01 or more at a signalized intersection that operates at LOS E or LOS F.

Caltrans

- Caltrans endeavors to maintain a target LOS at the transition between LOS C and LOS D on state highway facilities; however, Caltrans acknowledges that this may not always be feasible, and if an existing state highway facility is operating at less than the appropriate target LOS, the existing measures of effectiveness should be maintained.

Existing Conditions

Existing weekday peak hour turn movement counts at the study intersections and average daily traffic counts at the roadway segments near project site were conducted in March 2019, during a typical non-holiday week while area schools were in-session. Peak hour turn volumes were adjusted using appropriate passenger car equivalent (PCE) factors or heavy vehicle percentages collected from field data to account for number of heavy vehicles in the existing traffic stream. Figure 6 in Appendix F illustrates the existing traffic volumes.

An intersection LOS analysis was prepared for the existing conditions using the ICU. Table 3.17-3 shows the results of the existing conditions LOS analysis.

Table 3.17-3 Existing Weekday Peak Hour Intersection Level of Service

No.	Intersection	LOS Method	AM Peak		PM Peak	
			V/C[1]	*LOS*[2]	*V/C*[1]	*LOS*[2]
1	Studebaker Road/SR-22 westbound ramps	ICU	0.695	B	0.902	**E**
2	Studebaker Road/SR-22 eastbound ramps	ICU	0.667	B	0.752	C
3	Studebaker Road/Loynes Drive	ICU	0.661	B	1.040	**F**
4	Pacific Coast Highway/East 2nd Street	ICU	0.794	C	0.766	C
5	Studebaker Road/2nd Street/Westminster Boulevard	ICU	0.757	C	0.899	D
6	LADWP Driveway/2nd Street	ICU	0.509	A	0.600	B
7	2nd Street/Island Village Drive	ICU	0.481	A	0.544	A
8	Seal Beach Boulevard/Westminster Avenue	ICU	0.782	C	0.974	**E**
9	Seal Beach Boulevard/St. Andrews Drive	ICU	0.603	B	0.561	A
10	Seal Beach Boulevard/Leisure World Driveway 1	ICU	0.556	A	0.489	A
11	Seal Beach Boulevard/Leisure World Driveway 2	ICU	0.534	A	0.528	A
12	Seal Beach Boulevard/SR-22 eastbound ramps	ICU	0.954	**E**	1.030	**F**
13	Seal Beach Boulevard/SR-22 westbound ramps	ICU	0.720	C	0.862	D

Source: Appendix F.
Notes: LOS = level of service; V/C = volume to capacity; ICU = Intersection Capacity Utilization; SR = State Route; LADWP = Los Angeles Department of Water and Power.

As shown in the table, following study area intersections are currently operating at LOS E or worse under existing conditions:

- Studebaker Road/SR-22 westbound ramps (LOS E in the PM peak hour)
- Studebaker Road/Loynes Drive (LOS F in the PM peak hour)
- Seal Beach Boulevard/Westminster Avenue (LOS E in the PM peak hour)
- Seal Beach Boulevard/SR-22 eastbound ramps (LOS E in the AM peak hour and LOS F in the PM peak hour)

Transit System

The Los Angeles County Metropolitan Transportation Authority, the Orange County Transportation Authority, and Long Beach Transit provide public transit service within the study area. Figures 4A–4C in Appendix F illustrate the existing transit facilities for Los Angeles County Metropolitan Transportation Authority, Orange County Transportation Authority, and Long Beach. Figure 4D in Appendix F illustrates the existing transit stop locations in the study area. The nearest bus stops to the project site are located along Studebaker Road and Seal Beach Boulevard.

Pedestrian and Bicycle Facilities

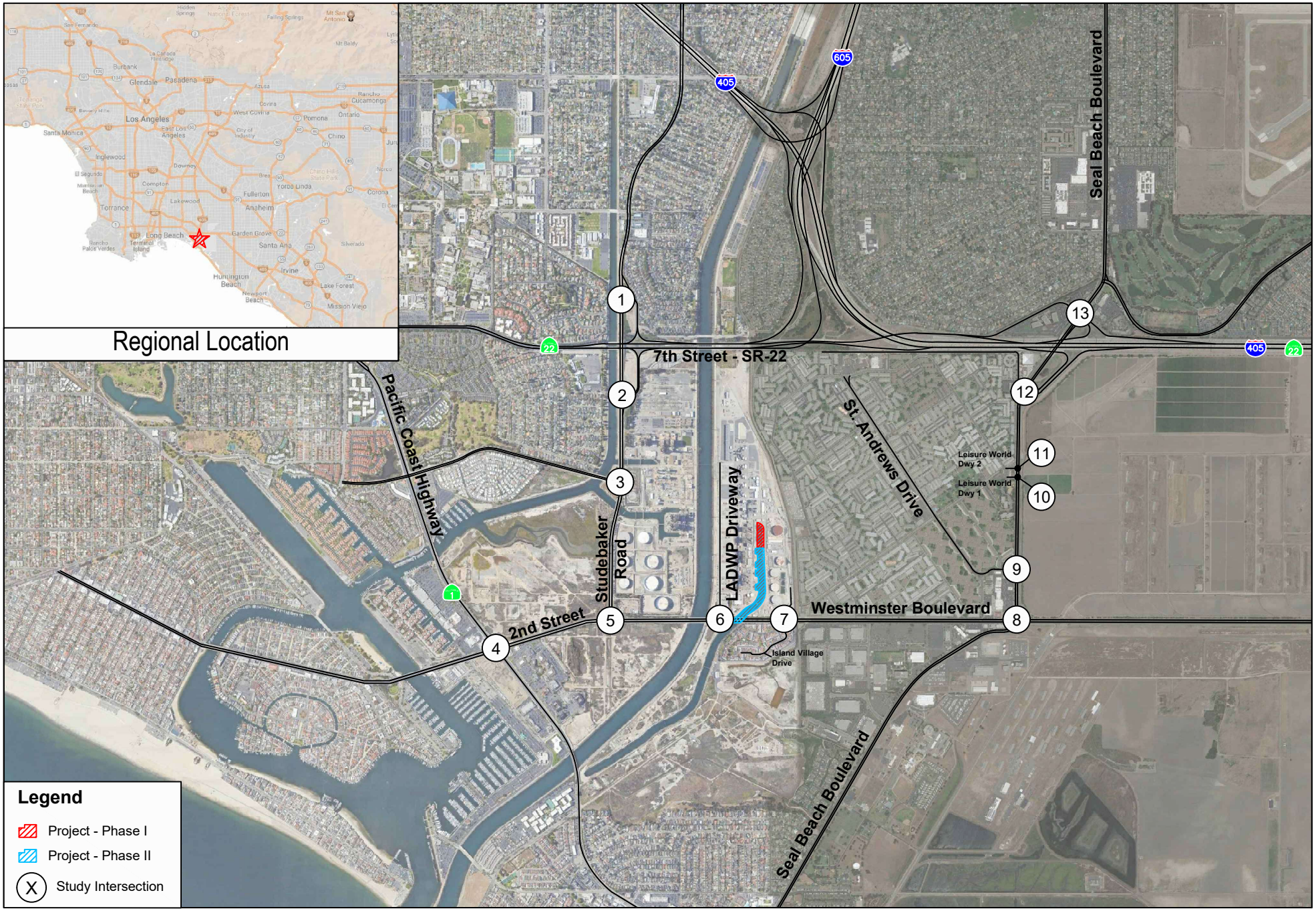
The project site and its immediate vicinity does not serve many active transportation users due to proximity to light industrial uses. 2nd Street has an intermittently paved sidewalk in the vicinity of the project site. A pedestrian crosswalk is provided at the LADWP driveway/2nd Street intersection.

The City of Long Beach is serviced by Class I, II, and III bicycle facilities; bicycle boulevards; and separated bicycle lanes (Cycle Track or Class IV).

Within the study area, there are existing Class I and II bikeways along portions of Pacific Coast Highway, 7th Street, 2nd Street-Westminster Boulevard, Seal Beach Boulevard, and Loynes Drive. These bikeways are discontinuous in certain areas. Existing and future bicycle facilities are shown on Figure 5 in Appendix F.

Project Trip Generation, Distribution and Assignment

The Institute of Transportation Engineers' Trip Generation manual does not contain trip rates for the construction-related activities. Trip generation for construction projects is based on average or peak number of workers and trucks that would be required for the proposed construction activities. Construction traffic includes the number of workers, and the amount of delivery and haul truck traffic that would be generated to and from the site daily and during the AM and PM peak hours. Per LADWP, an anticipated daily average of 50 workers and 50 trucks would be required during Phase I, and 100 workers and 100 trucks would be required for Phase II for construction-related activities. The construction activities will occur in one shift of approximately 8 hours between 7:00 am and 3:00 pm over the weekdays, Monday through Friday. Based on the work schedule, workers would not be traveling during the AM or the PM peak periods. However, to provide a conservative analysis, approximately 20% of the 50 workers (i.e., 10 workers) were assumed to arrive at the site after 7:00 a.m. (i.e., during the AM peak hour) and leave the site after 3:00 p.m. (i.e., during the PM peak hour). All truck trips were averaged over the 8-hour workday to estimate peak hour trips with 50% inbound and 50% outbound. PCE factors were used to account for the project's truck traffic and provide a more realistic measurement in terms of the impact of project-related truck traffic. All truck trips were converted to PCE trips using a factor of 3.0. Similar assumptions were utilized for Phase II construction activities.



SOURCE: Google Maps 2018

Los Angeles Department of Water & Power

FIGURE 4

Project Location and Study Area

Haynes Generating Station Intake Channel Infill

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The calculation of project trip generation estimates are shown in Tables 3.17-4A and 3.17-4B.

