CAL WATER WELL AND WATER TREATMENT PLANT

INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

PREPARED FOR

CITY OF LONG BEACH INCORPORATED 1897

PREPARED BY

Michael Baker INTERNATIONAL

PUBLIC REVIEW DRAFT INITIAL STUDY/
MITIGATED NEGATIVE DECLARATION

Cal Water Well and Water Treatment Plant

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This document is designed for double-sided printing to conserve natural resources.

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INITIAL STUDY/MITIGATED NEGATIVE DECLARATION AND TECHNICAL APPENDICES ON CD

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1.0 INTRODUCTION

The proposed Cal Water Well and Water Treatment Plant (herein referenced as the "project") involves constructing a water well (DOM 301), a water treatment plant on the project site, and installing water conveyance pipelines in the rights-of-way of adjacent roadways to link two nearby existing water wells, DOM 272 and DOM 297, to the proposed treatment plant. Groundwater produced at the two existing wells and the proposed well would be delivered to the proposed water treatment plant on-site and then to the local distribution system, including Cal Water's existing Dominguez District system and the County of Los Angeles' distribution system along Victoria Street.

Following a preliminary review of the proposed project, the City of Long Beach (City) has determined that it is subject to the guidelines and regulations of the California Environmental Quality Act (CEQA). This Initial Study/Mitigated Negative Declaration addresses the direct, indirect, and cumulative environmental effects of the project, as proposed.

1.1 STATUTORY AUTHORITY AND REQUIREMENTS

In accordance with CEQA (Public Resources Code Sections 21000-21177) and pursuant to Section 15063 of Title 14 of the California Code of Regulations (CCR), the City of Long Beach, acting in the capacity of Lead Agency, is required to undertake the preparation of an Initial Study to determine whether the proposed project would have a significant environmental impact. If the Lead Agency finds that there is no evidence that the project, either as proposed or as modified to include the mitigation measures identified in the Initial Study, may cause a significant effect on the environment, the Lead Agency shall find that the proposed project would not have a significant effect on the environment and shall prepare a Negative Declaration (or Mitigated Negative Declaration) for that project. Such determination can be made only if "there is no substantial evidence in light of the whole record before the Lead Agency" that such impacts may occur (Section 21080, Public Resources Code).

The environmental documentation, which is ultimately approved and/or certified by the City in accordance with CEQA, is intended as an informational document undertaken to provide an environmental basis for subsequent discretionary actions upon the project. The resulting documentation is not, however, a policy document and its approval and/or certification neither presupposes nor mandates any actions on the part of those agencies from whom permits and other discretionary approvals would be required.

1.2 PURPOSE

Section 15063 of the CEQA Guidelines identifies specific disclosure requirements for inclusion in an Initial Study. Pursuant to those requirements, an Initial Study shall include:

- A description of the project, including the location of the project;
- Identification of the environmental setting;
- Identification of environmental effects by use of a checklist, matrix, or other method, provided that entries on a checklist or other form are briefly explained to indicate that there is some evidence to support the entries;
- Discussion of ways to mitigate significant effects identified, if any;
- Examination of whether the project is compatible with existing zoning, plans, and other applicable land use controls; and
- The name(s) of the person(s) who prepared or participated in the preparation of the Initial Study.

1.3 CONSULTATION

As soon as the Lead Agency (in this case, the City of Long Beach) has determined that an Initial Study would be required for the project, the Lead Agency is directed to consult informally with all Responsible Agencies and Trustee Agencies that are responsible for resources affected by the project, in order to obtain the recommendations of those agencies on the environmental documentation to be prepared for the project. Following receipt of any written comments from those agencies, the City will consider their recommendations when formulating the preliminary findings. Following completion of this Initial Study, the City will initiate formal consultation with these and other governmental agencies as required under CEQA and its implementing guidelines.

1.4 INCORPORATION BY REFERENCE

The following documents were utilized during preparation of this Initial Study and are incorporated into this document by reference. Due to the COVID-19 pandemic, City Hall is currently only open to the public on an appointment basis. As such, these documents are available for review online on the following websites.

- *City of Long Beach General Plan* (updated 2019). The purpose of the *City of Long Beach General Plan* (General Plan) is to provide a general, comprehensive, and long-range guide for community decision-making. The General Plan consists of the following elements, adopted on various dates: Land Use (2019); Urban Design (2019); Housing (2014); Mobility (2013); Historic Preservation (2010); Open Space and Recreation (2002); Public Safety (2002); Air Quality (1996); Seismic Safety (1988); Local Coastal Program (1980); Noise (1975); and Conservation (1973). The individual elements identify goals and policies for existing and future conditions within the City. Available for review here: https://www.longbeach.gov/lbds/planning/advance/general-plan/.

- *Long Beach Municipal Code* (codified through Ordinance No. ORD-21-0020, enacted June 15, 2021). The *Long Beach Municipal Code* (LBMC) consists of regulatory, penal, and administrative ordinances of the City. It is the method the City uses to implement control of land uses, in accordance with the General Plan goals and policies. Title 20, *Subdivisions*, and Title 21, *Zoning*, of the LBMC identifies land uses permitted and prohibited according to the zoning designation of particular parcels. The purpose of the zoning regulations within the LBMC is to promote and preserve the public health, safety, comfort, convenience, prosperity, and general welfare of the people of Long Beach. Available for review here: https://library.municode.com/ca/long_beach/codes/municipal_code.

2.0 PROJECT DESCRIPTION

2.1 PROJECT LOCATION

Regionally, the project site is located in the southern portion of the County of Los Angeles and in the northern portion of the City of Long Beach (City); refer to Exhibit 2-1, *Regional Vicinity*. Locally, the project site is located at 6157 Long Beach Boulevard (Assessor's Parcel Number [APN] 7307-008-053). The 16,268-square foot site is bound by residential and commercial uses to the north, Long Beach Boulevard to the east, commercial uses to the south, and industrial uses to the west. In addition, the project proposes infrastructure improvements in the public right-of-way of Long Beach Boulevard, Victoria Street, and Barclay Street and thus, these areas are also included in the overall project footprint; refer to Exhibit 2-2, *Site Vicinity*.

Regional access to the project site is provided via Interstate 710 (I-710) and State Route 91 (SR-91) to the east and north, respectively. Local access to the site is provided via Long Beach Boulevard.

2.2 ENVIRONMENTAL SETTING

The project site is currently vacant and undeveloped. Non-native vegetation covers the disturbed site. The site is fenced along the eastern and southern boundaries and is separated from existing uses to the north and west by masonry block walls; refer to Exhibit 2-2.

EXISTING GENERAL PLAN AND ZONING

According to the *City of Long Beach General Plan* (General Plan) Land Use Element, the project site has a PlaceType designation of Neighborhood Serving Center or Corridor Low Density (NSC-L). The NSC-L PlaceType is intended for low-rise, low-intensity mixed-use (e.g., housing and retail) commercial centers and corridors designed to meet consumers' daily needs for goods and services close to residential areas. The NSC-L PlaceType has a 0.5 to 1.0 floor area ratio (FAR), maximum residential density of 44 units per acre, and three-story maximum building height limit.

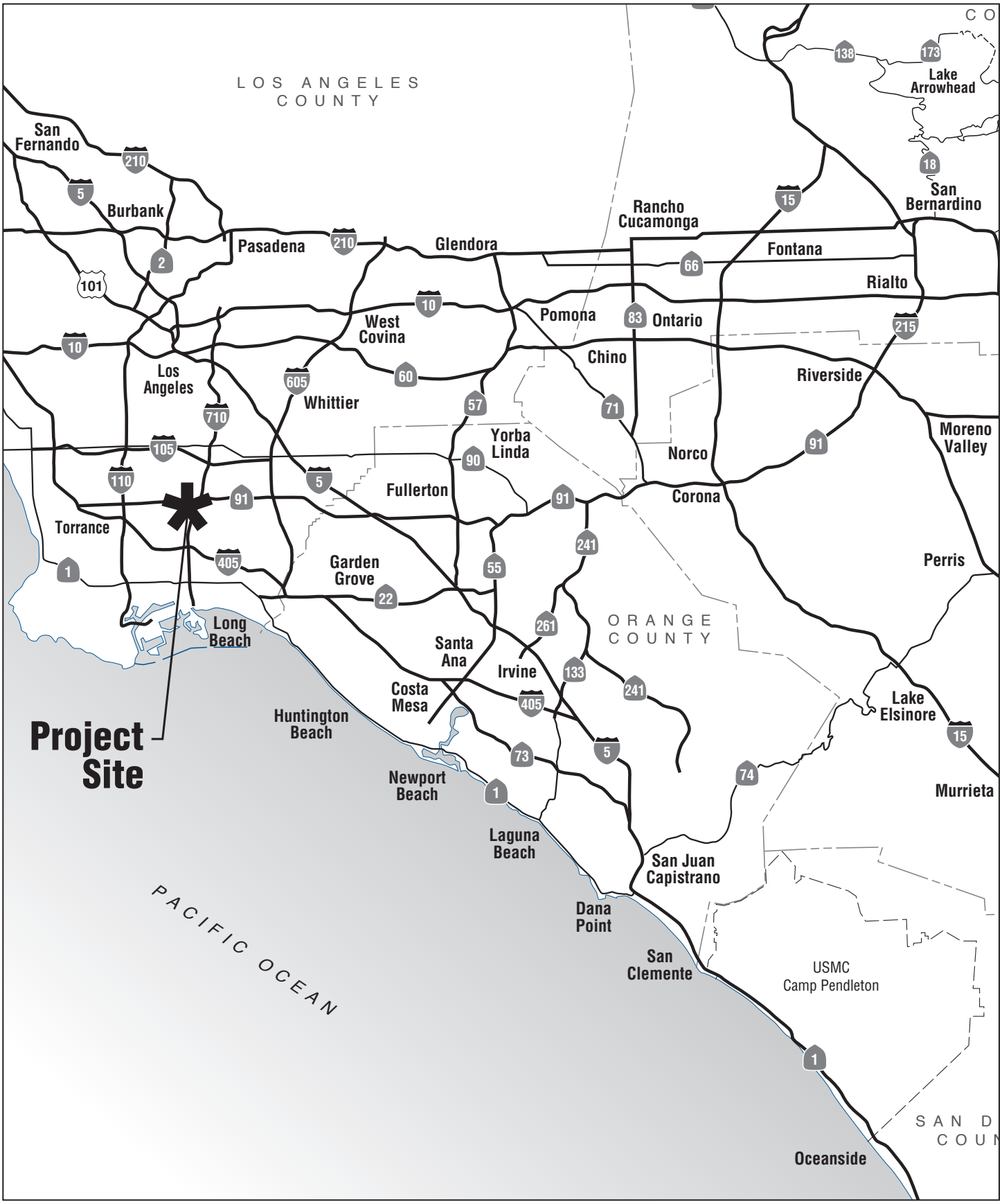
According to the *City of Long Beach Zoning Districts Map*, dated September 2018, the project site is zoned Community Commercial Automobile-Oriented (CCA). Based on *Long Beach Municipal Code* (LBMC) Section 21.32.020(C)(1), the CCA district allows retail and service uses for an entire community, including convenience and comparison shopping for goods and associated services.

2.3 SURROUNDING USES

Surrounding land uses in proximity to the project site are primarily comprised of commercial and residential uses. The surrounding land uses include the following:

- *North:* Single-family residences and an auto repair shop (i.e., Jaime's Auto Repair) are located to the north. Uses are designated Founding and Contemporary Neighborhood (FCN) and zoned Single-family Residential, Standard Lot (R-1-N);

- *East:* Long Beach Boulevard is located to the east. Further east across Long Beach Boulevard are commercial uses (i.e., Sal's Gumbo Shack and Don's Liquor Store) and a church (i.e., Ambassador for Christ Worship Center). Uses are designated NSC-L and FCN and zoned CCA and R-1-N;



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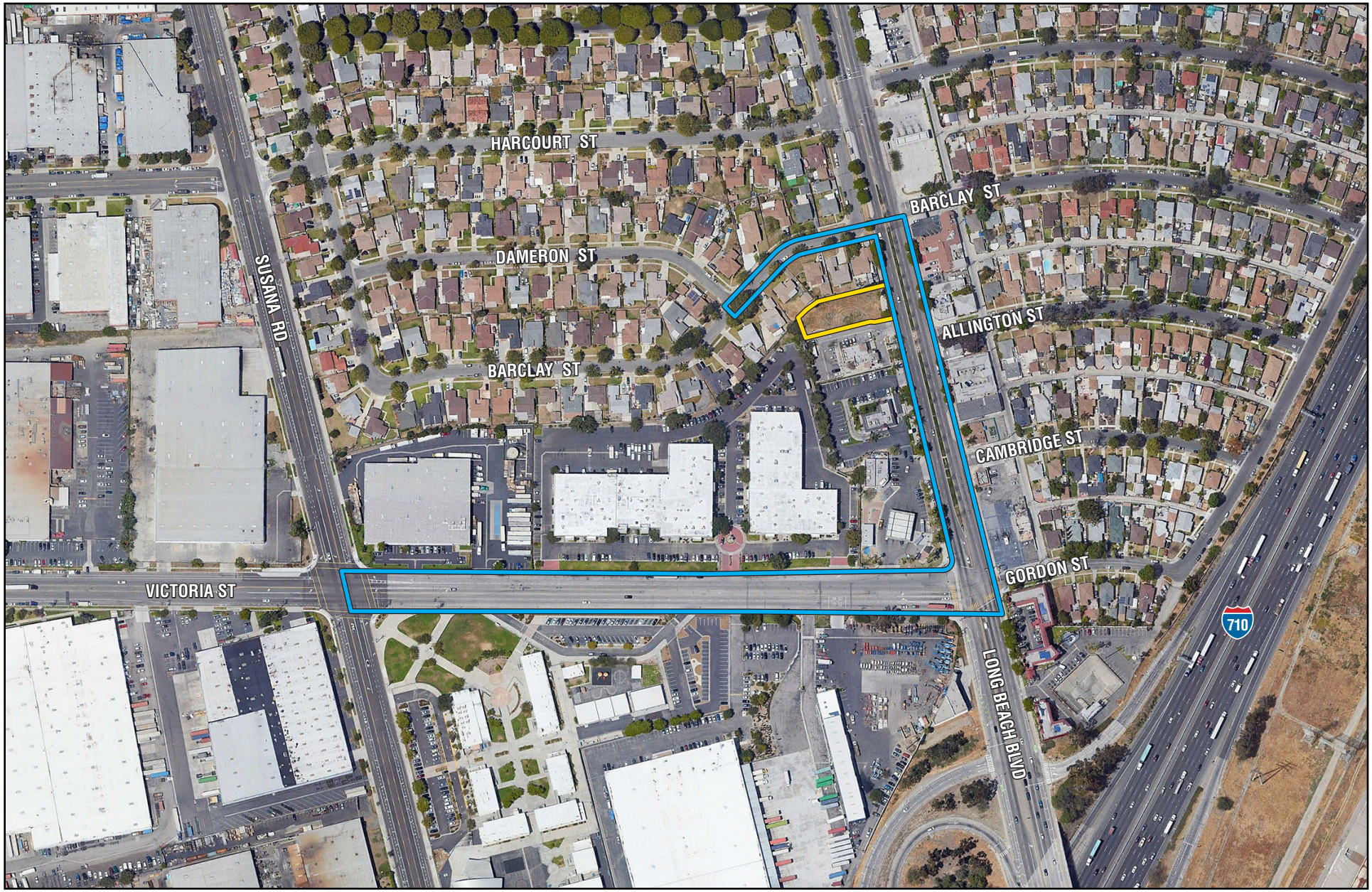
Regional Vicinity

Exhibit 2-1



Source: Google Earth Pro, March 2021

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Project Site

Proposed Pipeline Alignment

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Site Vicinity

Exhibit 2-2

- *South:* Commercial uses (i.e., Albert Fresh Mexican Food, Subway, Jack in the Box, and an ARCO gas station) are located to the south. Uses are designated NSC-L and zoned CCA; and

- *West:* Single-family residences and industrial uses (i.e., Victoria Business Park) are located to the west. Uses are designated NSC-L and Neo Industrial (NI) and zoned R-1-N and Medium Industrial (IM).

2.4 PROJECT BACKGROUND

The project Applicant, California Water Service Company (Cal Water), provides water utility services for most of the City of Carson and portions of Long Beach, Torrance, Compton, and unincorporated areas of Los Angeles County. To meet customers' needs, Cal Water uses a combination of local groundwater and surface water purchased from the Metropolitan Water District of Southern California (MWD), which is imported from the Colorado River and the State Water Project (SWP) in northern California. Cal Water's Dominguez District, which includes the project site, currently encompasses 374 miles of pipeline, 9 active wells, 12 storage tanks, and 7 MWD connections.

The project proposes to construct a water well and water treatment plant on-site and install water main improvements in adjacent roadway right-of-way to increase the reliability of supply to the northern portion of the Dominguez District service area. The water well and water treatment plant would allow utilization of groundwater (via existing unused groundwater rights) to offset water purchased from MWD. As such, the project would result in a lower overall cost to Cal Water customers. Additionally, utilizing groundwater would enhance local supply reliability and reduce reliance on purchased water sources that are subject to curtailment or interruption. Specifically, SWP water is subject to cutbacks in response to available snowpack in northern California on a year-to-year basis. SWP water supply may also become completely unavailable should a major disaster compromise the aqueduct system that travels from northern to southern California. Therefore, the proposed project would maximize local groundwater supply, reduce supply variability during dry years, and enhance water availability for fire and essential services in the event of a major disaster.

2.5 PROJECT CHARACTERISTICS

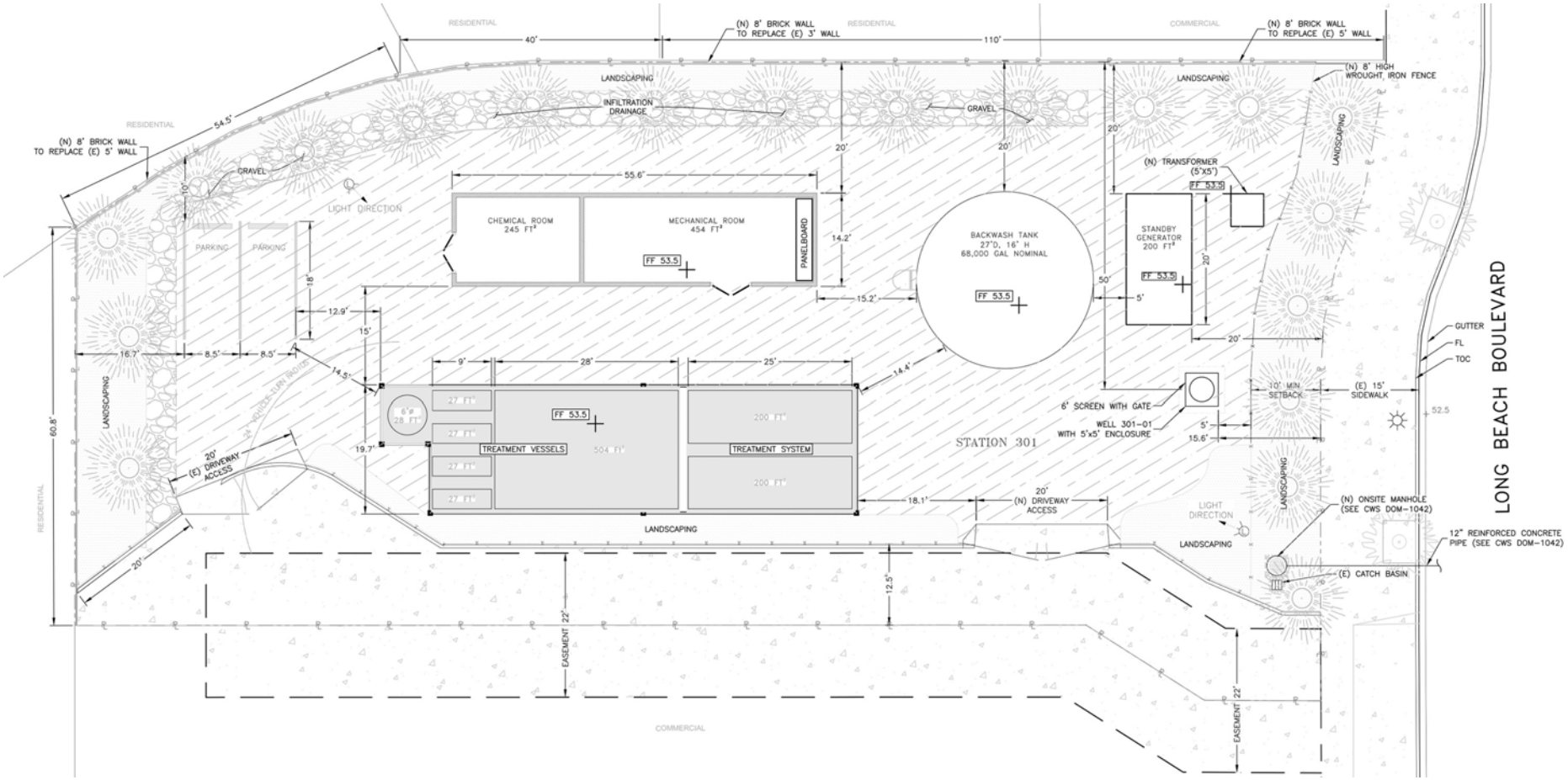
The project proposes to construct a water well (known as DOM 301) and a water treatment plant on the project site. As part of the project, conveyance pipelines would also be constructed in the Long Beach Boulevard, Victoria Street, and Barclay Street rights-of-way to link two nearby existing water wells, DOM 272 and DOM 297, to the proposed treatment plant. Groundwater produced at the two existing wells and the proposed well would be delivered to the proposed water treatment plant on-site and then to the local distribution system, including Cal Water's existing Dominguez District system within the City of Long Beach and County of Los Angeles jurisdictions.

The proposed treatment plant would enhance the quality of the water delivered to Cal Water customers, while the construction of the new water well and the collection and distribution mains would improve supply reliability and help meet emergency water demands (e.g., fire flows). The various project components are described in detail below.

WATER TREATMENT PLANT AND WELL

As shown on Exhibits 2-3, *Proposed Site Plan*, and 2-4, *Project Elevations*, the proposed water treatment plant would consist of a number of new structures. Structures and primary equipment proposed on-site include:

- *Water Well, Well Pump, and Motor*. The proposed water well would be located along the eastern end of the project site within a five-foot by five-foot enclosure and be approximately 1,010 feet deep with a 16-inch diameter steel casing. The well is designed to produce approximately 1,500 gallons per minute (gpm) and would be equipped with a vertical turbine pump and 75 horsepower (HP) electric motor. If water production and water quality are superior, a 230-kilowatt (kW) standby emergency generator and associated 1,000-gallon diesel storage tank would be installed in the northeast corner of the site for backup power.



Source: California Water Service, 2021.

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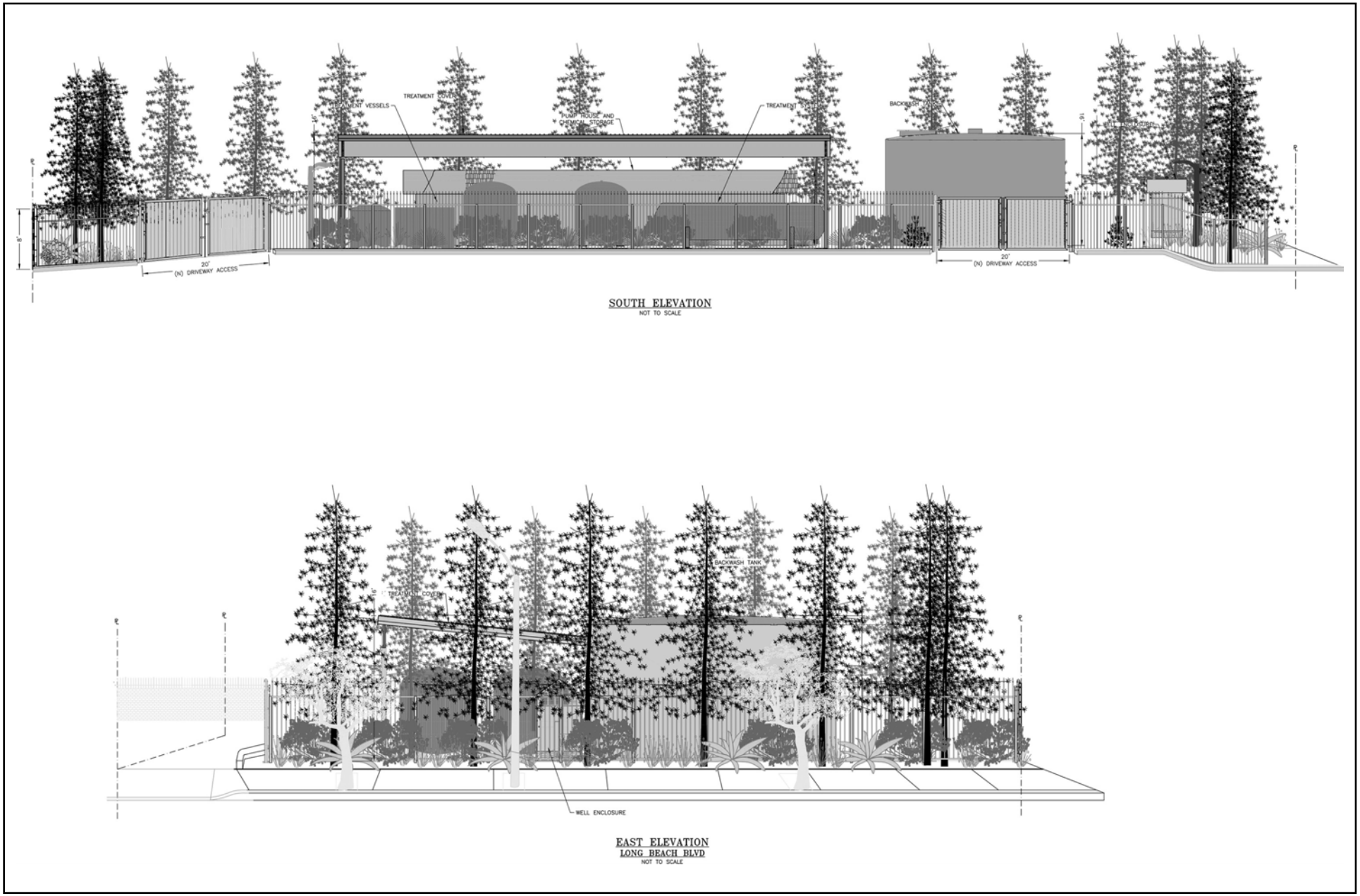
Proposed Site Plan

Exhibit 2-3



Source: California Water Service, 2021.

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Project Elevations

Exhibit 2-4

An automatic transfer switch would be incorporated into the design to allow use of the emergency generator in the event of a power outage. It is acknowledged that the emergency generator may or may not be installed at a later date but is evaluated as part of the project in this Initial Study.

- *Automatic Self-Cleaning Filter*. An above grade automatic self-cleaning filter would be located downstream of the proposed well to protect all downstream mechanical equipment from the occasional sand discharge from the well. Raw water would enter the filter inlet and pass through a coarse screen (designed to protect the cleaning mechanism), then through a fine screen where any sand would accumulate inside the filter. The filtered water would then flow through the filter outlet.

  The self-cleaning process utilizes a small electric motor and a suction scanner to "vacuum" the accumulated solids from the inside of the filter screen. During the self-cleaning process, filtered water would continue to flow downstream.

- *Air Strippers*. The air strippers are designed to remove methane and all available sulfides that are present in the gaseous form of hydrogen sulfide from the raw groundwater.

- *Granular Activated Carbon Gas Scrubber*. Air exhausted from the air strippers would be drawn through the use of a blower and venting system and treated in the gas scrubber to remove hydrogen sulfide from gaseous air prior to discharge into the atmosphere.

- *Booster Pumps*. After passing through the air strippers, raw water would flow by gravity to two 100-HP booster pumps adjacent to the air strippers. The turbine pumps are designed to deliver 1,200 gpm of water through the ion exchange system and to the distribution system.

- *Ion Exchange System*. Following the booster pumps, the ion exchange system is designed to remove total organic carbon, reduce disinfection by-product precursors, and remove color-causing organic compounds. The ion exchange system is composed of four parallel eight-foot diameter, five-foot high pressure vessels housing the ion exchange resin and a brine make-up system. The vessels would be covered by a 16-foot high metal shade canopy and the brine make-up system would be located to the north of the vessels.

  If elevated levels of contaminants are detected during the well testing, an appropriate treatment system would be installed. It is conservatively assumed that manganese treatment, odor, and color removal would be required. The manganese treatment system would include components such as a horizontal multi-media pressure filter, ion exchange units, ground-level backwash water storage tank, associated pipes and valves, and associated electrical switchgear. The backwash water storage tank would reuse the water stored during the flushing of the treatment vessels and would be approximately 27 feet in diameter and up to 16 feet tall with a capacity of 68,000 gallons.

- *Waste Equalization Tank*. To reduce wastewater flowrates, wastewater generated on-site would be equalized through a 68,000-gallon waste equalization tank and be discharged into the City's sewer network in a controlled manner, as dictated by the sewer connection waste allowance. Per City of Long Beach Public Works Department, approximately one gallon per minute, 24 hours per day, or approximately 1,440 gallons per day, is allowed.

- *Sodium Hypochlorite and Ammonia Feed Systems*. Sodium hypochlorite and ammonia would be added to the ground water to disinfect the water supply prior to entering the distribution system.

- *Ultraviolet Disinfection*. The ultraviolet (UV) disinfection system would be installed downstream of the ion exchange system to achieve virus inactivation, if necessary.

- *Process Control System*. The treatment plant would be controlled via a single-user interface from which operations of the treatment system may be monitored and modified. The process control system would be programmed to perform the various functions required of the treatment plant.

An approximately 700-square foot, 11-foot tall concrete masonry unit (CMU) electrical/mechanical/chemical building located in the center of the project site would house the booster pumps and blowers, process control system, electrical appurtenances, and chemicals (i.e., chlorine and ammonia). A Southern California Edison (SCE) transformer would also be installed on-site to provide electrical power for on-site equipment and lighting. As stated, a standby emergency generator and diesel storage tank may also be installed on-site for backup power at a later date. The transformer, generator, and diesel storage tank would be constructed on concrete pads in the northeast corner of the site.

It should be noted that the final site plan design of the treatment plant and required equipment will be based on the results of the water quality data of the proposed well and testing of all three wells (DOM 301, DOM 272, and DOM 297). As such, not all equipment listed above may be required. Nevertheless, this Initial Study conservatively assumes all potential treatment equipment are included and analyzed as part of the proposed project. All equipment would comply with the City's setback requirements and noise-generating equipment would generally be placed away from the property lines abutting existing residences. Exact locations of on-site equipment would be reviewed and determined in consultation with the City of Long Beach Development Services Department.

Facility Operations

The treatment plant is anticipated to operate 24 hours a day, seven days a week. A daily inspection of the plant would be conducted by one Cal Water plant inspector, and would consist of visually inspecting the plant for proper operation; verifying chemical supplies; noting any abnormalities; inspecting site security, safety, and any chemical spills; and taking water quality samples for testing. A daily inspection log would be maintained on-site. All plant inspectors are required to have all necessary qualifications and experience and be certified by the State Water Resources Control Board.

Plant operations would be monitored remotely and any equipment malfunction or warning signals or intrusion alarms would be sent to Cal Water's central operating center through a Supervisory Control and Data Acquisition (SCADA) system for necessary action.

Once the facility is constructed, no regular equipment repairs or maintenance would be required. Well pump equipment may require replacement approximately every ten years and well rehabilitation would occur every 10 to 15 years.

Site Drainage

The project site currently conveys stormwater runoff in a north to south direction across the site to a grassy area outside of the existing fencing where the water percolates or evaporates. The project involves repaving the site to collect surface water runoff in a drain inlet to flow into the City's existing stormwater system along Long Beach Boulevard. Any excess groundwater pumped from the well during routine maintenance would also discharge into the proposed storm drain inlet. Additionally, as shown on Exhibit 2-3, percolation areas are proposed to allow for on-site infiltration in the gravel and landscaped areas along the northern end of the property.

Site Access and Security

Site access would be provided via two gated 20-foot wide driveway access points along the southern project boundary; refer to Exhibit 2-3. As stated, the site would be visited approximately once per day by a Cal Water inspector; no permanent employees would work on-site. Two parking spaces would be provided for Cal Water employees along the western end of the site.

For safety and security, the existing fencing along the eastern and southern project boundaries would be removed and replaced with eight-foot tall wrought iron fencing; refer to Exhibit 2-4. Eight-foot brick walls would also be constructed along the northern and western site perimeters. Surveillance cameras would be installed along the property fencing for increased security and landscaped buffers would be planted along the site perimeter in the setback areas.

Lighting consisting of light emitting diode (LED) fixtures would be installed to provide building and security lighting on-site. All proposed lighting fixtures would be dark-sky compliant, directional, and shielded to minimize light spillover on adjacent uses.

Landscaping

The proposed project would provide landscaping improvements, including a variety of ornamental trees, shrubs, and groundcover; refer to Exhibit 2-5, *Proposed Landscape Plan*. The street frontage along Long Beach Boulevard would be planted with evergreen trees, as well as a variety of rock groundcover and drought tolerant shrub masses (e.g., Mexican feather grass, blue flame agave, and coast rosemary). The northern and western site perimeters would similarly be lined with evergreen trees as well as boulders and rock groundcover with drought tolerant shrub masses, including Russian sage, lion's mane, coast rosemary, blue flame agave, sunset manzanita, and Mexican feather grass. The southern perimeter adjacent to existing commercial uses would be landscaped with crushed rock groundcover and coast rosemary, sunset manzanita, desert spoon, yellow kangaroo paw, and desert spoon. Overall, proposed landscaping would total approximately 2,856 square feet, or 20 percent of the total site area.

