City of
Santa Monica

Olympic Well Field Restoration and Arcadia Water Treatment Plant Expansion Project

Initial Study/Mitigated Negative Declaration

July 2020

City of Santa Monica
Public Works Department
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Santa Monica, California 90401

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Acronyms and Abbreviations

Acronym/Abbreviation	Definition
1,2-DCE	1,4-dioxane and cis and trans-1,2-dichloroethylene
1,2,3-TCP	1,2,3-trichloropropane
µg/L	micrograms per liter
acre-feet/yr	acre-feet per year
AERMOD	American Meteorological Society/Environmental Protection Agency Regulatory Model
APN	Assessor's Parcel Number
APSA	Aboveground Petroleum Storage Act
AWTF	Advanced Water Treatment Facility
BAP	Bergamot Area Plan
bgs	below ground surface
BMP	best management practice
CAAQS	California Ambient Air Quality Standards
CAAP	Climate Action and Adaption Plan
CalEEMod	California Emissions Estimator Model
CALGreen	California Green Building Standards Code
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CBC	California Building Code
CCR	California Code of Regulations
CCRO	Closed Circuit Reverse Osmosis
CEQA	California Environmental Quality Act
CERS	California Environmental Reporting System
CGS	California Geological Survey
CH4	methane
City	City of Santa Monica
CO	carbon monoxide
CO2	carbon dioxide
CO2e	carbon dioxide equivalent
CRHR	California Register of Historical Resources
dB	decibel
dBA	A-weighted decibel
DPM	diesel particulate matter
DWR	California Department of Water Resources
EIR	environmental impact report
EO	Executive Order
ESL	environmental screening level
E Line	Exposition Line
FEMA	Federal Emergency Management Agency
GAC	granulated activated carbon
GHG	greenhouse gas
gpm	gallons per minute
GSA	Groundwater Sustainability Agency
GSP	Groundwater Sustainability Plan
GWP	global warming potential

Acronym/Abbreviation	Definition
HARP2	Hotspots Analysis and Reporting Program Version 2
HFC	hydrofluorocarbon
HIC	Chronic Hazard Index
HMBP	hazardous material business plan
HMCP	Hazardous Materials Contingency Plan
HMP	Hazard Mitigation Plan
HRA	health risk assessment
HVAC	heating, ventilation, and air conditioning
I	Interstate
ips	inches per second
IS	initial study
kBtu	thousand British thermal units
kg	kilogram
kWh	kilowatt-hour
LACDPW	Los Angeles County Department of Public Works
LACM	Los Angeles County History Museum
LADWP	Los Angeles Department of Water and Power
LAFD	Los Angeles Fire Department
Leq	equivalent continuous sound level
LID	Low-Impact Development
Lmax	instantaneous maximum noise level
LOS	level of service
LST	localized significance threshold
LUCE	Land Use and Circulation Element
MBTA	Migratory Bird Treaty Act
MCL	maximum contaminant level
Metro	Metropolitan Transportation Authority
mgd	million gallons per day
MICR	Maximum Individual Cancer Risk
MM-	mitigation measure
MND	Mitigated Negative Declaration
MT	metric ton
MWD	Metropolitan Water District of Southern California
N2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NF3	nitrogen trifluoride
NFA	no further action
NO2	nitrogen dioxide
NOx	oxides of nitrogen
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
O3	ozone
OEHHA	Office of Environmental Health Hazard Assessment
OPR	Governor's Office of Planning and Research
PCB	polychlorinated biphenyls

Acronym/Abbreviation	Definition
PCE	perchloroethylene
PFC	perfluorocarbon
PM10	coarse particulate matter
PM2.5	fine particulate matter
ppm	parts per million
ppt	parts per trillion
PPV	peak particle velocity
PRC	Public Resources Code
PRIMP	Paleontological Resources Impact Mitigation Program
Project	Olympic Well Field Restoration and Arcadia Water Treatment Plant Expansion Project
RO	reverse osmosis
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCCIC	South Central Coastal Information Center
SCE	Southern California Edison
SCS	Sustainable Communities Strategy
SF6	sulfur hexafluoride
SLF	Sacred Lands File
SGMA	Sustainable Groundwater Management Act
SMMC	Santa Monica Municipal Code
SO2	sulfur dioxide
SOx	sulfur oxides
SoCalGas	Southern California Gas Company
SPCC	Spill Prevention, Control, and Countermeasure
SVP	Society of Vertebrate Paleontology
SWIP	Sustainable Water Infrastructure Project
SWMP	Sustainable Water Master Plan
SWPPP	stormwater pollution prevention plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
TCE	trichloroethylene
TCP	Traffic Control Plan
TDM	transportation demand management
VMT	vehicle miles traveled
VOC	volatile organic compound
WEAP	Worker Environmental Awareness Program
WTP	Water Treatment Plant

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1 Introduction

1.1 Project Overview

The proposed Olympic Well Field Restoration and Arcadia Water Treatment Plant Expansion Project (Project) is intended to enhance sustainability of the City of Santa Monica's (City's) local water supply through developing alternative water supplies and expanding local groundwater supplies. The proposed Project would further reduce the City's reliance upon purchased imported water from the Metropolitan Water District of Southern California (MWD), with the objective of maximizing local water resources. The Project would accomplish this goal through the restoration of the Olympic Well Field's pumping capacity, expansion of local groundwater production and concurrent reduction of imported water supply, conveyance of the extracted groundwater to a new Olympic Advanced Water Treatment Facility (co-located at the Arcadia Water Treatment Plant [WTP]) via a new dedicated pipeline, and upgrades to the Arcadia WTP with an innovative Reverse Osmosis (RO) concentrate treatment technology to enhance production efficiency. Upon Project completion, the overall raw water treatment capacity of the Arcadia WTP would be expanded from approximately 10 million gallons per day (mgd) or 11,300 acre-feet per year (acre-feet/yr) to approximately 13 mgd, or 14,700 acre-feet/yr.