Table 3.17-4A Project Trip Generation – Phase I

Vehicle Type	Daily Quantity	Daily Trips	AM Peak Hour			PM Peak Hour		
			In	*Out*	*Total*	*In*	*Out*	*Total*
Trip Generation								
Workers	50 workers	100	10	0	10	0	10	10
Vendor Trucks	0 Trucks	0	0	0	0	0	0	0
Haul Trucks	50 Trucks	100	6	7	13	7	6	13
Total Trips		**200**	**16**	**7**	**23**	**7**	**16**	**23**
Trip Generation w/PCE								
Workers (1.0 PCE)[1]	50 workers	100	10	0	10	0	10	10
Haul Trucks (2.5 PCE)[2]	50 Trucks	300	18	21	39	21	18	39
Total Trips (w/PCE)		**400**	**28**	**21**	**49**	**21**	**28**	**49**

Notes: PCE = passenger car equivalent.
[1] PCE factor of 1 was utilized for worker passenger cars.
[2] PCE factor of 3.0 was utilized for vendor and haul trucks.

Table 3.17-4B Project Trip Generation – Phase II

Vehicle Type	Daily Quantity	Daily Trips	AM Peak Hour			PM Peak Hour		
			In	*Out*	*Total*	*In*	*Out*	*Total*
Trip Generation								
Workers	100 workers	200	20	0	20	0	20	20
Vendor Trucks	0 Trucks	0	0	0	0	0	0	0
Haul Trucks	100 Trucks	200	13	12	25	12	13	25
Total Trips		**400**	**33**	**12**	**45**	**12**	**33**	**45**
Trip Generation w/PCE								
Workers (1.0 PCE)[1]	100 workers	200	20	0	20	0	20	20
Haul Trucks (2.5 PCE)[2]	100 Trucks	600	39	36	75	36	39	75
Total Trips (w/PCE)		**800**	**59**	**36**	**95**	**36**	**59**	**95**

Notes: PCE = passenger car equivalent.
[1] PCE factor of 1 was utilized for worker passenger cars.
[2] PCE factor of 3.0 was utilized for vendor and haul trucks.

As shown in Table 3.17-4A, the Phase I would generate 200 daily trips, 23 AM peak hour trips (16 inbound and 7 outbound), and 23 trips during the PM peak hour (7 inbound and 16 outbound). With the application of PCE factors to truck trips, the project would generate 400 total PCE daily trips, and 49 PCE trips during the AM peak hour (28 inbound and 21 outbound) and 49 PCE trips during the PM peak hour (21 inbound and 28 outbound).

As shown in the Table 3.17-4B, the Phase II of the project would generate 400 daily trips, 45 AM peak hour trips (33 inbound and 12 outbound), and 45 trips during the PM peak hour (12 inbound and 13 outbound). With the application of PCE factors to truck trips, the project would generate 800 total PCE daily trips, and 95 PCE trips during the AM peak hour (59 inbound and 36 outbound) and 95 PCE trips during the PM peak hour (36 inbound and 59 outbound).

Project trip distribution percentages were based on logical travel paths to commute corridors in the study area as well as truck route data provided by LADWP. Construction-related truck traffic will access the study area via SR-22 at its existing eastbound and westbound ramps at Studebaker Road, and utilize Studebaker Road and 2nd Street to access the project site via the existing LADWP driveway.

Project trips were assigned to the study area intersections by applying the project trip generation estimates to the trip distribution percentages at each study area intersection. The project trip distribution for workers and trucks is shown in Figures 7 and 8 in the Transportation Impact Study (TIS) in Appendix F. The resulting Phase I trip assignment for workers, trucks, and total project traffic are shown in Figures 9, 10, and 11, respectively, in the TIS in Appendix F. The resulting Phase II trip assignment for workers, trucks, and total project traffic are shown in Figures 12, 13, and 14, respectively, in the TIS in Appendix F.

Existing plus Project Phase I Condition

Phase I Project traffic volumes were added to the Existing traffic volumes to derive the Existing plus Project traffic volumes (Figure 15 in the TIS in Appendix F). An intersection LOS analysis was prepared for the Existing plus Project condition using the ICU methodology. Table 3.17-5 summarizes the results of the Existing plus Project intersection analysis for the AM and PM peak hours.

As shown in the table, following study area intersections would operate at LOS E or worse under existing plus project conditions:

- Studebaker Road/SR-22 westbound ramps (LOS E in the PM peak hour)
- Studebaker Road/Loynes Drive (LOS F in the PM peak hour)
- Studebaker Road/2nd Street-Westminster Avenue (LOS E in the PM peak hour)
- Seal Beach Boulevard/Westminster Avenue (LOS E in the PM peak hour)
- Seal Beach Boulevard/SR-22 eastbound ramps (LOS E in the AM peak hour and LOS F in the PM peak hour)

As shown in Table 3.17-5, with the addition of project traffic the Studebaker Road/2nd Street-Westminster Avenue intersection would operate at LOS E during the PM peak hour under Existing plus Project conditions. Since the project traffic causes the LOS to degrade from D to E, the proposed project would have a significant (temporary) impact at the Studebaker Road/2nd Street-Westminster Avenue intersection per City of Long Beach criteria.

Table 3.17-5 Existing plus Project Peak Hour Intersection Level of Service

No.	Intersection	LOS Method	Existing				Existing plus Project				Change in V/C		Significant Impact?	
			AM Peak		PM Peak		AM Peak		PM Peak					
			Delay[1]	*LOS*[2]	*Delay*[1]	*LOS*[2]	*Delay*[1]	*LOS*[2]	*Delay*[1]	*LOS*[2]	*AM*	*PM*	*AM*	*PM*
1	Studebaker Road/SR-22 WB ramps	ICU	0.695	B	0.902	**E**	0.703	C	0.910	**E**	0.008	0.008	No	No
2	Studebaker Road/SR-22 EB ramps	ICU	0.667	B	0.752	C	0.675	B	0.759	C	0.008	0.007	No	No
3	Studebaker Road/Loynes Drive	ICU	0.661	B	1.040	**F**	0.669	B	1.040	**F**	0.008	0.000	No	No
4	Pacific Coast Highway/East 2nd Street	ICU	0.794	C	0.766	C	0.794	C	0.767	C	0.000	0.001	No	No
5	Studebaker Road/2nd Street/Westminster Boulevard	ICU	0.757	C	0.899	D	0.765	C	0.913	**E**	0.008	0.014	No	**Yes**
6	LADWP Driveway/2nd Street	ICU	0.509	A	0.600	B	0.542	A	0.630	B	0.033	0.030	No	No
7	2nd Street/Island Village Drive	ICU	0.481	A	0.544	A	0.481	A	0.544	A	0.000	0.000	No	No
8	Seal Beach Boulevard/Westminster Avenue	ICU	0.782	C	0.974	**E**	0.784	C	0.974	**E**	0.002	0.000	No	No
9	Seal Beach Boulevard/St. Andrews Drive	ICU	0.603	B	0.561	A	0.603	B	0.561	A	0.000	0.000	No	No
10	Seal Beach Boulevard/Leisure World Driveway 1	ICU	0.556	A	0.489	A	0.556	A	0.489	A	0.000	0.000	No	No
11	Seal Beach Boulevard/Leisure World Driveway 2	ICU	0.534	A	0.528	A	0.534	A	0.528	A	0.000	0.000	No	No
12	Seal Beach Boulevard/SR-22 EB ramps	ICU	0.954	**E**	1.030	**F**	0.954	**E**	1.030	**F**	0.000	0.000	No	No
13	Seal Beach Boulevard/SR-22 WB ramps	ICU	0.720	C	0.862	D	0.720	C	0.862	D	0.000	0.000	No	No

S**ource:** Appendix F.

Notes: ICU = Intersection Capacity Utilization; LOS = level of service; V/C = volume-to-capacity; SR = State Route; WB = westbound; EB = eastbound; LADWP = Los Angeles Department of Water and Power; **BOLD** = unsatisfactory LOS.

1 Volume-to-capacity (V/C) ratio.

2 Level of service (LOS).

Year 2021 Cumulative Condition

The Year 2021 Cumulative conditions are based on the addition of traffic from approved and pending projects in the study area, along with application of an ambient growth factor to the existing 2019 traffic volumes.

The cumulative projects are projects that are proposed and in the review process but not yet fully approved, or projects that have been approved but not fully constructed or occupied. The City of Long Beach identified three cumulative projects, and the City of Seal Beach identified one cumulative project that may add traffic to the project study area. Figure 16 in the TIS in Appendix F shows the locations of the cumulative projects.

Table 3.17-6 provides a brief description of the cumulative projects.

Table 3.17-6 Description of Cumulative Projects

No.	Cumulative Project/ Application Mo.	Location	Description
City of Long Beach			
1	AES Battery Energy Storage System No. 1802-27	690 Studebaker Road	Modification of 18-015 reducing the scope of the building to include two instead of three battery storage buildings that are 38,800 square feet and 42 feet tall each (In Plan Check)
2	2nd+PCH No. 1609-22	6400 East Pacific Coast Highway	95,000 square feet of retail uses, 55,000-square-foot grocery store, 25,000-square-foot health club/gym, 70,000-square-foot restaurant uses, and 1,150 parking spaces (Under construction)
3	No. 1811-05	300 Studebaker Road	Two concrete tilt-up industrial buildings totaling 139,500 square feet. Light industrial uses on 8.5-acre site.(In review)
City of Seal Beach			
4	Ocean Place Residential	1st Street and Marine Drive	32 DU single-family homes and neighborhood park (Under construction)

Notes: PCH = Pacific Coast Highway; DU = dwelling unit.