COLLECTION AND DISTRIBUTION MAINS

Off-site well collection and water distribution mains are proposed to facilitate influent and effluent to the treatment plant. Proposed well collection mains would bring groundwater from the existing DOM 272 well (19065 Reyes Avenue), DOM 297 well (169 Victoria Street) and proposed DOM 301 well to the treatment plant. The distribution mains would feed potable water from the treatment plant to existing water mains in Susana Road and Barclay Street. As shown on Exhibit 2-6, *Proposed Collection and Distribution Mains*, proposed collection and distribution mains include the following:

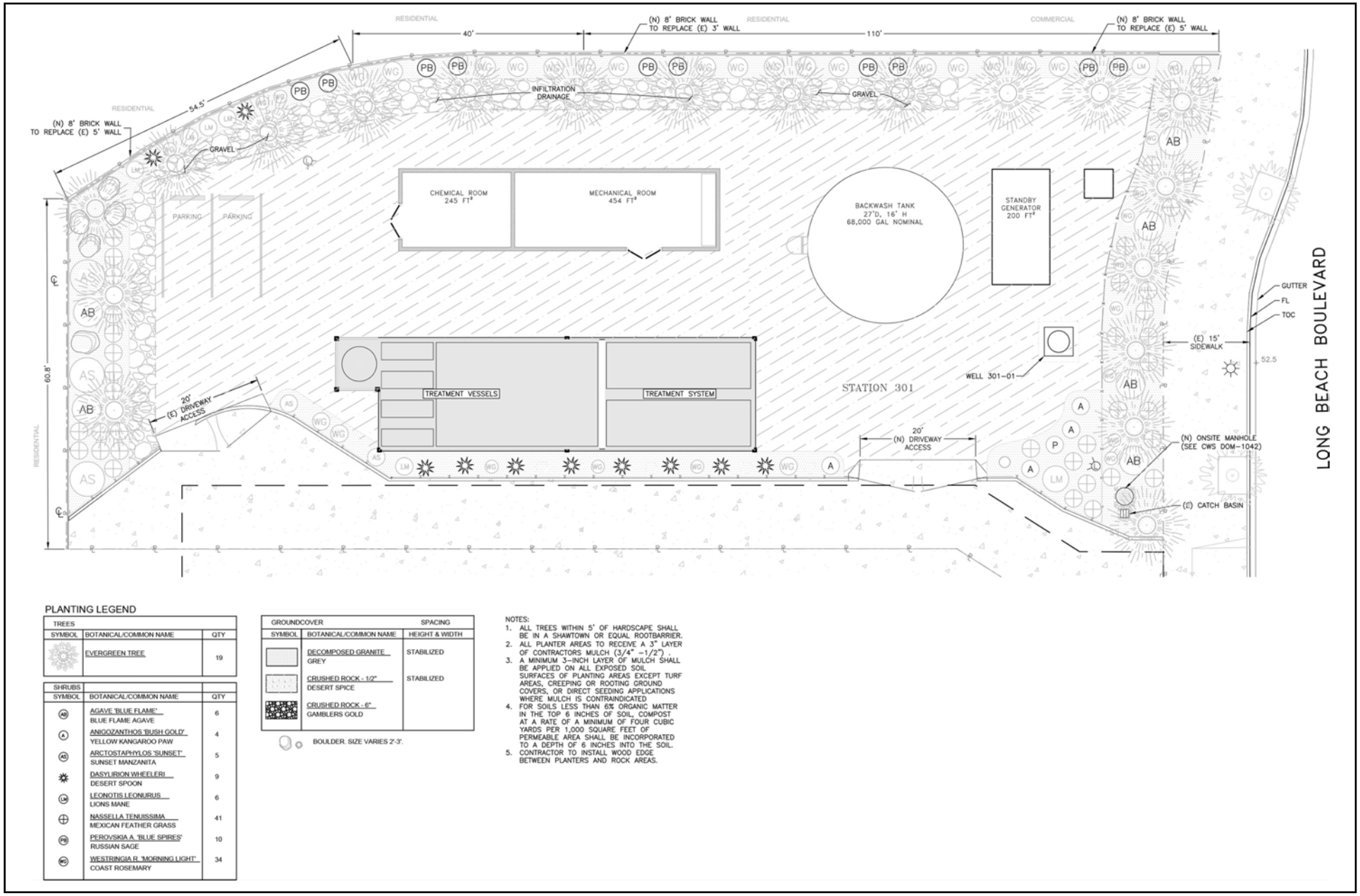
A well collection main approximately 1,950 total feet in length is proposed:

- 12-inch main approximately 550 feet in length on Long Beach Boulevard from project site to Victoria Street; and
- 12-inch main approximately 1,400 feet in length on Victoria Street from Long Beach Boulevard to Susana Road.

A water distribution main approximately 2,520 total feet in length is proposed:

- 12-inch main approximately 550 feet in length on Long Beach Boulevard from project site to Victoria Street;
- 12-inch main approximately 1,400 feet in length on Victoria Street from Long Beach Boulevard to Susana Road;
- 8-inch main approximately 150 feet in length on Long Beach Boulevard from Barclay Street to project site; and
- 8-inch main approximately 420 feet in length on Barclay Street from Dameron Street to Long Beach Boulevard.

The collection and distribution mains would be ductile iron pipelines installed underground in public right-of-way with average depths of approximately four to five feet below ground surface.



PLANTING LEGEND

TREES		
SYMBOL	BOTANICAL/COMMON NAME	QTY
	EVERGREEN TREE	19

SHRUBS		
SYMBOL	BOTANICAL/COMMON NAME	QTY
AB	AGAVE 'BLUE FLAME' BLUE FLAME AGAVE	6
A	ANIGOZANTHOS 'BUSH GOLD' YELLOW KANGAROO PAW	4
AS	ARCTOSTAPHYLOS 'SUNSET' SUNSET MANZANITA	5
	DASYLIRION WHEELERI DESERT SPOON	9
LM	LEONOTIS LEONURUS LIONS MANE	6
	NASSELLA TENUISSIMA MEXICAN FEATHER GRASS	41
PB	PEROVSKIA A. 'BLUE SPIRES' RUSSIAN SAGE	10
WG	WESTRINGIA R. 'MORNING LIGHT' COAST ROSEMARY	34

GROUNDCOVER		SPACING
SYMBOL	BOTANICAL/COMMON NAME	HEIGHT & WIDTH
	DECOMPOSED GRANITE GREY	STABILIZED
	CRUSHED ROCK - 1/2" DESERT SPICE	STABILIZED
	CRUSHED ROCK - 6" GAMBLERS GOLD	

BOULDER. SIZE VARIES 2'-3'.

NOTES:
1. ALL TREES WITHIN 5' OF HARDSCAPE SHALL BE IN A SHAWTOWN OR EQUAL ROOTBARRIER.
2. ALL PLANTER AREAS TO RECEIVE A 3" LAYER OF CONTRACTORS MULCH (3/4" –1/2") .
3. A MINIMUM 3–INCH LAYER OF MULCH SHALL BE APPLIED ON ALL EXPOSED SOIL SURFACES OF PLANTING AREAS EXCEPT TURF AREAS, CREEPING OR ROOTING GROUND COVERS, OR DIRECT SEEDING APPLICATIONS WHERE MULCH IS CONTRAINDICATED
4. FOR SOILS LESS THAN 6% ORGANIC MATTER IN THE TOP 6 INCHES OF SOIL, COMPOST AT A RATE OF A MINIMUM OF FOUR CUBIC YARDS PER 1,000 SQUARE FEET OF PERMEABLE AREA SHALL BE INCORPORATED TO A DEPTH OF 6 INCHES INTO THE SOIL.
5. CONTRACTOR TO INSTALL WOOD EDGE BETWEEN PLANTERS AND ROCK AREAS.

Source: California Water Service, 2021.

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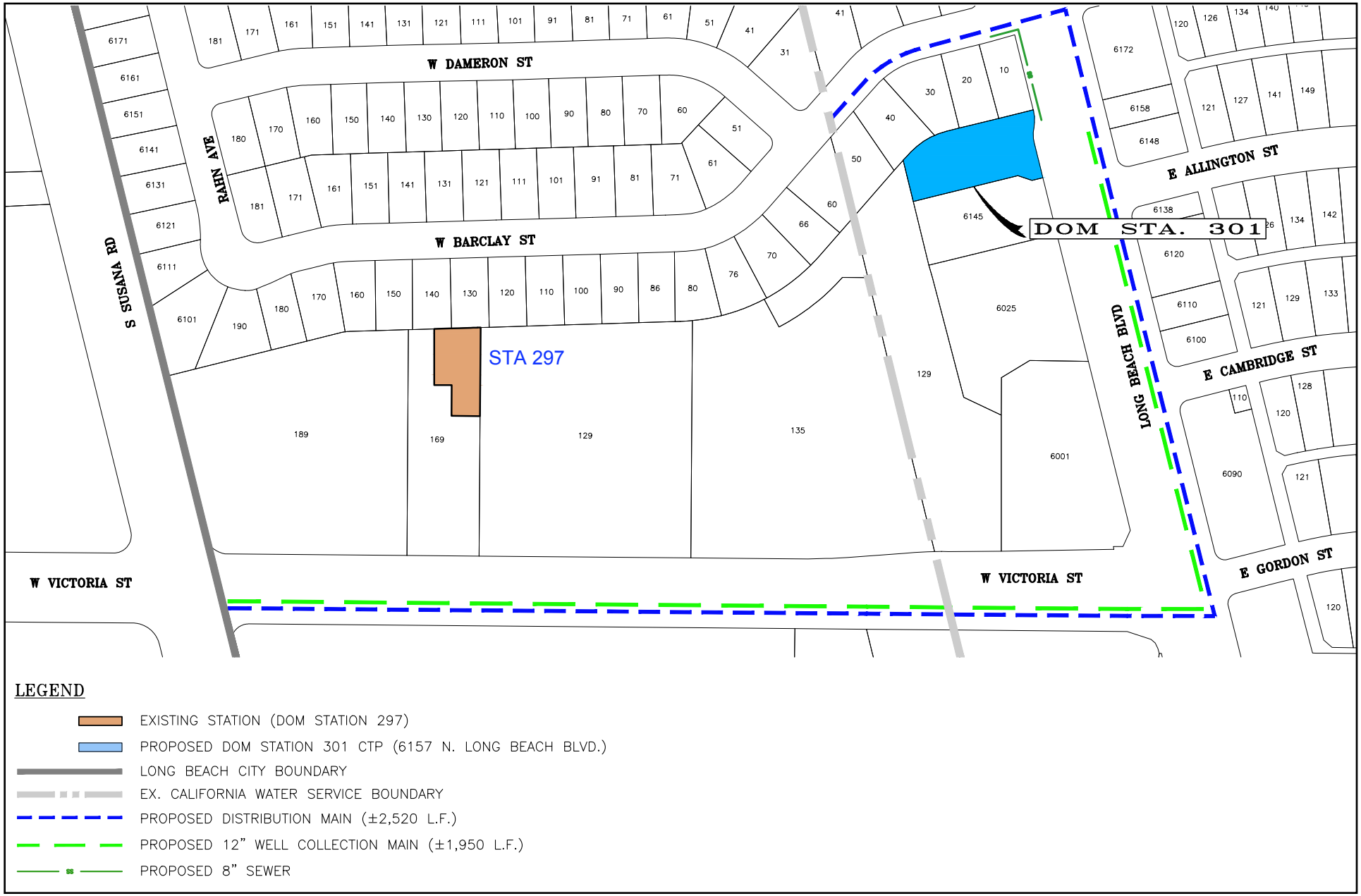
Proposed Landscape Plan

Exhibit 2-5



Source: California Water Service, 2021.

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Proposed Collection and Distribution Mains

Exhibit 2-6

An 8-inch sewer main would also be constructed to discharge any wastewater or plant flushing to the City's sewer system. An approximately 300-foot sewer segment would run north on Long Beach Boulevard from the project site and turn west on Barclay Street to discharge into the existing sewer manhole in Barclay Street.

2.6 PHASING AND CONSTRUCTION

The project is proposed to be completed in two phases: Phase I involves drilling the proposed water well and Phase II involves constructing the water treatment plant and conveyance pipelines.

PHASE I

The proposed well would be drilled to a depth of approximately 1,010 feet below ground surface. Well construction would utilize a reverse circulation hydraulic rotary drilling method. Well drilling would require intermittent periods of 24-hour construction activity due to the need to drill continuously until well casings can be installed to stabilize the open borehole. To comply with the City's Community Noise Ordinance (LBMC Section 8.80.010), Cal Water is proposing to erect a temporary 16-foot high noise barrier along the site perimeter during all construction activities to shield the adjacent properties, particularly adjacent residences to the north and west, from project-related construction noise.

During borehole drilling, drill fluid (consisting of water and bentonite, if necessary) and cuttings (consisting of native clay, silt, sand, and gravel) would be contained in a settling tank. A staging area is proposed on the project site to store the drill fluid settling tank, drill cuttings, and construction equipment and materials. A temporary water storage tank would be utilized to contain water discharged during well development and test pumping to allow settling of solids before discharging to the off-site storm drainage system. The drill cuttings would be tested for hazardous waste and would be properly disposed, as needed.

This phase also includes well performance testing for production and water quality in order to determine overall site design and required treatment equipment. To support construction and performance testing, Cal Water is proposing to install an on-site storm drain connection to an existing storm drain approximately 100 feet to the east of the property. This storm drain connection would be used to discharge water generated during the well drilling and testing process. Cal Water is permitted and authorized to discharge water generated during well development per Cal Water's Statewide National Pollutant Discharge Elimination System (NPDES) Permit No. CAG140001.

As part of Phase I construction, a two-inch water service line from the City water main would be constructed for use as a future eye wash station and for site irrigation. A public fire hydrant would also be installed in the sidewalk of Long Beach Boulevard adjacent to the project site.

PHASE II

Phase II construction consists of two subphases: Phase IIA involves constructing the treatment plant and Phase IIB involves constructing the conveyance pipelines in public right-of-way. Construction of the two subphases would occur concurrently.

<u>Phase IIA</u>

During Phase IIA, the treatment plant and associated equipment, including the well pump and motor, electric/mechanical/chemical building, site lighting and paving, security system, perimeter walls, well discharge pipeline, and connection to the water system would be constructed. An emergency diesel generator may be installed at a later date but is evaluated as part of the project in this Initial Study.

After the well is installed and tested under Phase I, the final required on-site treatment equipment would be determined. The treatment process may include air strippers, a gas scrubber, an ion exchange system, and a sodium hypochlorite and feed system.

The electrical/mechanical/chemical building would be constructed to house the booster pumps, electrical, and treatment facilities. If required, the gas scrubber and ion exchange system would be installed outdoors on concrete pads. Permanent canopy shelters may also be constructed above the ion exchange system.

Phase IIB

Concurrent with Phase IIA, Phase IIB involves construction of off-site water distribution and well collection mains to facilities influent and effluent to the treatment plant. Pipeline construction activities would require temporary lane closures and would include open cut trenching, pipe installation, backfill and compaction, and re-grading, where necessary. Trenches are anticipated to be approximately four to five feet in depth and approximately 24 to 36 inches in width. If shallow groundwater is encountered during trenching activities, dewatering activities would be required and may involve pumping the groundwater into tank trucks and transporting to a disposal facility or discharging to a nearby storm drain permitted under Cal Water's current NPDES permit.

Native material generated during trenching would be retained for backfill to the degree feasible. Excavated materials that cannot be utilized for backfill would be hauled off-site to an appropriate disposal facility, and a limited amount of additional backfill material would be imported, if needed. After installation of the proposed water mains, disturbed street surfaces would be restored to meet or exceed current City standards.

Construction parking and staging areas are proposed on nearby off-site properties and would be reviewed and approved by the City of Long Beach Development Services prior to construction activities.

CONSTRUCTION SCHEDULE

Phase I construction would occur for a duration of approximately six months, and Phases IIA and IIB would occur concurrently for approximately 12 months. There would be an approximately nine month gap between Phase I and II construction activities to allow for final engineering design and construction material procurements.

2.7 PERMITS AND APPROVALS

The proposed project would require permits and approvals from the City of Long Beach and other agencies prior to construction. These permits and approvals are described below and may change as the project entitlement process proceeds.

City of Long Beach

- California Environmental Quality Act Clearance;
- Conditional Use Permit;
- Building Permit;
- Sewer Connection Permit;
- Encroachment Permit;
- Permit from the Health Department for the 24 hour drilling as confirmed by Long Beach Building and Safety;

Los Angeles County Fire Department Petrochemical Unit

- Discharge Permit (for well development, test pumping, and operations);

Sanitation Districts of Los Angeles County

- Waste Discharge Permit;

South Coast Air Quality Management District

- Operation Permit (for diesel generator, if applicable); and

State Water Resources Control Board Division of Drinking Water

- Drinking Water Permit Amendment.

3.0 INITIAL STUDY CHECKLIST

3.1 BACKGROUND

1.	**Project Title:** Cal Water Well and Water Treatment Plant
2.	**Lead Agency Name and Address:** City of Long Beach 411 West Ocean Boulevard, 3rd Floor Long Beach, CA 90802
3.	**Contact Person and Phone Number:** Sergio Gutierrez Planner III 562.570.5934
4.	**Project Location:** Regionally, the project site is located in the southern portion of the County of Los Angeles and in the northern portion of the City of Long Beach. Locally, the project site is located at 6157 Long Beach Boulevard (Assessor's Parcel Number [APN] 7307-008-053). The project's development footprint also includes portions of Long Beach Boulevard, Victoria Street, and Barclay Street rights-of-way for water conveyance pipeline installation.
5.	**Project Sponsor's Name and Address:** California Water Service Company (Cal Water) Brad Lee, Applicant Representative 2632 West 237th Street Torrance, CA 90505
6.	**General Plan Designation:** According to the *City of Long Beach General Plan* (General Plan) Land Use Element, the project site has a PlaceType designation of Neighborhood Serving Center or Corridor Low Density (NSC-L).
7.	**Zoning:** The *City of Long Beach Zoning Districts Map* zones the project site as Community Commercial Automobile-Oriented (CCA).

8. Description of the Project:

The project proposes to construct a water well (DOM 301) and a water treatment plant on the project site. As part of the project, conveyance pipelines would also be constructed in the Long Beach Boulevard, Victoria Street, and Barclay Street rights-of-way to link two nearby existing water wells, DOM 272 and DOM 297, to the proposed treatment plant. Groundwater produced at the two existing wells and the proposed well would be delivered to the proposed water treatment plant on-site and then to the local distribution system, including Cal Water's existing Dominguez District system and the County of Los Angeles' distribution system along Victoria Street. Additional details regarding the project are provided in Section 2.5, *Project Characteristics*.

9. Surrounding Land Uses and Setting:

Surrounding land uses in proximity to the project site are primarily comprised of commercial and residential uses. The surrounding land uses include the following:

- *North:* Single-family residences and an auto repair shop (i.e., Jaime's Auto Repair) are located to the north. Uses are designated Founding and Contemporary Neighborhood (FCN) and zoned Single-family Residential, Standard Lot (R-1-N);
- *East:* Long Beach Boulevard is located to the east. Further east across Long Beach Boulevard are commercial uses (i.e., Sal's Gumbo Shack and Don's Liquor Store) and a church (i.e., Ambassador for Christ Worship Center). Uses are designated NSC-L and FCN and zoned CCA and R-1-N;
- *South:* Commercial uses (i.e., Albert Fresh Mexican Food, Subway, Jack in the Box, and an ARCO gas station) are located to the south. Uses are designated NSC-L and zoned CCA; and
- *West*: Single-family residences and industrial uses (i.e., Victoria Business Park) are located to the west. Uses are designated NSC-L and Neo Industrial (NI) and zoned R-1-N and Medium Industrial (IM).

10. Other public agencies whose approval is required (e.g., permits, financing approval or participation agreement).

Refer to Section 2.7, *Permits and Approvals*, for a description of the permits and approvals anticipated to be required for the project. Additional approvals may be required as the project entitlement process moves forward.

3.2 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

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

☒	Aesthetics	☐	Agriculture and Forestry	☐	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

3.3 EVALUATION OF ENVIRONMENTAL IMPACTS

This section analyzes the potential environmental impacts associated with the proposed project. The issue areas evaluated in this Initial Study include:

- 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

The environmental analysis in this section is patterned after the Initial Study Checklist recommended by the CEQA Guidelines and used by the City of Long Beach in its environmental review process. For the preliminary environmental assessment undertaken as part of this Initial Study's preparation, a determination that there is a potential for significant effects indicates the need to more fully analyze the development's impacts and to identify mitigation.

For the evaluation of potential impacts, the questions in the Initial Study Checklist are stated and an answer is provided according to the analysis undertaken as part of the Initial Study. The analysis considers the long-term, direct, indirect, and cumulative impacts of the development. To each question, there are four possible responses:

- *No Impact*. The development will not have any measurable environmental impact on the environment.

- *Less Than Significant Impact*. The development will have the potential for impacting the environment, although this impact will be below established thresholds that are considered to be significant.

- *Less Than Significant Impact With Mitigation Incorporated*. The development will have the potential to generate impacts which may be considered as a significant effect on the environment, although mitigation measures or changes to the development's physical or operational characteristics can reduce these impacts to levels that are less than significant.

- *Potentially Significant Impact*. The development will have impacts which are considered significant, and additional analysis is required to identify mitigation measures that could reduce these impacts to less than significant levels.

Where potential impacts are anticipated to be significant, mitigation measures will be required, so that impacts may be avoided or reduced to insignificant levels.

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4.0 ENVIRONMENTAL ANALYSIS

The following is a discussion of potential project impacts as identified in the Initial Study/Environmental Checklist. Explanations are provided for each item.

4.1 AESTHETICS

Except as provided in Public Resources Code Section 21099, would the project:	Potentially Significant Impact	Less Than Significant Impact 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) Have a substantial adverse effect on a scenic vista?

No Impact. According to the *City of Long Beach General Plan* (General Plan) Mobility Element, scenic routes in Long Beach are primarily located near the shoreline along Interstate 710, Ocean Boulevard, and State Route 1 (Pacific Coast Highway). There are no designated scenic routes in the project vicinity. As such, project implementation would have no impact on scenic vistas within the City.

Mitigation Measures: No mitigation is required.

b) 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 within proximity to the project site.[1] The nearest Officially Designated State Scenic Highway is a segment of State Route 91, located approximately 21.6 miles to the east. The nearest Eligible State Scenic Highway (not officially designated) is a segment of Pacific Coast Highway, located approximately 6.3 miles to the southeast of the project site. Given the distance, the proposed project would not affect scenic resources (i.e., trees, rock outcroppings, or historic buildings) along these scenic highways. As such, no impact would occur in this regard.

Mitigation Measures: No mitigation is required.

[1] California Department of Transportation, *California State Scenic Highway System Map*, https://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=465dfd3d807c46cc8e8057116f1aacaa, accessed May 18, 2021.

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?

Less Than Significant Impact. The project site is located in an urbanized area of Long Beach. As such, the following analysis evaluates the project's consistency with applicable regulations governing scenic quality.

MUNICIPAL CODE CONSISTENCY ANALYSIS

Long Beach Municipal Code (LBMC) Title 21, *Zoning*, includes site development standards that aid in governing scenic quality. Table 4.1-1, *Municipal Code Governing Scenic Quality Consistency Analysis*, provides a consistency analysis of the proposed project and relevant Community Commercial Automobile-Oriented (CCA) zoning district development standards related to scenic quality. Refer to Section 4.11, *Land Use and Planning*, for a discussion concerning the project's consistency with other applicable zoning requirements.

Table 4.1-1
Municipal Code Governing Scenic Quality Consistency Analysis

Relevant Municipal Code Sections	Consistency Analysis
Section 21.32.210 – Building height: The height of all buildings shall be limited as indicated in Tables 32-2 and 32-2A. *Per Table 32-2, CCA zone has a maximum building height of 28 feet (2 stories).*	Consistent. The proposed electrical/mechanical/ chemical block building would be approximately 11 feet tall (one story). Thus, the project would be consistent with LBMC Section 21.32.210.
Section 21.32.225 – Screening required: A. General. The following required screening shall apply in all commercial districts: 1. Open Storage. Open storage shall be prohibited. Certain merchandise is permitted to be displayed outdoors for sale or rent as indicated in Tables 32-0 and 32-1. 2. Parking Lots. All parking lots shall be screened as provided for in Section 21.41.266 and Chapter 21.42. 3. Adjacent To Residential Districts. All commercial uses adjoining or abutting a residential district shall be screened by a solid fence or wall not less than six feet, six inches (6'6") in height, except in the front yard of the residential lot, where the fence or wall shall be three feet (3') in height. 4. Parking Structures. All sides of a parking structure abutting a public street shall be screened by trees, vines or other decorative screening approved by the Director of Development Services. See Chapter 21.42 for additional requirements.	Consistent. The project does not propose any open storage areas, parking lots, or parking structures. As plant operations would primarily be monitored remotely, only one to two parking spaces would be provided on-site. The site's northern and western boundaries are adjacent to residences zoned Single-family Residential, Standard Lot (R-1-N). Eight-foot tall brick walls would be constructed along the northern and western site perimeters. Therefore, the project would be consistent with LBMC Section 21.32.225.

Table 4.1-1 [cont'd]
Municipal Code Governing Scenic Quality Consistency Analysis

<table>
<tr><th>Relevant Municipal Code Sections</th><th>Consistency Analysis</th></tr>
<tr><td>Section 21.42.040 – Landscaping standards for R-3, R-4 and Nonresidential Districts:

B. Landscape Area Requirements. A minimum number of plants shall be provided as follows:

1. On-Site Street Frontage.

a. Within the required setback area along all street frontages, except at driveways, a minimum five-foot (5') wide landscaping strip (inside dimension to planter) shall be provided. This area shall be landscaped with one (1) tree for each fifteen (15) linear feet of street frontage and three (3) shrubs for each tree.

b. Sites with more than one hundred feet (100') of street frontage shall also provide one (1) tree of not less than thirty-six inch (36") box size for each one hundred feet (100') of street frontage.

c. Planters. All on-site landscaped areas adjoining the public right-of-way shall be located in planters not less than three inches (3") high. The planters shall be designed to drain back onto the private property and not directly onto the public right-of-way. When required, tree-wells shall be sized to allow full growth of proposed trees within the public right-of-way.</td><td>Consistent. The project's street frontage (eastern boundary) is approximately 75 feet wide. As such, based on LBMC Section 21.42.040, the project is required to provide five trees (one tree for each 15 feet of street frontage) and 15 shrubs (three shrubs for each tree). As shown on Exhibit 2-5, Proposed Landscape Plan, the project would plant more than the required number of trees and shrubs along the street frontage. The street trees would be planted within tree wells and a minimum three-inch mulch layer would be provided for all planter areas. The existing catch basin located at the southeastern corner of the site would provide on-site drainage, similar to existing conditions. The project would be consistent with LBMC Section 21.42.040.</td></tr>
<tr><td>Section 21.43.020 – Height limits:

Fence and garden wall heights shall not exceed the maximum heights set forth in Table 43-1. Fence heights shall be measured from grade adjoining the fence on the public right-of-way side of the fence (for fences adjoining the public right-of-way) and the average grade of both sides of the fence (for fences between two (2) private properties). For fences in flood hazard zones where the Building Code requires the finish floor of a building to be constructed at or above the top of the flood plain, fence height shall be measured from the top of the flood plain.

<table><tr><th colspan="2">Commercial and Industrial</th></tr><tr><td>- Within required street frontage setback</td><td>3 feet</td></tr><tr><td>- Abutting residential front yard</td><td>3 feet</td></tr><tr><td>- Abutting residential side or rear yard</td><td>8 feet</td></tr><tr><td>- Other yard</td><td>12 feet</td></tr></table></td><td>Consistent. As shown on Exhibit 2-3, the project would provide eight-foot tall brick walls along the northern and western site perimeters that abut residential areas. Additionally, the project would construct an eight-foot tall wrought iron fence along the Long Beach Boulevard street frontage (not within the required landscape setback). As such, the project would be consistent with LBMC Section 21.43.020.</td></tr>
<tr><td colspan="2">Source: City of Long Beach, Long Beach Municipal Code, codified through Ordinance No. ORD-21-0012, enacted April 13, 2021.</td></tr>
</table>

GENERAL PLAN CONSISTENCY ANALYSIS

The General Plan Urban Design Element describes the goals of urban design in Long Beach and includes several strategies and policies governing scenic quality that are relevant to the proposed project. Table 4.1-2, *General Plan Policies Governing Scenic Quality Consistency Analysis*, evaluates the project's consistency with such policies.

Table 4.1-2
General Plan Policies Governing Scenic Quality Consistency Analysis

Relevant General Plan Urban Design Element Policies	Consistency Analysis
Policy UD 14-1: Properly scale a building's form (i.e., height and massing) to the primary street it fronts on (i.e., taller buildings on larger boulevards, smaller buildings on narrower streets).	Consistent. The project involves constructing a well and water treatment plant on-site, including an electrical/mechanical/chemical block building. The building would be approximately 11 feet tall (one story) and located in the center of the site; refer to Exhibit 2-3. Thus, the proposed building would be similar in scale to other existing uses along Long Beach Boulevard, including single-family residences to the north and west and commercial buildings to the south.
Policy UD 14-6: Ensure new development respects the privacy concerns of adjoining properties and buildings. Building, window, and balcony orientation should maximize views while preserving the privacy of surrounding neighbors by considering direct sight lines to windows and/or outdoor living spaces on neighboring lots. Minimize obtrusive light by limiting outdoor lighting that is misdirected, excessive, or unnecessary	Consistent. The proposed electrical/mechanical/chemical building would not have any windows that could impact the privacy of surrounding neighbors, including existing residences to the north and west of the project site. Additionally, the site would have limited building and security lighting. As shown on Exhibit 2-3, two station lights would be installed on-site, one to the west of the electrical/mechanical/chemical block building and one in the southeast corner of the site near the existing driveway along Long Beach Boulevard. All proposed lighting fixtures would be dark-sky compliant, directional, and shielded to minimize light spillover on adjacent uses.
Policy UD 14-8: Avoid street walls where it will adversely affect the existing character (i.e., scale, dominant style, historic features) of a neighborhood or street face.	Consistent. In consultation with City staff and the City's Site Plan Review Committee, the Applicant proposes to provide eight-foot tall wrought iron fencing along the Long Beach Boulevard street frontage and along the southern boundary adjacent to the existing commercial use. The proposed fencing would not adversely affect the existing character of the project area and would also be screened by trees and shrubs proposed along the street frontage.
Policy UD 15-1: Encourage new projects to repair the urban fabric where it has eroded (e.g., reestablishing a uniform street wall where it once existed, but where buildings have been demolished over time).	Consistent. The project site is a vacant parcel within a commercial/residential area. The proposed development would construct a well and water treatment plant on-site with landscaping along the street frontage, which would improve the urban fabric and scenic quality of the site compared to existing conditions (i.e., vacant fenced off property).

Table 4.1-2 [cont'd]
General Plan Policies Governing Scenic Quality Consistency Analysis

Relevant General Plan Urban Design Element Policies	Consistency Analysis
Policy UD 15-2: Promote infill projects that support the designated PlaceType and be appropriate in their use, scale, compactness of development, and design character with adjacent sites and nearby existing development.	Consistent. The project site has a PlaceType designation of Neighborhood Serving Center or Corridor Low Density (NSC-L). The proposed well and water treatment plant is a conditionally permitted use in the NSC-L PlaceType. The proposed development would only have one building, approximately 11 feet tall, with the remainder of the site occupied by mechanical equipment associated with the water treatment plant. As a utility use, the project does not directly enhance the NSC-L PlaceType; however, the proposed building is compatible with adjacent one-story structures to the north, south, and west and the project would provide street frontage landscaping to enhance the visual character along Long Beach Boulevard.
Policy UD 19-2: Ensure that project site design and function minimizes the potential adverse impacts of vehicle access, parking and loading facilities, signage, lighting, trash enclosures, and sound systems.	Consistent. No loading facilities, signage, trash enclosures, or sound systems are proposed as part of the project. Two vehicle parking spaces would be included on the west side of the project site. Vehicular access to the site would be provided via an existing driveway along Long Beach Boulevard that leads to two proposed gated 20-foot wide driveway access points along the southern project boundary. The proposed access points would not result in adverse vehicular access impacts given that the existing driveway from Long Beach Boulevard would remain as is. Additionally, as stated above, the project site would have limited building and security lighting. As shown on Exhibit 2-3, two station lights would be installed on-site, one to the west of the electrical/mechanical/chemical block building and one in the southeast corner of the site near the existing driveway along Long Beach Boulevard. All proposed lighting fixtures would be dark-sky compliant, directional, and shielded to minimize light spillover on adjacent uses.
Policy UD 19-5: Provide shade trees to match the existing species to reinforce neighborhood identity, to add greenscape for texture, shade and overall visual character, and to create a uniform streetscape. Maintain consistent wall and fence treatment along the street edge.	Consistent. There are currently two street trees along the site's street frontage. The project proposes to plant a number of shade trees and shrubs along the street frontage and thus, would add greenscape and enhance the visual character of Long Beach Boulevard. Wrought iron fencing is also proposed along the site's eastern and southern boundaries, which would be screened by the proposed landscaping.

Table 4.1-2 [cont'd]
General Plan Policies Governing Scenic Quality Consistency Analysis

Relevant General Plan Urban Design Element Policies	Consistency Analysis
Policy UD 39-1: Accommodate large canopy street trees that contribute to the City's urban forest, enhance street character and neighborhood identity, and provide shade for pedestrians and parked cars and bikes.	Consistent. Refer to response to Policy UD 19-5.

Source: City of Long Beach, *City of Long Beach General Plan Urban Design Element*, December 2019.

As analyzed, the project would be consistent with LBMC standards and General Plan policies governing scenic quality. Impacts in this regard would be less than significant.

Mitigation Measures: No mitigation is required.

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

Less Than Significant Impact With Mitigation Incorporated. There are two primary sources of light: light emanating from building interiors that pass through windows and light from exterior sources (i.e., street lighting, parking lot lighting, building illumination, security lighting, and landscape lighting). Depending upon the location of the light source and its proximity to adjacent light sensitive uses, light introduction can be a nuisance, affecting adjacent areas and diminishing the view of the clear night sky.

The proposed project is located within an urban and developed area of Long Beach. Existing light sources in the project vicinity include interior and exterior lighting associated with adjacent commercial, office, and residential uses. Light and glare caused by vehicular headlights and street lighting along Long Beach Boulevard, Victoria Street, and Barclay Street further influence lighting in the project area.

CONSTRUCTION

Based on LBMC Section 8.80.202, *Construction Activity – Noise Regulation*, construction activities are limited to occur only between 7:00 a.m. and 7:00 p.m. on weekdays and Federal holidays, and between 9:00 a.m. and 6:00 p.m. on Saturdays; construction activities are prohibited on Sundays. Most project construction activities would occur during daylight hours and no additional lighting sources would be needed. However, the proposed well drilling would require intermittent periods of 24-hour construction activity due to the need to drill continuously until well casings can be installed to stabilize the open borehole. Nighttime construction activities would require lighting that could result in light/glare impacts. However, implementation of Mitigation Measure AES-1 would require using the minimum amount of lighting to safely conduct construction activities, and orienting any lighting directly towards the construction area and away from surrounding sensitive receptors to the extent practicable. Moreover, to comply with the City's Community Noise Ordinance (LBMC Section 8.80.010), Cal Water is proposing to erect a temporary 16-foot high noise barrier along the site perimeter during all construction activities to shield the adjacent properties, particularly adjacent residences to the north and west, from project-related construction noise. The noise barrier would also act as a light barrier to shield light from spilling over onto adjacent properties. Thus, construction-related light and glare impacts would be reduced to less than significant levels in this regard.

OPERATIONS

Project operations would have limited light sources. The mechanical equipment would operate unstaffed with only limited security lighting on-site. As shown on Exhibit 2-3, two station lights would be installed on-site, one to the west of the electrical/mechanical/chemical block building and one in the southeast corner of the site near the existing

driveway along Long Beach Boulevard. All proposed lighting fixtures would be dark-sky compliant, directional, and shielded to minimize light spillover on adjacent uses. Additionally, the site would be visited approximately once per day by a Cal Water inspector; no permanent employees would work on-site. Thus, the project would not result in a substantial increase in light generated by vehicular traffic traveling in and out of the project site.

Overall, light and glare impacts associated with construction and operations of the project would be less than significant.

Mitigation Measures:

AES-1 The Applicant and Construction Contractor shall use the minimum amount and intensity of lighting required for safety and construction purposes during nighttime well drilling activities. The light sources shall be shielded and directed towards the specific area of construction, and away from surrounding sensitive uses to the extent practicable.

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4.2 AGRICULTURE AND FORESTRY RESOURCES

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. Would the project:	**Potentially Significant Impact**	**Less Than Significant Impact With Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
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) 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. According to the California Department of Conservation, the project site is not designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance.[1] As discussed in Section 2.2, *Environmental Setting*, the project site is a currently vacant, undeveloped, and is covered with non-native vegetation. The project site does not contain any farmland and no farmland exists within the site vicinity. Thus, no impacts would occur in this regard.

Mitigation Measures: No mitigation is required.

[1] California Department of Conservation, *California Important Farmland Finder*, https://maps.conservation.ca.gov/DLRP/CIFF/, accessed June 4, 2021.

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

No Impact. The project site is currently zoned Community Commercial Automobile-Oriented (CCA). No zoning for agricultural use currently applies to the project site or surrounding areas. Additionally, the project site is not under a Williamson Act contract.[2] Therefore, project implementation would not conflict with existing zoning for agricultural use, or a Williamson Act contract. No impact would occur in this regard.

Mitigation Measures: No mitigation is required.

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))?

No Impact. Refer to Responses 4.2(a) and 4.2(b). No zoning for forest land or timberland exists within the project site, and no impacts would occur in this regard.

Mitigation Measures: No mitigation is required.

d) Result in the loss of forest land or conversion of forest land to non-forest use?

No Impact. Refer to Responses 4.2(b) and 4.2(c). No impacts would occur in this regard.

Mitigation Measures: No mitigation is required.

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?

No Impact. As stated above in Responses 4.2(a) through 4.2(c), the project site is located within an urbanized area and is void of any agricultural or forest resources. Thus, there is no potential for the conversion of these resources and no impacts would occur in this regard.

Mitigation Measures: No mitigation is required.

[2] California Department of Conservation Division of Land Resource Protection, *Los Angeles County Williamson Act FY 2015/2016*, November 21, 2018.

4.3 AIR QUALITY

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. Would the project:	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
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) Conflict with or obstruct implementation of the applicable air quality plan?

Less Than Significant Impact. The project is located within the South Coast Air Basin (Basin), which is governed by the South Coast Air Quality Management District (SCAQMD). Consistency with the SCAQMD *2016 Air Quality Management Plan* (2016 AQMP) means that a project is consistent with the goals, objectives, and assumptions set forth in the 2016 AQMP. The 2016 AQMP utilized information and data from the Southern California Association of Government (SCAG) and its *2016-2040 Regional Transportation Plan/Sustainable Communities Strategy* (2016-2040 RTP/SCS). While SCAG has recently adopted the *2020-2045 Regional Transportation Plan/Sustainable Communities Strategy* (2020-2045 RTP/SCS), SCAQMD has not released an updated AQMP that utilizes information from the 2020-2045 RTP/SCS. SCAQMD is planning to release the updated AQMP in 2022. As such, this consistency analysis is based on the 2016 AQMP and the 2016-2040 RTP/SCS. According to the SCAQMD CEQA *Air Quality Handbook*, in order to determine consistency with 2016 AQMP, two main criteria must be addressed:

CRITERION 1:

With respect to the first criterion, SCAQMD methodologies require that an air quality analysis for a project include forecasts of project emissions in relation to contributing to air quality violations and delay of attainment.

a) Would project result in an increase in the frequency or severity of existing air quality violations?

Since the consistency criteria identified under the first criterion pertains to pollutant concentrations, rather than to total regional emissions, an analysis of the project's pollutant emissions relative to localized pollutant concentrations is used as the basis for evaluating project consistency. As discussed in Response 4.3(c), localized concentrations of carbon monoxide (CO), nitrogen oxide (NO_X), particulate matter less than 10 microns in diameter (PM_{10}), and particulate matter less than 2.5 microns in diameter ($PM_{2.5}$) would be less than significant during project construction and operation. Therefore, the proposed project would not result in an increase in the frequency or severity of existing air quality violations.

b) Would the project cause or contribute to new air quality violations?

As discussed in Response 4.3(b), the proposed project would result in emissions that are below the SCAQMD threshold. Therefore, the project would not have the potential to cause or affect a violation of the ambient air quality standards.

c) *Would the project delay timely attainment of air quality standards or the interim emissions reductions specified in the AQMP?*

The proposed project would result in less than significant impacts with regard to regional and localized concentrations during project construction and operation; refer to Reponses 4.3(a) and 4.3(b). As such, the project would not delay the timely attainment of air quality standards or 2016 AQMP emissions reductions.

CRITERION 2:

With respect to the second criterion for determining consistency with SCAQMD and SCAG air quality policies, it is important to recognize that air quality planning with the Basin focuses on attainment of ambient air quality standards at the earliest feasible date. Projections for achieving air quality goals are based on assumptions regarding population, housing, and growth trends. Thus, the SCAQMD's second criterion for determining project consistency focuses on whether or not the proposed project exceeds the assumptions utilized in preparing the forecasts presented in the 2016 AQMP. Determining whether or not a project exceeds the assumptions reflected in the 2016 AQMP involves the evaluation of the three criteria outlined below. The following discussion provides an analysis of each these criteria.

a) *Would the project be consistent with the population, housing, and employment growth projections utilized in the preparation of the AQMP?*

Growth projections included in the 2016 AQMP form the basis for the projections of air pollutant emissions and are based on general plan land use designation and SCAG's 2016-2040 RTP/SCS demographics forecasts. The population, housing, and employment forecasts within the 2016-2040 RTP/SCS are based on local general plans as well as input from local governments, such as the City of Long Beach. The SCAQMD has incorporated these same demographic growth forecasts for various socioeconomic categories (e.g., population, housing, employment) into the 2016 AQMP.

Based on the *City of Long Beach General Plan* (General Plan) Land Use Element, the project site has a PlaceType designation of Neighborhood Serving Center or Corridor Low Density (NSC-L). The NSC-L PlaceType is intended for low-rise, low-density mixed-use (e.g., housing and retail) commercial centers and corridors designed to meet consumer's daily needs for goods and services close to residential areas. The NSC-L PlaceType has a 0.5 to 1.0 floor area ratio (FAR), a maximum residential density of 44 units per acre, and three-story maximum building height limit. According to the *City of Long Beach Zoning Districts Map*, dated September 2018, the project site is zoned Community Commercial Automobile-Oriented (CCA). Based on *Long Beach Municipal Code* (LBMC) Section 21.32.020(C)(1), the CCA district allows retail and service uses for an entire community, including convenience and comparison shopping for goods and associated services. The project requires a Conditional Use Permit to allow the proposed utility use in the CCA zone. With the approval of the Conditional Use Permit, the project would be consistent with the site's General Plan designation and zoning.

The proposed utility facility would be remotely operated with approximately one daily inspection conducted by an existing Cal Water inspector (i.e., no additional jobs would be generated by the proposed project). As such, the project would not result in any indirect population growth. Therefore, the project would not cause SCAG's population growth forecasts to be exceeded. Additionally, as the SCAQMD has incorporated these same projections into the 2016 AQMP, it can be concluded that the proposed project would be consistent with the projections included in the 2016 AQMP. A less than significant impact would occur in this regard.

b) *Would the project implement all feasible air quality mitigation measures?*

The proposed project would result in less than significant air quality impacts. Compliance with all feasible emission reduction rules and measures identified by the SCAQMD would be required as identified in Responses 4.3(b) and 4.3(c). As such, the proposed project meets this 2016 AQMP consistency criterion.

c) *Would the project be consistent with the land use planning strategies set forth in the AQMP?*

Land use planning strategies set forth in the 2016 AQMP are primarily based on the 2016-2040 RTP/SCS. As discussed above, the project would be consistent with the site's General Plan land use designation and zoning. As such, the proposed project meets this AQMP consistency criterion.

In conclusion, the determination of 2016 AQMP consistency is primarily concerned with long-term influence of a project on air quality in the Basin. The proposed project would not result in long-term impact on the region's ability to meet State and Federal air quality standards. Further, the proposed project's long-term influence on air quality in the Basin would also be consistent with the SCAQMD and SCAG's goals and policies and is considered consistent with the 2016 AQMP.

Mitigation Measure: No mitigation is required.

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?

Less Than Significant Impact.

CRITERIA POLLUTANTS

Carbon Monoxide (CO). CO is an odorless, colorless toxic gas that is emitted by mobile and stationary sources as a result of incomplete combustion of hydrocarbons or other carbon-based fuels. In cities, automobile exhaust can cause as much as 95 percent of all CO emissions. CO replaces oxygen in the body's red blood cells. Individuals with a deficient blood supply to the heart, patients with diseases involving heart and blood vessels, fetuses (unborn babies), and patients with chronic hypoxemia (oxygen deficiency) as seen in high altitudes are most susceptible to the adverse effects of CO exposure. People with heart disease are also more susceptible to developing chest pains when exposed to low levels of carbon monoxide.

Ozone (O_3). O_3 occurs in two layers of the atmosphere. The layer surrounding the Earth's surface is the troposphere. The troposphere extends approximately 10 miles above ground level, where it meets the second layer, the stratosphere. The stratosphere (the "good" ozone layer) extends upward from about 10 to 30 miles and protects life on Earth from the sun's harmful ultraviolet rays. "Bad" O_3 is a photochemical pollutant, and needs volatile organic compounds (VOCs), NO_x, and sunlight to form; therefore, VOCs and NO_x are O_3 precursors. To reduce O_3 concentrations, it is necessary to control the emissions of these O_3 precursors. Significant O_3 formation generally requires an adequate amount of precursors in the atmosphere and a period of several hours in a stable atmosphere with strong sunlight. High O_3 concentrations can form over large regions when emissions from motor vehicles and stationary sources are carried hundreds of miles from their origins.

While O_3 in the upper atmosphere (stratosphere) protects the Earth from harmful ultraviolet radiation, high concentrations of ground-level O_3 (in the troposphere) can adversely affect the human respiratory system and other tissues. O_3 is a strong irritant that can constrict the airways, forcing the respiratory system to work hard to deliver oxygen. Individuals exercising outdoors, children, and people with pre-existing lung disease such as asthma and chronic pulmonary lung disease are considered to be the most susceptible to the health effects of O_3. Short-term exposure (lasting for a few hours) to O_3 at elevated levels can result in aggravated respiratory diseases such as emphysema, bronchitis and asthma, shortness of breath, increased susceptibility to infections, inflammation of the lung tissue, increased fatigue, as well as chest pain, dry throat, headache, and nausea.

Nitrogen Dioxide (NO_2). NO_x are a family of highly reactive gases that are a primary precursor to the formation of ground-level ozone and react in the atmosphere to form acid rain. NO_2 (often used interchangeably with NO_x) is a reddish-brown gas that can cause breathing difficulties at elevated levels. Peak readings of NO_2 occur in areas that have a high concentration of combustion sources (e.g., motor vehicle engines, power plants, refineries, and other industrial operations). NO_2 can irritate and damage the lungs and lower resistance to respiratory infections such as influenza. The health effects of short-term exposure are still unclear. However, continued or frequent exposure to NO_2 concentrations that are typically much higher than those normally found in the ambient air may increase acute respiratory illnesses in children and increase the incidence of chronic bronchitis and lung irritation. Chronic exposure to NO_2 may aggravate eyes and mucus membranes and cause pulmonary dysfunction.

Coarse Particulate Matter (PM_{10}). PM_{10} refers to suspended particulate matter, which is smaller than 10 microns or ten one-millionths of a meter. PM_{10} arises from sources such as road dust, diesel soot, combustion products, construction operations, and dust storms. PM_{10} scatters light and significantly reduces visibility. In addition, these particulates penetrate into lungs and can potentially damage the respiratory tract. On June 19, 2003, the California Air Resources Board (CARB) adopted amendments to the Statewide 24-hour particulate matter standards based upon requirements set forth in the Children's Environmental Health Protection Act (Senate Bill 25).

Fine Particulate Matter ($PM_{2.5}$). Due to recent increased concerns over health impacts related to $PM_{2.5}$, both State and Federal $PM_{2.5}$ standards have been created. Particulate matter impacts primarily affect infants, children, the elderly, and those with pre-existing cardiopulmonary disease. In 1997, the U.S. Environmental Protection Agency (EPA) announced new $PM_{2.5}$ standards. Industry groups challenged the new standard in court and the implementation of the standard was blocked. However, upon appeal by the EPA, the United States Supreme Court reversed this decision and upheld the EPA's new standards. On January 5, 2005, the EPA published a final rule in the Federal Register that designates the basin as a nonattainment area for Federal $PM_{2.5}$ standards. On June 20, 2002, CARB adopted amendments for Statewide annual ambient particulate matter air quality standards. These standards were revised and established due to increasing concerns by CARB that previous standards were inadequate, as almost everyone in California is exposed to levels at or above the current state standards during some parts of the year, and the Statewide potential for significant health impacts associated with particulate matter exposure was determined to be large and wide-ranging.

Sulfur Dioxide (SO_2). SO_2 is a colorless, irritating gas with a rotten egg smell; it is formed primarily by the combustion of sulfur-containing fossil fuels. SO_2 is often used interchangeably with SO_x. Exposure of a few minutes to low levels of SO_2 can result in airway constriction in some asthmatics.

Volatile Organic Compounds (VOC). VOCs are hydrocarbon compounds (any compound containing various combinations of hydrogen and carbon atoms) that exist in the ambient air. VOCs contribute to the formation of smog through atmospheric photochemical reactions and may be toxic. Compounds of carbon (also known as organic compounds) have different levels of reactivity; that is, they do not react at the same speed or do not form O_3 to the same extent when exposed to photochemical processes. VOCs often have an odor, and some examples include gasoline, alcohol, and the solvents used in paints. Exceptions to the VOC designation include: CO, CO_2, carbonic acid, metallic carbides or carbonates, and ammonium carbonate. VOCs are a criteria pollutant since they are a precursor to O_3, which is a criteria pollutant. The SCAQMD uses the terms VOC and ROG interchangeably (see below).

Reactive Organic Gases (ROG). Similar to VOC, ROG are also precursors in forming O_3 and consist of compounds containing methane, ethane, propane, butane, and longer chain hydrocarbons, which are typically the result of some type of combustion/decomposition process. Smog is formed when ROG and NO_x react in the presence of sunlight. ROGs are a criteria pollutant since they are a precursor to O_3, which is a criteria pollutant.

SHORT-TERM CONSTRUCTION EMISSIONS

The project would have two phases of construction, Phase I involves drilling the proposed water well and Phase II involves constructing the water treatment plant and installing the conveyance pipelines. Phase I involves construction activities associated with grading, well drilling, and paving, and Phase II involves construction activities associated with pipeline trenching, treatment plant construction, and treatment plant architectural coating application. Exhaust emission factors for typical diesel-powered heavy equipment area based on the California Emissions Estimator Model version 2016.3.2 (CalEEMod) program defaults. Variables factored into estimating the total construction emissions include the level of activity, length of construction period, number of pieces and types of equipment in use, site characteristics, weather conditions, number of construction personnel, and the amount of materials to be transported on- or off-site. The analysis of daily construction emissions has been prepared utilizing CalEEMod. Refer to Appendix A, *Air Quality/Greenhouse Gas/Energy Analysis*, for the CalEEMod outputs and results. Table 4.3-1, *Project-Generated Construction Emissions*, presents the anticipated daily short-term construction emissions.

Table 4.3-1
Project-Generated Construction Emissions

Emissions Source	Pollutant (pounds/day)[1,2]					
	ROG	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Year 1 Construction Emissions[2]	3.47	33.15	37.14	0.08	1.81	1.53
Year 2 Construction Emissions[2]	3.78	35.05	36.13	0.07	2.00	1.66
SCAQMD Thresholds	*75*	*100*	*550*	*150*	*150*	*55*
Threshold Exceeded?	***No***	***No***	***No***	***No***	***No***	***No***

Notes:
1. Emissions were calculated using CalEEMod version 2016.3.2. Winter emissions represent worst-case.
2. The reduction/credits for construction emissions are based on "mitigation" included in CalEEMod and are required by the SCAQMD Rules. The adjustments applied in CalEEMod includes the following: properly maintain mobile and other construction equipment; replace ground cover in disturbed areas quickly; water exposed surfaces three times daily; cover stockpiles with tarps; and limit speeds on unpaved roads to 15 miles per hour. The emissions results in this table represent the "mitigated" emissions shown in Appendix A.

Source: Refer to Appendix A for assumptions used in this analysis.

Fugitive Dust Emissions

Construction activities are a source of fugitive dust emission that may have a substantial, temporary impact on local air quality. In addition, fugitive dust may be a nuisance to those living and working in the project area. Fugitive dust emissions are associated with land clearing, ground excavation, cut-and-fill, and truck travel on unpaved roadways (including demolition as well as construction activities). Fugitive dust emissions vary substantially from day to day, depending on the level of activity, specific operations, and weather conditions. Fugitive dust from grading, excavation and construction is expected to be short-term and would cease upon project completion. Most of this material is inert silicates, rather than the complex organic particulates released from combustion sources, which are more harmful to health.

Dust (larger than 10 microns) generated by such activities usually becomes more of a local nuisance than a serious health problem. Of particulate health concerns is the amount of PM_{10} generated as part of fugitive dust emissions. PM_{10} poses a serious health hazard alone or in combination with other pollutants. $PM_{2.5}$ is mostly produced by mechanical processes. These include automobile tire wear, industrial processes such as cutting and grinding, and re-suspension of particles from the ground or road surfaces by wind and human activities such as construction or agriculture. $PM_{2.5}$ is mostly derived from combustion sources, such as automobiles, trucks, and other vehicle exhaust, as well as from stationary sources. These particles are either directly emitted or are formed in the atmosphere from the combustion of gases such as NO_X and SO_X combining with ammonia. $PM_{2.5}$ components from material in the Earth's crust, such as dust, are also present, with the amount varying in different locations.

The project would implement required SCAQMD dust control techniques (i.e., daily watering), limitations on construction hours, and adhere to SCAQMD Rules 402 and 403 (which require watering of inactive and perimeter areas, track out requirements, etc.), to reduce PM_{10} and $PM_{2.5}$ concentrations. As depicted in Table 4.3-1, total PM_{10} and $PM_{2.5}$ emissions would not exceed the SCAQMD thresholds during construction. Thus, PM_{10} and $PM_{2.5}$ emissions impacts associated with project construction would be less than significant.

Construction Equipment and Worker Vehicle Exhaust

Exhaust emissions from construction activities include emissions associated with the transport of machinery and supplies to and from the project site, construction worker commutes to the project site, emissions produced on-site as the equipment is used, and emissions from trucks transporting materials to/from the site. As presented in Table 4.3-1, construction equipment and worker vehicle exhaust emissions (i.e., ROG, NO_X, CO, SO_2, PM_{10}, and $PM_{2.5}$) would not exceed the established SCAQMD thresholds for all criteria pollutants. Therefore, impacts in this regard would be less than significant.

ROG Emissions

In addition to gaseous and particulate emissions, the application of asphalt and surface coatings creates ROG emissions, which are O_3 precursors. In accordance with the methodology prescribed by the SCAQMD, ROG emissions associated with paving and architectural coating have been quantified with the CalEEMod model. As required by SCAQMD Regulation XI, Rule 1113 – Architectural Coating, all architectural coatings for the proposed structures would comply with specifications on painting practices as well as regulation on the ROG content of paint.[1] ROG emissions associated with the proposed project would be less than significant; refer to Table 4.3-1.

Total Daily Construction Emissions

As indicated in Table 4.3-1, criteria pollutant emissions during construction of the proposed project would not exceed the SCAQMD significance thresholds. Thus, total construction related air emissions would be less than significant.

Naturally Occurring Asbestos

Asbestos is a term used for several types of naturally occurring fibrous minerals that are a human health hazard when airborne. The most common type of asbestos is chrysotile, but other types such as tremolite and actinolite are also found in California. Asbestos is classified as a known human carcinogen by State, Federal, and international agencies and was identified as a toxic air contaminant by CARB in 1986.

Asbestos can be released from serpentinite and ultramafic rocks when the rock is broken or crushed. At the point of release, the asbestos fibers may become airborne, causing air quality and human health hazards. These rocks have been commonly used for unpaved gravel roads, landscaping, fill projects, and other improvement projects in some localities. Asbestos may be released to the atmosphere due to vehicular traffic on unpaved roads, during grading for development projects, and at quarry operations. All of these activities may have the effect of releasing potentially harmful asbestos into the air. Natural weathering and erosion processes can act on asbestos bearing rock and make it easier for asbestos fibers to become airborne if such rock is disturbed. According to the California Department of Conservation Division of Mines and Geology, serpentinite and ultramafic rocks are not known to occur within the project area.[2] Thus, no impacts would occur in this regard.

1 South Coast Air Quality Management District, *Rule 1113 Architectural Coatings*, http://www.aqmd.gov/docs/default-source/rule-book/reg-xi/r1113.pdf, accessed May 10, 2021.

2 California Department of Conservation Division of Mines and Geology, *A General Location Guide for Ultramafic Rocks in California – Areas More Likely to Contain Naturally Occurring Asbestos Report*, August 2000.

LONG-TERM OPERATIONAL EMISSIONS

Long-term operational air quality impacts consist of mobile source emissions generated from project-related traffic and emissions from area and energy sources. Emissions associated with each source area detailed in Table 4.3-2, *Project-Generated Operational Emissions*, are discussed below.

Table 4.3-2
Project-Generated Operational Emissions

Emissions Source[4]	Pollutant (pounds/day)[1]					
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Project Summer Emissions						
Area	0.02	0.00	<0.01	0.00	0.00	0.00
Energy[2]	<0.01	<0.01	<0.01	0.00	<0.01	<0.01
Mobile	0.07	0.19	1.06	<0.01	0.32	0.09
Total Summer Emissions[3]	***0.08***	***0.19***	***1.06***	***<0.01***	***0.32***	***0.09***
SCAQMD Threshold	*55*	*55*	*550*	*150*	*150*	*55*
Threshold Exceeded?	***No***	***No***	***No***	***No***	***No***	***No***
Project Winter Emissions						
Area	0.02	0.00	<0.01	0.00	0.00	0.00
Energy[2]	<0.01	<0.01	<0.01	0.00	<0.01	<0.01
Mobile	0.06	0.20	1.00	<0.01	0.32	0.09
Total Winter Emissions[3]	***0.08***	***0.20***	***1.00***	***<0.01***	***0.32***	***0.09***
SCAQMD Threshold	*55*	*55*	*550*	*150*	*150*	*55*
Threshold Exceeded?	***No***	***No***	***No***	***No***	***No***	***No***

Notes:
1. Emissions were calculated using CalEEMod version 2016.3.2 and the California Air Resources Board EMission FACtor model 2017 (EMFAC2017).
2. Exceeding Title 24 by 30 percent was applied in CalEEMod to account for the latest 2019 Title 24 Standards and project design feature. CalEEMod default energy efficiency is based on 2016 Title 24 Standards, and 2019 Title 24 Standards are 30 percent more efficient for nonresidential buildings.
3. The numbers may be slightly off due to rounding.
4. The reduction/credits for operational emissions are based on "mitigation" included in CalEEMod and are required by the SCAQMD Rules. The emissions results in this table represent the "mitigated" emissions shown in Appendix A.

Source: Refer to Appendix A for assumptions used in this analysis.

Area Source Emissions

Area source emissions include the emissions generated by the proposed emergency diesel-powered generator. As shown in Table 4.3-2, area source emissions during both summer and winter would not exceed established SCAQMD thresholds. Impacts would be less than significant in this regard.

Energy Source Emissions

Energy source emissions would be generated as a result of electricity and natural gas usage associated with the proposed project. The primary use of electricity and natural gas by the project would be for space heating and cooling, water heating, ventilation, lighting, appliances, and electronics. The on-site equipment anticipated to utilize electricity include the water well, automatic filter, air stripper, gas scrubber, and two booster pumps. Energy source emissions would not exceed established SCAQMD thresholds; refer to Table 4.3-2. Impacts in this regard would be less than significant.

Mobile Source

Mobile sources are emissions from motor vehicles, including tailpipe and evaporative emissions. Depending upon the pollutant being discussed, the potential air quality impact may be of either regional or local concern. For example, ROG, NO_X, SO_X, PM_{10}, and $PM_{2.5}$ are all pollutants of regional concern (NO_X and ROG react with sunlight to form O_3 [photochemical smog], and wind currents readily transport SO_X, PM_{10}, and $PM_{2.5}$). However, CO tends to be a localized pollutant, dispersing rapidly at the source.

Project-generated vehicle emissions were estimated using CalEEMod as well as the CARB's EMission FACtor Model 2017 (EMFAC2017). During operation, approximately one daily inspection of the plant would be conducted by a Cal Water inspector. No regular equipment repairs or maintenance would be required after construction is completed. According to the *Cal Water Well and Water Treatment Plant VMT Assessment* (VMT Analysis) prepared by Michael Baker International (dated April 29, 2021), the proposed project would conservatively generate approximately 35 average daily trips, including 6 trips during the a.m. peak hour and 6 trips during the p.m. peak hour. As shown in Table 4.3-2, mobile source emissions for both summer and winter would not exceed established SCAQMD thresholds. Therefore, impacts in this regard would be less than significant.

Total Operational Emissions

As shown in Table 4.3-2, the total operational emissions for both summer and winter would not exceed established SCAQMD thresholds. Therefore, impacts in this regard would be less than significant.

AIR QUALITY HEALTH IMPACTS

Adverse health effects induced by criteria pollutant emissions are highly dependent on a multitude of interconnected variables (e.g., cumulative concentrations, local meteorology and atmospheric conditions, and the number and character of exposed individual [e.g., age, gender]). In particular, O_3 precursors, VOCs and NO_X, affect air quality on a regional scale. Health effects related to O_3 are therefore the product of emissions generated by numerous sources throughout a region. Existing models have limited sensitivity to small changes in criteria pollutant concentrations, and, as such, translating project-generated criteria pollutants to specific health effects or additional days of nonattainment would produce meaningless results. In other words, the project's less than significant increases in regional air pollution from criteria air pollutants would have nominal or negligible impacts on human health.

As noted in the Brief of Amicus Curiae by the SCAQMD (dated April 6, 2015) for the *Sierra Club vs. County of Fresno*, the SCAQMD acknowledged it would be extremely difficult, if not impossible to quantify health impacts of criteria pollutants for various reasons including modeling limitations as well as where in the atmosphere air pollutants interact and form. Further, as noted in the Brief of Amicus Curiae by the San Joaquin Valley Air Pollution Control District (SJVAPCD) (dated April 13, 2015) for the *Sierra Club vs. County of Fresno*, SJVAPCD acknowledged that currently available modeling tools are not equipped to provide a meaningful analysis of the correlation between an individual development project's air emissions and specific human health impacts.

The SCAQMD acknowledges that health effects quantification from O_3, as an example, is correlated with the increases in ambient level of O_3 in the air (concentration) that an individual person breathes. The SCAQMD's Brief of Amicus Curiae states that it would take a large amount of additional emissions to cause a modeled increase in ambient O_3 levels over the entire region. The SCAQMD states that based on their own modeling in the SCAQMD's *2012 Air Quality Management Plan*, a reduction of 432 tons (864,000 pounds) per day of NO_X and a reduction of 187 tons (374,000 pounds) per day of VOCs would reduce O_3 levels at highest monitored sites by only nine parts per billion. As such, the SCAQMD concludes that it is not currently possible to accurately quantify O_3-related health impacts caused by NO_X or VOC emissions from relatively small projects (defined as projects with regional scope) due to photochemistry and regional model limitations. Thus, as the project would not exceed SCAQMD thresholds for construction and operational air emissions, the project would have a less than significant impact for air quality health effects.

Mitigation Measure: No mitigation is required.

c) Expose sensitive receptors to substantial pollutant concentrations?

Less Than Significant Impact. Sensitive receptors are defined as facilities or land uses that include members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples of these sensitive receptors are residences, schools, hospitals, and daycare centers. The CARB has identified the following groups of individuals as those most likely to be affected by air pollution: the elderly over 65, children under 14, athletes, and persons with cardiovascular and chronic respiratory diseases such as asthma, emphysema, and bronchitis.

The nearest sensitive receptors are residences located directly north of the proposed water well and treatment plant, as well as residences located directly north and south of the proposed distribution main along Barclay Street. In order to identify impacts to sensitive receptors, the SCAQMD recommends addressing localized significance thresholds for construction and operational impacts (stationary source only).

LOCALIZED SIGNIFICANCE THRESHOLDS

Localized Significance Thresholds (LSTs) were developed in response to SCAQMD Governing Boards' Environmental Justice Enhancement Initiative (I-4). The SCAQMD provided the *Final Localized Significance Threshold Methodology* (dated June 2003 [revised 2008]) for guidance. The LST methodology assists lead agencies in analyzing localized air quality impacts. The SCAQMD provides the LST lookup tables for one-, two-, and five-acre projects emitting CO, NO_X, $PM_{2.5}$, and/or PM_{10}. The project is located within Source Receptor Area (SRA) 4, South Los Angeles County Coastal.

Construction LST

The SCAQMD's guidance on applying CalEEMod to LSTs specifies the number of acres a particular piece of equipment would likely disturb per day. Based on default information provided by CalEEMod, the project is anticipated to disturb less than one acre during the grading phase. Therefore, the LST thresholds for one acre was utilized for the construction LST analysis. The closest sensitive receptors to the project site are single-family residences adjoining the project site to the north. These sensitive land uses may be potentially affected by air pollutant emissions generated during on-site construction activities. LST thresholds are provided for distances to sensitive receptors of 25, 50, 100, 200, and 500 meters. According to SCAQMD LST Methodology, projects with boundaries located closer than 25 meters to the nearest receptor should use the LSTs for receptors located at 25 meters. Therefore, the LST values for 25 meters were utilized in the analysis.

Table 4.3-3, *Localized Emissions Significance*, shows the localized construction-related emissions for NO_x, CO, $PM_{2.5}$, and PM_{10} compared to LSTs for SRA 4. It is noted that the localized emissions presented in Table 4.3-3 are less than those in Table 4.3-1 because localized emissions include only on-site emissions (e.g., from construction equipment and fugitive dust) and do not include off-site emissions (e.g., from hauling activities). As shown in Table 4.3-3, the project's localized construction emissions would not exceed the LSTs for SRA 4. Therefore, the localized significance impacts from project-related construction activities would be less than significant.

Table 4.3-3
Localized Emissions Significance

Source[2]	Pollutant (pounds/day)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
Maximum Daily Emissions[1]	33.08	36.36	1.55	1.46
Localized Significance Threshold[3]	57	585	4	3
Thresholds Exceeded?	***No***	***No***	***No***	***No***

Notes:
1. The winter emissions during Year 1 well drilling are presented as the worst-case scenario for NO_X, CO, PM_{10}, and $PM_{2.5}$ for the project.
2. The reduction/credits for construction emissions are based on "mitigation" included in CalEEMod and are required by the SCAQMD Rules. The emissions results in this table represent the "mitigated" emissions shown in Appendix A.
3. The Localized Significance Threshold (LST) was determined using Appendix C of the SCAQMD's *Final Localized Significant Threshold Methodology* guidance document for pollutants NO_X, CO, PM_{10}, and $PM_{2.5}$. The LST was based on the anticipated daily acreage disturbance for construction (one acre) and distance to sensitive receptor (25 meters) for SRA 4, South Los Angeles County Coastal.

Source: Refer to Appendix A for assumptions used in this analysis.

Operations LST

According to SCAQMD LST methodology, LSTs would apply to operational activities if the project includes stationary sources or attracts mobile sources that may spend extended periods queuing and idling at the site (e.g., warehouse or transfer facilities). The proposed project does not include such uses. Thus, due to the lack of such emissions, no long-term LST analysis is needed. Operational LST impacts would be less than significant in this regard.

CARBON MONOXIDE HOTSPOTS

CO emissions are a function of vehicle idling time, meteorological, and traffic flow. Under certain extreme meteorological conditions, CO concentrations near a congested roadway or intersection may reach unhealthful levels (e.g., adversely affecting residents, school children, hospital patients, and the elderly).

The Basin is designated as an attainment/maintenance area for the Federal CO standards and an attainment area under State standards. There has been a decline in CO emissions even though vehicle miles traveled (VMT) on U.S. urban and rural roads have increased; estimated anthropogenic CO emissions have decreased 68 percent between 1990 and 2014. In 2014, mobile sources accounted for 82 percent of the nation's total anthropogenic CO emissions.[3] Three major control programs have contributed to the reduced per-vehicle CO emissions, including exhaust standards, cleaner burning fuels, and motor vehicle inspection/maintenance programs.