The trip generation for the cumulative projects is shown in Table 3.17-7. As shown in the table, cumulative projects are forecast to generate approximately 14,680 daily trips, 533 AM peak hour trips, and 912 PM peak hour trips. Figure 17 in the TIS in Appendix F shows the cumulative project traffic volumes.

Table 3.17-7 Cumulative Projects Trip Generation Summary

No.	Land Use/ Description	Units	Daily Trips	AM Peak Hour			PM Peak Hour		
				In	*Out*	*Total*	*In*	*Out*	*Total*
1	Industrial Building[1]	139.5 TSF	692	86	12	98	11	76	88
2	AGS Battery Energy Storage System[2]	400.950 TSF	20	0	0	0	0	0	0
3	2nd+PCH[3]	Mixed use	13,666	236	176	412	426	366	792
4	Ocean Place Residential[4]	32 DU	302	6	18	24	20	12	32
Total Trip Generation			**14,680**	**328**	**205**	**533**	**457**	**454**	**912**

Sources:
[1,4] ITE 2017.
[2] City of Long Beach 2016.
[3] LLG 2017.
Notes: TSF = '000 square feet; PCH = Pacific Coast Highway; DU = dwelling unit.

Trip distributions and assignments for the cumulative projects were developed assuming logical commute corridors. The trips generated by the cumulative projects were distributed and assigned through the study area network.

Year 2021 cumulative traffic volumes include traffic from ambient growth (1% per year for 2 years), and traffic from the addition of cumulative projects in the vicinity of the project. Figure 18 in the TIS in Appendix F illustrates the Year 2021 cumulative (no project) traffic volumes for peak hour conditions.

An intersection LOS analysis was prepared for the year 2021 conditions using the ICU methodology. Table 3.17-8 summarizes the results of the Year 2021 cumulative conditions intersection analysis for the AM and PM peak hours.

Table 3.17-8 Year 2021 Cumulative Weekday Peak Hour Intersection Level of Service

No.	Intersection	LOS Method	AM Peak		PM Peak	
			V/C[1]	*LOS*[2]	*V/C*[1]	*LOS*[2]
1	Studebaker Road/SR-22 westbound ramps	ICU	0.718	B	0.914	**E**
2	Studebaker Road/SR-22 eastbound ramps	ICU	0.709	C	0.797	C
3	Studebaker Road/Loynes Drive	ICU	0.674	B	1.041	**F**
4	Pacific Coast Highway/East 2nd Street	ICU	0.842	D	0.857	D
5	Studebaker Road/2nd Street-Westminster Boulevard	ICU	0.744	C	0.906	**E**
6	LADWP Driveway/2nd Street	ICU	0.525	A	0.624	B
7	2nd Street/Island Village Drive	ICU	0.496	A	0.568	A
8	Seal Beach Boulevard/Westminster Avenue	ICU	0.805	D	1.005	**F**
9	Seal Beach Boulevard/St. Andrews Drive	ICU	0.614	B	0.570	A
10	Seal Beach Boulevard/Leisure World Driveway 1	ICU	0.565	A	0.497	A

Table 3.17-8 Year 2021 Cumulative Weekday Peak Hour Intersection Level of Service

No.	Intersection	LOS Method	AM Peak		PM Peak	
			V/C[1]	*LOS*[2]	*V/C*[1]	*LOS*[2]
11	Seal Beach Boulevard/Leisure World Driveway 2	ICU	0.543	A	0.537	A
12	Seal Beach Boulevard/SR-22 eastbound ramps	ICU	0.971	**E**	1.048	**F**
13	Seal Beach Boulevard/SR-22 westbound ramps	ICU	0.732	C	0.878	D

Source: Appendix F.
Notes: LOS = level of service; V/C = volume-to-capacity; SR = State Route; ICU = Intersection Capacity Utilization; **BOLD** = unsatisfactory LOS; LADWP = Los Angeles Department of Water and Power.
1 Volume-to-capacity (V/C) ratio.
2 Level of service (LOS).

As shown in the table, the following study area intersections would operate at LOS E or worse under Year 2021 conditions:

- Studebaker Road/SR-22 westbound ramps (LOS E in the PM peak hour)
- Studebaker Road/Loynes Drive (LOS F in the PM peak hour)
- Studebaker Road/2nd Street-Westminster Boulevard (LOS E in the PM peak hour)
- Seal Beach Boulevard/Westminster Avenue (LOS F in the PM peak hour)
- Seal Beach Boulevard/SR-22 eastbound ramps (LOS E in the AM peak hour and F in the PM peak hour)

Year 2021 Cumulative plus Project Phase I Condition

Phase I Project traffic volumes were added to the Year 2021 Cumulative traffic volumes to derive the Year 2021 Cumulative plus Project traffic volumes (Figure 19 in the TIS in Appendix F). An intersection LOS analysis was prepared for the Year 2021 Cumulative plus Project condition using the ICU methodology. Table 3.17-9 summarizes the results of the Year 2021 Cumulative plus Project intersection analysis for the AM and PM peak hours.

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Table 3.17-9 Year 2021 Cumulative plus Project Peak Hour Intersection Level of Service

No.	Intersection	LOS Method	Year 2021 Cumulative				Year 2021 Cumulative plus Project				Change in V/C		Significant Impact?	
			AM Peak		PM Peak		AM Peak		PM Peak					
			Delay[1]	LOS[2]	Delay[1]	LOS[2]	Delay[1]	LOS[2]	Delay[1]	LOS[2]	AM	PM	AM	PM
1	Studebaker Road/SR-22 WB ramps	ICU	0.718	B	0.914	**E**	0.725	C	0.921	**E**	0.007	0.007	No	No
2	Studebaker Road/SR-22 EB ramps	ICU	0.709	C	0.797	C	0.716	C	0.804	D	0.007	0.007	No	No
3	Studebaker Road/Loynes Drive	ICU	0.674	B	1.041	**F**	0.681	B	1.041	**F**	0.007	0.000	No	No
4	Pacific Coast Highway/East 2nd Street	ICU	0.842	D	0.857	D	0.842	D	0.857	D	0.000	0.000	No	No
5	Studebaker Road/2nd Street-Westminster Boulevard	ICU	0.744	C	0.906	**E**	0.752	C	0.920	**E**	0.008	0.014	No	No
6	LADWP Driveway/2nd Street	ICU	0.525	A	0.624	B	0.558	A	0.654	B	0.033	0.030	No	No
7	2nd Street/Island Village Drive	ICU	0.496	A	0.568	A	0.496	A	0.568	A	0.000	0.000	No	No
8	Seal Beach Boulevard/Westminster Avenue	ICU	0.805	D	1.005	**F**	0.807	D	1.006	**F**	0.002	0.001	No	No
9	Seal Beach Boulevard/St. Andrews Drive	ICU	0.614	B	0.570	A	0.614	B	0.571	A	0.000	0.001	No	No
10	Seal Beach Boulevard/Leisure World Driveway 1	ICU	0.565	A	0.497	A	0.565	A	0.497	A	0.000	0.000	No	No
11	Seal Beach Boulevard/Leisure World Driveway 2	ICU	0.543	A	0.537	A	0.543	A	0.537	A	0.000	0.000	No	No
12	Seal Beach Boulevard/SR-22 EB ramps	ICU	0.971	**E**	1.048	**F**	0.971	**E**	1.049	**F**	0.000	0.001	No	No
13	Seal Beach Boulevard/SR-22 WB ramps	ICU	0.732	C	0.878	D	0.732	C	0.878	D	0.000	0.000	No	No

Source: Appendix F.

Note: LOS = level of service; V/C = volume-to-capacity; SR = State Route; WB = westbound; EB = eastbound; ICU = Intersection Capacity Utilization Methodology; LADWP = Los Angeles Department of Water and Power.**BOLD** = unsatisfactory LOS;

1 Volume-to-capacity (V/C) ratio.

2 Level of service (LOS).

As shown in the table, following study area intersections would continue to operate at LOS E or worse under Year 2021 cumulative plus Project conditions:

- Studebaker Road/SR-22 westbound ramps (LOS E in the PM peak hour)
- Studebaker Road/Loynes Drive (LOS F in the PM peak hour)
- Studebaker Road/2nd Street-Westminster Avenue (LOS E in the PM peak hour)
- Seal Beach Boulevard/Westminster Avenue (LOS E in the PM peak hour)
- Seal Beach Boulevard /SR-22 eastbound ramps (LOS E in the AM peak hour and LOS F in the PM peak hour)

As shown in the table, the addition of project traffic would not cause an increase of V/C that would create a significant impact at any intersection that is operating at an unacceptable LOS. Therefore, the proposed project would not have a significant impact at any study area intersection under year 2021 Cumulative Year plus Project conditions per City of Long Beach or City of Seal Beach criteria.

Year 2030 Condition

The traffic volumes for the Year 2030 conditions are estimated using an ambient growth factor to the Year 2021 cumulative traffic volumes. The existing intersection geometrics in the study area have been assumed to be maintained through the Year 2030 traffic scenario.

A growth rate of 0.17% per year, based on the "General Traffic Volume Growth Factors" (from the respective Regional Statistical Area #20 – RSA) found in Exhibit D-1 of the Los Angeles County Congestion Management Program (CMP) (Metro 2010) was applied to the Year 2021 cumulative traffic volumes to account for the Year 2030 conditions. Figure 21 in the TIS in Appendix F illustrates the Year 2030 (no project) traffic volumes for peak hour conditions.

An intersection LOS analysis was prepared for the year 2030 conditions using the ICU methodology. Table 3.17-10 summarizes the results of the Year 2030 conditions intersection analysis for the AM and PM peak hours.