According to the SCAQMD *CEQA Air Quality Handbook*, a potential CO hotspot may occur at any location where the background CO concentration already exceeds 9.0 parts per million (ppm), which is the 8-hour California ambient air quality standard, the closet monitoring station to the project site that monitors CO concentration is the Long Beach Station (2425 Webster Street), located approximately 5.6 miles south of the project site. The maximum CO concentration at the Long Beach Station was measured at 3.047 ppm in 2019.[4] Given that the background CO concentration does not currently exceed 9.0 ppm, a CO hotspot would not occur at the project site. Therefore, CO hotspot impacts would be less than significant in this regard.

Mitigation Measures: No mitigation is required.

[3] U.S. Environmental Protection Agency, *Carbon Monoxide Emissions*, https://cfpub.epa.gov/roe/indicator_pdf.cfm?i=10, accessed May 11, 2021.
[4] California Air Resources Board, *Air Quality Data*, https://www.arb.ca.gov/aqmis2/aqdselect.php?tab=specialrpt, accessed May 21,2021.

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

Less Than Significant Impact. According to the SCAQMD *CEQA Air Quality Handbook*, land uses associated with odor complaints typically include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding. The propose project involves construction of a water well, water treatment plant, and conveyance pipelines in adjacent roadway rights-of-way. Components of the water treatment plant include air strippers and granular activated carbon gas scrubber. The air strippers are designed to remove methane and all available sulfide that are present in the gaseous form of hydrogen sulfide from the raw groundwater. Air exhausted from the air strippers would be drawn using blower and venting system and treated in the gas scrubber to remove hydrogen sulfide from gaseous air prior to discharging into the atmosphere. This equipment would significantly reduce odors generated by the project. In addition, odors dissipate quickly and would be mostly confined within the project boundary. Therefore, the project would not result in odors adversely affecting off-site receptors, including sensitive residential receptors to the north, and the impacts would be less than significant.

Construction activities associated with the project may generate detectable odors from heavy-duty equipment exhaust and architectural coating. However, construction-related odors would be short-term in nature and cease upon project completion. In addition, the project would be required to comply with the California Code of Regulations, Title 13, Sections 2449(d)(3) and 2485, which minimizes the idling time of construction equipment either by requiring equipment to be shut off when not in use or limiting idling time to no more than five minutes. Compliance with these existing regulations would further reduce the detectable odors from heavy-duty equipment exhaust. The project would also be required to comply with the SCAQMD Regulation XI, Rule 1113 – Architectural Coating, which would minimize odor impacts from ROG emissions during architectural coating. Any odor impacts to existing adjacent land uses would be short-term and negligible. As such, the project would not result in other emissions, such as those leading to odors adversely affecting a substantial number of people. Impacts would be less than significant in this regard.

Mitigation Measures: No mitigation is required.

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4.4 BIOLOGICAL RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant Impact 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?				✓

This section is primarily based upon the *Biological Constraints Memorandum for the Cal Water Well and Water Treatment Plant – City of Long Beach, Los Angeles County, California* (Biological Constraints Memo) prepared by Michael Baker International, dated May 25, 2021; refer to Appendix B, *Biological Constraints Memo*.

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

No Impact. A Biological Constraints Memo was prepared for the project and includes a records search of the California Department of Fish and Wildlife's (CDFW) California Natural Diversity Database (CNDDB) and the California Native Plant Society's Online Inventory of Rare and Endangered Plants of California (CNPS Online Inventory). The records search encompassed four United States Geologic Survey (USGS) 7.5-minute quadrangles, including Long Beach, South Gate, Inglewood, and Torrance. The U.S. Fish and Wildlife Service's (USFWS) Information for Planning and Consultation (IPaC) online database was also reviewed to identify biological resources protected by the USFWS that are known or expected to occur on or within the project vicinity. In addition, Michael Baker reviewed publicly available reports, survey results, and literature detailing the biological resources previously observed on or within the vicinity of the project site, including the USFWS Environmental Conservation Online System Critical Habitat Mapper, U.S. Department of Agriculture/Natural Resources Conservation Service Web Soil Survey, and historic/current aerial photographs. A field survey was also conducted to observe existing conditions in regard to biological resources.

According to the Biological Constraints Memo, the project site is currently vacant and undeveloped with non-native vegetation covering the disturbed site. Roadway rights-of-way along Victoria Street, Long Beach Boulevard, and Barclay Street are completely developed with minimal street landscaping.

SPECIAL-STATUS PLANTS

Twenty-nine special-status plant species have been recorded in the USGS Long Beach, South Gate, Inglewood, and Torrance, California 7.5-minute quadrangles by the CNDDB, CNPS Online Inventory, and IPaC online database. Of these 29 species, all have a low potential to occur or are not expected to occur within the project site based on a review of specific habitat preferences, known distributions, and elevation ranges. The site is dominated by non-native plants and appears to be regularly mowed. Therefore, project development would have no impact on special-status plants.

SPECIAL-STATUS WILDLIFE

Twenty-nine special-status wildlife species have been recorded in the USGS Long Beach, South Gate, Inglewood, and Torrance, California 7.5-minute quadrangles by the CNDDB and IPaC online database. Of these 29 species, all have a low potential to occur or are not expected to occur within the project site based on a review of specific habitat preferences, known distributions, and elevation ranges. As stated, the site is located in an urbanized and built out environment, is dominated by non-native plants, and appears to be regularly mowed. Therefore, no impact would occur to special-status wildlife species.

Due to the ecologically disturbed nature of the project site, including surrounding developments outside of the project site, implementation of the proposed project would have no impact on special-status plant and wildlife species.

Mitigation Measures: No mitigation measures are required.

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

No Impact. According to the Biological Constraints Memo, no special-status vegetation communities have been reported in the Long Beach, South Gate, Inglewood, and Torrance, California 7.5-minute quadrangles by the CNDDB. Additionally, no special-status vegetation communities or riparian habitat were observed during the field survey. The project site also does not fall within USFWS-designated Critical Habitat for any Federally listed species. Therefore, project development would have no impact on riparian habitat or other sensitive natural communities.

Mitigation Measures: No mitigation measures are required.

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?

No Impact. No State or Federally protected wetlands are located within the proposed development footprint. As such, project construction would not adversely impact protected wetlands through direct removal, filling, hydrological interruption, or other means. No impacts would occur in this regard.

Mitigation Measures: No mitigation measures are required.

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?

Less Than Significant Impact With Mitigation Incorporated. Based on the lack of suitable habitat within the project site, project implementation would not interfere with the movement of any native resident, migratory fish, or wildlife species. The project site is bound by existing development on all sides and is located in an urbanized area of Long Beach and thus, does not function as a wildlife corridor or nursery site. However, the existing ornamental trees and shrubs along Victoria Street, Long Beach Boulevard, and Barclay Street have the potential to provide suitable nesting habitat for birds. As such, the proposed installation of conveyance pipelines in these roadways could potentially impact nesting birds protected by the Migratory Bird Treaty Act (MBTA). The MBTA prohibits activities that result in the direct take (defined as killing or possession) of a migratory bird. The proposed project has the potential to impact nesting birds if construction activities occur during the nesting season. As such, Mitigation Measure BIO-1 would ensure project-related ground disturbing activities occurring during the nesting season, if any, do not adversely impact potential nesting birds on-site. Implementation of Mitigation Measure BIO-1 would reduce such impacts to less than significant levels.

Mitigation Measures:

BIO-1 If ground-disturbing activities or removal of any trees, shrubs, or any other potential nesting habitat are scheduled within the avian nesting season (generally from January 1 through August 31), a qualified biologist retained by the Applicant shall conduct a pre-construction clearance survey for nesting birds within three days prior to any ground disturbing activities.

The biologist conducting the clearance survey shall document the negative results if no active bird nests are observed on the project site during the clearance survey with a brief letter report indicating that no impacts to active bird nests would occur before construction can proceed. If an active avian nest is discovered during the pre-construction clearance survey, construction activities shall stay outside of a 300-foot buffer around the active nest. For raptor species, this buffer shall be 500 feet. The biologist shall be present to delineate the boundaries of the buffer area and to monitor the active nest to ensure that nesting behavior is not adversely affected by the construction activity. Results of the pre-construction survey and any subsequent monitoring shall be provided to the City of Long Beach Development Services Department, California Department of Fish and Wildlife, and other appropriate agency(ies).

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

No Impact. *Long Beach Municipal Code* (LBMC) Chapter 14.28, *Trees and Shrubs*, contains regulations on tree and shrub planting, removal, and maintenance, including the protection of all trees located along streets, alleys, courts, or other public places during construction activities. Implementation of the proposed project would not adversely impact existing street trees along Long Beach Boulevard, Victoria Street, or Barclay Street. Consequently, construction of the proposed project would not conflict with any local policies protecting biological resources, including LBMC Chapter 14.28. No impacts would occur in this regard.

Mitigation Measures: No mitigation is required.

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?

No Impact. According to the California Department of Fish and Wildlife Service's *California Natural Community Conservation Plans Map,* the project site is neither located within a Natural Community Conservation Plan nor a Habitat Conservation Plan.[1] As such, project development would have no impact in this regard.

Mitigation Measures: No mitigation is required.

[1] California Department of Fish and Wildlife Service, *California Natural Community Conservation Plans*, April 2019.

4.5 CULTURAL RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant Impact 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 dedicated cemeteries?			✓	

This section is primarily based upon the *Cultural and Paleontological Resources Identification Report for the Cal Water Well and Water Treatment Plant Project, City of Long Beach, Los Angeles County, California* (Cultural/Paleontological Resources Report), prepared by Michael Baker International, dated June 8, 2021; refer to Appendix C, *Cultural/Paleontological Resources Report*.

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

Less Than Significant Impact. As part of the Cultural/Paleontological Resources Report, a South Central Information Center (SCCIC) records search, literature review and historical map review, an archaeological field survey, and a buried site sensitivity analysis were conducted to determine whether the project could result in a significant adverse change to cultural resources in accordance with CEQA. The SCCIC records search, conducted on April 19, 2021, included review of the California Inventory of Historic Resources, California Points of Historical Interest, California Historical Landmarks, Archaeological Determinations of Eligibility for Los Angeles County, and Built Environmental Resource Database. The archaeological field survey was conducted on May 3, 2021 to document existing conditions of the site and project area.

No cultural resources were identified within the project site; however, the record search revealed that one cultural resource (P-19-192309) was identified within 0.5-mile of the project site. P-19-192309 is an engineering structure located approximately 720 feet southeast of the site. According to the Cultural/Paleontological Resources Report, P19-192309 is currently listed on the California Register of Historical Resources and has been determined eligible for the National Register of Historic Places. Based on its distance from the project site and scale of the project, it is not anticipated that the proposed project would result in impacts to P-19-192309.

The record search also revealed that 15 cultural resource studies have previously been completed within the project area, one of which includes the project site (Report LA-11993). Report LA-11993 did not identify any cultural resources in the study area and concluded a finding of no adverse effect. Additionally, the field survey did not identify any new cultural resources. As such, project implementation would not cause a substantial adverse change in the significance of a historical resource and impacts in this regard would be less than significant.

***Mitigation Measures*:** No mitigation is required.

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

Less Than Significant Impact With Mitigation Incorporated. The soils of the project area have been heavily impacted by modern development the surface and in the near-surface sediments. Though the soil sits upon Holocene-age sediment, the soils are mapped as Urban Land of varying complexes, including the Metz-Pico, Hueneme-San

Emigdio, and the Biscailuz-Hueneme series. Urban Land is heavily modified through the creation of fills, soil import, and construction. It is typically of low sensitivity for significant prehistoric resources though it could contain significant historic period resources.

The buried site sensitivity of the project area has likely been negatively impacted by close proximity to the Los Angeles River. The river flooded numerous times in the twentieth century, sometimes with great impact upon the inhabitants living along its banks. Events such as the late March to early February 1938 flood dramatically overran the natural and man-made channelized banks of the river to cover 108,000 acres, destroyed substantial concrete structures, caused millions of dollars in property damage, moved the river's natural channel up to a mile, and removed and redeposited massive amounts of soil and alluvium. The 1938 flood was only considered a 50-year flood. Larger 100-year and 1,000-year flood regimes could have had even greater impacts upon archaeological sites along the Los Angeles River channel. Though the Los Angeles River may have provided many natural resources during prehistoric times and would have been a corridor for human movement, it could be an ever-changing area in prehistory with annually changing banks and deposition and removal of soil and alluvium. According to the Cultural/Paleontological Resources Report, researchers cited an 1862 flood in which the Los Angeles River, San Gabriel River, and Santa Ana River combined to create an 18-mile-wide river flowing into the Pacific Ocean between Signal Hill and Huntington Beach. As such, the Cultural/Paleontological Resources Report determined that the project area has low sensitivity for significant or potentially significant cultural deposits, such as prehistoric or historic period archaeology sites, as a result of historic and modern development and the negative impacts to the integrity of potential archaeological sites from historic flooding of the Los Angeles River.

Further, as discussed above, the previously conducted cultural resources studies within the project area did not identify any cultural resources in each respective study area, and the field survey did not identify any new cultural resources on-site. Nonetheless, there is a potential for disturbing previously unknown archaeological resources during excavation into native soil materials. As such, the project would be required to comply with Mitigation Measure CUL-1. Mitigation Measure CUL-1 would require all project construction efforts to halt until an archaeologist evaluates the findings and makes recommendations. With implementation of Mitigation Measure CUL-1, the project would not cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5 of the CEQA Guidelines, and impacts would be reduced to less than significant levels.

***Mitigation Measures*:**

CUL-1 Archaeological Resources Inadvertent Discovery. In the event that any subsurface cultural resources are encountered during earth-moving activities, all work within 50 feet shall halt and the project Applicant shall retain an archaeologist who meets the Secretary of the Interior's Professional Qualification Standards for archaeology to evaluate the findings and make appropriate recommendations. The archaeologist may evaluate the find in accordance with federal, State, and local guidelines, including those set forth in the California Public Resources Code Section 21083.2, to assess the significance of the find and identify avoidance or other measures as appropriate. If the discovery proves to be significant under the California Environmental Quality Act (CEQA), additional work such as data recovery excavation may be warranted to mitigate any significant impacts. In the event that an identified cultural resource is of Native American origin, the qualified archaeologist shall consult with the project Applicant and City of Long Beach Development Services to implement Native American consultation procedures. Construction shall not resume until the qualified archaeologist states in writing that the proposed construction activities would not significantly damage any archaeological resources.

c) Disturb any human remains, including those interred outside of dedicated cemeteries?

***Less Than Significant Impact*.** Due to the level of disturbance on the project site and in the site vicinity, it is not anticipated that human remains, including those interred outside of formal cemeteries, would be encountered during earth removal or ground-disturbing activities. Nonetheless, if human remains are found, those remains would require proper treatment, in accordance with applicable laws. State of California Public Resources Health and Safety Code

Section 7050.5 through 7055 describe the general provisions for human remains. Specifically, Health and Safety Code Section 7050.5 describes the requirements if any human remains are accidentally discovered during excavation of a site. As required by State law, the requirements and procedures set forth in Section 5097.98 of the California Public Resources Code would be implemented, including notification of the County Coroner, notification of the Native American Heritage Commission, and consultation with the individual identified by the Native American Heritage Commission to be the most likely descendant. If human remains are found during excavation, excavation must stop near the find and any area that is reasonably suspected to overlay adjacent remains until the County Coroner has been called out, the remains have been investigated, and appropriate recommendations have been made for the treatment and disposition of the remains. Following compliance with the aforementioned regulations, impacts related to the disturbance of human remains are less than significant.

***Mitigation Measures*:** No mitigation is required.

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4.6 ENERGY

Would the project:	Potentially Significant Impact	Less Than Significant Impact 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?			✓	

REGULATORY FRAMEWORK

State

California Building Energy Efficiency Standards (Title 24)

The 2019 California Building Energy Efficiency Standards for Residential and Nonresidential Buildings (California Code of Regulations, Title 24, Part 6), commonly referred to as "Title 24," became effective on January 1, 2020. In general, Title 24 requires the design of building shells and building components to conserve energy. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. Under 2019 Title 24 standards, residential buildings use about 53 percent less energy (mainly due to solar photovoltaic panels and lighting upgrades) when compared to those constructed under 2016 Title 24 standards, and nonresidential buildings are 30 percent more energy efficient than 2016 Title 24 standards.[1] The 2019 Title 24 standards require installation of energy efficient windows, insulation, lighting, ventilation systems, and other features that reduce energy consumption in homes and businesses

California Green Building Standards (CAL Green)

The California Green Building Standards Code (CALGreen; California Code of Regulations, Title 24, Part 11) is a Statewide mandatory construction code that was developed and adopted by the California Building Standards Commission and the California Department of Housing and Community Development; Title 24 Parts 6 and 11 together comprise the Building Energy Efficiency Standards. CALGreen standards require new residential and commercial buildings to comply with 6 Efficiency Strategic Plan

The California Public Utilities Commission (CPUC) prepared an *Energy Efficiency Strategic Plan* (Strategic Plan) in September 2008 with the goal of promoting energy efficiency and a reduction in greenhouse gases. In January 2011, a lighting chapter was adopted and added to the Strategic Plan. The Strategic Plan is California's single roadmap to achieving maximum energy savings in the State between 2009 and 2020, and beyond 2020. The Strategic Plan contains the practical strategies and actions to attain significant statewide energy savings, as a result of a year-long collaboration by energy experts, utilities, businesses, consumer groups, and governmental organizations in California, throughout the West, nationally and internationally. The plan includes four bold strategies:

[1] California Energy Commission, *2019 Building Energy Efficiency Standards*, March 2018.

1. All new residential construction in California will be zero net energy by 2020;
2. All new commercial construction in California will be zero net energy by 2030;
3. Heating, ventilation, and air condition (HVAC) will be transformed to ensure that its energy performance is optimal for California's climate; and
4. All eligible low-income customers will be given the opportunity to participate in the low-income energy efficiency program by 2020.

California Energy Commission Integrated Energy Policy Report

In 2002, the California State Legislature adopted Senate Bill (SB) 1389, which requires the California Energy Commission (CEC) to develop an Integrated Energy Policy Report (IEPR) every two years. SB 1389 requires the CEC to conduct assessments and forecasts of all aspects of energy industry supply, production, transportation, delivery and distribution, demand, and prices, and use these assessments and forecasts to develop energy policies that conserve resources, protect the environment, ensure energy reliability, enhance the State's economy, and protect public health and safety.

The CEC adopted the *2020 Integrated Energy Policy Report Update* (2020 IEPR Update) Volume I and Volume III on March 17, 2021, and Volume II on April 14, 2021.[2] The 2020 IEPR Update provides the results of the CEC's assessments of a variety of energy issues facing California, many of which will require action if the State is to meet its climate, energy, air quality, and other environmental goals while maintaining reliability and controlling costs.[3] The year of 2020 was unprecedented as the State continues to face the impacts and repercussions of several events including the COVID-19 pandemic, electricity outages, and Statewide wildfires. In response to these challenging events, the 2020 IEPR Update covers a broad range of topics, including transportation, microgrids, and the California Energy Demand Forecast. Volume I of the 2020 IEPR Update focuses on California's transportation future and the transition to zero-emission vehicles (ZEVs), Volume II examines microgrids, lessons learned from a decade of State-supported research, and stakeholder feedback on the potential of microgrids to contribute to a clean and resilient energy system, and Volume III reports on California's energy demand outlook, updated to reflect the global pandemic and help plan for a growth in zero-emission plug in electric vehicles.[4] Overall, the 2020 IEPR Update identifies actions the State and others can take that would strengthen energy resiliency, reduce greenhouse gas (GHG) emissions that cause climate change, improve air quality, and contribute to a more equitable future.

Local

City of Long Beach General Plan

Applicable goals and policies related to energy from the *City of Long Beach General Plan* (General Plan) Land Use Element are listed below.

Goal No.4: Support Neighborhood Preservation and Enhancement

Strategy No.11: Create healthy and sustainable neighborhoods

LU Policy 11-2: Provide for a wide variety of creative, affordable, sustainable land use solution to help resolve air, soil and water pollution, energy consumption and resource depletion issues.

2 California Energy Commission, *2020 Integrated Energy Policy Report Update Schedule*, March 25, 2021, https://www.energy.ca.gov/sites/default/files/2021-03/Workshop%20Schedule%20for%20Web%203.25.21_Updated_ADA.pdf, accessed May 18, 2021.

3 California Energy Commission, *Final 2020 Integrated Energy Policy Report Update, Volume I: Blue Skies, Clean Transportation*, March 2021, https://www.energy.ca.gov/data-reports/reports/integrated-energy-policy-report/2020-integrated-energy-policy-report-update-0, accessed May 18, 2021.

4 Ibid.

THRESHOLD OF SIGNIFICANCE

In accordance with CEQA Guidelines, project impacts are evaluated to determine whether significant adverse environmental impacts would occur. This analysis will focus on the project's potential impacts and provide mitigation measure, if required, to reduce or avoid any potentially significant impacts that are identified. According to Appendix G of the CEQA Guidelines, the proposed project would have a significant impact related to energy, if it would:

- Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation (refer to Response 4.6(a)); and/or

- Conflict with or obstruct a State or local plan for renewable energy or energy efficiency (Refer to Response 4.6(b)).

CEQA Guidelines Appendix F is an advisory document that assists in determining whether a project will result in the inefficient, wasteful, and unnecessary consumption of energy. The analysis on Response 4.6(a) relies on Appendix F of the CEQA Guidelines, which includes the following criteria to determine whether this threshold of significance is met:

- Criterion 1: The project energy requirements and its energy use efficiencies by amount and fuel type for each stage of the project including construction, operation, maintenance and/or removal. If appropriate, the energy intensiveness of materials maybe discussed.

- Criterion 2: The effects of the project on local and regional energy supplies and on requirements for additional capacity.

- Criterion 3: The effects of the project on peak and base period demands for electricity and other forms of energy.

- Criterion 4: The degree to which the project complies with existing energy standards.

- Criterion 5: The effects of the project on energy resources.

- Criterion 6: The project's projected transportation energy use requirements and its overall use of efficient transportation alternatives.

Quantification of the project's energy usage is presented and addresses Criterion 1. The discussion on construction-related energy use focuses on Criteria 2, 4, and 5. The discussion on operational energy use is divided into transportation energy demand and building energy demand. The transportation energy demand analysis discusses Criteria 2, 4, and 6, and the building energy demand analysis discusses Criteria 2, 3, 4, and 5.

a) 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.

PROJECT-RELATED SOURCES OF ENERGY CONSUMPTION

This analysis focuses on three sources of energy that are relevant to the proposed project: electricity, natural gas, and transportation fuel for vehicle trips and off-road equipment associated with project construction and operations. The analysis of the operational electricity/natural gas usage is based on the California Emissions Estimator Model version 2016.3.2 (CalEEMod) modeling results for the project. The project's estimated electricity/natural gas consumption is based on primarily on CalEEMod's default settings for the County, and consumption factors provided by the Southern California Edison (SCE) and the Southern California Gas Company (SoCalGas), the electricity and natural gas providers for the City and project site. The results of the CalEEMod modeling are included in Appendix A, *Air Quality/Greenhouse Gas/Energy Analysis*. The amount of operational fuel consumption was estimated using the California Air Resources Board's (CARB) EMission FACtor 2017 (EMFAC2017) computer program which provides projections for typical daily fuel usage in the County, and the project's annual vehicle miles traveled (VMT) outputs from CalEEMod. The estimated construction fuel consumption is based on the project's construction equipment list, timing/phasing, and house of duration for construction equipment, as well as vendor, hauling, and construction worker trips.

The project's estimated energy consumption is summarized in Table 4.6-1, *Project and Countywide Energy Consumption*. As shown in Table 4.6-1, the project's energy usage would constitute an approximate 0.0031 percent increase over Los Angeles County's typical annual electricity consumption and an approximate 0.0002 percent increase over Los Angeles County's typical annual natural gas consumption. The project's construction and operational vehicle fuel consumption would increase the County's consumption by 0.0100 percent and 0.0002 percent, respectively (**Criterion 1**).

Table 4.6-1
Project and Countywide Energy Consumption

Energy Type	Project Annual Energy Consumption[1]	Los Angeles County Annual Energy Consumption[2]	Percentage Increase Countywide[2]
Electricity Consumption	2,032 MWh	66,118,673 MWh	0.0031%
Natural Gas Consumption	5 therms	3,048,321 therms	0.0002%
Fuel Consumption			
• Construction Fuel Consumption[3]	38,925 gallons	390,111,209 gallons	0.0100%
• Operational Automotive Fuel Consumption[3]	8,244 gallons	4,033,521,614 gallons	0.0002%

Notes:
1. As modeled in CalEEMod version 2016.3.2.
2. The project increases in electricity and natural gas consumption are compared to the total consumption in Los Angeles County in 2019. The project increases in automotive fuel consumption are compared with the projected Countywide diesel fuel consumption in 2022.
   Los Angeles County electricity consumption data source: California Energy Commission, *Electricity Consumption by County*, http://www.ecdms.energy.ca.gov/elecbycounty.aspx, accessed May 13, 2021.
   Los Angeles County natural gas consumption data source: California Energy Commission, *Gas Consumption by County*, http://www.ecdms.energy.ca.gov/gasbycounty.aspx, accessed May 13, 2021.
3. Project fuel consumption calculated based on CalEEMod results. Countywide fuel consumption is from the California Air Resources Board EMFAC2017 model.

Refer to Appendix A for assumptions used in this analysis.

CONSTRUCTION-RELATED ENERGY CONSUMPTION

During construction, the project would consume energy in two general forms: (1) the fuel energy consumed by construction vehicles and equipment; and (2) bound energy in construction materials, such as asphalt, steel, concrete, pipes, and manufactured or processed materials such as lumber and glass.

Fossil fuels used for construction vehicles and other energy-consuming equipment would be used during grading, paving, building construction and architectural coatings. Fuel energy consumed during construction would be temporary and would not represent a significant demand on energy resources. In addition, some incidental energy conservation would occur during construction through compliance with State requirements that heavy-diesel equipment not in use for more than five minutes be turned off. Project construction equipment would also be required to comply with latest U.S. Environmental Protect Agency (EPA) and CARB engine emissions standards. These emissions standards require highly efficient combustion systems that maximize fuel efficiency and reduce unnecessary fuel consumption. Due to increasing transportation costs and fuel prices, contractors and owners have a strong financial incentive to avoid wasteful, inefficient, and unnecessary consumption of energy during construction (**Criterion 4**).

Substantial reduction in energy inputs for construction materials can be achieved by selecting green building materials composed of recycled materials that require less energy to produce than non-recycled materials.[5] The integration of green building materials can help reduce environmental impacts associated with the extraction, transport, processing, fabrication, installation, reuse, recycling, and disposal of these building industry source material.[6] The project-related incremental increase in the use of energy bound in construction materials such as asphalt, steel, concrete, pipes and manufactured or processed materials (e.g., lumber and gas) would not substantially increase demand for energy compared to overall local and regional demand for construction materials. As indicated in Table 4.6-1, the project's fuel consumption from construction would be approximately 38,925 gallons, which would increase fuel use in the County by approximately 0.01 percent. As such, construction would have a nominal effect on the local and regional energy supplies (**Criterion 2**). It is noted that construction fuel use is temporary and would cease upon completion of construction activities. There are no unusual project characteristics that would necessitate the use of construction equipment that would be less energy efficient that at comparable construction sits in the region or State (**Criterion 5**). Therefore, construction fuel consumption would be not be any more inefficient, wasteful, or unnecessary than other similar development projects of this nature. As such, a less than significant impact would occur in this regard.

OPERATIONAL ENERGY CONSUMPTION

Transportation Energy Demand

Pursuant to the Federal Energy Policy and Conservation Act of 1975, the National Highway Traffic and Safety Administration is responsible for establishing additional vehicle standards and for revising existing standards. Compliance with Federal fuel economy standards is not determined for each individual vehicle model. Rather, compliance is determined based on each manufacturer's average fuel economy for the portion of their vehicles produced for sale in the United States. Table 4.6-1 provides an estimate of the daily fuel consumed by vehicle traveling to and from the project site. Based on the *Cal Water Well and Water Treatment Plan VMT Assessment* prepared by Michael Baker (dated April 29, 2021), the proposed project would generate approximately 35 average daily trips. As indicated in Table 4.6-1, project operational daily trips are estimated to consume approximately 318,889 gallons of fuel per year, which would increase the County's automotive fuel consumption by 0.0002 percent. The project does not propose any unusual features that would result in excessive long-term operational fuel consumption (**Criterion 2**).

[5] California Department of Resources Recycling and Recovery, *Green Building Materials*, https://www.calrecycle.ca.gov/greenbuilding/materials#Material, accessed May 13, 2021.
[6] Ibid.

The key drivers of transportation-related fuel consumption are job locations/commuting distance and many personal choices on when and where to drive for various purposes. Those factors are outside of the scope of the design of the proposed project. Furthermore, the proposed project is a water treatment facility that would be operated remotely, require approximately one daily inspection by a Cal Water inspector, and generate nominal vehicle trips (**Criterion 4** and **Criterion 6**).

Therefore, fuel consumption associated with vehicle trips generated by the project would not be considered inefficient, wasteful, or unnecessary in comparison to other similar developments in the region. A less than significant impact would occur in this regard.

Building Energy Demand

The CEC developed 2020 to 2030 forecasts for energy consumption and peak demand in support of the 2019 IEPR for each of the major electricity and natural gas planning areas and the State based on the economic and demographic growth projections.[7] CEC forecasts that the Statewide annual average growth rates of energy demand between 2019 and 2030 would be up to 1.10 percent for electricity and 0.16 percent for natural gas.[8] As shown in Table 4.6-1, operational energy consumption of the project would represent approximately 0.0003 percent increase in electricity consumption and 0.0002 percent increase in natural gas consumption over the current Countywide usage, which would be significantly below CEC's forecasts and the current Countywide usage. Therefore, the project would be consistent with the CEC's energy consumption forecasts. As such, the project would not require additional energy capacity or supplies (**Criterion 2**). Additionally, the proposed project would require no regular equipment repairs or maintenance. The project is anticipated to operate 24 hours a day, seven days a week. The energy consumption would be nominal and distributed evenly throughout the day. As a result, the project would not result in unique or more intensive peak or base period electricity demand (**Criterion 3**).

The proposed electrical/mechanical/chemical block building would be required to comply with 2019 Title 24 Building Energy Efficiency Standards, which provides minimum efficiency standards related to various building features, including appliances, space heating and cooling equipment, building insulation and roofing, and lighting. Implementation of the 2019 Title 24 standards significantly reduces energy usage (30 percent compared to the 2016 Title 24 standards). The Title 24 Building Energy Efficiency Standards are updated every three years and become more stringent between each update, as such complying with the latest 2019 Title 24 standards would make the proposed project more energy efficient than existing buildings built under the earlier versions of the Title 24 standards (**Criterion 4**).

Furthermore, the electricity provider, SCE, is subject to California's Renewables Portfolio Standard (RPS). The RPS requires investor-owned utilities, electric service providers, and community choice aggregators to increase procurement from eligible renewable energy resources to 33 percent of total procurement by 2020 to 60 percent of total procurement by 2030. Renewable energy is generally defined as energy that comes from resources which are naturally replenished within a human timescale such as sunlight, wind, tides, waves, and geothermal heat. The increase in reliance of such energy resources further ensures that new development projects will not result in the waste of the finite energy resources (**Criterion 5**).

Therefore, the project would not cause wasteful, inefficient, and unnecessary consumption of building energy during project operation, or preempt future energy development or future energy conservation. A less than significant impact would occur in this regard.

Mitigation Measures: No mitigation is required.

[7] California Energy Commission, *California Energy Demand 2020-2030 Revised Forecast*, February 2020.
[8] Ibid.

b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Less Than Significant Impact.

The project would comply with all applicable energy goals and measures identified in the General Plan, as detailed in Table 4.6-2, *General Plan Energy Goal Consistency Analysis*. The General Plan contains energy efficient goals and measures that would help implement energy efficient measures and subsequently reduce GHG emissions within the City. In addition, the proposed electrical/mechanical/chemical block building would be required to comply with Title 24 and CALGreen standards, which would ensure the project incorporates energy efficient windows, insulation, lighting, and ventilation systems. Therefore, the project would result in less than significant impacts associated with renewable energy or energy efficiency plans.

Table 4.6-2
General Plan Energy Goal Consistency Analysis

General Plan Goal/Strategy/Policy	Project Compliance
No.4: Support Neighborhood Preservation and Enhancement **Strategy No.11**: Create healthy and sustainable neighborhoods. **LU Policy 11-2**: Provide for a wide variety of creative, affordable, sustainable land use solution to help resolve air, soil and water pollution, energy consumption and resource depletion issues.	**Consistent**. The project Applicant, Cal Water, provides water utility services for most of the City of Carson and portions of Long Beach, Torrance, Compton, and unincorporated areas of Los Angeles County. As a water well and water treatment plant, the proposed project would increase the reliability of water supply to Cal Water's Dominguez District service area. The project would allow utilization of groundwater (via unused groundwater rights) to offset purchased water. As such, the project would result in a lower overall cost to Cal Water customers. Additionally, utilizing groundwater would enhance local supply reliability and reduce reliance on purchased water sources that are subject to curtailment or interruption. In addition, project operations would occur remotely and would not require regular maintenance that could cause substantial energy consumption; refer to Table 4.6-1. As such, the proposed project would be in compliance with General Plan Land Use Element Strategy No. 11 and LU Policy 11-2.
Source: City of Long Beach, *City of Long Beach General Plan Land Use Element*, December 2019.	

Mitigation Measures: No mitigation is required.

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4.7 GEOLOGY AND SOILS

Would the project:	Potentially Significant Impact	Less Than Significant Impact 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:				
1) 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.			✓	
2) Strong seismic ground shaking?		✓		
3) Seismic-related ground failure, including liquefaction?		✓		
4) 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?				✓
f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?		✓		

This section is partially based upon the *Cultural and Paleontological Resources Identification Report for the Cal Water Well and Water Treatment Plant Project, City of Long Beach, Los Angeles County, California* (Cultural/Paleontological Resources Report), prepared by Michael Baker International, dated June 8, 2021; refer to Appendix C, *Cultural/Paleontological Report*.

a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

1) 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.

Less Than Significant Impact. Southern California, including the project area, is subject to the effects of seismic activity due to the active faults that traverse the area. Active faults are defined as those that have experienced surface displacement within Holocene time (approximately the last 11,000 years) and/or are in a State-designated Alquist-Priolo Earthquake Fault Zone.

According to the California Geological Survey's *Earthquake Zones of Required Investigation Long Beach Quadrangle* and Plate 2*, Fault Map with Special Study Zones*, of the General Plan Seismic Safety Element, no active faults or Alquist-Priolo Earthquake Fault Zones traverse the project site.[1] An Alquist-Priolo Special Study Zone traverses Long Beach in a northwest-southeast direction; however, its closest mapped location to the project site is approximately 2.4 miles to the south. The probability of damage due to surface ground rupture within the project site is low due to the distance to the known Alquist-Priolo Special Study Zone. Thus, impacts in this regard would be less than significant.

Mitigation Measures: No mitigation is required.

2) Strong seismic ground shaking?

Less Than Significant Impact With Mitigation Incorporated. Southern California has numerous active seismic faults subjecting residents to potential earthquake and seismic-related hazards. Seismic activity poses two types of potential hazards for residents and structures, categorized either as primary or secondary hazards. Primary hazards include ground rupture, ground shaking, ground displacement, subsidence, and uplift from earth movement. Primary hazards can also induce secondary hazards such as ground failure (lurch cracking, lateral spreading, and slope failure), liquefaction, water waves (seiches), movement on nearby faults (sympathetic fault movement), dam failure, and fires. Both primary and secondary hazards pose a threat to the community as a result of the project's proximity to active regional faults.

The region surrounding the Long Beach area is characterized by a relatively high seismic activity. The greatest damage from earthquakes results from ground shaking. Ground shaking is generally most severe near quake epicenters and generally become weaker further out from the epicenter. Based on the California Geological Survey's *Fault Activity Map of California*, and Plate 2*, Fault Map with Special Study Zones*, of the General Plan Seismic Safety Element, the closest major faults to the project site are the Newport-Inglewood Fault, Avalon-Compton Fault, and Los Alamitos Fault, located approximately 2.4 miles to the south, 3.1 miles to the west, and 4.2 miles to the southeast, respectively. As such, the project site may be subject to strong seismic shaking during an earthquake event, as is the case with the vast majority of areas throughout southern California.

Implementation of the proposed project would construct a water well and water treatment plant with ancillary structures and install conveyance pipelines in adjacent roadway rights-of-way. Due to the location of the project site within a seismically-active region, there is potential for strong seismic ground shaking. However, implementation of Mitigation Measure GEO-1, would require the Applicant to prepare a geotechnical report that evaluates the impacts of existing geotechnical conditions on the proposed development. The geotechnical report would identify any required seismic design parameters consistent with the General Plan, *Long Beach Municipal Code* (LBMC), and California Building Code (CBC) to reduce potential geotechnical hazards and maximize structural stability and well operations. Thus, upon implementation of Mitigation Measure GEO-1, impacts would be reduced to less-than-significant levels.

Mitigation Measures:

GEO-1 Prior to the initiation of construction activities, the project Applicant shall retain a qualified geotechnical engineer to prepare a site-specific geotechnical/soils report. The geotechnical report shall identify existing geotechnical conditions (e.g., liquefaction, landslide, lateral spreading, subsidence, collapse, expansive soils) and evaluate such conditions on the proposed development. The report shall identify required seismic design parameters consistent with the *City of Long Beach General Plan*, *Long Beach Municipal Code*, and California Building Code to reduce potential geotechnical hazards and maximize structural stability and well operations. The City of Long Beach Building and Safety Bureau shall ensure that all required seismic design parameters detailed in the geotechnical report are included in the project design plans.

[1] California Geological Survey, *Earthquake Zones of Required Investigation Long Beach Quadrangle*, March 25, 1999.

3) Seismic-related ground failure, including liquefaction?

Less Than Significant Impact With Mitigation Incorporated. Liquefaction of cohesionless soils can be caused by strong vibratory motion due to earthquakes. Liquefaction is characterized by a loss of shear strength in the affected soil layers, thereby causing the soils to behave as a viscous liquid. Susceptibility to liquefaction is based on geologic and geotechnical data. River channels and floodplains are considered most susceptible to liquefaction, while alluvial fans have a lower susceptibility. Depth to groundwater is another important element in the susceptibility to liquefaction. Groundwater shallower than 30 feet results in high to very high susceptibility to liquefaction, while deeper water results in low and very low susceptibility.

Based on the California Geological Survey's *Earthquake Zones of Required Investigation Long Beach Quadrangle*, the project site is mapped as being susceptible to liquefaction.[2] The project would be required to comply with Mitigation Measure GEO-1. As stated above, Mitigation Measure GEO-1 would require the Applicant to prepare a geotechnical report which addresses geotechnical conditions on-site and implement required seismic design features in conformance with the General Plan, LBMC, and CBC. The design measures are intended to maximize structural stability and well operation in the event of liquefaction hazards. Adherence to existing State and local building standards and Mitigation Measure GEO-1 would minimize risks related to liquefaction to a less than significant level.

Mitigation Measures: Refer to Mitigation Measure GEO-1.

4) Landslides?

No Impact. Landslides are a geologic hazard, with some moving slowly and causing damage gradually, and others moving rapidly and causing unexpected damage. Gravity is the force driving landslide movement. Factors that commonly allow the force of gravity to overcome the resistance of earth material to landslide movement include saturation by water, steepening of slopes by erosion or construction, alternate freezing or thawing, and seismic shaking.

Based on the California Geological Survey's *Earthquake Zones of Required Investigation Long Beach Quadrangle*, the project site is not susceptible to seismically-induced landslides.[3] Consequently, there is a low potential for landslides to occur on or near the project site as a result of the proposed development. The project would not expose people or structures to potential substantial adverse effects involving landslides, and no impacts would occur in this regard.

Mitigation Measures: No mitigation is required.

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

Less Than Significant Impact. The primary concern in regard to soil erosion or loss of topsoil would be during the construction phase of the project. Grading and earthwork activities associated with construction of the water well, water treatment plant, and conveyance pipelines would temporarily expose soils to potential short-term erosion by wind and water. However, the public rights-of-way where the conveyance pipelines would be installed are completely paved and topsoil is not present in these areas. Additionally, all demolition and construction activities would be subject to compliance with the CBC and the requirements set forth in the National Pollutant Discharge Elimination System (NPDES) Construction General Permit for construction activities; refer to Response 4.9(a). The NPDES Construction General Permit requires preparation of a Stormwater Pollution Prevention Plan (SWPPP), which would identify specific erosion and sediment control best management practices (BMPs) to be implemented in order to protect stormwater runoff during construction activities. Compliance with the CBC and NPDES requirements would minimize effects from soil erosion. Following compliance with the CBC and NPDES requirements, project implementation would result in a less than significant impact regarding soil erosion.

2 Ibid.
3 Ibid.

Mitigation Measures: No mitigation is required.

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 an on-site or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

Less Than Significant Impact With Mitigation Incorporated. Based on the analysis provided in Response 4.7(a)(4), the project would not result in significant impacts related to landslides. However, the project site is located within a seismically-active area. The project would be required to comply with Mitigation Measure GEO-1, including the implementation of seismic design features to ensure geotechnical stability with respect to potential lateral spreading, subsidence, liquefaction, and collapsible soils hazards. The proposed development is also required to comply with CBC standards to mitigate potential geological hazard impacts in this regard. Upon implementation of existing regulations and Mitigation Measure GEO-1, impacts would be less than significant.

Mitigation Measures: Refer to Mitigation Measure GEO-1.

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?

Less Than Significant Impact With Mitigation Incorporated. Expansive soils are defined as soils possessing clay particles that react to moisture changes by shrinking (when dry) or swelling (when wet). As stated above, the project Applicant would be required to prepare a geotechnical report that evaluates existing geotechnical conditions, including the potential for expansive soils, and identify building design features to reduce any potential geotechnical hazards. Further, the proposed project would be required to comply with the CBC to minimize potential for expansive soil hazards. Thus, impacts in this regard would be less than significant with mitigation incorporated.

Mitigation Measures: Refer to Mitigation Measure GEO-1.

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?

No Impact. No septic tanks or alternative wastewater disposal systems would be constructed as part of the project, and no impacts would occur in this regard.

Mitigation Measures: No mitigation is required.

f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less Than Significant Impact With Mitigation Incorporated. According to the Cultural/Paleontological Resources Report, Young alluvium, unit 2 (Qya2) underlies the project site. Young alluvium, unit 2, from the Pleistocene (2.5 million years ago to 11,700 years ago) and Holocene (11,700 years ago today) Epochs, is predominantly composed of poorly sorted and poorly consolidated clay and silt, and loose to moderately dense sand and silty sand. These deposits are generally found adjacent to stream and river channels and represent deposition by streams and rivers during flood events. In the project area, these deposits represent flooding events of the Los Angeles River.

The climate of southern California during the Pleistocene was cooler and moister than the modern Mediterranean climate. In contrast to the harsh, cold conditions in high latitudes near the ice sheets, southern California experienced a relatively milder climate during this time. During this time, familiar Pleistocene or “Ice Age” fauna, such as mammoth, mastodons, horses, camelids, and ground sloths, inhabited the area. The Natural History Museum of Los Angeles completed a paleontology collection records search for locality and specimen data in the project area on March 29, 2021. The records search showed no previously identified fossil localities within the project area. Seven fossil localities from the same sedimentary deposits as the project area occurred, either at the surface or at depth, at distances greater

than three miles from the project site. The Cultural/Paleo Report also included supplemental searches within a three-mile radius of the project site using the following online sources: University of California Museum of Paleontology Locality Search, San Diego Natural History Museum Collection Database, The Paleobiology Database, and FAUNMAP. No additional fossil localities were identified.

Based on the records search and literature review, the project site has a low sensitivity for fossil-bearing deposits within intact deposits. The site is underlain by deposits that have low sensitivity at the surface (Holocene age), and only transition into higher sensitivity deposits (Pleistocene age) with depth. In addition, no known fossil localities are in or near (within three miles) the project site. Therefore, the project has low potential to disturb paleontological resources due to the young age of the surficial deposits and the lack of documented localities nearby. Nevertheless, there is potential for encountering paleontological resources if Pleistocene age deposits are encountered at depth. Thus, implementation of Mitigation Measure GEO-2 would ensure that should any paleontological resources be encountered during ground-disturbing activities, all such activities are halted until a qualified paleontologist assesses the significance of the find. If the find is determined to be significant, appropriate avoidance measures recommended by the qualified paleontologist and approved by the City would be followed. As such, impacts regarding paleontological resources would be reduced to less than significant levels with mitigation incorporated.

Mitigation Measures:

GEO-2 Paleontological Resources Inadvertent Discovery. In the event that paleontological resources are encountered during the course of ground-disturbing activities, all such activities shall halt immediately, at which time the Applicant shall notify the City of Long Beach Development Services and retain a qualified paleontologist to assess the significance of the find. The paleontological assessment shall be completed in accordance with the Society of Vertebrate Paleontology standards. If the find is identified as insignificant, no additional measures will be necessary. If the find is determined to be significant, appropriate avoidance measures recommended by the qualified paleontologist and approved by the City of Long Beach Development Services must be followed unless avoidance is determined infeasible. If avoidance is infeasible, other appropriate measures (e.g., data recovery, excavation, curation) as recommended by the qualified paleontologist shall be instituted. A qualified paleontologist is a professional with a graduate degree in paleontology, geology, or related field, with demonstrated experience in the vertebrate, invertebrate, or botanical paleontology of California, as well as at least one year full time professional experience, or equivalent specialized training in paleontological research (i.e., the identification of fossil deposits, application of paleontological field and laboratory procedures and techniques, and curation of fossil specimens), and at least four months of supervised field and analytic experience in general North American paleontology.

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4.8 GREENHOUSE GASES

Would the project:	Potentially Significant Impact	Less Than Significant Impact 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?			✓	

GLOBAL CLIMATE CHANGE

California is a substantial contributor of global greenhouse gases (GHGs), emitting over 425 million tons of carbon dioxide (CO_2) per year.[1] Climate studies indicate that California is likely to see an increase of three to four degrees Fahrenheit over the next century. Methane (CH_4) is also an important GHG that potentially contributes to global climate change. GHGs are global in their effect, which is to increase the earth's ability to absorb heat in the atmosphere. As primary GHGs have a long lifetime in the atmosphere, accumulate over time, and are generally well-mixed, their impact on the atmosphere is mostly independent of the point of emission.

The impact of human activities on global climate change is apparent in the observational record. Air trapped by ice has been extracted from core samples taken from polar ice sheets to determine the global atmospheric variation of CO_2, CH_4, and nitrous oxide (N_2O) from before the start of industrialization (approximately 1750), to over 650,000 years ago. For that period, it was found that CO_2 concentrations ranged from 180 to 300 parts per million (ppm). For the period from approximately 1750 to the present, global CO_2 concentrations increased from a pre-industrialization period concentration of 280 to 379 ppm in 2005, with the 2005 value far exceeding the upper end of the pre-industrial period range. As of April 2021, the highest monthly average concentration of CO_2 in the atmosphere was recorded at 418 ppm.[2]

The Intergovernmental Panel on Climate Change (IPCC) constructed several emission trajectories of GHGs needed to stabilize global temperatures and climate change impacts. It concluded that a stabilization of GHGs at 400 to 450 ppm carbon dioxide equivalent (CO_2e)[3] concentration is required to keep global mean warming below 2 degrees Celsius (ºC), which in turn is assumed to be necessary to avoid dangerous climate change.

REGULATORY FRAMEWORK

Federal

U.S. Environmental Protection Agency Endangerment Finding

The U.S. Environmental Protection Agency's (EPA) authority to regulate GHG emissions stems from the U.S. Supreme Court decision in *Massachusetts v. EPA* (2007). The Supreme Court ruled that GHGs meet the definition of air

1 California Environmental Protection Agency, *California Greenhouse Gas Emissions for 2000 to 2018*, https://ww3.arb.ca.gov/cc/inventory/pubs/reports/2000_2018/ghg_inventory_trends_00-18.pdf, accessed May 10, 2021.

2 Scripps Institution of Oceanography, *Carbon Dioxide Concentration at Mauna Loa Observatory*, https://scripps.ucsd.edu/programs/keelingcurve/, accessed May 10, 2021.

3 Carbon Dioxide Equivalent (CO_2e) – A metric measure used to compare the emissions from various greenhouse gases based upon their global warming potential.

pollutants under the existing Clean Air Act and must be regulated if these gases could be reasonably anticipated to endanger public health or welfare. Responding to the Court's ruling, the EPA finalized an endangerment finding in December 2009. Based on scientific evidence it found that six GHGs (CO_2, CH_4, N_2O, hydrofluorocarbons [HFCs], perfluorocarbons [PFCs], and sulfur hexafluoride [SF_6]) constitute a threat to public health and welfare. Thus, it is the Supreme Court's interpretation of the existing Clean Air Act and the EPA's assessment of the scientific evidence that form the basis for the EPA's regulatory actions.

State

Assembly Bill 32 (California Global Warming Solutions Act of 2006)

California passed the California Global Warming Solutions Act of 2006 (AB 32; California Health and Safety Code Division 25.5, Sections 38500-38599). AB 32 establishes regulatory, reporting, and market mechanisms to achieve quantifiable reductions in GHG emissions and establishes a cap on Statewide GHG emissions. AB 32 requires that Statewide GHG emissions be reduced to 1990 levels by 2020. AB 32 specifies that regulations adopted in response to Assembly Bill (AB) 1493 (Pavley Bill) should be used to address GHG emissions from vehicles. However, AB 32 also includes language stating that if the AB 1493 regulations cannot be implemented, then the California Air Resources Board (CARB) should develop new regulations to control vehicle GHG emissions under the authorization of AB 32.

Senate Bill 375

Senate Bill (SB) 375, signed in September 2008 (Chapter 728, Statutes of 2008), aligns regional transportation planning efforts, regional GHG reduction targets, and land use and housing allocations. SB 375 requires Metropolitan Planning Organizations (MPOs) to adopt a sustainable communities' strategy (SCS) or alternative planning strategy (APS) that will prescribe land use allocation in that MPOs regional transportation plan. CARB, in consultation with MPOs, is required to provide each affected region with GHG reduction targets emitted by passenger cars and light trucks in the region for the years 2020 and 2035. These reduction targets are to be updated every eight years but can be updated every four years if advancements in emissions technologies affect the reduction strategies to achieve the targets. CARB is also charged with reviewing each MPO's SCS or APS for consistency with its assigned targets. If MPOs do not meet the GHG reduction targets, transportation projects may not be eligible for funding.

Executive Order S-3-05

Executive Order S-3-05 set forth a series of target dates by which Statewide emissions of GHGs would be progressively reduced, as follows:

- By 2010, reduce GHG emissions to 2000 levels;
- By 2020, reduce GHG emissions to 1990 levels; and
- By 2050, reduce GHG emissions to 80 percent below 1990 levels.

The Executive Order directed the California Environmental Protection Agency (Cal/EPA) Secretary to coordinate a multi-agency effort to reduce GHG emissions to the target levels. The Secretary is required to submit biannual reports to the Governor and California Legislature describing the progress made toward the emissions targets, the impacts of global climate change on California's resources, and mitigation and adaptation plans to combat these impacts. To comply with Executive Order S-3-05, the Cal/EPA Secretary created the California Climate Action Team, made up of members from various State agencies and commissions. The Climate Action Team released its first report in March 2006, which proposed to achieve the targets by building on the voluntary actions of California businesses, local governments, and communities and through State incentive and regulatory programs.

Title 24, Part 6

The California Energy Efficiency Standards for Residential and Nonresidential Buildings, Title 24, Part 6 of the California Code of Regulations (CCR) and commonly referred to as "Title 24," were established in 1978 in response to

a legislative mandate to reduce California's energy consumption. Part 6 of Title 24 requires the design of building shells and building components to conserve energy. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. The 2019 Title 24 standards took effect on January 1, 2020. Under 2019 Title 24 standards, residential buildings use about 53 percent less energy (mainly due to solar photovoltaic panels and lighting upgrades) when compared to those constructed under 2016 Title 24 standards, and nonresidential buildings are 30 percent more energy efficient than 2016 Title 24 standards.[4]

Title 24, Part 11

The California Green Building Standards Code (CCR Title 24, Part 11), commonly referred to as CALGreen, is a Statewide mandatory construction code developed and adopted by the California Building Standards Commission and the Department of Housing and Community Development. CALGreen also provides voluntary tiers and measures that local governments may adopt that encourage or require additional measures in five green building topical areas. The most recent update to the CALGreen Code went into effect on January 1, 2020.

Senate Bill 32

Signed into law on September 2016, SB 32 codifies the 2030 GHG reduction target in Executive Order B-30-15 (40 percent below 1990 levels by 2030). SB 32 authorizes CARB to adopt an interim GHG emissions level target to be achieved by 2030. CARB also must adopt rules and regulations in an open public process to achieve the maximum, technologically feasible, and cost-effective GHG reductions.

CARB Scoping Plan

On December 11, 2008, CARB adopted its *Climate Change Scoping Plan* (Scoping Plan), which functions as a roadmap to achieve GHG reductions in California required by AB 32 through subsequently enacted regulations. The Scoping Plan contains the main strategies California will implement to reduce CO_2e emissions by 174 million metric tons (MT), or approximately 30 percent, from the State's projected 2020 emissions levels of 596 million $MTCO_2e$ under a business as usual (BAU)[5] scenario. This is a reduction of 42 million $MTCO_2e$, or almost ten percent, from 2002 to 2004 average emissions, and requires the reductions in the face of population and economic growth through 2020. The Scoping Plan calculates 2020 BAU emissions as the emissions that would be expected to occur in the absence of any GHG reduction measures. The 2020 BAU emissions estimate was derived by projecting emissions from a past baseline year using growth factors specific to each of the different economic sectors (e.g., transportation, electrical power, industrial, commercial, and residential). CARB used three-year average emissions, by sector, from 2002 to 2004 to forecast emissions to 2020. The measures described in the Scoping Plan are intended to reduce projected 2020 BAU emissions to 1990 levels, as required by AB 32.

AB 32 requires CARB to update the Scoping Plan at least once every five years. CARB adopted the first major update to the Scoping Plan on May 22, 2014. The 2014 Scoping Plan summarizes recent science related to climate change, including anticipated impacts to California and the levels of GHG reduction necessary to likely avoid risking irreparable damage. It identifies the actions California has already taken to reduce GHG emissions and focuses on areas where further reductions could be achieved to help meet the 2020 target established by AB 32. The 2014 Scoping Plan also looks beyond 2020 toward the 2050 goal, established in Executive Order S-3-05, and observes that "a mid-term statewide emission limit will ensure that the State stays on course to meet our long-term goal." The 2014 Scoping Plan did not establish or propose any specific post-2020 goals, but identified such goals adopted by other governments or recommended by various scientific and policy organizations.

4 California Energy Commission, *2019 Building Energy Efficiency Standards*, March 2018.

5 "Business as Usual" refers to emissions that would be expected to occur in the absence of GHG reductions; refer to http://www.arb.ca.gov/cc/inventory/data/bau.htm. Note that there is significant controversy as to what BAU means. In determining the GHG 2020 limit, CARB used the above as the "definition." It is broad enough to allow for design features to be counted as reductions.

In December 2017, CARB approved the *California's 2017 Climate Change Scoping Plan: The Strategy for Achieving California's 2030 Greenhouse Gas Target* (2017 Scoping Plan). This update focused on implementation of a 40-percent reduction in GHGs by 2030 compared to 1990 levels. To achieve this, the 2017 Scoping Plan draws on a decade of successful programs that addresses the major sources of climate changing gases in every sector of the economy:

- *More Clean Cars and Trucks:* The 2017 Scoping Plan establishes far-reaching programs to incentivize the sale of zero-emission vehicles, drive the deployment of zero-emission trucks, and shift to a cleaner system of handling freight Statewide.

- *Increased Renewable Energy:* California's electric utilities are ahead of schedule meeting the requirement that 33 percent of electricity come from renewable sources by 2020. The 2017 Scoping Plan guides utility providers to 50 percent renewables, as required under SB 350.

- *Slashing Super-Pollutants:* The 2017 Scoping Plan calls for a significant cut in super-pollutants, such as CH_4 and HFC refrigerants, which are responsible for as much as 40 percent of global warming.

- *Cleaner Industry and Electricity:* California's renewed cap-and-trade program extends the declining cap on emissions from utilities and industries and the carbon allowance auctions. The auctions will continue to fund investments in clean energy and efficiency, particularly in disadvantaged communities.

- *Cleaner Fuels:* The Low Carbon Fuel Standard will drive further development of cleaner, renewable transportation fuels to replace fossil fuels.

- *Smart Community Planning:* Local communities will continue developing plans which will further link transportation and housing policies to create sustainable communities.

- *Improved Agriculture and Forests:* The 2017 Scoping Plan also outlines innovative programs to account for and reduce emissions from agriculture, as well as forests and other natural lands.

Local

City of Long Beach Sustainable City Action Plan

The City adopted the Sustainable City Action Plan (SCAP) in February 2010. The SCAP is tented to guide operational, policy, and financial decisions to create a more sustainable Long Beach. The goals in the SCAP were set to be achieved by 2020. As the proposed project would be operational after 2020, the SCAP is not considered for the consistency analysis in this section.

Long Beach Climate Action and Adaptation Plan

The City is currently developing its first-ever Climate Action and Adaptation Plan (CAAP). The City released the proposed CAAP on June 1, 2019. The City Council confirmed the CAAP on January 7, 2021, and the environmental review of the CAAP is currently underway. Final adoption of the CAAP is anticipated in fall 2021. As it has not yet been adopted, the CAAP is not considered for the consistency analysis in this section.

THRESHOLD OF SIGNIFICANCE

Amendments to CEQA Guidelines Section 15064.4 were adopted to assist lead agencies in determining the significance of the impacts of GHG emissions and gives lead agencies the discretion to determine whether to assess those emissions quantitatively or qualitatively. This section recommends certain factors to be considered in the determination of significance (i.e., the extent to which a project may increase or reduce GHG emissions compared to the existing environment; whether the project exceeds an applicable significance threshold; and the extent to which the project complies with regulations or requirements adopted to implement a plan for the reduction or mitigation of

GHGs). The amendments do not establish a threshold of significance; rather, lead agencies are granted discretion to establish significance thresholds for their respective jurisdictions, including looking to thresholds developed by other public agencies or suggested by other experts, such as the California Air Pollution Control Officers Association (CAPCOA), so long as any threshold chosen is supported by substantial evidence (CEQA Guidelines Section 15064.7(c)). The California Natural Resources Agency has also clarified that the CEQA Guidelines amendments focus on the effects of GHG emissions as cumulative impacts, and therefore GHG emissions should be analyzed in the content of CEQA's requirements for cumulative impact analyses (CEQA Guidelines Section 15064(h)(3)).[6,7] A project's incremental contribution to a cumulative impact can be found not cumulatively considerable if the project would comply with an approved plan or mitigation program that provides specific requirements to avoid or substantially lessen the cumulative problem within the geographic area of the project.[8]

The City has not adopted a numerical significance threshold for assessing impacts related to GHG emissions nor has the South Coast Air Quality Management District (SCAQMD), CARB, or any other State or regional agency adopted a numerical significance threshold for assessing GHG emissions that is applicable to the proposed project. Since there is no applicable adopted or accepted numerical threshold of significance for GHG emissions, the methodology for evaluating the project's impacts related to GHG emissions focuses on its consistency with Statewide, regional, and local plans adopted for the purpose of reducing and/or mitigating GHG emissions. This evaluation of consistency with such plans is the sole basis for determining the significance of the project's GHG-related impacts on the environment.

Notwithstanding, for informational purposes, the analysis also calculates the amount of GHG emissions that would be attributable to the project using recommended air quality models, as described below. The primary purpose of quantifying the project's GHG emissions is to satisfy CEQA Guidelines Section 15064.4(a), which calls for a good-faith effort to describe and calculate emissions. The estimated emissions inventory is also used to determine if there would be a reduction in the project's incremental contribution of GHG emissions as a result of compliance with regulations and requirements adopted to implement plans for the reduction or mitigation of GHG emissions. However, the significance of the project's GHG emissions impacts are not based on the amount of GHG emissions resulting from the project.

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?

Less Than Significant Impact.

PROJECT-RELATED SOURCES OF GREENHOUSE GASES

Project-related GHG emissions include emissions from direct and indirect sources. Project implementation would result in direct and indirect emissions of CO_2, N_2O, and CH_4, and would not result in other GHGs that would facilitate a meaningful analysis. Therefore, this analysis focuses on these three forms of GHG emissions. Direct project-related GHG emissions include emissions from construction activities, area sources, mobile sources, and stationary sources, while indirect sources include emissions from energy consumption. The proposed project is a water well and water treatment plant. Therefore, no water would be consumed, and no solid waste would be generated during project operation. The California Emissions Estimator Model version 2016.3.2 (CalEEMod) relies upon trip generation rates from the *Cal Water Well and Water Treatment VMT Assessment* (VMT Analysis) prepared by Michael Baker International (dated April 29, 2021), and project-specific land use data to calculate mobile source emissions. Based on

6 California Natural Resources Agency, *Final Statement of Reasons for Regulatory Action*, pp. 11-13, 14, 16, December 2009, https://resources.ca.gov/CNRALegacyFiles/ceqa/docs/Final_Statement_of_Reasons.pdf, accessed May 12, 2021.

7 State of California Governor's Office of Planning and Research, *Transmittal of the Governor's Office of Planning and Research's Proposed SB97 CEQA Guidelines Amendments to the Natural Resources Agency*, April 13, 2009, https://planning.lacity.org/eir/CrossroadsHwd/deir/files/references/C01.pdf, accessed May 12, 2021.

8 4 California Code of Regulations Section 15064(h)(3).

the VMT Analysis, the proposed project would generate approximately 35 average daily trips, including 6 trips during the a.m. peak hour and 6 trips during the p.m. peak hour. Table 4.8-1, *Estimated Greenhouse Gas Emissions*, presents the estimated CO_2, N_2O, and CH_4 emissions associated with the proposed project; refer to Appendix A, *Air Quality/Greenhouse Gas /Energy Analysis* for CalEEMod outputs.

Table 4.8-1
Estimated Greenhouse Gas Emissions

Source	CO_2	CH_4		N_2O		Total Metric Tons of CO_2e[2,3]
	Metric Tons per Year[1]	Metric Tons per Year[1]	Metric Tons of CO_2e[1]	Metric Tons per Year[1]	Metric Tons of CO_2e[1]	
Direct Emissions						
Construction (amortized over 30 years)	16.11	<0.01	0.10	0.00	0.00	16.20
Area Source	<0.01	0.00	0.00	0.00	0.00	<0.01
Mobile Source	55.27	<0.01	0.09	0.00	0.00	55.36
Stationary Source	2.81	<0.01	0.01	0.00	0.00	2.82
Indirect Emissions						
Energy Consumption[4]	492.22	0.00	0.00	0.00	0.00	492.22
Total Net Project-Related Emissions[2]	***566.60 $MTCO_2e$ per year***					

Notes: CO_2e = carbon dioxide equivalent; $MTCO_2e$ = metric tons of carbon dioxide equivalent
1. Project emissions were calculated using CalEEMod version 2016.3.2 and EMFAC2017, as recommended by the SCAQMD.
2. Totals may be slightly off due to rounding.
3. Carbon dioxide equivalent values calculated using the U.S. Environmental Protection Agency Website, *Greenhouse Gas Equivalencies Calculator*, http://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator, accessed May 21, 2021.
4. Exceeding Title 24 by 30 percent was applied in CalEEMod to account for the latest 2019 Title 24 Standards. CalEEMod default energy efficiency is based on 2016 Title 24 Standards, and 2019 Title 24 Standards are 30 percent more efficient for nonresidential buildings.

Source: Refer to Appendix A for detailed model input/output data.

Direct Project-Related Sources of Greenhouse Gases

Construction Emissions. Construction GHG emissions are typically summed and amortized over the lifetime of the project (assumed to be 30 years), then added to the operational emissions.[9] As shown in Table 4.8-1, the proposed project would result in 16.20 $MTCO_2e$ per year when amortized over 30 years (or a total of 486.08 $MTCO_2e$ in 30 years).

Area Source. Area source emissions were calculated using CalEEMod. The project-related area source emissions include landscaping activities. The project would directly result in less than 0.01 $MTCO_2e$ per year from area source emissions; refer to Table 4.8-1.

Mobile Source. CalEEMod relies upon trip generation rates from the VMT Analysis and project-specific land use data to calculate mobile source emissions. Project-generated vehicle emissions were estimated using CalEEMod as well as CARB's EMission FACtor model 2017 (EMFAC2017). The project would result in approximately 55.36 $MTCO_2e$ per year of mobile source generated GHG emissions; refer to Table 4.8-1.

Stationary Source. Stationary source emissions were calculated using CalEEMod. The project would potentially include a diesel emergency generator on-site. It is assumed that the emergency generator would operate 24 hours per year. The project-related stationary source emissions would be 2.82 $MTCO_2e$ per year; refer to Table 4.8-1.

9 The project lifetime is based on the standard 30-year assumption of the South Coast Air Quality Management District (South Coast Air Quality Management District, *Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold*, October 2008).

Indirect Project-Related Sources of Greenhouse Gases

Energy Consumption. Energy consumption emissions were calculated using CalEEMod and project-specific land use data. Southern California Edison (SCE) would provide electricity to the project site. The project would indirectly result in 492.22 $MTCO_2e$ per year due to energy consumption; refer to Table 4.8-1.

Total Project-Related Sources of Greenhouse Gases

As shown in Table 4.8-1, the total amount of project-related GHG emissions from direct and indirect sources combined would total 566.60 $MTCO_2e$ per year.

CONSISTENCY WITH APPLICABLE GHG PLANS, POLICIES, OR REGULATIONS

The GHG plan consistency analysis for the project is based on the project's consistency with the 2017 Scoping Plan Update. The 2017 Scoping Plan Update describes the approach the State will take to reduce GHG emissions by 40 percent below 1990 levels by the year 2030. The proposed project involves constructing a water well, water treatment plant, and conveyance pipelines and would require limited daily maintenance; therefore, the Southern California Association of Government's (SCAG) *2020-2045 Regional Transportation Plan & Sustainable Communities Strategy* (RTP/SCS) is not considered for plan consistency analysis.

Consistency with 2017 CARB Scoping Plan Update

The 2017 Scoping Plan Update has a range of GHG reduction actions which include direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, market-based mechanisms such as a cap-and-trade system, and an AB 32 implementation fee to fund the program. The 2017 Scoping Plan Update identifies additional GHG reduction measures necessary to achieve the 2030 target. These measures build upon those identified in the *First Update to the Scoping Plan* (dated 2013). Although a number of these measures are currently established as policies and measures, some measures have not yet been formally proposed or adopted. It is expected that these measures or similar actions to reduce GHG emissions will be adopted as required to achieve Statewide GHG emissions target. Table 4.8-2, *2017 Scoping Plan Update Consistency Analysis*, evaluates the project's consistency with applicable reduction actions and strategies by emission source category to determine how the project would be consistent with or exceed reduction actions and strategies outlined in the 2017 Scoping Plan Update.

Table 4.8-2
2017 Scoping Plan Update Consistency Analysis

Actions and Strategies	Project Consistency Analysis
Senate Bill (SB) 350	
Achieve a 50 percent Renewables Portfolio Standard (RPS) by 2030, with a doubling of energy efficiency savings by 2030.	**Consistent.** The project would utilize energy from Southern California Edison (SCE), which is required to meet the renewable energy standards under SB 350. In 2019, 35.1 percent of SCE's electricity came from renewable resources. By 2030, SCE plans to achieve 80 percent carbon-free energy. The project would also meet the applicable requirements of the Title 24 Standards and CALGreen.