Table 3.17-10 Year 2030 Weekday Peak Hour Intersection Level of Service

No.	Intersection	LOS Method	AM Peak		PM Peak	
			V/C[1]	*LOS*[2]	*V/C*[1]	*LOS*[2]
1	Studebaker Road/SR-22 westbound ramps	ICU	0.726	C	0.926	**E**
2	Studebaker Road/SR-22 eastbound ramps	ICU	0.717	C	0.807	D
3	Studebaker Road/Loynes Drive	ICU	0.681	B	1.055	**F**
4	Pacific Coast Highway/East 2nd Street	ICU	0.852	D	0.867	D

Table 3.17-10 Year 2030 Weekday Peak Hour Intersection Level of Service

No.	Intersection	LOS Method	AM Peak		PM Peak	
			V/C[1]	*LOS*[2]	*V/C*[1]	*LOS*[2]
5	Studebaker Road/2nd Street-Westminster Boulevard	ICU	0.754	C	**0.917**	**E**
6	LADWP Driveway/2nd Street	ICU	0.530	A	0.631	B
7	2nd Street/Island Village Drive	ICU	0.502	A	0.575	A
8	Seal Beach Boulevard/Westminster Avenue	ICU	0.816	D	1.021	**F**
9	Seal Beach Boulevard/St. Andrews Drive	ICU	0.622	B	0.577	A
10	Seal Beach Boulevard/Leisure World Driveway 1	ICU	0.572	A	0.503	A
11	Seal Beach Boulevard/Leisure World Driveway 2	ICU	0.550	A	0.543	A
12	Seal Beach Boulevard/SR-22 eastbound ramps	ICU	0.985	**E**	1.063	**F**
13	Seal Beach Boulevard/SR-22 westbound ramps	ICU	0.742	C	0.889	D

Source: Appendix F.
Notes: LOS = level of service; V/C = volume-to-capacity; SR = State Route; ICU = Intersection Capacity Utilization; **BOLD** = unsatisfactory LOS; LADWP = Los Angeles Department of Water and Power.
1 Volume-to-capacity (V/C) ratio.
2 Level of service (LOS).

As shown in the table, the following study area intersections would operate at LOS E or worse under Year 2030 conditions:

- Studebaker Road/SR-22 westbound ramps (LOS E in the PM peak hour)
- Studebaker Road/Loynes Drive (LOS F in the PM peak hour)
- Studebaker Road/2nd Street–Westminster Boulevard (LOS E in the PM peak hour)
- Seal Beach Boulevard/Westminster Avenue (LOS F in the PM peak hour)
- Seal Beach Boulevard/SR-22 eastbound ramps (LOS E in the AM peak hour and F in the PM peak hour)

Year 2030 plus Project Phase II Condition

Phase II Project traffic volumes were added to the Year 2030 traffic volumes to derive the Year 2030 plus Project Phase II traffic volumes (Figure 21 in the TIS in Appendix F). An intersection LOS analysis was prepared for the Year 2030 plus Project Phase II condition using the ICU methodology. Table 3.17-10 summarizes the results of the Year 2030 plus Project Phase II intersection analysis for the AM and PM peak hours.

As shown in the table, following study area intersections would continue to operate at LOS E or worse under Year 2030 plus Project conditions:

- Studebaker Road/SR-22 westbound ramps (LOS E in the PM peak hour)
- Studebaker Road/Loynes Drive (LOS F in the PM peak hour)

- Studebaker Road/2nd Street–Westminster Avenue (LOS E in the PM peak hour)
- Seal Beach Boulevard/Westminster Avenue (LOS E in the PM peak hour)
- Seal Beach Boulevard /SR-22 eastbound ramps (LOS E in the AM peak hour and LOS F in the PM peak hour)

As shown in the table, the Studebaker Road/2nd Street–Westminster Avenue intersection would continue to operate at LOS E during the PM peak hour under Year 2030 plus Project Phase II conditions. The project traffic causes the volume to capacity ratio to increase by more than 0.02; therefore, the proposed project would have a significant (temporary) impact at the Studebaker Road/2nd Street–Westminster Avenue intersection per City of Long Beach criteria.

Caltrans Methodology Intersection Analysis

Project-specific construction traffic impacts were evaluated under Existing plus Project conditions and Year 2021 Cumulative conditions to conform to Caltrans methodology for analyzing intersection operations under its jurisdiction per HCM methodology.

These intersections include the following five of total 13 analyzed in this study:

- Studebaker Road/SR-22 westbound ramps
- Studebaker Road/SR-22 eastbound ramps
- Pacific Coast Highway/East 2nd Street
- Seal Beach Boulevard/SR-22 eastbound ramps
- Seal Beach Boulevard/SR-22 westbound ramps

Existing plus Project Phase I Intersection Operations

An intersection LOS analysis was prepared for the Existing plus Project Phase I condition using the HCM methodology. Table 3.17-12 summarizes the results of the Existing plus Project Phase I intersection analysis for the AM and PM peak hours. As shown in the table, the Seal Beach Boulevard/SR-22 eastbound ramps intersection would operate at LOS E or worse during the PM peak hour under Existing and Existing plus Project conditions:

The addition of project traffic causes nominal increase (0.1-second increase or less) in delay at the Seal Beach Boulevard/SR-22 eastbound ramps intersection and would not cause the intersection to operate at a worse LOS than it is without the project under existing conditions. Therefore, the proposed project would not have a significant impact at the Seal Beach Boulevard/SR-22 eastbound ramps intersection. Further, the project

traffic from construction related activities is temporary and would only last 15 months. Truck traffic from the project would not utilize Seal Beach Boulevard or its ramp intersections with SR-22.

Year 2021 Cumulative plus Project Phase I Intersection Operations

An intersection LOS analysis was prepared for the Year 2021 Cumulative plus Project Phase I conditions using the HCM methodology. Table 3.17-13 summarizes the results of the Year 2021 Cumulative plus Project Phase II intersection analysis for the AM and PM peak hours. As shown in the table, the Seal Beach Boulevard/SR-22 eastbound ramps intersection would operate at LOS E or worse during the PM peak hour under Year 2021 Cumulative and Year 2021 Cumulative plus Project Phase I conditions:

The addition of project traffic causes nominal increase (0.1-second increase or less) in delay at the Seal Beach Boulevard/SR-22 eastbound ramps intersection and would not cause the intersection to operate at a worse LOS than it is without the project under cumulative conditions. Therefore, the proposed project would not have a significant impact at the Seal Beach Boulevard/SR-22 eastbound ramps intersection. Further, the project traffic from construction related activities is temporary and would only last 15 months. Truck traffic from the project would not utilize Seal Beach Boulevard or its ramp intersections with SR-22.

Year 2030 plus Project Phase II Intersection Operations

An intersection LOS analysis was prepared for the Year 2030 plus Project Phase II conditions using the HCM methodology. Table 3.17-14 summarizes the results of the Year 2030 plus Project Phase II intersection analysis for the AM and PM peak hours. As shown in the table, the Seal Beach Boulevard/SR-22 eastbound ramps intersection would operate at LOS E during both the AM and PM peak hours, under Year 2030 and Year 2030 plus Project conditions. The Seal Beach Boulevard/SR-22 westbound ramps intersection would operate at LOS E during the PM peak hour under Year 2030 and Year 2030 plus Project conditions.

The addition of project traffic causes nominal increase (0.3 second increase or less) in delay at the Seal Beach Boulevard/SR-22 eastbound or westbound ramp intersections and would not cause the intersections to operate at a worse LOS than it is without the project under Year 2030 conditions. Therefore, the proposed project would not have a significant impact at the Seal Beach Boulevard/SR-22 eastbound ramp or westbound ramp intersections. Further, the project traffic from construction related activities is temporary and would only last 20 months. Truck traffic from the project would not utilize Seal Beach Boulevard or its ramp intersections with SR-22.

Mitigation

The construction-related traffic from the project would create a significant traffic impact to the following intersection under the Existing plus Project Phase I and Year 2030 plus Project Phase II conditions:

- Under the Existing plus Project Phase I conditions, the Studebaker Road/2nd Street–Westminster Avenue intersection operates at LOS E in the PM peak hour and the project traffic causes the LOS to degrade from D to E.
- Under the 2030 plus Project Phase II conditions, the Studebaker Road/2nd Street–Westminster Avenue intersection operates at LOS E in the PM peak hour and the project traffic causes the V/C to increase by more than 0.02.

This impact would be temporary and short term during the construction phase. The following mitigation measure is required to address the (temporary) significant traffic impact at the intersection:

Existing plus Project Phase I Condition:

MM-TRAF-1 For the duration of construction, the project (Construction Manager/Contractor) shall limit the construction related traffic by restricting all truck trips and allowing only two (2) outbound worker trips, during the PM peak hour. With those restrictions, the change in level of service at the intersection of Studebaker Road/2nd Street–Westminster Avenue would be less than significant.

Year 2030 plus Project Phase II Condition:

MM-TRAF-2 For the duration of construction, the project (Construction Manager/Contractor) shall limit the construction related traffic by allowing only 13 truck trips (7 inbound and 6 outbound) during the PM peak hour. No restriction to worker trips is required during the PM peak hour under Year 2030 plus Phase II conditions. With that restriction, the project's corresponding V/C increase (at LOS E conditions) would be less than significant (i.e., less than 0.02) at the intersection of Studebaker Road/2nd Street–Westminster Avenue.

As previously discussed in detail, the proposed project would result in **less-than-significant impacts with mitigation incorporated** on the roadway facilities analyzed (i.e., study area intersections) per City of Long Beach and Seal Beach criteria. The proposed project would not conflict with adopted policies, plans, or programs regarding transit, bicycle, and pedestrian facilities, and impacts would be **less than significant**.