Table 4.8-2 [cont'd]
2017 Scoping Plan Update Consistency Analysis

Actions and Strategies	Project Consistency Analysis
Low Carbon Fuel Standard (LCFS)	
Increase stringency of carbon fuel standards; reduce the carbon intensity of fuels by 18 percent by 2030, which is up from 10 percent in 2020.	**Not Applicable**. The LCFS applies to manufacturers of automotive fuels, not to individual land uses. Mobile emissions associated with the project in Table 4.8-1 reflect compliance with this regulation. Nonetheless, as previously discussed, GHG emissions related to vehicular travel by the project would benefit from this regulation and mobile source emissions generated by the project would be reduced with implementation of the LCFS consistent with reduction of GHG emissions under AB 32.
Mobile Source Strategy (Cleaner Technology and Fuels Scenario)	
Maintain existing GHG standards of light and heavy-duty vehicles while adding an addition 4.2 million zero-emission vehicles (ZEVs) on the road. Increase the number of ZEV buses, delivery trucks, or other trucks.	**Consistent.** The proposed facility would be operated remotely with approximately one daily inspection conducted by a Cal Water inspector. Therefore, project operations would generate a nominal number of vehicle trips, some of which may include the occasional light- or medium-duty trucks. Truck uses associated with the project would be required to comply with all CARB regulations, including the LCFS and newer engine standards. The proposed project would not conflict with the CARB's goal of adding 4.2 million zero-emission (ZEVs) on the road. As such, the project would not conflict with the goals of the Mobile Source Strategy.
Sustainable Freight Action Plan	
Improve the freight system efficiency and maximize the use of near zero emission vehicles and equipment powered by renewable energy. Deploy over 100,000 zero-emission trucks and equipment by 2030.	**Consistent.** As described above, project operations would involve minimal trips associated with daily inspections by a Cal Water employee. Thus, the project would not conflict with CARB's goal to deploy over 100,000 zero-emission trucks and equipment by 2030, as the project would be required to comply with all future applicable regulatory standard adopted by CARB.
Short-Lived Climate Pollutant (SLCP) Reduction Strategy	
Reduce the GHG emissions of methane and hydrofluorocarbons by 40 percent below the 2013 levels by 2030. Furthermore, reduce the emissions of black carbon by 50 percent below the 2013 levels by the year 2030.	**Consistent.** The project does not involve sources that would emit large amounts of methane (refer to Table 4.8-1). Additionally, the proposed project would include installation of air strippers designed to remove methane and all available sulfide that are present in the gaseous form of hydrogen sulfide from the raw groundwater. Furthermore, the project would be required to comply with all CARB and SCAQMD hydrofluorocarbon regulations. As such, the proposed project would not conflict with the SLCP reduction strategy.
SB 375 Sustainable Communities Strategies	
Increase the stringency of the 2035 GHG emission per capita reduction target for metropolitan planning organizations (MPO).	**Consistent.** The proposed project would not require regular maintenance, would be operated remotely, and would generate low levels of GHG emissions (refer to Table 4.8-1). As such, the project would not conflict with the goals of SB 375.
Post-2020 Cap and Trade Programs	
The Cap-and-Trade Program will reduce greenhouse gas (GHG) emissions from major sources (covered entities) by setting a firm cap on statewide GHG emissions while employing market mechanisms to cost-effectively achieve the emission-reduction goals.	**Not Applicable.** As detailed in Table 4.8-1, the project would not generate GHG emissions over the 25,000 metric tons of CO_2e per year cap and trade emission threshold. Therefore, the project would not conflict with this goal.
Source: California Air Resources Board, *2017 Scoping Plan*, November 2017.	

Consequently, the proposed project would not conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of GHGs, including AB 32, SB 32, and the 2017 Scoping Plan Update. Impacts would be less than significant in this regard.

Mitigation Measures: No mitigation is required.

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4.9 HAZARDS AND HAZARDOUS MATERIALS

Would the project:	Potentially Significant Impact	Less Than Significant Impact 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?			✓	
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 which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				✓
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?				✓

This section is primarily based upon the *Phase I Environmental Site Assessment, 6157 Long Beach Blvd., Long Beach, CA 90805* (Phase I ESA) prepared by Chow Engineering, Inc., dated October 21, 2016; refer to Appendix D, *Phase I ESA*.

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

Less Than Significant Impact. The project proposes the construction of a water well, a water treatment plant, and conveyance pipelines. Exposure of the public or the environment to hazardous materials could occur through improper handling or use of hazardous materials or hazardous wastes particularly by untrained personnel, a transportation accident, environmentally unsound disposal methods, or fire, explosion, or other emergencies. The severity of potential effects varies with the activity conducted, the concentration and type of hazardous material or wastes present, and the proximity of sensitive receptors.

CONSTRUCTION IMPACTS

Project construction could expose construction workers and the public to temporary hazards related to the transport, use, and maintenance of construction materials (i.e., oil, diesel fuel, transmission fluid, etc.). These activities would be short-term, and the materials used would not be in such quantities or stored in such a manner as to pose a significant safety hazard. Specifically, Phase I of project construction involves well drilling activities, which would utilize a reverse circulation hydraulic rotary drilling method and would produce drilling spoils. The disposal of these materials, as well as all other construction activities, would be required to comply with applicable laws and regulations governing the use, storage, and transportation of hazardous materials, ensuring that all potentially hazardous materials are used and handled in an appropriate manner.

During borehole drilling, drill fluid (consisting of water and bentonite, if necessary) and cuttings (consisting of native clay, silt, sand, and gravel) would be contained in a settling tank. A staging area is proposed on the project site to store the drill fluid settling tank, drill cuttings, and construction equipment and materials. A temporary water storage tank would be utilized to contain water discharged during well development and test pumping to allow settling of solids before discharging to the off-site storm drainage system. The drill cuttings would be tested for hazardous waste and would be properly disposed in accordance with applicable laws and regulations, as needed. Phase I construction also includes well performance testing for water production and water quality in order to determine overall site design and required treatment equipment. To support construction and performance testing, Cal Water is proposing to install an on-site storm drain connection to an existing storm drain approximately 100 feet to the east of the property. This storm drain connection would be used to discharge water generated during the well drilling and testing process. Cal Water is permitted and authorized to discharge water generated during well development per Cal Water's Statewide National Pollutant Discharge Elimination System (NPDES) Permit No. CAG140001.

Phase II construction consists of two subphases: Phase IIA involves constructing the treatment plant and Phase IIB involves constructing the conveyance pipelines in public right-of-way. These activities are typical of building and infrastructure improvement construction and would be required to comply with applicable laws and regulations governing the use, storage, and transportation of hazardous materials, ensuring that all potentially hazardous materials are used and handled in an appropriate manner. As such, impacts concerning the routine transport, use, or disposal of hazardous materials during project construction would be less than significant.

OPERATIONAL IMPACTS

Operation of the proposed water well, water treatment plant, and conveyance pipelines would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. As discussed in Section 2.5, *Project Characteristics*, possible contaminants such as methane, gaseous form of hydrogen sulfide, total organic carbon, disinfection by-product precursors, color-causing organic compounds, sodium hypochlorite, and ammonia may be present from the extracted raw water or utilized for water treatment. The project proposes the placement of air strippers that are designed to remove methane and all available sulfides that are present in the gaseous form of hydrogen sulfide from the raw groundwater. Air exhausted from the air strippers would be drawn through the use of a blower and venting system and treated in the gas scrubber to remove hydrogen sulfide from gaseous air prior to discharge into the atmosphere. Following the booster pumps, raw water would go through the ion exchange system that would remove total organic carbon, reduce disinfection by-product precursors, and remove color-causing organic compounds. If elevated levels of contaminants are detected during the well testing, an appropriate treatment system would be installed. It is conservatively assumed that manganese treatment, odor, and color removal would be required. The manganese treatment system would include components such as a horizontal multi-media pressure filter, ion exchange units, ground-level backwash water storage tank, associated pipes and valves, and associated electrical switchgear. Further, sodium hypochlorite and ammonia would be added to the ground water to disinfect the water supply prior to entering the distribution system. Additionally, a concrete masonry unit (CMU) electrical/mechanical/chemical building is proposed on-site to store chemicals (e.g., chlorine and ammonia). A Southern California Edison (SCE) transformer would also be installed on-site to provide electrical power for on-site equipment and lighting. A standby emergency generator and diesel storage tank may also be installed on-site for

backup power. The transformer, generator, and diesel storage tank would be constructed on concrete pads in the northeast corner of the site.

It should be noted that the final site plan design of the treatment plant and required equipment would be based on the results of the water quality data of the proposed well. As such, not all treatment equipment may be required. Exact locations of on-site equipment would be reviewed and determined in consultation with the City of Long Beach Development Services. It is acknowledged that a daily inspection of the plant would be conducted by one Cal Water plant inspector, and would consist of visually inspecting the plant for proper operation; verifying chemical supplies; noting any abnormalities; inspecting site security, safety, and any chemical spills; and taking water quality samples for testing structures/equipment and requiring regular well tests. All plant inspectors are required to have all necessary qualifications and experience and be certified by the State Water Resources Control Board. Consultation and plan check review with the City regarding final site design and required water treatment equipment as well as daily inspection conducted by a qualified Cal Water inspector would ensure that potential risks regarding the routine transport, use, and disposal during project operations are minimized.

The proposed project would be subject to compliance with existing regulations, standards, and guidelines established by the U.S. Environmental Protection Agency (EPA), State, County of Los Angeles, and the City of Long Beach related to the transport, use, and disposal of hazardous materials. The project is subject to compliance with the existing hazardous materials regulations, which are codified in California Code of Regulations Titles 8, 22, and 26, and their enabling legislations set forth in Health and Safety Code Chapter 6.95 as well as California Code of Regulations Title 49. Both the Federal and State governments require any business, where the maximum quantity of a regulated substance exceeds the specified threshold quantity, register with the County as a manager of regulated substances and prepare a Risk Management Plan. The Risk Management Plan must contain an off-site consequence analysis, a five-year accident history, an accident prevention program, an emergency response program, and a certification of the truth and accuracy of the submitted information. Businesses would be required to submit their plans to the Certified Unified Program Agency (CUPA) (Long Beach Fire Department and Long Beach Health Department), which would make the plans available to emergency response personnel.

While the risk of exposure to hazardous materials cannot be eliminated, best management practices (BMPs) can be implemented to reduce risk to acceptable levels. Compliance with applicable laws and regulations governing the use, storage, and transportation of hazardous materials would ensure that all potentially hazardous materials are used and handled in an appropriate manner, and would minimize the potential for safety impacts to occur. Impacts regarding the routine transport, use, or disposal of hazardous materials during project operations would be less than significant.

Mitigation Measures: No mitigation is required.

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?

Less Than Significant Impact. One of the means through which human exposure to hazardous substance could occur is through accidental release. Incidents that result in an accidental release of hazardous substance into the environment can cause contamination of soil, surface water, and groundwater, in addition to any toxic fumes that might be generated. If not cleaned up immediately and completely, the hazardous substances can migrate into the soil or enter a local stream or channel causing contamination of soil and water. Human exposure of contaminated soil, soil vapor, or water can have potential health effects on a variety of factors, including the nature of the contaminant and the degree of exposure.

CONSTRUCTION IMPACTS

Construction Equipment

During project construction, there is a possibility of accidental release of hazardous substances such as petroleum-based fuels or hydraulic fluid used for construction equipment. The level of risk associated with the accidental release of hazardous substances is not considered significant due to the small volume and low concentration of hazardous materials utilized during construction. The construction contractor would be required to use standard construction controls and safety procedures that would avoid and minimize the potential for accidental release of such substances into the environment. Standard construction practices would be observed such that any materials released are appropriately contained and remediated as required by local, State, and Federal law.

Construction Activities

Construction activities could also result in accidental conditions involving existing on-site contamination. The following analysis considers current and past uses of the project site and its vicinity, which may have resulted in existing on-site hazardous conditions, of which could cause accidental conditions during site disturbance activities.

Existing and Historic Uses

Based on the Phase I ESA, it does not appear that the site has been developed for at least 50 years. According to historical aerial photographs, the site appears undeveloped from 1963 to present day with the exception of an on-site residence constructed circa 1968 and is demolished by 1972. Additionally, according to the Phase I ESA, no evidence of underground storage tanks (USTs) or regulated material was found on-site. No evidence was observed acknowledging the potential presence of petroleum products, hazardous waste or chemical products on the project site during the Phase I ESA site inspection. Additionally, the project site is not listed in database searches related to hazards and hazardous materials; thus, no evidence of current or historic conditions, releases, or activities were observed or evaluated that would indicate a historic or existing hazardous condition on-site. As such, it is not anticipated that project construction would result in significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials due to existing or historic uses on-site.

Historic/Existing Uses of Adjacent Properties

Due to their historic/existing uses, several nearby properties were recorded as either active or inactive hazardous material sites/hazardous waste sites in the project vicinity, including:

- Betz Laboratory (3154 Harcourt Street in the City of Compton, approximately 0.25-mile west of the project site);
- Subway (6145 Long Beach Boulevard in the City of Long Beach, adjacent to southern project boundary);
- a fueling station (6204 Long Beach Boulevard in the City of Long Beach, approximately 250 feet north and upgradient from the project site);
- Luxavia Station (6020 Long Beach Boulevard in the City of Long Beach, approximately 660 feet to the southeast of the project site);
- Robert Shaw/Invensys Climate Controls (100 West Victoria Street in the City of Long Beach, approximately 660 feet to the south of Victoria Street);
- Arco AM/PM Station (6001 Long Beach Boulevard in the City of Long Beach, approximately 660 feet south-southeast of the project site); and

- Several businesses along Victoria Street south and southwest of the site.

According to the Phase I ESA, these sites are unlikely to result in adverse impacts on the project site as they either have no reported environmental issues, are inactive, or are active but closely monitored through ongoing site investigations and remediations per the Regional Water Quality Control Board.

Additionally, according to the Phase I ESA, there is a potential that a dry cleaner used to operate at 6158 Long Beach Boulevard in the mid-1950s through the mid-1970s. The 6158 Long Beach Boulevard site is approximately 100 feet east of the project site (across Long Beach Boulevard) and is currently developed with a church. If dry cleaning operations were historically conducted at this site, there is the potential that volatile organic compounds (VOCs) typically used in dry cleaning may have impacted the subsurface (e.g., soil vapor) of the 6158 Long Beach Boulevard site. Nonetheless, the Phase I ESA concluded that potential impacts related to soil vapor on the proposed project site is considered low given that groundwater flow in the area is likely in the south/southwest direction (i.e., away from the project site). Therefore, the risk of potential hazardous impacts due to the historic dry cleaning use at 6158 Long Beach Boulevard to groundwater underneath the project site is low. As such, impacts would be less than significant in this regard.

OPERATIONAL IMPACTS

Refer to Response 4.9(a) for a description of impacts related to project operations. Upon adherence to existing regulations related to hazards and hazardous materials, impacts pertaining to the potential for accidental conditions during project operations would be less than significant.

Mitigation Measures: No mitigation is required.

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

Less Than Significant Impact. The closest school to the project site is the Colin Powell Elementary School, located at 150 West Victoria Street approximately 50 feet from the proposed water conveyance pipelines in Victoria Street and approximately 0.12-mile south of the project site. As discussed under Responses 4.9(a) and (b), upon compliance with existing local, State, and Federal regulations associated with hazardous materials, short-term construction and long-term operations of the proposed project would not create a significant hazard to the public or the environment. As such, it is not anticipated that the proposed project would pose a significant health risk to the Colin Powell Elementary School. Less than significant impacts would occur in this regard.

Mitigation Measures: No mitigation is required.

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

No Impact. Government Code Section 65962.5 requires the Department of Toxic Substances Control (DTSC) and the State Water Resources Control Board (SWRCB) to compile and update a regulatory sites listing (per the criteria of the Section). The California Department of Health Services is also required to compile and update, as appropriate, a list of all public drinking water wells that contain detectable levels of organic contaminants and that are subject to water analysis pursuant to Section 116395 of the Health and Safety Code. Government Section 65962.5 requires the local enforcement agency, as designated pursuant to Section 18051 of Title 14 of the California Code of Regulations (CCR), to compile, as appropriate, a list of all solid waste disposal facilities from which there is a known migration of hazardous waste.

The project site is not listed pursuant to Government Code Section 65962.5.[1] Thus, no impact would result in this regard.

Mitigation Measures: No mitigation is required.

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 site is not located within an airport land use plan or within two miles of a public airport or public use airport. The nearest airport to the project site is the Compton/Woodley Airport, located approximately 2.5 miles to the northwest of the project site at 901 Alondra Boulevard in the City of Compton. According to the Los Angeles County Airport Land Use Commission, the project site is located outside of the Compton/Woodley Airport Influence Area.[2] Therefore, no impacts would occur in this regard.

Mitigation Measures: No mitigation is required.

f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Less Than Significant Impact With Mitigation Incorporated. The proposed project would not physically interfere with an adopted emergency response plan or emergency evacuation plan. Construction activities would be confined to the boundaries of the project site. As discussed in Section 4.17, *Transportation*, the project would be accessed via an existing driveway along Long Beach Boulevard and no changes are proposed to this driveway that would result in inadequate emergency access. However, project construction activities would result in temporary partial lane closures along Victoria Street, Long Beach Boulevard, and Barclay Street rights-of-way to install the proposed water and sewer pipelines. As such, Mitigation Measure TRA-1 would require a Traffic Management Plan (TMP) be prepared and implemented to ensure traffic flow and emergency access are maintained during the construction process. As stated, the TMP would include potential measures such as construction signage, limitations on timing for lane closures to avoid peak hours, temporary striping plans, and the need for a construction flagperson to direct traffic during heavy equipment use, among others.

As noted in Section 2.5, *Project Characteristics*, plant operations would be monitored remotely, with one daily inspection of the plant conducted by Cal Water plant inspector. Thus, on a long-term operational basis, the proposed water well and water treatment plant are not anticipated to generate traffic capable of interfering with emergency operations. Upon implementation of Mitigation Measure TRA-1, impacts in this regard would be less than significant, impacts in this regard would be less than significant.

Mitigation Measures: Refer to Mitigation Measure TRA-1.

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

No Impact. The project site and surrounding land are built-out with urbanized uses; no wildland vegetation that could fuel wildfires is present. Additionally, as discussed in Section 4.20, *Wildfire*, the City is not located in an area identified by the Federal Emergency Management Agency as a Very High Fire Hazard Zone. Thus, there would be no impact in this regard.

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1 California Environmental Protection Agency, *Cortese Listing*, https://calepa.ca.gov/sitecleanup/corteselist/, accessed June 24, 2021.

2 Los Angeles County Airport Land Use Commission, *Los Angeles County Airport Land Use Plan, Compton/Woodley Airport - Airport Influence Area*, revised December 1, 2004, https://planning.lacounty.gov/assets/upl/data/pdalup.pdf, accessed June 7, 2021.

Mitigation Measures: No mitigation is required.

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4.10 HYDROLOGY AND WATER QUALITY

Would the project:	Potentially Significant Impact	Less Than Significant Impact 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?			✓	
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:			✓	
1) Result in substantial erosion or siltation on- or off-site?			✓	
2) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite?			✓	
3) 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?			✓	
4) 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) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Less Than Significant Impact. As part of Section 402 of the Clean Water Act, the U.S. Environmental Protection Agency (EPA) has established regulations under the National Pollutant Discharge Elimination System (NPDES) program to control direct stormwater discharges. In California, the State Water Resources Control Board (SWRCB) administers the NPDES permitting program and is responsible for developing NPDES permitting requirements. The NPDES program regulates industrial pollutant discharges, which include construction activities. The SWRCB works in coordination with the Regional Water Quality Control Boards (RWQCB) to preserve, protect, enhance, and restore water quality. The City of Long Beach is within the jurisdiction of the Los Angeles RWQCB.

CONSTRUCTION IMPACTS

Dischargers whose projects disturb one or more acres of soil or whose projects disturb less than one acre but are part of a larger common plan of development that in total disturbs one or more acres, are required to obtain coverage under the General Permit for Discharges from Construction Activities Construction General Permit Order 2009-0009-DWQ (Construction General Permit). Construction activities subject to the Construction General Permit include clearing,

grading, and disturbances to the ground such as stockpiling, or excavation, but does not include regular maintenance activities performed to restore the original line, grade, or capacity of the facility.

The Construction General Permit requires the development and implementation of a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP would contain a site map(s) which shows the construction site perimeter, existing and proposed buildings, lots, roadways, stormwater collection and discharge points, general topography both before and after construction, and drainage patterns across the project. The SWPPP is required to identify Best Management Practices (BMPs) the discharger would use to protect stormwater runoff and the placement of those BMPs. Additionally, the SWPPP would contain a visual monitoring program; chemical monitoring program for "non-visible" pollutants to be implemented if there is a failure of BMPs; and sediment monitoring plan if the site discharges directly to a water body listed on the 303(d) list for sediment. Section A of the Construction General Permit describes the elements that must be contained in a SWPPP.

The proposed water well, water treatment plant, and associated utility improvements in adjacent roadway rights-of-way, involve clearing, grading, and disturbances to the ground that disturbs at least one acre. Thus, the project is required to obtain a Construction General Permit. Additionally, Phase I of project construction involves well drilling activities, which would generate drill fluid (consisting of water and bentonite, if necessary) and cuttings (consisting of native clay, silt, sand, and gravel). The drill fluid and cuttings would be contained in a settling tank. A staging area is proposed on the project site to store the drill fluid settling tank, drill cuttings, and construction equipment and materials. A temporary water storage tank would be utilized to contain water discharged during well development and test pumping to allow settling of solids before discharging to the off-site storm drainage system. Phase I construction also includes well performance testing for water production and water quality in order to determine overall site design and required treatment equipment. To support construction and performance testing, Cal Water is proposing to install an on-site storm drain connection to an existing storm drain approximately 100 feet to the east of the property. This storm drain connection would be used to discharge water generated during the well drilling and testing process. Cal Water is permitted and authorized to discharge water generated during well development per Cal Water's NPDES Permit No. CAG140001. Moreover, as part of the project's compliance with NPDES requirements, the project Applicant would be required to prepare a Notice of Intent (NOI) for submittal to the Los Angeles RWQCB providing notification of intent to comply with the Construction General Permit. The Applicant would also prepare and implement a project-specific SWPPP, which is required to outline the erosion, sediment, and non-stormwater BMPs, in order to minimize the discharge of pollutants at the construction site. These BMPs could include measures to contain runoff from the construction site, prevent sediment from disturbed areas from entering the storm drain system using structural controls (i.e., sand bags at inlets), and cover and contain stockpiled materials to prevent sediment and pollutant transport. Implementation of the BMPs detailed in the project-specific SWPPP would ensure runoff and discharges during the project's construction phase do not violate any water quality standards. Compliance with NPDES requirements would reduce short-term construction-related water quality impacts to a less than significant level.

OPERATIONAL IMPACTS

The project would be regulated under the NPDES Phase I Municipal Stormwater Permits issued by the Los Angeles RWQCB for Long Beach. Since 1990, operators of municipal separate storm sewer systems are required to develop a stormwater management program designed to prevent harmful pollutants from impacting water resources via stormwater runoff. The City owns and/or operates a large municipal separate storm sewer system (MS4) that conveys and ultimately discharges into surface waters under the jurisdiction of the Los Angeles RWQCB. These discharges originate as surface runoff from the various land uses within the City's boundary. Untreated, these discharges contain pollutants with the potential to impair or contribute to the impairment of the beneficial uses in surface waters. Since 1999, the City's monitoring data and analyses in support of Total Maximum Daily Load development have identified pollutants of concern in discharges from the MS4. These pollutants of concern vary by receiving water. They generally include, but are not limited to, copper, lead, zinc, cadmium, polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs), pyrethroid pesticides, organophosphate pesticides fecal indicator bacteria, and trash.

On September 8, 2016, the Los Angeles RWQCB made effective Order No. R4-2014-0024, which renews the municipal NPDES permit for the City of Long Beach. As prescribed in Order No. R4-2014-0024-A01, *Waste Discharge Requirements for Municipal Separate Storm Sewer System (MS4) Discharges from the City of Long Beach*, the City shall develop and implement procedures to ensure that a discharger fulfills the following for non-stormwater discharges to MS4s.[1]

- Notifies the City of the planned discharge in advance, consistent with requirements in Table 7 of Order No. R4-2014-0024-A01 or recommendations pursuant to the applicable BMP manual;
- Obtains any local permits required by the City;
- Provides documentation to the City that it has obtained any other necessary permits of water quality certifications for the discharge;
- Conducts monitoring of the discharge, if required by the City;
- Implements BMPs and/or control measures as specified in Table 7 or in the applicable BMP manual(s) as a condition of the approval to discharge into the MS4; and
- Maintains records of its discharge to the MS4, consistent with requirements in Table 7 or recommendations pursuant to the applicable BMP manual.

In 2001, the City revised its Long Beach Stormwater Management Program (LBSWMP). The LBSWMP is a comprehensive program containing several elements, practices, and activities aimed at reducing or eliminating pollutants in stormwater to the maximum extent possible. Furthermore, the City's NPDES and Standard Urban Stormwater Mitigation Plan (SUSMP) regulations contained in *Long Beach Municipal Code* (LBMC) Chapter 18.61, *NPDES and SUSMP Regulations*, state that:

A. The Building Official shall prepare, maintain, and update, as deemed necessary and appropriate, the *NPDES and SUSMP Regulations Manual* and shall include technical information and implementation parameters, alternative compliance for technical infeasibility, as well as other rules, requirements and procedures as the City deems necessary, for implementing the provisions of this chapter.

B. The Building Official shall develop, as deemed necessary and appropriate, in cooperation with other City departments and stakeholders, informational bulletins, training manuals and educational materials to assist in the implementation of this chapter.

Given that the existing site is a vacant, pervious lot, the proposed development would increase the amount of impervious areas on-site. Drainage conditions in the project area would be slightly altered but would continue to drain towards an existing catch basin/sidewalk underdrain at the southeast corner of the site. The project would also implement stormwater BMPs to minimize impacts related to stormwater and urban runoff. Specifically, as shown on Exhibit 2-3, *Proposed Site Plan*, the project proposes a gravel and landscaped area along the northern and western project boundary with an infiltration system, which would allow stormwater accumulated on-site to infiltrate into the earth on-site rather than flow into the City's storm drain system. Excess runoff would then flow southeasterly towards existing curbs and gutters along Long Beach Boulevard. Thus, upon compliance with the requirements of the NPDES, LBMC Chapter 18.61, and the LBSWMP, impacts related to water quality standards and waste discharge requirements during long-term operations would be less than significant.

[1] Los Angeles Regional Water Quality Control Board, *Order No. R4-2014-0024-A01 Amending Order No. R4-2014-0024, NPDES Permit No. CAS004003, Waste Discharge Requirements for Municipal Separate Storm Sewer System (MS4) Discharges from the City of Long Beach*, September 8, 2016.

Mitigation Measures: No mitigation is required.

b) 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 water well would upgrade Cal Water facilities to ensure reliable and high quality water supply for existing and future customers. The project site itself is approximately 0.4 acre in size and is not currently used for groundwater recharge. Therefore, development of the water well and water treatment plant on-site would not interfere with groundwater recharge. Additionally, groundwater pumped from the new water well would be pumped from the Central Basin's Lynwood and Silverado Aquifers. The Central Basin is an adjudicated groundwater basin, meaning that there is a limit to the total allowed pumping allocation. Cal Water's Dominguez District's allowed pumping allocation is 6,480 acre-feet per year. The proposed water well would pump approximately 1,500 to 2,250 gallons per minute, or approximately 2,421 and 3,632 acre-feet per year. Therefore, Cal Water would not be allowed to pump out more water than permitted, which would ensure the project does not substantially decrease groundwater supplies or interfere substantially with groundwater recharge. Impacts in this regard would be less than significant.

Mitigation Measures: No mitigation is required.

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

1) Result in substantial erosion or siltation on- or off-site?

Less Than Significant Impact. Soil disturbance would temporarily occur during project construction due to earth-moving activities such as excavation, well drilling, and grading. Disturbed soils would be susceptible to erosion from wind and rain, resulting in sediment transport via stormwater runoff from the project site.

The project would be subject to compliance with the requirements set forth in the NPDES Stormwater Construction General Permit for construction activities; refer to Response 4.10(a). Compliance with the NPDES requirements, including preparation of a SWPPP, would reduce the volume of sediment-laden runoff discharging from the site during construction. Implementation of BMPs, such as storm drain inlet protection and bioswales, would reduce the potential for sediment and stormwater runoff containing pollutants from entering receiving waters. Therefore, project implementation would not substantially alter the existing drainage pattern of the site during the construction process such that substantial erosion or siltation would occur.

The long-term operation of the proposed project would not have the potential to result in substantial erosion or siltation on- or off-site. At project completion, the site would be developed with the water well, water treatment plant, and ancillary structures. The site would be mostly paved with a gravel area along the northern project boundary with an infiltration system, which would reduce stormwater runoff off-site. Overall, the proposed improvements would not substantially alter the existing topography or drainage patterns on-site. Impacts in this regard would be less than significant.

Mitigation Measures: No mitigation is required.

2) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite?

Less Than Significant Impact. Refer to Response 4.10(c)(1). The project site is generally flat and is located within an urbanized area. At project completion, the site would be mostly paved with a gravel area along the northern project boundary with an infiltration system, which would reduce stormwater runoff off-site. Excess runoff would flow easterly towards existing curbs and gutters along Long Beach Boulevard. No substantial changes would occur to the existing

topography or drainage pattern of the site and surrounding area in a manner that would result in flooding on- or off-site. As such, impacts in this regard would be less than significant.

Mitigation Measures: No mitigation is required.

3) 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?

Less Than Significant Impact. Refer to Responses 4.10(c)(1) and 4.10(c)(2).

Mitigation Measures: No mitigation is required.

4) Impede or redirect flood flows?

Less Than Significant Impact. Refer to Responses 4.10(c)(2) and 4.10(d).

Mitigation Measures: No mitigation is required.

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

No Impact.

FLOOD

According to the Federal Emergency Management Agency's Flood Map Service Center, the project site is located outside of the 100-year flood hazard area.[2] As a result, no impacts would occur in this regard.

TSUNAMI

A tsunami is a great sea wave, commonly referred to as a tidal wave, produced by a significant undersea disturbance such as tectonic displacement of a sea floor associated with large, shallow earthquakes. The project site is located over seven miles inland from the Pacific Ocean and thus, is at a sufficient distance so as not to be subject to tsunami impacts. No impacts would occur in this regard.

SEICHE

A seiche is an oscillation of a body of water in an enclosed or semi-enclosed basin, such as a reservoir, harbor, lake, or storage tank. The project site is not in the vicinity of a reservoir, harbor, lake, or storage tank capable of creating a seiche. No impacts would occur in this regard.

Mitigation Measures: No mitigation is required.

e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Less Than Significant Impact. The *Basin Plan for the Coastal Watersheds of Los Angeles and Venture Counties* (Basin Plan) establishes water quality standards for ground and surface waters within the Los Angeles region, which includes the City, and is the basis for the Los Angeles RWQCB's regulatory programs.

The 2014 Sustainable Groundwater Management Act requires local public agencies and groundwater sustainability agencies in high- and medium-priority basins to develop and implement groundwater sustainability plans (GSPs) or

[2] Federal Emergency Management Agency, *Flood Insurance Rate Map #06037C1955F, Panel 1955 of 2350*, September 26, 2008.

prepare an alternative to a groundwater sustainability plan. The City is located within the Coastal Plain of Los Angeles – West Coast groundwater basin, which is designated as a Very Low priority basin.[3] Therefore, there is no groundwater sustainability plan established for the basin. However, the Water Replenishment District of Southern California developed the *Groundwater Basins Master Plan* (GBMP), which identifies projects and programs to enhance basin replenishment, increase reliability of groundwater resources, and improve and protect groundwater quality in the Los Angeles West Coast and Central groundwater basins.[4]

As stated, project construction and operations would comply with existing NPDES program requirements established by the Los Angeles RWQCB; refer to Response 4.10(a). Additionally, as discussed under Response 4.10(b), groundwater pumped from the new water well would be pumped from the Central Basin's Lynwood and Silverado Aquifers. The Central Basin is an adjudicated groundwater basin and Cal Water's Dominguez District is allowed a pumping allocation of 6,480 acre-feet per year. Cal Water would not be allowed to pump more water than permitted, which would ensure the project does not conflict with or obstruct groundwater recharge of the Central Basin. As such, the project would not conflict with or obstruct implementation of the Los Angeles RWQCB's Basin Plan or Water Replenishment District of Southern California's GBMP. Impacts would be less than significant in this regard.

Mitigation Measures: No mitigation required.

[3] California Department of Water Resources, *SGMA Basin Prioritization Dashboard, Final 2018 (Unmodified Basins)*, https://gis.water.ca.gov/app/bp2018-dashboard/p1/, accessed June 3, 2021.

[4] Water Replenishment District of Southern California, *Groundwater Basins Master Plan*, September 2016, https://www.wrd.org/sites/pr/files/GBMP_FinalReport_Text%20and%20Appendicies.pdf, accessed June 3, 2021.

4.11 LAND USE AND PLANNING

Would the project:	Potentially Significant Impact	Less Than Significant Impact 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) Physically divide an established community?

Less Than Significant Impact. Activities and features that could physically divide a community include, but are not limited to:

- Construction of major highways or roadways;
- Construction of storm channels;
- Closing bridges or roadways; and
- Construction of utility transmission lines.

The key factor with respect to this threshold is the potential to create physical barriers that change the connectivity between areas of a community to the extent that persons are separated from other areas of the community. The proposed project would not physically divide an established community as the site is a vacant lot that shares a driveway with an existing commercial use (Subway/Albert Fresh Mexican Food) and is bound by existing development on all four sides; refer to Exhibit 2-2, *Site Vicinity*. While there is a residential neighborhood to the north and west of the site, the neighborhood is separated from the site by concrete walls. Additionally, while the proposed installation of water and sewer conveyance pipelines in Barclay Street (a residential roadway) would temporarily impact traffic flow in the neighborhood, the roadway would be restored to its existing conditions at project completion and would not result in any physical division of the existing neighborhood. Thus, impacts in this regard would be less than significant.

Mitigation Measures: No mitigation is required.

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?

***Less Than Significant Impact*.**

GENERAL PLAN CONSISTENCY

According to the *City of Long Beach General Plan* (General Plan) Land Use Element, the project site has a PlaceType designation of Neighborhood Serving Center or Corridor Low Density (NSC-L). The NSC-L PlaceType is intended for low-rise, low-intensity mixed-use (e.g., housing and retail) commercial centers and corridors designed to meet consumers' daily needs for goods and services close to residential areas. Table 4.11-1, *General Plan Land Use Element Consistency Analysis*, analyzes the project's consistency with applicable goals and policies in the General Plan Land Use Element.