Table 3.17-11 Year 2030 plus Project Peak Hour Intersection Level of Service

No.	Intersection	LOS Method	Year 2030				Year 2030 plus Project Phase II				Change in V/C		Significant Impact?	
			AM Peak		PM Peak		AM Peak		PM Peak					
			Delay[1]	LOS[2]	Delay[1]	LOS[2]	Delay[1]	LOS[2]	Delay[1]	LOS[2]	AM	PM	AM	PM
1	Studebaker Road/SR-22 WB ramps	ICU	0.726	C	0.926	**E**	0.742	C	0.939	**E**	0.016	0.013	No	No
2	Studebaker Road/SR-22 EB ramps	ICU	0.717	C	0.807	D	0.732	C	0.819	D	0.015	0.012	No	No
3	Studebaker Road/Loynes Drive	ICU	0.681	B	1.055	**F**	0.697	B	1.055	**F**	0.016	0.000	No	No
4	Pacific Coast Highway/East 2nd Street	ICU	0.852	D	0.867	D	0.853	D	0.868	D	0.001	0.001	No	No
5	Studebaker Road/2nd Street–Westminster Boulevard	ICU	0.754	C	**0.917**	**E**	0.770	C	**0.948**	**E**	0.016	0.031	No	**Yes**
6	LADWP Driveway/2nd Street	ICU	0.530	A	0.631	B	0.594	A	0.688	B	0.064	0.057	No	No
7	2nd Street/Island Village Drive	ICU	0.502	A	0.575	A	0.502	A	0.575	A	0.000	0.000	No	No
8	Seal Beach Boulevard/Westminster Avenue	ICU	0.816	D	1.021	**F**	0.818	D	1.021	**F**	0.002	0.000	No	No
9	Seal Beach Boulevard/St. Andrews Drive	ICU	0.622	B	0.577	A	0.623	B	0.578	A	0.001	0.001	No	No
10	Seal Beach Boulevard/Leisure World Driveway 1	ICU	0.572	A	0.503	A	0.572	A	0.504	A	0.000	0.001	No	No
11	Seal Beach Boulevard/Leisure World Driveway 2	ICU	0.550	A	0.543	A	0.550	A	0.544	A	0.000	0.001	No	No
12	Seal Beach Boulevard/SR-22 EB ramps	ICU	0.985	**E**	1.063	**F**	0.985	**E**	1.064	**F**	0.000	0.001	No	No
13	Seal Beach Boulevard/SR-22 WB ramps	ICU	0.742	C	0.889	D	0.742	C	0.890	D	0.000	0.001	No	No

Source: Appendix F.

Note: LOS = level of service; V/C = volume-to-capacity; SR = State Route; WB = westbound; EB = eastbound; ICU = Intersection Capacity Utilization Methodology; LADWP = Los Angeles Department of Water and Power; **BOLD** = unsatisfactory LOS.

1 Volume-to-capacity (V/C) ratio.

2 Level of service (LOS).

Table 3.17-12 Existing plus Project Peak Hour Intersection Level of Service – Highway Capacity Manual Methodology

No.	Intersection	LOS Method	Existing				Existing plus Project Phase I				Change in Delay		Significant Impact?	
			AM Peak		*PM Peak*		*AM Peak*		*PM Peak*					
			Delay[1]	*LOS*[2]	*Delay*[1]	*LOS*[2]	*Delay*[1]	*LOS*[2]	*Delay*[1]	*LOS*[2]	*AM*	*PM*	*AM*	*PM*
1	Studebaker Road/SR-22 WB ramps	HCM	9.9	A	6.9	A	9.9	A	6.9	A	0.0	0.0	No	No
2	Studebaker Road/SR-22 EB ramps	HCM	14.4	B	16.4	B	15.7	B	16.3	B	1.3	-0.1	No	No
4	Pacific Coast Highway/East 2nd Street	HCM	38.9	D	37.7	D	38.9	D	37.7	D	0.0	0.0	No	No
12	Seal Beach Boulevard/SR-22 EB ramps	HCM	50.9	D	**61.1**	**E**	50.9	D	**61.2**	**E**	0.0	0.1	No	No
13	Seal Beach Boulevard/SR-22 WB ramps	HCM	29.6	C	34.1	C	29.6	C	34.1	C	0.0	0.0	No	No

Source: Appendix F.
Notes: HCM = Highway Capacity Manual LOS = level of service; SR = State Route; WB = westbound; EB = eastbound; **BOLD** = unsatisfactory LOS.
1 Delay in seconds per vehicle.
2 Level of service (LOS).

Table 3.17-13 Year 2021 Cumulative plus Project Peak Hour Intersection Level of Service – Highway Capacity Manual Methodology

No.	Intersection	LOS Method	Year 2021 Cumulative Conditions				Year 2021 Cumulative plus Project Phase I Conditions				Change in Delay		Significant Impact?	
			AM Peak		*AM Peak*		*AM Peak*		*PM Peak*					
			Delay[1]	*LOS*[2]	*Delay*[1]	*LOS*[2]	*Delay*[1]	*LOS*[2]	*Delay*[1]	*LOS*[2]	*AM*	*PM*	*AM*	*PM*
1	Studebaker Road/SR-22 WB ramps	HCM	8.1	A	6.8	A	8.1	A	6.8	A	0.0	0.0	No	No
2	Studebaker Road/SR-22 EB ramps	HCM	13.7	B	16.5	B	15.1	B	16.5	B	1.4	0.0	No	No
4	Pacific Coast Highway/East 2nd Street	HCM	41.1	D	40.4	D	41.1	D	40.4	D	0.0	0.0	No	No
12	Seal Beach Boulevard/SR-22 EB ramps	HCM	53.0	D	**68.6**	**E**	53.0	D	**68.7**	**E**	0.0	0.1	No	No
13	Seal Beach Boulevard/SR-22 WB ramps	HCM	30.2	C	35.6	D	30.2	C	35.6	D	0.0	0.0	No	No

Source: Appendix F.
Notes: LOS = level of service; SR = State Route; WB = westbound; EB = eastbound; HCM = Highway Capacity Manual; **BOLD** = unsatisfactory LOS.
1 Delay in seconds per vehicle.
2 Level of service (LOS).

Table 3.17-14 Year 2030 plus Project Peak Hour Intersection Level of Service – Highway Capacity Manual Methodology

No.	Intersection	LOS Method	Year 2030 Conditions				Year 2030 plus Project Phase II Conditions				Change in Delay		Significant Impact?	
			AM Peak		*AM Peak*		*AM Peak*		*PM Peak*					
			Delay[1]	*LOS*[2]	*Delay*[1]	*LOS*[2]	*Delay*[1]	*LOS*[2]	*Delay*[1]	*LOS*[2]	*AM*	*PM*	*AM*	*PM*
1	Studebaker Road/SR-22 WB ramps	HCM	8.1	A	7.6	A	8.1	A	7.6	A	0.0	0.0	No	No
2	Studebaker Road/SR-22 EB ramps	HCM	13.8	B	16.3	B	14.9	B	16.2	B	1.1	-0.1	No	No
4	Pacific Coast Highway/East 2nd Street	HCM	41.8	D	40.7	D	41.9	D	40.7	D	0.1	0.0	No	No
12	Seal Beach Boulevard/SR-22 EB ramps	HCM	**58.7**	**E**	**69.9**	**E**	**58.7**	**E**	**70.2**	**E**	0.0	0.3	No	No
13	Seal Beach Boulevard/SR-22 WB ramps	HCM	30.7	C	**56.0**	**E**	30.7	C	**56.0**	**E**	0.0	0.0	No	No

Source: Appendix F.
Notes: LOS = level of service; SR = State Route; WB = westbound; EB = eastbound; HCM = Highway Capacity Manual; **BOLD** = unsatisfactory LOS.
1 Delay in seconds per vehicle.
2 Level of service (LOS).

b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

Less-than-Significant Impact. CEQA Guidelines Section 15064.3, subdivision (b), focuses on newly adopted criteria (vehicle miles traveled) for determining the significance of transportation impacts. It is further divided into four subdivisions: (1) land use projects, (2) transportation projects, (3) qualitative analysis, and (4) methodology. The proposed project involves backfilling of an existing channel that would generate temporary construction-related traffic, and no operations and maintenance traffic would be categorized under subdivision (b)(3), qualitative analysis. Subdivision (b)(3) recognizes that lead agencies may not be able to quantitatively estimate vehicle miles traveled for every project type. In those circumstances, this subdivision encourages lead agencies to evaluate factors such as the availability of transit, proximity to other destinations, and other factors that may affect the amount of driving required by the project.

Construction of the proposed project would result in a temporary increase in local traffic as a result of construction-related worker and truck and construction activities occurring on the project site. The off-site impacts from the movement of construction trucks would include short-term and intermittent effects on traffic operations because of slower movements and larger turning radii of the trucks compared to passenger vehicles.

Impacts related to increase in vehicle-trip generation (for workers and trucks) as a result of project construction have been analyzed under Threshold TRAF-1. These trips will generate vehicle miles; however, once construction is completed, construction-related traffic would cease, and vehicle miles traveled would return to pre-project conditions. Therefore, vehicle miles generated from construction traffic are temporary and short term. The proposed project would not conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b), and impacts would be **less than significant.**

c) Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Less-than-Significant Impact. The proposed project would not include any new roadway design features, nor would it alter any existing geometric design features. Access for construction related traffic (workers and trucks) to the HnGS site would be from the existing signalized LADWP Driveway/2nd Street intersection. This intersection (No. 6) was analyzed in the traffic analysis for the proposed project and is forecast to operate at LOS B or better during both the peak hours under Existing plus Project Phase I, Year 2021 Cumulative plus Project Phase I, and Year 2030 plus Project Phase II conditions. Therefore, the project traffic would not significantly impact the LOS at the project access intersection. As such, motorists/trucks entering and exiting the project site would be able to do so comfortably, safely, and without causing congestion. Therefore, project would not substantially increase hazards due to a roadway design feature. Impact would be **less than significant**.

d) Would the project result in inadequate emergency access?