Table 4.11-1
General Plan Land Use Element Consistency Analysis

Applicable General Plan Land Use Element Policies	Project Consistency Analysis
LU Policy 1-10: In addition to analyzing project and plan impacts on Levels of Service and Stop Delay, analyze Vehicle Miles Traveled consistent with the State's guidelines.	Consistent. The project's impacts related to vehicle miles traveled (VMT) is provided in Section 4.17, *Transportation*. As detailed, the project falls under the "Small Projects" category given that the project is projected to generate approximately 35 daily trips per day. As such, the project would be screened out of additional VMT analysis and would result in a less than significant impact in this regard.
LU Policy 6-9: Encourage the redevelopment of parcels with poor land utilization such as single-use commercial structures on parcels over 5,000 square feet.	Consistent. The project site is a vacant underutilized parcel within a small commercial lot. The proposed development would construct a water well and water treatment plant on-site and install conveyance pipelines in adjacent roadway right-of-way to increase the reliability of water supply to the northern portion of Cal Water's Dominguez District service area. Thus, the vacant lot would be better utilized with the proposed development.
LU Policy 7-4: Encourage degraded and abandoned buildings and properties to transition to more productive uses through adaptive reuse or new development.	Consistent. Refer to response to LU Policy 6-9.
LU Policy 7-8: Ensure infill development is compatible with surrounding established and planned uses.	Consistent. The project site is zoned Community Commercial Automobile-Oriented (CCA) and the proposed utility use is conditionally permitted in the zoning district. The proposed use is compatible with adjacent residences and commercial uses. While construction activities would temporarily impact nearby sensitive receptors (i.e., adjacent residences to the north and west), upon project completion, operations of the water well and treatment plant would not adversely impact the surrounding uses. Additionally, the site would be screened and landscaped along the site perimeter with concrete walls, trees/shrubs, and fencing.
LU Policy 9-1: Protect neighborhoods from the encroachment of incompatible activities or land uses that may have negative impacts on residential living environments.	Consistent. Refer to response to LU Policy 7-8.
LU Policy 14-1: Remedy existing deficiencies in blighted and underserved neighborhoods by providing public facilities, amenities, improvements and services equitably throughout the City.	Consistent. While the residential neighborhood adjacent to the project site is not considered blighted or underserved, the proposed water well and water treatment plant would increase the reliability of water supply to Cal Water's Dominguez District service area, which includes the surrounding neighborhood. The project would allow utilization of groundwater (via unused groundwater rights) to offset water purchased from Metropolitan Water District and thus, would allow for lower overall cost to Cal Water customers. Additionally, utilizing groundwater would enhance local supply reliability and reduce reliance on purchased water sources that are subject to curtailment or interruption. Therefore, the project would improve water utilities and services within the City.

Table 4.11-1 [cont'd]
General Plan Land Use Element Consistency Analysis

Applicable General Plan Land Use Element Policies	Project Consistency Analysis
LU Policy 15-1: Inform and involve residents and facilitate neighborhood participation in implementing development and infrastructure projects and other planning programs or tasks.	Consistent. In compliance with public commenting requirements under the California Environmental Quality Act, this Draft Initial Study/Mitigated Negative Declaration has been circulated to agencies and interested parties, including adjacent property owners, for a State-mandated 30-day public review period. Subsequently, public hearings regarding project approval would take place and allow for public comment and involvement.
LU Policy 15-3: Consult with California Native American tribes early in the planning process to ensure their concerns are appropriately reflected in planning initiatives and projects.	Consistent. In compliance with Assembly Bill 52, Native American tribes were notified of the proposed project and opportunity to consult on the project to determine if project development would result in any adverse impact to known tribal cultural resources in the project area. Refer Section 4.18, *Tribal Cultural Resources*, for a summary of the City's tribal consultation efforts.
LU Policy 16-8: Require an acoustical analysis prior to project approval for projects subject to CEQA review, for all noise sensitive projects located in an area with noise levels greater than 60 dBA CNEL. All new residential land uses shall be designed to maintain a standard of 45 dBA CNEL or less in building interiors, consistent with the General Plan. Noise reduction measures to achieve this noise level could include, but are not limited to, forced air ventilation so that windows can remain closed and/or upgraded wall and window assemblies.	Consistent. Noise modeling analysis was conducted to evaluate the project's short-term construction noise impacts on sensitive uses nearby, including the adjacent residences. Refer to Section 4.13, *Noise*, for an analysis of the project's construction and operational noise impacts.
LU Policy 17-1: Coordinate land use development and infrastructure investment.	Consistent. The proposed development involves constructing a water well and water treatment plant on-site as well as conveyance pipelines in the rights-of-way of Victoria Street, Long Beach Boulevard, and Barclay Street. The infrastructure improvements would increase the reliability of water supply to Cal Water's Dominguez District service area and generally improve water utilities and services within the City.
LU Policy 17-2: Maintain adequate and sustainable infrastructure systems to protect the health and safety of all Long Beach residents, businesses, institutions and regional-serving facilities.	Consistent. Refer to responses to LU Policy 14-1 and LU Policy 17-1.
Source: City of Long Beach, *City of Long Beach General Plan Land Use Element*, December 2019.	

As analyzed in Table 4.11-1, the project would be consistent with applicable General Plan policies and impacts in this regard would be less than significant.

MUNICIPAL CODE CONSISTENCY

According to the *City of Long Beach Zoning Districts Map*, the project site is zoned Community Commercial Automobile-Oriented (CCA). Based on *Long Beach Municipal Code* (LBMC) Section 21.32.020(C)(1), the CCA district allows retail and service uses for an entire community, including convenience and comparison shopping for goods and associated services.

The proposed utility use is a conditionally permitted use in the CCA zone and thus, would require a Conditional Use Permit. Table 4.11-2, *CCA Zone Development Standards Consistency Analysis*, evaluates the project's consistency with applicable development standards for the CCA zone. As shown, the project would be consistent with relevant LBMC standards, and impacts would be less than significant in this regard.

Table 4.11-2
CCA Zone Development Standards Consistency Analysis

Development Standard	CCA Zoning Requirement	Proposed Project	Does Project Satisfy Requirement?
Building Setbacks			
Front Street	10 feet	75 feet	Yes
Adjacent to Rear Yard of Residential District	20 feet	20 feet	Yes
Maximum Building Height	28 feet (2 stories)	11 feet	Yes
Required Landscaping	All required yard areas, except yards abutting alleys and yards used for outdoor dining, shall contain an area not less than 5 feet in width planted with trees, shrubs and/or groundcover.	As shown on Exhibit 2-5, *Proposed Landscape Plan*, the project would plant trees, shrubs, and groundcover along a 10-foot wide landscaped area along the eastern and western project boundary and along a 5-foot wide landscaped area along the northern and southern project boundary.	Yes
Screening (Adjacent to Residential Districts)	All commercial uses adjoining or abutting a residential district shall be screened by a solid fence or wall not less than 6 feet, 6 inches in height, except in the front yard of the residential lot, where the fence or wall shall be 3 feet in height.	The project would provide eight-foot tall brick walls along the northern and western site perimeters that abut residential areas.	Yes
Maximum Wall Height			
Abutting Residential Side/Rear Yard	8 feet	8 feet	Yes

Source: City of Long Beach, *Long Beach Municipal Code*, codified through Ordinance No. ORD-21-0020, enacted June 15, 2021.

Mitigation Measures: No mitigation is required.

4.12 MINERAL RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant Impact 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) 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 California Department of Conservation's *Generalized Mineral Land Classification Map of Los Angeles County – South Half*, the project site is designated Mineral Resource Zone 1 (MRZ-1). MRZ-1 is defined as areas where adequate information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence.[1] Operations of the water well and treatment plant would not involve mineral resource extraction activities, and there are no existing or proposed mineral resource extraction activities occurring in the vicinity. Thus, development of the proposed project would not result in a loss of availability of the identified mineral resources and no impacts would occur.

Mitigation Measures: No mitigation is required.

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?

No Impact. Refer to Response 4.12(a).

Mitigation Measures: No mitigation is required.

[1] California Department of Conservation Division of Mines and Geology, *Generalized Mineral Land Classification Map of Los Angeles County – South Half*, 1994.

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4.13 NOISE

Would the project result in:	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
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?				✓

FUNDAMENTALS OF NOISE

Sound is mechanical energy transmitted by pressure waves in a compressible medium such as air and is characterized by both its amplitude and frequency (or pitch). The human ear does not hear all frequencies equally. In particular, the ear deemphasizes low and very high frequencies. To better approximate the sensitivity of human hearing, the A-weighted decibel scale (dBA) has been developed. On this scale, the human range of hearing extends from approximately 3 dBA to around 140 dBA.

Noise is generally defined as unwanted or excessive sound, which can vary in intensity by over one million times within the range of human hearing; therefore, a logarithmic scale, known as the decibel scale (dB), is used to quantify sound intensity. Noise can be generated by a number of sources, including mobile sources such as automobiles, trucks, and airplanes, and stationary sources such as construction sites, machinery, and industrial operations. Noise generated by mobile sources typically attenuates (is reduced) at a rate between 3 dBA and 4.5 dBA per doubling of distance. The rate depends on the ground surface and the number or type of objects between the noise source and the receiver. Hard and flat surfaces, such as concrete or asphalt, have an attenuation rate of 3 dBA per doubling of distance. Soft surfaces, such as uneven or vegetated terrain, have an attenuation rate of about 4.5 dBA per doubling of distance. Noise generated by stationary sources typically attenuates at a rate between 6 dBA and about 7.5 dBA per doubling of distance.

There are a number of metrics used to characterize community noise exposure, which fluctuate constantly over time. One such metric, the equivalent sound level (L_{eq}), represents a constant sound that, over the specified period, has the same sound energy as the time-varying sound. Noise exposure over a longer period of time is often evaluated based on the Day-Night Sound Level (L_{dn}). This is a measure of 24-hour noise levels that incorporates a 10-dBA penalty for sounds occurring between 10 p.m. and 7 a.m. The penalty is intended to reflect the increased human sensitivity to noises occurring during nighttime hours, particularly at times when people are sleeping and there are lower ambient noise conditions. Typical L_{dn} noise levels for light and medium density residential areas range from 55 dBA to 65 dBA.

Two of the primary factors that reduce levels of environmental sounds are increasing the distance between the sound source to the receiver and having intervening obstacles such as walls, buildings, or terrain features between the sound source and the receiver. Factors that act to increase the loudness of environmental sounds include moving the sound source closer to the receiver, sound enhancements caused by reflections, and focusing caused by various meteorological conditions.

REGULATORY FRAMEWORK

State

The State Office of Planning and Research *Noise Element Guidelines* include recommended exterior and interior noise level standards for local jurisdictions to identify and prevent the creation of incompatible land uses due to noise. The *Noise Element Guidelines* contain a land use compatibility table that describes the compatibility of various land uses with a range of environmental noise levels in terms of the Community Noise Equivalent Level (CNEL). A noise environment of 50 CNEL to 60 CNEL is considered to be "normally acceptable" for residential uses. The Office of Planning and Research recommendations also note that, under certain conditions, more restrictive standards than the maximum levels cited may be appropriate.

City of Long Beach

Long Beach General Plan

The *Long Beach General Plan* (General Plan) Noise Element was adopted in 1975 and provides a description of existing and projected future noise levels, and incorporates comprehensive goals, policies, and implementing actions. The following goals are applicable to the proposed project:

Goals Related to Construction and Industrial Noise:

The overall goal of the City is to respond to demands for a reasonably quiet environment which is compatible with both existing ambient noise levels and continued building and industrial development. More categorized goals are:

1. *To reduce the level of noise exposure to the population caused by demolition and construction activities.*

2. *To reduce the level of outdoor noise exposure to the population generated by industries.*

Long Beach Municipal Code

Chapter 8.80, *Noise,* of the *Long Beach Municipal Code* (LBMC) sets forth all noise regulations controlling unnecessary, excessive, and annoying noise and vibration in the City. As outlined in Section 8.80.150 of the LBMC, maximum exterior noise levels are based on land use districts. According to the *Noise District Map* in the LBMC, the project site and surrounding uses are located within Land Use District One. District One is defined as "predominantly residential with other land use types also present," District Two is defined as "predominantly commercial with other land use types present," and Districts Three and Four are defined as "predominantly industrial with other land types use also present." Table 4.13-1, *City of Long Beach Noise Limits*, summarizes the exterior and interior noise limits for the various land use districts within the City.

Table 4.13-1
City of Long Beach Noise Limits

Land Use District	Exterior Noise Level (L_{eq})		Interior Noise Level (L_{eq})	
	7 a.m. to 10 p.m.	10 p.m. to 7 a.m.	7 a.m. to 10 p.m.	10 p.m. to 7 a.m.
District One	50	45	45	35
District Two	60	55	-[1]	-[1]
District Three[2]	65	65	-[1]	-[1]
District Four[2]	70	70	-[1]	-[1]

Notes:
1. Interior noise limits vary for different uses within this district.
2. Districts Three and Four limits are intended primarily for use at their boundaries rather than for noise control within the district.

Source: City of Long Beach, Long Beach Municipal Code Section 8.80.160 and Section 8.80.170.

Additionally, exterior noise sources shall not exceed:

- Standard 1: The noise standard for that land use district as specified in Table 4.13-1 for a cumulative period of more than 30 minutes in any hour;
- Standard 2: The noise standard plus five decibels for a cumulative period of more than 15 minutes in any hour;
- Standard 3: The noise standard plus ten decibels for a cumulative period of more than five minutes in any hour;
- Standard 4: The noise standard plus 15 decibels for a cumulative period of more than one minute in any hour; or
- Standard 5: The noise standard plus 20 decibels or the maximum measured ambient, for any period of time.

In accordance with the LBMC, if the existing measured ambient noise level exceeds the permissible level within any of the first four noise standard categories (Standards 1 through 4), the allowable noise exposure standard shall be increased in 5-decible increments in each category as appropriate to encompass or reflect the ambient noise level. In the event the ambient noise level exceeds the fifth noise limit category (Standard 5), the maximum allowable noise level shall be the measured ambient noise level.[1] Furthermore, the LBMC provides a reduction of 5 dBA for steady high-pitched noise or repeated impulsive noises.[2]

LBMC Section 8.80.250, *Exemption—Emergencies*, exempts performance of emergency work from the noise standard.

LBMC Section 8.80.202, *Construction Activity—Noise Regulations*, applies to construction activities where a building or other related permit is required and issued by the Building Official. LBMC Section 8.80.202 includes the following restrictions:

- Weekdays and Federal holidays: No person shall operate any tool or equipment used for construction, which produce loud or unusual noise which annoys or disturbs a reasonable person of normal sensitivity between the hours of 7:00 p.m. and 7:00 a.m. of the following day on weekdays, except for emergency work authorized by the Building Official. For purposes of this section, Federal holidays shall be considered weekdays.
- Saturdays: No person shall operate or permit the operation of any tools or equipment used for construction, which produces loud or unusual noise that annoys or disturbs a reasonable person of normal sensitivity between the hours of 7:00 p.m. on Friday and 9:00 a.m. on Saturday and after 6:00 p.m. on Saturday, except for emergency work authorized by the Building Official.
- Sundays: No person shall operate any tool or equipment used for construction at any time on Sunday, except for emergency work authorized by the Building Official or except for work authorized by permit issued by the Noise Control Officer.

LBMC Section 8.80.200 prohibits the operation of any device that creates vibration which is above the vibration perception threshold of an individual at or beyond the property boundary of the source if on private property or at 150 feet from the source if on a public space or public right-of-way. The perception threshold as defined by the LBMC is 0.001 g's (gravity) in the frequency range of 0-30 hertz (Hz) and 0.003 g's in the frequency range of 30-100 Hz.[3]

1 LBMC Section 8.80.150, *Exterior noise limits—Sound levels by receiving land use district*.
2 LBMC Section 8.80.160, *Exterior noise limits—Correction for character of sound.*
3 One "g" is the acceleration due to gravity at the Earth's surface, approximately 9.8 meters per second squared.

EXISTING CONDITIONS

Stationary Noise Sources

The project area consists of residential, commercial, and industrial uses. The primary sources of stationary noise in the project vicinity are urban-related activities (i.e., mechanical equipment and parking areas). The noise associated with these sources may represent a single-event noise occurrence, short-term, or long-term/continuous noise.

Mobile Noise Sources

The majority of the existing noise in the project area is generated from vehicle sources along Interstate 710, Victoria Street, and Long Beach Boulevard. Additionally, aircraft overflights are a source of mobile noise in the City.

NOISE MEASUREMENTS

Michael Baker International conducted short- and long-term noise measurements to quantify existing ambient noise levels in the project area, as discussed below.

Short-Term Noise Measurements

Three short-term noise measurements were taken on June 16, 2021, between the hours of 10:00 a.m. and 12:00 p.m. The noise measurement sites were representative of typical existing noise exposure at and immediately adjacent to the project site. Short-term (L_{eq}) measurements are considered representative of the noise levels in the project vicinity. As shown in Table 4.13-2, *Short-Term Noise Measurements*, short-term noise levels during the daytime ranged from 54.7 to 71.0 dBA L_{eq}.

Table 4.13-2
Short-Term Noise Measurements

Site No.	Location	L_{eq} (dBA)	L_{min} (dBA)	L_{max} (dBA)	Peak (dBA)	Date	Time
ST1	In front of residence located at 40 Barclay Street	54.7	49.3	67.8	92.3	6/16/21	10:23 a.m.
ST2	In front of Ambassador for Christ Worship Center	68.7	53.8	85.7	114.9	6/16/21	10:46 a.m.
ST3	Southeast corner of Susana Road and Victoria Street intersection, adjacent to Colin Powell Elementary School	71.0	56.5	88.2	108.2	6/16/21	11:06 a.m.
Notes: L_{eq} = Equivalent Sound Level; L_{min} = Minimum Noise Level; L_{max} = Maximum Noise Level							
Source: Michael Baker International, 2021; refer to Appendix E.							

Meteorological conditions were clear skies, warm temperatures, with light wind speeds (9 miles per hour), and low humidity. Noise monitoring equipment used for the ambient noise survey consisted of a Brüel & Kjær Hand-held Analyzer Type 2250 equipped with a Type 4189 pre-polarized microphone. The monitoring equipment complies with applicable requirements of the American National Standards Institute for Type I (precision) sound level meters. The results of the field measurements are included in Appendix E, *Noise Analysis*.

Long-Term Noise Measurements

Michael Baker International conducted one long-term (24-hour) noise measurement from June 16, 2021 to June 17, 2021. The noise measurement site represents the ambient noise levels in the vicinity of the proposed water well (i.e., DOM 301), where 24-hour construction activities would occur. As shown in Table 4.13-3, *Long-Term Noise*

Measurement, the ambient noise level in the project area is approximately 66.6 dBA L_{eq} during the daytime and 63.5 dBA L_{eq} during the nighttime. Meteorological conditions were clear skies, warm temperatures, with light wind speeds (9 miles per hour), and low humidity. The results of the field measurement are included in Appendix E.

Table 4.13-3
Long-Term Noise Measurement

Site No.	Location	Measured Noise Levels, dBA L_{eq}	
		Daytime Hours (7:00 a.m. – 10:00 p.m.)	Nighttime Hours (10:00 p.m. – 7:00 a.m.)
LT1	On-site, directly southeast of residence located at 20 Barclay Street	66.6	63.5
Notes: L_{eq} = Equivalent Sound Level; L_{min} = Minimum Noise Level; L_{max} = Maximum Noise Level			
Source: Michael Baker International, 2021; refer to Appendix E.			

SENSITIVE RECEPTORS

Sensitive populations are more susceptible to the effects of noise than are the general population. Land uses considered sensitive by the State of California include schools, playgrounds, athletic facilities, hospitals, rest homes, rehabilitation centers, long-term care and mental care facilities. Generally, a sensitive receptor is identified as a location where human populations (especially children, senior citizens, and sick persons) are present.

Land uses less sensitive to noise are business, commercial, and professional developments. Noise receptors categorized as being least sensitive to noise include industrial, manufacturing, utilities, agriculture, natural open space, undeveloped land, parking lots, warehousing, and transit terminals. These types of land uses often generate high noise levels. Moderately sensitive land uses typically include multi-family dwellings, hotels, motels, dormitories, and outpatient clinics. The nearest sensitive receptors are residences located directly north of the proposed water well and water treatment plant, as well as residences located directly north and south of the proposed distribution main along Barclay Street. Additional sensitive receptors in the project area include the Fresenius Kidney Care North Long Beach to the north of the proposed collection and distribution mains along Victoria Street, Ambassador for Christ Worship Center to the east of the project site (across Long Beach Boulevard), and Colin Powell Elementary School to the south of the proposed collection and distribution mains along Victoria Street.

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?

Less Than Significant Impact With Mitigation Incorporated. It is difficult to specify noise levels that are generally acceptable to everyone; noise that is considered a nuisance to one person may be unnoticed by another. Standards may be based on documented complaints in response to documented noise levels or based on studies of the ability of people to sleep, talk, or work under various noise conditions. However, all such studies recognize that individual responses vary considerably. Standards usually address the needs of the majority of the general population.

As stated above, the LBMC includes regulations controlling unnecessary, excessive, and annoying noise within the City. As outlined in the LBMC, maximum noise levels are based on land use districts.

SHORT-TERM NOISE IMPACTS

Construction activities generally are temporary and have a short duration, resulting in periodic increases in the ambient noise environment. Construction activities associated with the proposed project would be completed in two phases (Phase I and Phase II), as discussed below.

Phase I Construction

Phase I would involve drilling the proposed water well to a depth of approximately 1,010 feet below ground surface. Activities conducted during Phase I would include pilot hole drilling, storm drain installation, pump testing, aquifer zone sampling, casing and gravel pack installation, as well as installation of a water service line and fire hydrant. Construction activities would consist of grading, well drilling, and paving over a duration of approximately six months.

The nearest sensitive receptors (residences to the north) are located approximately 50 feet from the closest construction area (i.e., pilot hole drilling vicinity) on the project site. Pursuant to LBMC Section 8.80.202, construction activities may only occur between the hours of 7:00 a.m. and 7:00 p.m., Monday through Friday, and between the hours of 9:00 a.m. and 6:00 p.m. on Saturday. Construction activities are prohibited on Sundays and Federal holidays. All construction activities would occur within the allowable hours specified by the LBMC, with the exception of 24-hour per day pilot hole drilling, pump testing, aquifer zone sampling, and casing and gravel pack installation. It should be noted that each 24-hour construction phase would not overlap. Table 4.13-4, *24-Hour Construction Activities*, depicts the anticipated 24-hour construction duration. As shown in Table 4.13-4, 24-hour construction activities would occur intermittently over approximately eight weeks.

Table 4.13-4
24-Hour Construction Activities

Phase I Activities	Duration
Pilot Hole Drilling	3 Weeks
Pump Testing	2 Weeks
Aquifer Zone Sampling	2 Weeks
Casing and Gravel Pack Installation	1 Week

The pilot hole drilling phase represents the loudest 24-hour construction phase due to the operation of a reverse circulation hydraulic rotary drill rig. Therefore, this analysis considers the pilot hole drilling phase the worst-case 24-hour construction scenario. As a result, the remaining proposed 24-hour construction phases (i.e., pump testing, aquifer zone sampling, and casing and gravel pack installation) were not modeled.

Noise levels associated with the pilot hole drilling phase were modeled with the SoundPLAN version 8.2 three-dimensional noise model. SoundPLAN allows computer simulations of noise situations, and creates noise contour maps using reference noise levels, topography, point and area noise sources, mobile noise sources, and intervening structures. To reduce construction noise levels at the nearest sensitive receptors, the project proposes Project Design Feature PDF-1. Project Design Feature PDF-1 would erect a temporary 16-foot high noise barrier along the site perimeter during all phases of construction and has been accounted for in the SoundPLAN modeling. Based on SoundPLAN data, noise levels associated with reverse circulation hydraulic rotary drill rig activities would be approximately 90 dBA at 32.8 feet from the source. Noise contours associated with the proposed pilot hole drilling phase are included in Appendix E. The City of Long Beach does not have established noise standards for construction activities if the construction activities occur within the allowable hours specified by the LBMC. However, LBMC Section 8.80.150 has established a significance threshold of 5 dBA over ambient noise levels for construction activities which do not occur within the allowable hours identified in the LBMC. Therefore, daytime and nighttime exterior pilot hole drilling noise levels compared with noise standards at nearby sensitive receptors are provided in Table 4.13-5, *24-Hour Pilot Hole Drilling Noise Levels at Adjacent Residential Receptors*.

Table 4.13-5
24-Hour Pilot Hole Drilling Noise Levels at Adjacent Residential Receptors

Receptor	Daytime / Nighttime[1]	Existing Ambient Noise Level (dBA L_{eq})	Estimated Exterior Pilot Hole Drilling Noise Level (dBA L_{eq})[2]	Significance Threshold[3]	Significant Impact?
1	Daytime	66.6	63.2	71.6	No
	Nighttime	63.5		68.5	No
2	Daytime	66.6	60.5	71.6	No
	Nighttime	63.5		68.5	No
3	Daytime	66.6	58.5	71.6	No
	Nighttime	63.5		68.5	No

Notes:
1. In accordance with LBMC Section 8.80.160, daytime hours are defined as 7:00 a.m. – 10:00 p.m., and nighttime hours are defined as 10:00 p.m. – 7:00 a.m.
2. Noise levels take into account the proposed 16-foot high noise barrier along the site perimeter.
3. The significance threshold is equivalent to the measured ambient noise level plus 5 dBA in accordance with LBMC Section 8.80.150; refer to Table 4.13-3.

Source: SoundPLAN Model Version 8.2; refer to Appendix E.

As shown in Table 4.13-5, daytime and nighttime exterior pilot hole drilling noise levels would range from approximately 58.5 to 63.2 dBA at the nearest sensitive receptors to the north of the project site. Thus, the 24-hour estimated exterior pilot hole drilling noise levels would not exceed the daytime (i.e., 71.6 dBA) or nighttime (i.e., 68.5 dBA) significance thresholds. Impacts would be less than significant in this regard.

Phase II Construction

Phase II would involve construction of the water treatment plant and conveyance pipelines. Construction activities would consist of pipeline trenching, treatment plant construction, and treatment plant architectural coating applications over a duration of approximately 12 months.

Ground-borne noise and other types of construction-related noise impacts typically occur during the initial earthwork phase. This phase of construction has the potential to create the highest levels of noise. Typical noise levels generated by construction equipment are shown in Table 4.13-6, *Maximum Noise Levels Generated by Construction Equipment*. It should be noted that the noise levels identified in Table 4.13-6 are maximum sound levels (L_{max}), which are the highest individual sound occurring at an individual time period. Operating cycles for these types of construction equipment may involve one or two minutes of full power operation followed by three to four minutes at lower power settings. Other primary sources of acoustical disturbance would be due to random incidents, which would last less than one minute (such as dropping large pieces of equipment or the hydraulic movement of machinery lifts).

Table 4.13-6
Maximum Noise Levels Generated by Construction Equipment

Type of Equipment	Acoustical Use Factor[1]	L_{max} at 10 Feet (dBA)	L_{max} at 20 Feet (dBA)
Air Compressor	40	82	76
Auger Drill Rig	20	99	93
Backhoe	40	94	88
Crane	16	99	93
Concrete Mixer Truck	40	99	93
Dozer	40	99	93
Excavator	40	99	93
Forklift	40	94	88
Loader	40	99	93
Paver	50	95	89
Pumps	50	99	93
Roller	20	98	92
Tractor	40	96	90
Water Truck	20	82	76

Note:
1. Acoustical Use Factor (percent): Estimates the fraction of time each piece of construction equipment is operating at full power (i.e., its loudest condition) during a construction operation.

Source: Federal Highway Administration, *Roadway Construction Noise Model (FHWA-HEP-05-054)*, January 2006.

Construction noise levels in the project vicinity would fluctuate depending on the particular type, number, and duration of usage for the varying equipment. The effects of construction noise largely depend on the type of construction activities occurring on any given day, noise levels generated by those activities, distances to noise-sensitive receptors, and the existing ambient noise environment in the receptor's vicinity. Construction generally occurs in several discrete phases, with each phase requiring different equipment with varying noise characteristics. These phases alter the characteristics of the noise environment generated on the proposed project site and in the surrounding community for the duration of the construction process.

Construction noise impacts generally happen when construction activities occur in areas immediately adjoining noise sensitive land uses, during noise sensitive times of the day, or when construction durations last over extended periods of time. The closest sensitive receptors to Phase II construction activities are residential uses located approximately 20 feet to the south of the proposed conveyance pipelines along Barclay Street and approximately 10 feet to the north of the proposed water treatment plant construction area. As indicated in Table 4.13-6, typical construction noise levels would range from approximately 76 to 93 dBA at the sensitive receptors closest to the proposed conveyance pipeline construction area and from approximately 82 to 99 dBA at the sensitive receptors closest to the proposed water treatment plant construction area. These noise levels could intermittently occur for a few days when construction equipment is operating closest to the residential uses. The remainder of the time, the construction noise levels would be much less because the equipment would be working in an area farther away from the existing sensitive uses.

As previously discussed, the City does not have established noise standards for construction activities if the construction activities occur within the allowable hours specified by the LBMC. Pursuant to LBMC Section 8.80.202, construction activities may only occur between the hours of 7:00 a.m. and 7:00 p.m., Monday through Friday, and between the hours of 9:00 a.m. and 6:00 p.m. on Saturday. Construction activities are prohibited on Sundays and Federal holidays. Phase II construction activities would occur within the allowable hours specified by the LBMC, and 24-hour construction would not be required. Although construction noise is allowed during the City's allowable construction hours and is not considered to be a significant impact during those hours, the project could expose

adjoining residential uses to temporary high noise levels (76 to 99 dBA) during construction activities. However, Project Design Feature PDF-1 would reduce short-term construction noise impacts by installing a 16-foot high noise barrier along the site perimeter during all phases of construction. Although construction noise impacts that occur within the weekday time periods allowed by the LBMC are not considered to be significant, Project Design Feature PDF-1 would be imposed to minimize the project's temporary construction noise impacts to surrounding land uses. As such, impacts would be less than significant in this regard.

LONG-TERM NOISE IMPACTS

Mobile Noise

The project proposes to construct a water well and water treatment plant on-site and install water main improvements in adjacent roadway rights-of-way. According to the *Highway Traffic Noise Analysis and Abatement Policy and Guidance*, a doubling of traffic volumes would result in a 3 dB increase in traffic noise levels, which is barely detectable by the human ear.[4] Based on the *Cal Water Well and Water Treatment Plant VMT Assessment* (VMT Analysis) prepared by Michael Baker International (dated April 29, 2021), the proposed water treatment plant would conservatively generate approximately 35 average daily trips, including 6 trips during the a.m. peak hour and 6 trips during the p.m. peak hour. Access to the proposed water treatment plant would be provided via the existing driveway along Long Beach Boulevard. Based on the latest Citywide Traffic Flow Map, existing average daily traffic volumes along Long Beach Boulevard in the vicinity of the proposed project is approximately 18,000 vehicles per day.[5] As such, the project's trip generation (approximately 35 average daily trips) would not double existing traffic volumes and an increase in traffic noise along local roadways would be imperceptible. Therefore, project-related traffic noise would be less than significant.

Stationary Noise

Upon project completion, noise in the project area would not significantly increase. The project involves construction of a water well and water treatment plant (pumps and blowers, portable emergency generator, and water treatment systems) and associated collection and distribution mains. Primary noise sources associated with these facilities and improvements are the mechanical equipment (i.e., pumps and blowers and the water treatment systems, with periodic use of an emergency backup generator, as needed).

Pumps and Blowers

The pumps and blowers would be housed in an 11-foot tall concrete masonry unit (CMU) block building located in the center of the project site. Pumps and blowers typically generate noise levels of approximately 88 dBA at a distance of three feet from the source.[6] The CMU block building housing the pumps and blowers would be located approximately 20 feet from the property line of the nearest sensitive receptors (i.e., residential uses) to the north. Accounting for a 24 dBA interior-to-exterior attenuation factor, exterior noise generated by the pumps and blowers would be approximately 48 dBA at the nearest sensitive receptors.[7] LBMC Section 8.80.150 has established a significance threshold of 5 dBA over ambient noise levels. Therefore, noise levels generated by the pumps and blowers would not exceed the daytime (i.e., 71.6 dBA) or nighttime (i.e., 68.5 dBA) significance thresholds. Impacts would be less than significant in this regard.

4 U.S. Department of Transportation, *Highway Traffic Noise Analysis and Abatement Policy and Guidance*, updated August 24, 2017, https://www.fhwa.dot.gov/environMent/noise/regulations_and_guidance/polguide/polguide02.cfm, accessed on July 14, 2021.

5 City of Long Beach Traffic Engineering Division, *2014 Citywide Traffic Flow*, https://www.longbeach.gov/globalassets/pw/media-library/documents/resources/general/maps-and-gis/2014-citywide-traffic-flow, accessed July 1, 2021.

6 City of Carlsbad, *Precise Development Plan and Desalination Plant Project Environmental Impact Report, Section 4.9 Nosie and Vibration*, dated 2005, https://www.carlsbaddesal.com/uploads/1/0/0/4/100463770/eir_4_9.pdf, accessed July 14, 2021.

7 U.S. Environmental Protection Agency, *Protective Noise Levels (EPA 550/9-79-100)*, November 1979.

Portable Emergency Generator

A 230-kilowatt (kW) portable emergency generator may operate on the project site for emergency maintenance purposes. It is anticipated that the portable emergency generator would operate 24 hours per year. Generators typical produce noise levels of 82 dBA at a distance of 50 feet.[8] Pursuant to LBMC Section 8.80.250, noise generated from emergency operations is exempt from the noise standard. Therefore, the noise standard does not apply to the portable emergency generator. Impacts would be less than significant in this regard.

Water Treatment Systems

At the time of this analysis, the proposed water treatment systems are anticipated to include air strippers, a granular activated carbon gas scrubber, and an ion exchange system. The final water treatment systems would be based on the results of the water quality data of the proposed well after the well is drilled. Therefore, Mitigation Measure NOI-1 would be implemented to ensure the project complies with the noise standards established in LBMC Section 8.80.150. Mitigation Measure NOI-1 would require a noise review of the proposed future water treatment systems on the project site after designs are finalized. In the event the proposed water treatment systems have the potential to result in noise impacts beyond those analyzed in this Initial Study, the City would require the preparation of a Noise Assessment to ensure operational noise levels do not exceed the exterior noise thresholds established in LBMC Section 8.80.150. Noise levels generated from the water treatment systems would be less than significant with implementation of Mitigation Measure NOI-1.