Less-than-Significant Impact. The project site is located in an established, developed area with ample access for emergency service providers. The LOS for all the study area intersections analyzed in the traffic analysis are summarized under Threshold (a). The analysis shows that the project would have a temporary significant impact at the Studebaker Road/2nd Street-Westminster Avenue intersection. This impact would be mitigated with the implementation of **MM-TRAF-1 and MM-TRAF-2**. As such, the project would have a **less than significant** related to emergency access.

References

City of Long Beach. 2004. Traffic Impact Analysis Guidelines.

City of Long Beach. 2016. Alamitos Generating Station Battery Energy Storage System Project, Initial Study/Mitigated Negative Declaration, Public Review Draft, prepared by Michael Baker International, October 2016.

City of Seal Beach. 2010. Traffic Impact Study Guidelines. Accessed April 2019. http://www.sealbeachca.gov/Portals/0/Documents/TRAFFIC%20IMPACT%20STUDY%20OVERVIEW%20R1.pdf

ITE (Institute of Engineers). 2017. Trip Generation Manual, 10th Edition, September 2017.

Metro (Los Angeles County Metropolitan Transportation Authority). 2010. 2010 *Congestion Management Program*. Accessed October 3, 2019. http://media.metro.net/projects_studies/cmp/images/CMP_Final_2010.pdf.

LLG (Linscott Law & Greenspan). 2017. Traffic Impact Analysis Report for the Haynes Generating Station Units 3 through 6 Demolition Project, March 1, 2017.

Transportation Research Board. 2016. Highway Capacity Manual, 6th Edition. Published 2016.

3.18 Tribal Cultural Resources

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	☐	☐	☒	☐
ii) 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 Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☒	☐	☐

a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?

Less-than-Significant Impact. As discussed in Section 3.5, Cultural Resources, a CHRIS records search was conducted for the project area at the South Central Coastal Information Center on November 22, 2016. No historical resources or tribal cultural resources were identified as a result of the records search. In response to a Sacred Lands File (SLF) search request, the Native American Heritage Commission (NAHC) stated in a letter dated October 17, 2016, that the SLF search was completed with negative results. Therefore, the proposed project would not adversely affect tribal cultural resources that are listed or eligible for listing in the state or local register of historical resources as defined in Public Resources Code section 5020.1(k). As such, impacts would be less than significant.

ii) 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 Public Resources Code Section 5024.1? (In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.)

Less than Significant Impact with Mitigation Incorporated. The project is subject to compliance with AB 52 (PRC Section 21074), which requires consideration of impacts to tribal cultural resources as part of the CEQA process. Notifications must be sent to any groups that are traditionally or culturally affiliated with the geographic area of the project and who have requested notification. According to PRC Section 21080.3.1(b), consultation begins if (1) the California Native American tribe requested to lead agency, in writing, to be informed by the lead agency through a formal notification of projects in the geographic area that is traditionally and culturally affiliated with the tribe, and (2) the California Native American tribe responds, in writing, within 30 days of receipt of the formal notification, and requests the consultation.

As previously discussed, a SLF record search completed for the project area returned negative results. In June 2019, LADWP contacted all Native American contacts identified by the NAHC as tribes traditionally or culturally affiliated with the project area and vicinity. Six letters were submitted via certified mail on June 24, 2019 which advised the tribes and specific individuals of the proposed project and requested information regarding cultural resources in the immediate area, as well as feedback or concerns related to the proposed project. To date, LADWP has not received any responses requesting additional information or AB 52 consultation associated with the proposed project. As 30 days have passed since LADWP sent formal notification in compliance with AB 52, the consultation window is considered to have closed. Nonetheless, over-excavation of the channel to create a defined fill area has the potential for inadvertent discovery of tribal cultural resources. In the event of inadvertent discoveries, compliance with **MM-CUL-1** and **MM-CUL-2** would reduce impacts to tribal cultural resources below a level of significance.

3.19 Utilities and Service Systems

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment, or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☐	☒
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?	☐	☐	☐	☒
c) Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☒	☐
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☐	☒

a) Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment, or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

No Impact. The proposed project would involve filling 2,150 feet of the Intake Channel at HnGS and does not include any further development or components that would lead to increased demand for water, wastewater treatment, stormwater drainage, electric power, natural gas, or telecommunications facilities. Thus, the proposed project would have no impact on existing facilities or require the expansion or construction of new or expanded those facilities.

b) Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?

No Impact. The project would involve filling 2,150 feet of the Intake Channel at HnGS leaving vacant space within the HnGS property for a future energy project. Although water would be used to suppress dust in compliance with SCAQMD Rule 403, the project would not require large amounts of water for dust suppression purposes. The project does not propose any additional structures or development that would require water supplies and would not result in increased water demand. Since the project would not require additional water supplies, the project would result in no impact.

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

No Impact. The proposed project would involve filling 2,150 feet of the Intake Channel at HnGS, leaving vacant space for a future energy project. The project does not propose any additional structures or development that would require wastewater treatment and would not result in increased demand. Therefore, there would be no impact to the wastewater treatment system.

d) Would the project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

Less-than-Significant Impact. The project would involve filling 2,150 feet of the Intake Channel with engineered fill, leaving vacant space within the existing HnGS property. Waste generated from the project would primarily consist of over-excavated soil, in addition to nominal amounts of general waste. Construction debris would be recycled or transported to a landfill and disposed of appropriately. In accordance with AB 939, LADWP's construction contractor would ensure that source reduction techniques and recycling measures are incorporated into project construction. It is anticipated that the proposed project would generate approximately 12,000 cubic yards of over-excavated soil during Phase I (anticipated to occur over a period of 15 months), and approximately 48,000 cubic yards of over-excavated soil in Phase II (anticipated to occur over a period of 20 months). As the project involves filling the Intake Channel, the project would primarily be a soil import project and would not generate large amounts of waste for export. Any waste produced as a result of the project would be disposed of in compliance with state and local standards.

Several landfills throughout the County of Los Angeles could serve the project, as listed in Table 3.19-1. The total permitted throughput for all landfills is 37,075 cubic yards per day, and approximately 180 million cubic yards of capacity remain (County of Los Angeles 2017). Based on the estimate of waste material to be generated during the 35-month project, 60,000 cubic yards represents approximately 0.033% of the remaining capacity of existing Los Angeles County landfills. Therefore, the project would not generate solid waste in excess of state or local standards, or in excess of the capacity of local landfills, or otherwise impact the attainment of solid waste reduction goals; impacts would be less than significant.

Table 3.19-1 Existing Landfills

Landfill	Location	Estimated Closing Year	Maximum Daily Capacity (cubic yards per day)	Current Remaining Capacity (million cubic yards)
Antelope Valley	Palmdale	2039	4,800	16.48
Calabasas Landfill	Unincorporated Area	2029	7,795	12.48
Chiquita Canyon Landfill	Unincorporated Area	2047	6,730	60.12
Lancaster Landfill	Unincorporated Area	2041	4,000	13.70
Sunshine Canyon Landfill	Los Angeles/Unincorporated Area	2037	13,750	77.31
		Total	**37,075**	**180.09**

Source: County of Los Angeles 2017.

e) Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

No Impact. As previously discussed, the proposed project would generate various types of solid waste. In relation to the handling and disposal of this waste, LADWP would comply with all City of Long Beach, County of Los Angeles, and state solid waste diversion, reduction, and recycling mandates, including compliance with the county-wide Integrated WMP. No impact would occur.

References

County of Los Angeles. 2017. *Countywide Integrated Waste Management Plan, 2017 Annual Report.* Accessed April 2019. https://dpw.lacounty.gov/epd/swims/ShowDoc.aspx?id=6530&hp=yes&type=PDF

3.20 Wildfire

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☐	☒

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☐	☒
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☐	☒

The California Department of Forestry and Fire Services (CAL FIRE) is responsible for designating fire hazard severity zones (FHSZs) within the State Responsibility Area throughout California. FHSZs are geographical areas with an elevated risk for wildfire hazard. The State Responsibility Area is the area for which the state assumes financial responsibility for fire suppression and protection. CAL FIRE also creates recommended maps for very high FHSZs within the Local Responsibility Area, which are then adopted, or modified and adopted, by local jurisdictions. Development within a State Responsibility Area is required to abide by specific development and design standards. A review of CAL FIRE's FHSZ maps and data revealed that the project site is not located within a State Responsibility Area or a very high FHSZ (CAL FIRE 2012). Nonetheless, a response has been provided for the following threshold questions.

a) Would the project substantially impair an adopted emergency response plan or emergency evacuation plan?

No Impact. The proposed project involves filling the HnGS Intake Channel within the existing HnGS property, leaving vacant space. The project site is not located within an evacuation route nor would it impair an adopted emergency response plan. The project would result in no impact related to an adopted emergency response plan or emergency evacuation plan.

b) Due to slope, prevailing winds, and other factors, would the project exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

No Impact. The project site and surrounding area are relatively flat with no slopes or other factors that could exacerbate wildfire risks. The project site is located in an urbanized area and not near wildland that is susceptible to prevailing winds that could exacerbate wildfire risks. Therefore, the project would not expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire. No impact would occur related to wildfire risks or exposure.

c) Would the project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

No Impact. The proposed project would fill the HnGS Intake Channel within the existing HnGS property. The HnGS property has existing infrastructure, such as roads, water, power and other utilities that serve the property. The project would not require the installation or maintenance of associated infrastructure. Therefore, no impact would occur.

d) Would the project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

No Impact. The project site and surrounding area are flat and do no consist of slopes that would become unstable or result in drainage changes, flooding or landslides. The proposed project would fill the HnGS Intake Channel, leaving vacant space. The project does not involve the development of additional structures, nor is it located in an area that is susceptible to wildfire, downslope or downstream flooding or landslides, and therefore would not expose people or structures to significant risks Therefore, no impact would occur.