Project Design Features:

PDF-1 In order to reduce construction noise, a minimum 16-foot high temporary noise barrier shall be installed along the project site perimeter to break the line of sight between anticipated construction equipment and adjacent residences surrounding the site. The temporary noise barrier shall have a sound transmission class (STC) of 20 or greater in accordance with American Society for Testing and Materials Test Method E90, or at least 2 pounds per square foot to ensure adequate transmission loss characteristics. In order to achieve this, the barrier may consist of 3-inch steel tubular framing, welded joints, a layer of 18-ounce tarp, a 2-inch-thick fiberglass blanket, a half-inch-thick weatherwood asphalt sheathing, and 7/16-inch sturdy board siding with a heavy duct seal around the perimeter. The length, height, and location of the noise control barrier walls shall be adequate to assure proper acoustical performance. In addition, to avoid objectionable noise reflections, the source side of the noise barrier shall be lined with an acoustic absorption material meeting a noise reduction coefficient rating of 0.70 or greater in accordance with American Society for Testing and Materials Test Method C423. All noise control barrier walls shall be designed to preclude structural failure due to such factors as winds, shear, shallow soil failure, earthquakes, and erosion.

Mitigation Measures:

NOI-1 Prior to issuance of building permits, the City of Long Beach shall review the final site plan design of the water treatment systems to verify whether any proposed water treatment systems are capable of generating substantive noise levels. In the event substantive noise levels would occur that have not already been addressed within this Initial Study/Mitigated Negative Declaration, a Noise Assessment shall be prepared, to the satisfaction of the City of Long Beach Development Services Department, which demonstrates the water treatment systems would not exceed the exterior noise thresholds identified in *Long Beach Municipal Code* Section 8.80.150.

[8] Federal Highway Administration, *Roadway Construction Noise Model (FHWA-HEP-05-054),* January 2006.

b) Generation of excessive groundborne vibration or groundborne noise levels?

Less Than Significant Impact. Project construction can generate varying degrees of groundborne vibration, depending on the construction procedure and the construction equipment used. Operation of construction equipment generates vibrations that spread through the ground and diminish in amplitude with distance from the source. The effect on buildings located in the vicinity of the construction site often varies depending on soil type, ground strata, and construction characteristics of the receiver building(s). The results from vibration can range from no perceptible effects at the lowest vibration levels, to low rumbling sounds and perceptible vibration at moderate levels, to slight damage at the highest levels. Groundborne vibrations from construction activities rarely reach levels that damage structures. Ordinary buildings that are not particularly fragile would not experience any cosmetic damage (e.g., plaster cracks) at distances beyond 30 feet. This distance can vary substantially depending on the soil composition and underground geological layer between vibration source and receiver. In addition, not all buildings respond similarly to vibration generated by construction equipment.

The types of construction vibration impacts include human annoyance and building damage. Human annoyance occurs when construction vibration rises significantly above the threshold of human perception for extended periods of time. Building damage can be cosmetic or structural. The groundborne vibration limit provided by the City is based on human perception in terms of acceleration level in g's. Groundborne vibration levels can be described in terms of acceleration (i.e., g's) or velocity (i.e., peak particle velocity [PPV]). Since the published vibration levels for typical construction equipment are expressed in terms of velocity (i.e., PPV), the Federal Transit Administration (FTA) guidelines are used to evaluate potential impacts related to construction vibration for both potential building damage and human annoyance. The FTA has identified an architectural damage criterion for continuous vibrations of 0.20 inch/second PPV. Further, as the nearest sensitive receptors to project construction are residents, the criterion for human annoyance of 0.2 inch-per-second PPV is utilized. Typical vibration produced by construction equipment is illustrated in Table 4.13-7, *Typical Vibration Levels for Construction Equipment*.

Table 4.13-7
Typical Vibration Levels for Construction Equipment

Equipment	Approximate peak particle velocity at 30 feet (inches/second)	Approximate peak particle velocity at 60 feet (inches/second)
Vibratory Roller	0.160	NA
Auger Drill Rig	NA	0.024
Small Bulldozer/Tractors	0.002	NA

Notes: NA = Not Applicable
Calculated using the following formula:

$$PPV_{equip} = PPV_{ref} \times (25/D)^{1.5}$$

where: PPV (equip) = the peak particle velocity in in/sec of the equipment adjusted for the distance
PPV (ref) = the reference vibration level in in/sec from Table 12-2 of the FTA *Transit Noise and Vibration Impact Assessment Guidelines*
D = the distance from the equipment to the receiver

Source: Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual*, September 2018.

The nearest structure to the project site is approximately 30 feet to the north of the proposed water treatment plant construction area and approximately 60 feet to the north of the proposed pilot hole drilling area (i.e., auger drill rig operations). Groundborne vibration decreases rapidly with distance. As indicated in Table 4.13-7, based on the FTA data, vibration velocities from typical heavy construction equipment operation at the water treatment plant construction area would range from 0.002 to 0.160 inch/second PPV and auger drill rig operations would be approximately 0.024 inch/second PPV at the nearest structures (i.e., residential uses). Therefore, the proposed construction activities would not exceed the 0.2 inch-per-second PPV significance threshold for vibration. Construction vibration impacts would be less than significant in this regard.

Mitigation Measures: No mitigation is required.

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 proposed project site is not located within an airport land use plan or within two miles of a public airport or public use airport. The nearest airport to the project site is the Compton/Woodley Airport, located approximately 2.5 miles to the northwest of the project site at 901 Alondra Boulevard in the City of Compton. According to the Los Angeles County Airport Land Use Commission, the project site is located outside of the Compton/Woodley Airport Influence Area.[9] Therefore, no impacts would occur in this regard.

Mitigation Measures: No mitigation is required.

[9] Los Angeles County Airport Land Use Commission, *Los Angeles County Airport Land Use Plan, Compton/Woodley Airport - Airport Influence Area*, revised December 1, 2004, https://planning.lacounty.gov/assets/upl/data/pd_alup.pdf, accessed June 7, 2021.

4.14 POPULATION AND HOUSING

Would the project:	Potentially Significant Impact	Less Than Significant Impact 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) 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)?

Less Than Significant Impact. A project can induce population growth in an area, either directly (for example, by proposing new homes and/or businesses) or indirectly (for example, through extension of roads or other infrastructure). No residential uses would be developed as part of the project. Therefore, the project would not induce unplanned direct population growth in the City through new housing development.

The project would not have the capacity to result in significant impacts related to indirect unplanned population growth. While the project would involve the construction of a water treatment plant and water well to enhance the supply of water delivered to existing and future customers, it would not result in an indirect increase in permanent residents within the City. Additionally, project operations would occur remotely with approximately one daily inspection conducted by an existing Cal Water inspector. As such, development of the project would not induce unplanned indirect population growth through extension of roads or other infrastructure improvements. Impacts would be less than significant.

Mitigation Measures: No mitigation is required.

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

No Impact. The project site is currently vacant and undeveloped. There is no existing housing on-site. As such, project implementation would not displace any existing housing or residents and would not necessitate the construction of replacement housing elsewhere. No impacts would occur in this regard.

Mitigation Measures: No mitigation is required.

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4.15 PUBLIC SERVICES

Would the project:	Potentially Significant Impact	Less Than Significant Impact 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:				
1) Fire protection?			✓	
2) Police protection?			✓	
3) Schools?				✓
4) Parks?				✓
5) 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:

1) Fire protection?

Less Than Significant Impact. The Long Beach Fire Department (LBFD) provides fire protection within Long Beach and has 23 stations throughout the City. The nearest station to the project site is Fire Station 11 located at 160 East Market Street, approximately 1.1 miles to the southeast. The proposed project involves the construction of a water well, treatment plant, and conveyance pipelines. Given the proposed utility use, the project would not substantially increase the need for fire protection services as no residential uses are proposed and the project is not expected to result in an increase in the City's population. Construction and operations of the water well and water treatment plant would not result in a substantial increase in the likelihood of a fire or other hazard. Additionally, all proposed activities would be subject to compliance with requirements set forth in the California Fire Code and California Building Code related to fire safety. The project would also be subject to compliance with the fire provisions specified in LBMC Title 18, *Building and Construction*. Overall, project implementation is not anticipated to adversely impact existing LBFD services upon compliance with existing regulations. Impacts would be less than significant in this regard.

Mitigation Measures: No mitigation is required.

2) Police protection?

Less Than Significant Impact. The Long Beach Police Department (LBPD) provides law enforcement services to the City, including the project site. The closest LBPD station is the North Division station located at 4891 Atlantic Avenue, approximately two miles southeast of the project site across the Los Angeles River. Implementation of the proposed project would not substantially increase the need for additional police protection services to the project site. As a utility facility, the project would not introduce any new permanent residents into the City. Additionally, as a remotely operated water well and water treatment plant, the proposed use would not substantially increase the need for police services in the project area. As a result, project implementation is not anticipated to increase response times to the project site or surrounding vicinity or require the construction of new or physically altered police protection facilities. In addition, the project would be subject to site plan review by the City prior to project approval to ensure that it meets City requirements in regard to public safety (e.g., nighttime security lighting) to minimize the potential for safety concerns. Thus, impacts in this regard would be less than significant.

Mitigation Measures: No mitigation is required.

3) Schools?

No Impact. The proposed project would not introduce any new permanent residents into the City that may utilize school services provided by the Long Beach Unified School District (LBUSD). Additionally, short-term temporary construction jobs would likely be taken by workers already living in the City or neighboring jurisdictions. As such, implementation of the proposed project would not result in increased demand for LBUSD school services nor the need for the construction of additional school facilities. No impacts would occur in this regard.

Mitigation Measures: No mitigation is required.

4) Parks?

No Impact. According to the City of Long Beach Parks, Recreation, and Marine Department, the City maintains 170 parks with 26 community centers, among other programs and services.[1] Nearby parks include Coolidge Park (352 East Neece Street) and DeForest Park (6255 De Forest Avenue). As an infrastructure improvement, project implementation would not introduce any new permanent residents to the City and thus, would not generate a demand for park facilities or increase the use of existing facilities. As such, no impacts would occur in this regard.

Mitigation Measures: No mitigation is required.

5) Other public facilities?

No Impact. Library services within Long Beach is provided by the Long Beach Public Library (LBPL). The closest LBPL branch library to the project site is the Michelle Obama Neighborhood Library, located at 5870 Atlantic Avenue, approximately 1.7 miles to the east. The proposed utility use would not introduce any new permanent residents to the City that could increase demand for other public facilities, including library services. Therefore, no impacts would occur in this regard.

Mitigation Measures: No mitigation is required.

[1] City of Long Beach, *Long Beach Parks, Recreation and Marine Department Website*, http://www.longbeach.gov/park/, accessed June 24, 2021.

4.16 RECREATION

Would the project:	Potentially Significant Impact	Less Than Significant Impact 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. Refer to Response 4.15(a)(4). Project implementation would not introduce any new permanent residents. Therefore, the proposed project would not result in a substantial increase in demand on parks or other recreational facilities and would not result in the physical deterioration of these facilities. No impacts would occur in this regard.

Mitigation Measures: No mitigation is required.

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 project does not include recreational facilities, nor would it require the construction or expansion of existing recreational facilities. No impacts would result in this regard.

Mitigation Measures: No mitigation is required.

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4.17 TRANSPORTATION

Would the project:	Potentially Significant Impact	Less Than Significant Impact 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. Would the project 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 primarily based upon the *Cal Water Well and Water Treatment Plant VMT Assessment* (VMT Analysis) prepared by Michael Baker International, dated April 29, 2021; refer to Appendix F, *VMT Analysis*.

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

Less Than Significant Impact with Mitigation Incorporated.

ROADWAY FACILITIES

Refer to Response 4.17(b) below regarding project impacts on roadway facilities.

TRANSIT, BICYCLE, AND PEDESTRIAN FACILITIES

Transit services in the project area are provided by Metro (Route 60) and Long Beach Transit (Route 51). Several bus stops are located along Long Beach Boulevard, the closest of which is approximately 320 feet to the north near the intersection of Long Beach Boulevard and Harcourt Street. Additionally, Metro Route 202 runs along Victoria Street and Susana Road to the west of the project site.

There are no bicycle facilities along the project's eastern frontage along Long Beach Boulevard. However, a Separated Bikeway (Class IV) is provided along Long Beach Boulevard south of Victoria Street, approximately 705 feet from the project site, that connects to a Shared-Use Path (Class I) along the Los Angeles River Bikeway.[1] Pedestrian sidewalks are provided on both sides of Long Beach Boulevard.

[1] City of Long Beach, *Bicycle Master Plan, A Supplement to the Mobility Element*, December 2016.

Construction

Construction activities associated with the project may temporarily impact transit, bicycle, and pedestrian facilities. As shown on Exhibit 2-5, *Proposed Collection and Distribution Mains*, the project involves installing water collection, water distribution, and sewer pipelines in Victoria Street, Long Beach Boulevard, and Barclay Street. Temporary partial lane closures would be required during installation of the proposed pipelines along Victoria Street, Long Beach Boulevard, and Barclay Street; however, these roadways would remain open to traffic at all times. During periods of partial lane closures, the Applicant would be required to implement a temporary Traffic Management Plan (TMP) to maintain traffic flow and emergency access during the construction process (Mitigation Measure TRA-1). The TMP would include potential measures such as construction signage, limitations on timing for lane closures to avoid peak hours, temporary striping plans, and the need for a construction flagperson to direct traffic during heavy equipment use, among others. With implementation of Mitigation Measure TRA-1, the project would not conflict with existing transit, bicycle, or pedestrian facilities, and impacts would be reduced to less than significant levels.

Operations

At project completion, operations of the on-site water well and water treatment plant would not conflict with any program plan, ordinance, or policy addressing the City's existing transit, bicycle, or pedestrian network. Water well and treatment plant operations would occur within the project boundary and surrounding roadways affected by collection/distribution mains would be restored to pre-project conditions upon the completion of construction. Thus, impacts would be less than significant.

Mitigation Measures:

TRA-1 Prior to project construction activities, the project Applicant shall prepare a Traffic Management Plan (TMP) for approval by the City of Long Beach Traffic Engineer. The TMP shall include measures such as construction signage, limitations on timing for lane closures to avoid peak hours, temporary striping plans, and the need for a construction flagperson to direct traffic during heavy equipment use. The TMP shall specify that one direction of travel in each direction must always be maintained along Victoria Street, Long Beach Boulevard, and Barclay Street throughout project construction. Bicycle lanes, pedestrian sidewalks, and bus stops shall remain open and accessible, to the greatest extent feasible, during construction or shall be re-routed to ensure continued connectivity while maintaining Americans with Disabilities Act (ADA) accessibility. The TMP shall be incorporated into project specifications for verification prior to final plan approval.

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

Less Than Significant Impact. The VMT Analysis evaluates the project's vehicle miles traveled (VMT) impacts in accordance with the *City of Long Beach Traffic Impact Analysis Guidelines* (City Guidelines; June 2020), specifically Section 2, *VMT Analysis to Satisfy SB 743 Requirements and CEQA Guidelines Section 15064.3, Subdivision (b)*. Based on the City Guidelines, land use projects that meet any of the screening thresholds based on size, location, proximity to transit or trip-making potential are presumed to result in a less than significant impact in regard to VMT.

The project's estimated trip generation was calculated using trip generation rates obtained from the Institute of Transportation Engineers (ITE) *Trip Generation Manual* (10th Edition, 2017) for Land Use Code 170 (Utility). Table 4.17-1, *Project Trip Generation*, details the project's trip generation. As shown, the project is anticipated to generate 35 daily trips, including 6 a.m. peak hour trips and 6 p.m. peak hour trips during an average weekday.

Table 4.17-1
Project Trip Generation

Land Use	Source[1]	AM Peak Hour			PM Peak Hour		
		In	Out	Rate	In	Out	Rate
Utility	ITE 170	80%	20%	2.31	20%	80%	2.27

Land Use	Quantity	AM Peak Hour			PM Peak Hour			Daily Rate
		In	Out	Total	In	Out	Total	
Utility	2,632.4 SF	5	1	6	1	5	6	35

Notes:
[1] ITE = Institute of Transportation Engineers (ITE) *Trip Generation Manual* (10th Edition, 2017); ### = ITE Land Use Code

Source: Refer to Appendix F.

As detailed in the City Guidelines, the City has historically established a screening threshold of 50 peak hour trips for requiring a traffic impact analysis. For most land use types, approximately 10 percent of daily trips occur during the busiest peak hour. Therefore, a project generating fewer than 50 peak hour trips would generate approximately 500 average daily trips. Greenhouse gas (GHG) emissions resulting from this level of vehicular traffic would be less than comparable GHG emissions thresholds. Therefore, this threshold of 500 average daily trips is retained to screen out small projects from additional VMT analysis. Based on this criteria, the project falls under the "Small Projects" category given that the project is projected to generate approximately 35 daily trips per day. As such, the project would be screened out of additional VMT analysis and would result in a less than significant impact in this regard.

Mitigation Measures: No mitigation is required.

c) 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 project does not propose changes to the City's circulation system, such as sharp curves or dangerous intersections, and would not introduce incompatible uses to area roadways (e.g., farm equipment). Site access would be provided via an existing driveway along Long Beach Boulevard and two proposed gated 20-foot wide site access points along the southern project boundary; refer to Exhibit 2-3, *Proposed Site Plan*. No changes are proposed to the existing driveway along Long Beach Boulevard. As such, the project would not increase hazards due to geometric design features or incompatible uses and impacts would be less than significant in this regard.

Mitigation Measures: No mitigation is required.

d) Result in inadequate emergency access?

Less Than Significant Impact with Mitigation Incorporated. As stated, the project would be accessed via an existing driveway along Long Beach Boulevard and no changes are proposed to this driveway that would result in inadequate emergency access. However, project construction activities would result in temporary partial lane closures along Victoria Street, Long Beach Boulevard, and Barclay Street rights-of-way to install the proposed water and sewer pipelines. As such, Mitigation Measure TRA-1 would require a Traffic Management Plan be prepared and implemented to ensure traffic flow and emergency access are maintained during the construction process. As stated, the TMP would include potential measures such as construction signage, limitations on timing for lane closures to avoid peak hours, temporary striping plans, and the need for a construction flagperson to direct traffic during heavy equipment use, among others. Upon implementation of Mitigation Measure TRA-1, impacts in this regard would be less than significant.

Mitigation Measures: Refer to Mitigation Measure TRA-1.

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4.18 TRIBAL CULTURAL RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
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:				
1) 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				✓
2) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of 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.		✓		

As of July 1, 2015, California Assembly Bill 52 (AB 52) was enacted and expanded CEQA by establishing a formal consultation process for California tribes within the CEQA process. The bill specifies that any project may affect or cause a substantial adverse change in the significance of a tribal cultural resource would require a lead agency to "begin consultation with a California Native American tribe that is traditional and culturally affiliated with the geographic area of the proposed project." Section 21074 of AB 52 also defines a new category of resources under CEQA called "tribal cultural resources." Tribal cultural resources are defined as "sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe" and is either listed on or eligible for the California Register of Historical Resources or a local historic register, or if the lead agency chooses to treat the resource as a tribal cultural resource.

In compliance with AB 52, the City of Long Beach distributed letters on April 13, 2021 to Native American tribes notifying each tribe of the opportunity to consult with the City regarding the proposed project; refer to Appendix G, *AB 52 Consultation Documentation*. The tribes were identified based on a list provided by the Native American Heritage Commission (NAHC) or were tribes that had previously requested to be notified of future projects proposed by the City.

On February 19, 2016, the California Natural Resources Agency proposed to adopt and amend regulations as part of AB 52 implementing Title 14, Division 6, Chapter 3 of the California Code of Regulations, CEQA Guidelines, to include consideration of impacts to tribal cultural resources pursuant to Government Code Section 11346.6. On September 27, 2016, the California Office of Administrative Law approved the amendments to Appendix G of the CEQA Guidelines, and these amendments are addressed within this environmental document.

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:

1) 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

No Impact. As detailed in Response 4.5(a), no historic resources or sites listed or eligible for listing in a State or local register of historic resources are located on the project site. Therefore, no impacts related to historic tribal cultural resources defined in Public Resources Code Section 5020.1(k) would occur.

Mitigation Measures: No mitigation is required.

2) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of 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. As stated, in accordance with AB 52, the City distributed letters on April 13, 2021 to Native American tribes notifying each tribe of the opportunity to consult with the City regarding the proposed project. The tribes had 30 days to respond to the City's request for consultation. On April 15, 2021, the Gabrieleño Band of Mission Indians – Kizh Nation formally requested consultation with the City. A consultation meeting was held on June 3, 2021 between the tribe and City staff. The tribe requested any relevant information regarding the history of the subsurface soils that would be impacted as part of the project's ground disturbing activities in order to determine whether the project would result in the removal and/or disturbance of native soils. The City provided the Cultural/Paleontological Resources Report to the tribe, which included a brief description of on-site soils; refer to Appendix C, *Cultural/Paleontological Resources Report*. Upon reviewing, the tribe requested that a tribal monitor be present during all ground-disturbing activities to ensure potentially uncovered tribal cultural resources are not adversely impacted. As such, Mitigation Measure TCR-1 is included to reduce such impacts to less than significant levels.

***Mitigation Measures*:**

TCR-1 Prior to the commencement of any ground disturbing activity at the project site, the project Applicant shall retain a Native American Monitor approved by the Gabrieleño Band of Mission Indians-Kizh Nation (Tribe) and is listed under the Native American Heritage Commission's (NAHC) tribal contact list for the project area. A copy of the executed contract shall be submitted to the City of Long Beach Planning Bureau prior to the issuance of any permit necessary to commence ground-disturbing activity. The Tribal monitor shall only be present on-site during the construction phases that involve ground-disturbing activities. Ground disturbing activities are defined as activities that may include, but are not limited to, pavement removal, potholing or auguring, grubbing, tree removals, boring, grading, excavation, drilling, and trenching, within the project area. The Tribal Monitor shall complete daily monitoring logs that provide descriptions of the day's activities, including construction activities, locations, soil, and any cultural materials identified. The on-site monitoring shall end when all ground-disturbing activities on the project site are completed, or when the Tribal Monitor has indicated that all upcoming ground-disturbing activities at the project site have little to no potential for impacting tribal cultural resources. Upon discovery of any tribal cultural resources, construction activities shall cease in the immediate vicinity of the find (not less than the surrounding 100 feet) until the find can be assessed. All tribal cultural resources unearthed by project activities shall be evaluated by the qualified archaeologist and Tribal Monitor. If the resources are Native American in origin, the Tribe will retain it/them in the form and/or manner the Tribe deems appropriate, for educational, cultural, and/or historic purposes.

If human remains and/or grave goods are discovered or recognized at the project site, all ground disturbance shall immediately cease, and the County Coroner shall be notified per Public Resources Code Section 5097.98, and Health and Safety Code Section 7050.5. Human remains and grave/burial goods shall be treated alike per California Public Resources Code Section 5097.98(d)(1) and (2). Work may continue on other parts of the project site while evaluation and, if necessary, mitigation takes place (CEQA Guidelines Section 15064.5[f]). If a non-Native American resource is determined by the qualified archaeologist to constitute a "historical resource" or "unique archaeological resource," time allotment and funding sufficient to allow for implementation of avoidance measures, or appropriate mitigation, shall be made available by the project Applicant. 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. Any historic archaeological material that is not Native American in origin shall be curated at a public, non-profit institution with a research interest in the materials, such as the Natural History Museum of Los Angeles County or the Fowler Museum, if such an institution agrees to accept the material. If no institution accepts the archaeological material, it shall be offered to a local school or historical society in the area for educational purposes.

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4.19 UTILITIES AND SERVICE SYSTEMS

Would the project:	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Require or result in the relocation or construction of new or expanded water, or wastewater treatment or stormwater 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) Require or result in the relocation or construction of new or expanded water, or wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

Less Than Significant Impact.

WATER

Water services for the project site are provided by Cal Water. Cal Water provides water utility services for most of the City of Carson and portions of Long Beach, Torrance, Compton, and unincorporated areas of Los Angeles County. To meet customers' needs, Cal Water uses a combination of local groundwater and surface water purchased from the Metropolitan Water District of Southern California (MWD), which is imported from the Colorado River and the State Water Project (SWP) in northern California. Cal Water's Dominguez District, which includes the project site, currently encompasses 374 miles of pipeline, nine active wells, 12 storage tanks, and seven MWD connections.

The project proposes to construct a water well and water treatment plant on-site and install water conveyance pipelines in adjacent roadway right-of-way to increase the reliability of supply to the northern portion of the Dominguez District service area. The potential construction-related environmental impacts from the project have been analyzed throughout this Initial Study. It should be noted that the proposed water well and water treatment plant would allow utilization of groundwater (via unused groundwater rights). Utilizing groundwater would enhance local supply reliability and reduce reliance on purchased water sources that are subject to curtailment or interruption. Specifically, SWP water is subject to cutbacks in response to available snowpack in northern California on a year-to-year basis. SWP water supply may also become completely unavailable should a major disaster compromise the aqueduct system that travels from northern to southern California. Therefore, the proposed project would maximize local groundwater supply, reduce supply variability during dry years, and provide water availability for fire and essential services in the event of a major

disaster. As described throughout this Initial Study, the project would result in improvement on water facilities and would not directly increase water demand or introduce a new use that would result in an increase in water demand. Overall, the project would not result in significant environment impacts with implementation of proposed mitigation measures presented throughout this Initial Study. Impacts in this regard would be less than significant.

WASTEWATER

Sewer services for the project site are provided by Long Beach Water Department (LBWD). The LBWD operates and maintains approximately 765 miles of sanitary sewer lines, delivering over 40 million gallons per day to Los Angeles County Sanitation Districts (LACSD) facilities located on the north and south sides of the City. Currently, a majority of the City's wastewater is delivered to the Joint Water Pollution Control Plant (JWPCP) of the LACSD. The remaining portion of the City's wastewater is delivered to the Long Beach Water Reclamation Plant of the LACSD. JWPCP is located approximately 6.4 miles northwest of the project site at 24501 South Figueroa Street in the City of Carson. The JWPCP is the largest of the LACSD's wastewater treatment plants and provides both primary and secondary treatment for 280 million gallons of wastewater per day. The Long Beach Water Reclamation Plant is located at 7400 East Willow Street in the City of Long Beach, approximately 6.7 miles to the northeast of the project site. The plant provides primary, secondary, and tertiary treatment for 25 million gallons of wastewater per day.

Among other features, implementation of the proposed project would also involve installing a sewer line. As discussed in Section 2.5, *Project Characteristics*, any wastewater or plant flushing generated on-site would be discharged to a proposed 8-inch sewer main, which would connect to an approximately 300-foot sewer line that would run north in Long Beach Boulevard from the project site, then turn west on Barclay Street to discharge into the existing sewer manhole in Barclay Street; refer to Exhibit 2-5, *Proposed Collection and Distribution Mains*. Temporary construction activities associated with the project would not generate substantial wastewater and would be short-term in nature. At project completion, wastewater generated on-site would be equalized through a 68,000-gallon waste equalization tank to reduce wastewater flowrates, and be discharged into the City's sewer network in a controlled manner, as dictated by the LBWD's sewer connection waste allowance. It is noted that approximately one gallon per minute, 24 hours per day, or approximately 1,440 gallons per day, is allowed.

Conservatively assuming project operations would result in the maximum wastewater flow allowance of 1,440 gallons per day, project-generated wastewater would represent less than 0.01 percent of the treatment capacities at either the JWPCP or the Long Beach Water Reclamation Plant. As such, project implementation is not anticipated to require or result in the relocation or construction of new or expanded wastewater treatment facilities. Impacts in this regard would be less than significant.

STORMWATER

The project site is regulated under the National Pollutant Discharge Environmental System (NPDES) Phase I Municipal Stormwater Permits issued by the Los Angeles RWQCB for Long Beach. The project site currently conveys stormwater runoff in a north to south direction across the site to a grassy area outside of the existing fencing where the water percolates or evaporates. The project proposes a gravel and landscaped area along the northern project boundary with an infiltration system, which would allow stormwater accumulated on-site to infiltrate into the earth on-site rather than flow into the City's storm drain system. Excess runoff would then flow southeasterly towards existing curbs, gutters and a catch basin along Long Beach Boulevard. As discussed in Responses 4.10(c)(1) and 4.10(c)(2), the proposed improvements would not create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems. As such, impacts in this regard would be less than significant.

DRY UTILITIES

Dry utilities include electricity, natural gas, and telecommunications facilities. Electrical services to the project site are provided by Southern California Edison (SCE); natural gas by Southern California Gas Company (SCGC); and telecommunications by Spectrum Communication, Frontier Communications, and AT&T U-Verse.

Project construction and operations would not increase dry utility use substantially above existing conditions in a manner that would require or result in the relocation or construction of new or expanded dry utilities facilities. A Southern California Edison (SCE) transformer would be installed on-site to provide electrical power for on-site equipment and lighting. A standby emergency generator and diesel storage tank may also be installed on-site for backup power. As shown in Table 4.6-1, *Project and Countywide Energy Consumption*, the project's energy usage would constitute an approximate 0.0031 percent increase over Los Angeles County's typical annual electricity consumption and an approximate 0.0002 percent increase over Los Angeles County's typical annual natural gas consumption. As such, it is not anticipated that project implementation would require or result in the relocation or construction of new or expanded dry utilities. Impacts would be less than significant in this regard.

Mitigation Measures: No mitigation is required.

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

Less Than Significant Impact. As described in Response 4.19(a), construction and operational activities associated with the proposed project would not generate an increase in demand for water supply. The project would maximize local groundwater supply based on existing Cal Water groundwater entitlements, reduce supply variability during dry years, and enhance water availability for fire and essential services in the event of a major disaster. As described throughout this Initial Study, the project would not directly increase water demand or introduce a new use that would result in an increase in water demand. Therefore, impacts in this regard would be less than significant.

Mitigation Measures: No mitigation is required.

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?

Less Than Significant Impact. Refer to Response 4.19(a).

Mitigation Measures: No mitigation is required.

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?

Less Than Significant Impact. Construction activities associated with the proposed project would generate construction debris (e.g., soil, concrete, and demolished materials). In particular, the proposed water well would be drilled to a depth of approximately 1,010 feet below ground surface and drill cuttings (consisting of native clay, silt, sand, and gravel) would be contained in a settling tank and tested for hazardous waste prior to being properly disposed. Additionally, pipeline installation activities would involve open cut trenching. Excavated materials that cannot be utilized for backfill would be hauled off-site to an appropriate disposal facility, and a limited amount of additional backfill material would be imported, if needed. All construction debris would be short-term in nature and would not have the capability to substantially affect the capacity of regional landfills. The disposal of construction debris would be required to comply with applicable Federal, State, and local statutes and regulations related to solid waste.

At project completion, operational activities would be typical of utility uses and would generate a nominal amount of solid waste. As such, compliance with all applicable statutes and regulations related to solid waste would reduce construction and operational impacts in this regard to less than significant.

Mitigation Measures: No mitigation is required.

e) Comply with Federal, State, and local management and reduction statutes and regulations related to solid waste?

Less Than Significant Impact. Refer to Response 4.19(d).

Mitigation Measures: No mitigation is required.

4.20 WILDFIRE

If located in or near State responsibility areas or lands classified as very high fire hazard severity zones, would the project:	Potentially Significant Impact	Less Than Significant Impact 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?				✓
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?				✓

a) Substantially impair an adopted emergency response plan or emergency evacuation plan?

No Impact. According to the California Department of Forestry and Fire, the project site and entire City of Long Beach is not located within or near a State responsibility area or identified as a Fire Hazard Severity Zone. Therefore, no impacts would occur in this regard.

Mitigation Measures: No mitigation is required.

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?

No Impact. Refer to Response 4.20(a).

Mitigation Measures: No mitigation is required.

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?

No Impact. Refer to Response 4.20(a).

Mitigation Measures: No mitigation is required.

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?

No Impact. Refer to Response 4.20(a).

Mitigation Measures: No mitigation is required.

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4.21 MANDATORY FINDINGS OF SIGNIFICANCE

Would the project:	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?		✓		
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 degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

Less Than Significant Impact With Mitigation Incorporated. As detailed in Section 4.4, *Biological Resources*, no impacts would occur to any special-status plant or wildlife species known to occur in the project area. However, short-term construction activities could impact nesting birds protected by the Migratory Bird Treaty Act. Implementation of Mitigation Measure BIO-1 would minimize potential impacts to nesting birds to less than significant levels. As such, the project would not 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, or reduce the number or restrict the range of a rare or endangered plant or animal.

Further, as indicated in Section 4.5, *Cultural Resources* and Section 4.18, *Tribal Cultural Resources*, project implementation is not anticipated to result in adverse impacts to cultural or tribal cultural resources upon implementation of Mitigation Measures CUL-1 and TCR-1. Mitigation Measure CUL-1 would require construction activities to halt if archaeological resources are inadvertently discovered. A qualified archaeologist who meets the Secretary of the Interior's Professional Qualification Standards for archaeology would evaluate the find and make appropriate recommendations. Mitigation Measure TCR-1 would ensure a Native American monitor is present during all ground-disturbing construction activities to evaluate any potential finds that could be a tribal cultural resource. As such, upon implementation of recommended mitigation measures, the project is not anticipated to eliminate important examples of the major periods of California history or prehistory and impacts would be less than significant in this regard.

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 proposed project involves constructing a water well, water treatment plant, and water conveyance pipelines within adjacent roadway rights-of-way. The proposed utility use would not result in substantial population growth within the area, either directly or indirectly. Although the project may incrementally affect other resources that were determined to be less than significant, the project's contribution to these effects is not considered "cumulatively considerable", in consideration of the relatively nominal impacts of the project and mitigation measures provided.

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. Previous sections of this Initial Study reviewed the proposed project's potential impacts related to aesthetics, air quality, geology and soils, greenhouse gases, hydrology/water quality, noise, hazards and hazardous materials, traffic, and other issues. As concluded in these previous discussions, the proposed project would result in less than significant environmental impacts with implementation of the recommended mitigation measures. Therefore, the proposed project would not result in environmental impacts that would cause substantial adverse effects on human beings.

4.22 REFERENCES

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4.23 REPORT PREPARATION PERSONNEL

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5.0 CONSULTANT RECOMMENDATION

Based on the information and environmental analysis contained in the Initial Study/Environmental Checklist, we recommend that the City of Long Beach prepare a mitigated negative declaration for the Cal Water Well and Water Treatment Plant. We find that the proposed project could result in potentially significant environmental impacts, but that mitigation measures have been identified that reduce such impacts to less than significant levels. We recommend that the second category be selected for the City of Long Beach's determination (see Section 6.0, *Lead Agency Determination*).

10/8/2021
Date

Frances Yau, AICP, Project Manager
Michael Baker International

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6.0 LEAD AGENCY 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 EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required. ☐

Signature: _____

Title: Planner III

Printed Name: Sergio Gutierrez

Agency: City of Long Beach

Date: 10/8/2021

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