References

CAL FIRE (California Department of Forestry and Fire Protection). 2012. *California Fire Hazard Severity Zone Maps*. Accessed April 2019. https://www.fire.ca.gov/fire_prevention/fire_prevention_wildland_zones_maps

3.21 Mandatory Findings of Significance

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
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)?	☐	☒	☐	☐
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐	☐

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

Less-than-Significant Impact with Mitigation Incorporated. As discussed in this MND, impacts to biological, cultural (archaeological), and tribal cultural resources would be less than significant with mitigation incorporated.

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)?

Less-than-Significant Impact with Mitigation Incorporated. The following analysis discusses the project's potential to make a cumulatively considerable contribution to an environmental impact, by resource. Where it has been determined based on the analysis in this MND that no impact would occur in relation to specific resources (i.e., Agriculture and Forestry Resources, Mineral Resources, Population and Housing, Public Services, Recreation, and Wildfire), the project would inherently not result in a cumulatively considerable impact relative to those resources and no further discussion is provided. The proposed project would be located entirely within the HnGS property, a fully developed industrial site in a largely built-out urban area. Table 3.21-1 includes the list of cumulative projects in the area.

Table 3.21-1 Cumulative Projects

Cumulative Project/ Application No.	Location	Description
City of Long Beach		
AES Battery Energy Storage System No. 1802-27	690 Studebaker Road	Modification of 18-015 reducing the scope of the building to include two instead of three battery storage buildings that are 38,800 square feet and 42 feet tall each (In Plan Check)
2nd Street and Pacific Coast Highway No. 1609-22	6400 East Pacific Coast Highway	95,000 square feet of retail uses, 55,000 square feet grocery store, 25,000-square-foot health club/gym, 70,000-square-foot restaurant uses and 1,150 parking spaces (Under construction)
No. 1811-05	300 Studebaker Road	Two concrete tilt-up industrial buildings totaling 139,500 square feet (In review)
City of Seal Beach		
Ocean Place Residential	1st Street and Marine Drive	32 DU single-family homes and neighborhood park (Under construction)

Notes: DU = dwelling unit.

Aesthetics

The project involves filling 2,150 feet of the HnGS Intake Channel. A significant cumulative impact to aesthetics would occur where development of cumulative projects would combine to degrade visual quality or character, block important views or result in a new source of light or glare. The geographic scope for analyzing cumulative impacts for aesthetics focuses on lands in proximity to the project area and within the surrounding viewshed. The cumulative projects in Table 3.21-1 are not located within the same viewshed as the project site and thus would not, in combination with the proposed project result in a cumulatively considerable impact to aesthetics.

Air Quality

Air pollution emissions, as defined by federal, state, and local agencies and regulations, are largely a cumulative impact. The nonattainment status of regional pollutants is a result of past and present development, and the SCAQMD develops and implements plans for future attainment of ambient air quality standards. In addition to the SCAQMD efforts, CARB has comprehensive regulatory programs in place for new and existing sources of air pollution.

Based on the cumulative nature of air pollution and the various mechanisms in place to reduce cumulative air pollutant emissions, project-level thresholds of significance for criteria pollutants, as analyzed in Section 3.3, Air Quality, are relevant in the determination of whether the project's individual emissions would be cumulatively considerable. The potential for the proposed project to result in a cumulatively considerable air quality impact is evaluated under threshold 3.3(b), previously outlined. As discussed under threshold 3.3(b) the project is not expected to result in cumulatively considerable emissions in the SCAB. As such, the project's impact to air quality would not be cumulatively considerable.

Biological Resources

Impacts to biological resources are considered potentially significant, as the project involves filling of jurisdictional waters where special-status species have the potential to occur, as well as native or migratory fish or bird species. Filling the Intake Channel could potentially directly and indirectly impact special-status species or managed species, migratory fish or wildlife species and EFH. Incorporation of avoidance and minimization measures, included in MM-BIO-1 through MM-BIO-4 would lessen and may eliminate the likelihood that managed species, unmanaged invertebrate and fish species, migratory fish or wildlife species, and EFH habitat outside of the direct impact areas would be adversely affected; MM-BIO-5 would mitigate impacts to eelgrass habitat. Further, the project would be required to comply with state and federal regulations for all proposed project impacts to jurisdictional waters, and would need to apply for and receive the appropriate approvals and permitting prior to project implementation. The geographic scope of cumulative impacts to biological resources is limited to the project site and the immediate surroundings, which contain a limited amount of undeveloped land. As the related cumulative projects are not located within the immediate surroundings, and proposed mitigation would reduce impacts to below a level of significance, the project, in combination with other related projects, would not be cumulatively considerable.

Cultural Resources

Impacts to historic resources from the proposed project would be less than significant because no historical resources were reported on site. Impacts to archaeological resources would be mitigated by having a qualified archaeologist present during ground-disturbing activities (MM-CUL-1 and MM-CUL-2). Impacts related to the inadvertent discovery of human remains would be avoided with compliance with California Health and Safety Code Section 7050.5.If human remains are discovered anywhere other than a dedicated cemetery, no

further disturbance or excavation of the site or nearby area reasonably suspected to contain human remains can occur until the County Coroner has examined the remains.

Cumulative impacts to cultural resources evaluate whether impacts of the proposed project and other related cumulative projects, when taken as a whole, substantially diminish the number of historical or archaeological resources within the same or similar context or property type. The proposed project could have potentially significant impacts to unknown archaeological resources, and mitigation would be required to reduce adverse impacts to less than significant. It is anticipated that related projects would also be subject to the same requirements of CEQA as the proposed project, and would mitigate for impacts to cultural resources, as necessary. These determinations would be made on a case-by-case basis, and the effects of cumulative development on cultural resources would be mitigated to the extent feasible in accordance with CEQA and other applicable legal requirements. Therefore, the proposed project's impacts to cultural resources would not be considered cumulatively considerable since the impacts are site specific, have been assessed and would be mitigated at a project- and site-specific level, and other cumulative projects in the area would be required to do the same.

Energy

Cumulative projects that could result in cumulative impacts to energy would generate wasteful, inefficient, or unnecessary use of energy. However, the project would not result in wasteful, inefficient, or unnecessary use of energy in large part due to the short-term and temporary nature of the construction period, and because there is no proposed operational energy use. Energy use would occur during construction through the use of heavy-duty construction equipment, vendor trucks, haul trucks, and travel to and from the project area. Once construction activities cease, petroleum use from off-road equipment and transportation vehicles would end. Cumulative projects would be required to minimize energy use and would be built and operated in accordance with all existing, applicable regulations at the time of construction. Because of the short-term nature of construction and relevantly small scale of the project, related projects would not result in cumulative considerable impacts related to energy.

Geology and Soils

The geographic extent considered for potential cumulative impacts to people and structures related to geologic and seismic hazards is more localized and site-specific than for many other environmental impacts. Impacts related to earthquakes and adverse soil conditions would be less than significant as a result of the required compliance with applicable building codes and geologic hazard regulations. Geologic/soil issues relate to local, site-specific soil conditions; ground response to earthquakes; and the potential for adverse soil conditions to damage the proposed project's structural components would be less than significant. Only those cumulative projects that are adjacent to the proposed project site would potentially contribute to create a cumulatively considerable impact related to geology and soils. However,

none of the cumulative projects in the area are adjacent to the proposed project (the closest being approximately 0.5 miles away). For this reason, the proposed project's impacts with respect to geology and soils would not be cumulatively considerable.

Greenhouse Gas Emissions

The cumulative nature of climate change and the project's potential to contribute to climate change impacts associated with project-generated GHG emissions is evaluated in Section 3.8, Greenhouse Gas Emissions. As explained in Section 3.8, GHG impacts are recognized exclusively as cumulative impacts, and there are no non-cumulative GHG emission impacts from a climate change perspective. The supporting documentation for the 2010 CEQA amendments indicates that the impact of GHG emissions should be considered in the context of a cumulative impact, rather than a project-level impact, and an environmental document must analyze the incremental contribution of a project to GHG levels and determine whether those emissions are cumulatively considerable. As discussed in Section 3.8, the project would not result in a cumulatively considerable impact related to GHG emissions.

Hazards

Cumulative impacts related to hazards and hazardous materials could result from projects that combine to increase exposure to hazards and hazardous materials. The proposed project would have less-than-significant impacts related to hazardous materials with mitigation measures incorporated. The proposed project would comply with all federal, state, and local regulations pertaining to the use, transport, and release of hazardous materials. The potential release of hazardous materials during construction and ground-disturbing activities would be reduced in compliance with the mitigation measures outlined in Section 3.9. Although cumulative projects have the potential to result in potentially significant impacts to hazards and hazardous materials, these projects would also be subject to federal, state, and local regulations that would reduce potential impacts to less than significant, including the application of mitigation measures, as necessary. Therefore, the proposed project, combined with the cumulative projects provided in Table 3.21-1, would not result in a cumulatively considerable impact related to hazardous materials.

Hydrology and Water Quality

The geographic scope of cumulative effects on hydrology and water quality is the watersheds affected by the proposed project. The temporal scope of the proposed project is limited to the construction phases because there are no proposed operational aspects of the project. The potential impacts of the proposed project would be from alterations to water quality as a result of the potential for erosion, siltation or sedimentation of adjacent water bodies, which would be reduced to less than significant through compliance with regulations.

For such short-term impacts, the proposed project, along with other projects occurring in the area, would be required to comply with applicable federal, state, and local water quality regulations. The proposed project, along

with other projects more than 1 acre in size (which includes most of the cumulative projects listed), would be required to obtain coverage under the NPDES Construction General Permit, which requires implementation of stormwater BMPs that effectively control erosion and sedimentation and construction-related pollutants in runoff. The various NPDES permits required are aimed at maintaining the beneficial uses of the water bodies in the RWQCB's Basin Plan and meeting water quality objectives associated with specific pollutants of concern. Because significant adverse water quality is often linked to the cumulative effects of various projects and land uses, the provisions within NPDES permits, by their nature, seek to address cumulative conditions. Further, with implementation of mitigation, the project's potential water quality impacts would be reduced to below a level of significance. Therefore, with compliance with regulatory requirements and application of appropriate mitigation, impacts would not be cumulatively considerable.

Land Use

Cumulative land use impacts would result from projects that contribute to development that is inconsistent with applicable plans or incompatible with existing or planned uses. The project would result in less-than-significant impacts to land use as it would be compatible with the site's land use designation of Industrial/Energy/Storage and a zoning designation of Planned Development District 1 (PD-1). Further, any future energy project proposed on site would be consistent with the zoning and land use designations of the project site. The project site is located within the coastal zone and the CCC permit jurisdiction, and would be required to apply for and comply with the regulations of a Coastal Development Permit issued by the CCC. All of the related projects in Table 3.21-1 would be subject to the land use and zoning policies underlying each respective project site. Further, the related projects in Table 3.21-1 do not involve alterations to or filling of coastal waters. Any related projects located within the coastal zone would be subject to applicable development regulations. Therefore, related projects would not combine with the proposed project to create a cumulatively considerable impact.

Noise

Noise associated with project construction would primarily affect residential areas adjacent to HnGS to the east. The closest cumulative project sites, as listed in Table 3.21-1, would be the AES Battery Energy Storage System located at 690 Studebaker Road, approximately 0.5 miles northwest of the proposed project and 0.6 miles northwest of the affected residential areas. Construction schedules and activities for these cumulative projects are currently unknown; therefore, potential construction noise impacts associated with simultaneous projects are speculative. However, although multiple construction activities may occur simultaneously at the project site and at the cumulative project sites, given the distance between the cumulative project sites and the affected residences as well as the noise attenuation created by intervening structures and other variables such as atmospheric absorption, the additional contribution to the ambient noise level would be imperceptible at less than 1 dBA. Therefore, the proposed project's impacts related to noise would not be cumulatively considerable.

Transportation

As discussed in Section 3.17, Transportation, an analysis was completed for the Year 2021 Cumulative plus Project Phase I condition and the Year 2030 Cumulative plus Project Phase II using the ICU and HCM methodology. Tables 3.17-9 and 3.17-10 summarize the results of the cumulative intersection analysis for the AM and PM peak hours.

As shown in Table 3.17-9, following study area intersections would continue to operate at LOS E or worse under Year 2021 Cumulative plus Project Phase I conditions:

- Studebaker Road/SR-22 westbound ramps (LOS E in the PM peak hour)
- Studebaker Road/Loynes Drive (LOS F in the PM peak hour)
- Studebaker Road/2nd Street-Westminster Avenue (LOS E in the PM peak hour)
- Seal Beach Boulevard/Westminster Avenue (LOS E in the PM peak hour)
- Seal Beach Boulevard/SR-22 eastbound ramps (LOS E in the AM peak hour and LOS F in the PM peak hour)

The addition of project traffic would not cause an increase of V/C that would create a significant impact at any intersection that is currently operating at an unacceptable LOS. Therefore, the proposed project would not have a significant impact at any study area intersection under year 2021 Cumulative Year plus Project Phase I conditions per City of Long Beach or City of Seal Beach criteria.

As shown in Table 3.17-10, the Seal Beach Boulevard/SR-22 eastbound ramps intersection would operate at LOS E or worse during the PM peak hour under Year 2021 Cumulative and Year 2021 Cumulative plus Project conditions. Since the addition of project traffic causes nominal increase (0.1 second increase or less) in delay at the Seal Beach Boulevard/SR-22 eastbound ramps intersection and would not cause the intersection to operate at a worse LOS than it is without the project under cumulative conditions. Therefore, the proposed project would not have a significant impact at the Seal Beach Boulevard/SR-22 eastbound ramps intersection. Further, the project traffic from construction related activities is temporary and would last for approximately 15 months. Truck traffic from the project would not utilize Seal Beach Boulevard or its ramp intersections with SR-22.

As shown in Table 3.17-11, following study area intersections would continue to operate at LOS E or worse under Year 2030 Cumulative plus Project Phase II conditions:

- Studebaker Road/SR-22 westbound ramps (LOS E in the PM peak hour)
- Studebaker Road/Loynes Drive (LOS F in the PM peak hour)
- Studebaker Road/2nd Street-Westminster Avenue (LOS E in the PM peak hour)

- Seal Beach Boulevard/Westminster Avenue (LOS E in the PM peak hour)
- Seal Beach Boulevard/SR-22 eastbound ramps (LOS E in the AM peak hour and LOS F in the PM peak hour)

The Studebaker Road/2nd Street-Westminster Avenue intersection would continue to operate at LOS E during the PM peak hour under Year 2030 plus Project Phase II conditions. Since the project traffic causes the volume-to-capacity ratio to increase by more than 0.02, the proposed project would have a significant (temporary) impact at the Studebaker Road/2nd Street-Westminster Avenue intersection per City of Long Beach criteria. The construction-related traffic from the project would create significant traffic impact to the following intersections under the Existing plus Project Phase I and Year 2030 plus Project Phase II conditions:

- Under the Existing plus Project Phase I conditions, the Studebaker Road/2nd Street-Westminster Avenue intersection operates at LOS E in the PM peak hour and the project traffic causes the LOS to degrade from D to E.
- Under the 2030 plus Project Phase II conditions, the Studebaker Road/2nd Street-Westminster Avenue intersection operates at LOS E in the PM peak hour and the project traffic causes the V/C to increase by more than 0.02.

This impact would be temporary and short term during the construction phase. The mitigation measures have been recommended to address the (temporary) significant traffic impact at the intersection and reduce impacts to below a level of significance. With implementation of MM-TRAF-1 and MM-TRAF-2, the project would not result in cumulatively considerable traffic impacts.

Tribal Cultural Resources

Potential impacts to tribal cultural resources would be mitigated by having a qualified archaeologist present during ground-disturbing activities (MM-CUL-1 and MM-CUL-2). Impacts related to the inadvertent discovery of human remains would be avoided with compliance with California Health and Safety Code Section 7050.5. If human remains are discovered anywhere other than a dedicated cemetery, no further disturbance or excavation of the site or nearby area reasonably suspected to contain human remains can occur until the County Coroner has examined the remains.

Cumulative impacts to tribal cultural resources evaluate whether impacts of the proposed project and other related cumulative projects, when taken as a whole, substantially diminish the number of tribal cultural resources within the same or similar context or property type. The proposed project could have potentially significant impacts to unknown tribal cultural resources, and mitigation would be required to reduce adverse impacts to less than significant. It is anticipated that related projects would also be subject to the same requirements of CEQA as the proposed project, and would mitigate for impacts to tribal cultural resources, as necessary. Further, cumulative projects would be required to conduct formal consultation under AB 52. These determinations would be made on

a case-by-case basis, and the effects of cumulative development on tribal resources would be mitigated to the extent feasible in accordance with CEQA, AB 52 and other applicable legal requirements. Therefore, impacts to tribal cultural resources would not be considered cumulatively considerable since the impacts are site specific, have been assessed and would be mitigated at a project- and site-specific level, and other cumulative projects in the area would be required to do the same.

Utilities and Service Systems

Cumulative impacts to utilities and service systems would result from projects that combine to create a demand for water, wastewater, stormwater, and solid waste facilities beyond the capacity of existing facilities. The proposed project would result in less-than-significant impact related to solid waste, as the project would generate general construction waste and over excavated soil. No long-term operational generation of solid waste would be associated with the proposed project. Construction debris and over-excavated soil would be recycled or transported to a landfill site and disposed of appropriately. In accordance with AB 939, LADWP's construction contractor would ensure that source reduction techniques and recycling measures are incorporated into project construction.

Development of related projects would increase land use intensities in the area, resulting in increased solid waste generation in the service area for Los Angeles County landfills. AB 939, or the Integrated Waste Management Act of 1989, mandates that cities divert 50% of the total solid waste generated away from landfills. In order to maintain state requirements of diverting 50% of solid waste and to offset impacts associated with solid waste, the proposed project and all related projects would be required to implement waste reduction, diversion, and recycling during both construction and operation. Additionally, AB 341 will require local agencies to adopt strategies that will enable 75% diversion of all solid waste by 2020. Through compliance with waste diversion requirements, and due to the recycling collection features that would be part of the proposed project design and the design of many typical urban infill projects, impacts would not be cumulatively considerable. Therefore, the project's impacts related to landfill capacity would not be cumulatively considerable.

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

Less-than-Significant Impact with Mitigation Incorporated. Based on the analysis in this MND, for all resource topics, the proposed project would have no impact, less-than-significant impacts, or less-than-significant impacts with incorporation of mitigation measures. Therefore, substantial adverse impacts on human beings would not occur as a result of the proposed project.

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