The proposed Project is comprised of three primary elements, including: (1) Olympic Well Field Restoration, (2) Olympic Pipeline, (3) Olympic Advanced Water Treatment Facility (AWTF) and Arcadia WTP Production Efficiency Enhancement and Expansion (Arcadia WTP Expansion).

- The Olympic Well Field Restoration component involves equipping two new injection wells (Santa Monica Well [SM]-10i and SM-11i) and two new domestic groundwater production wells (SM-8 and SM-9) in the Olympic Well Field. Lateral pipeline connections from the groundwater production wells and the injection wells to existing pipelines would be constructed within the public right-of-way. The production wells would connect to the proposed Olympic Pipeline and the injection wells would connect to recycled water pipelines. Additionally, a new recycled water pipeline would connect SM-11i to a planned recycled water pipeline at the Santa Monica City Yards.
- The Olympic Pipeline component involves construction of a new 16-inch water transmission pipeline to transport water extracted from the Olympic Well Field in the City of Santa Monica to the new Olympic AWTF in the City of Los Angeles.
- The Olympic AWTF and Arcadia WTP Expansion involves two interrelated components that would be co-located at the Arcadia WTP. The proposed Olympic AWTF includes new treatment process equipment designed to treat key contaminants from the Olympic Well Field. The existing Arcadia WTP would be partially expanded to handle the additional flows from the Olympic AWTF. Additionally, this component includes a new innovative RO concentrate treatment technology to increase production efficiency and produce additional potable water while reducing concentrate discharges to the sewer system.

The Project is subject to environmental review pursuant to the California Environmental Quality Act (CEQA). In accordance with the CEQA Guidelines, Section 15367 (14 CCR 15367), the City is the lead agency with principal responsibility for considering the Project for approval. Discretionary and other ministerial actions required for the Project are described in Section 2.7 of this Initial Study/Mitigated Negative Declaration (IS/MND).

1.2 California Environmental Quality Act Compliance

In accordance with CEQA (Public Resources Code Section 21000, et. Seq.) and the State CEQA Guidelines, the City as the lead agency has prepared an Initial Study to determine whether the Project would result in a potentially significant environmental impact. CEQA requires that if, as a result of the Initial Study, the lead agency finds that there is evidence that any aspect of the Project may cause a significant environmental effect, the lead agency shall further find that an Environmental Impact Report (EIR) is warranted to analyze Project-related and cumulative environmental impacts. Alternatively, if the lead agency finds that there is no evidence that the Project, either as proposed or as modified to include the mitigation measures (MMs) identified in the Initial Study, may cause a significant effect on the environment, the lead agency shall find that the Project would not have a significant effect on the environment and shall prepare a Negative Declaration or Mitigated Negative Declaration (ND or MND) for the 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 an effect may occur (Section 21080(c), Public Resources Code).

Pursuant to CEQA, the City has prepared this IS/MND to evaluate the potential environmental effects of the proposed Project. This IS/MND evaluates the potential direct, indirect, and cumulative environmental effects of all environmental issues listed in Appendix G of the CEQA Guidelines. The City's Public Works Department, Water Resources Division and the Planning and Community Development Department, City Planning Division, directed and supervised the preparation of this IS/MND. Although prepared with assistance from the consulting firm Dudek, the content contained within and the conclusions drawn by this IS/MND reflect the sole independent judgment of the City. The IS/MND determined that, while the implementation of the Project could cause some potentially significant impacts on the environment, all of the Project's potentially significant impacts would be reduced to less-than-significant levels by the implementation of mitigation measures. Therefore, an IS/MND has been prepared for the proposed Project.

In accordance with Government Code Section 53091(d) and (e), the building and zoning ordinances of a county or city shall not apply to the location or construction of facilities for the production, generation, storage, treatment, or transmission of water by a local agency. Therefore, any references to the building or zoning regulations of the City of Los Angeles in this document shall be considered solely within the context of evaluating the potentially significant impacts of certain portions of the Project.

1.3 Initial Study Checklist

The Project's Initial Study) has been prepared per State CEQA Guidelines, Sections 15060–15065. The State CEQA Guidelines include a suggested checklist to indicate whether a project would have an adverse impact on the environment. The checklist is found in Section 3 of this document. Following the Environmental Checklist, Sections 3.1 through 3.21 include an explanation and discussion of each significance determination made in the checklist for the Project.

For this IS/MND, the following four possible responses to each individual environmental issue area are included in the checklist:

1. Potentially Significant Impact
2. Less Than Significant Impact With Mitigation Incorporated

3. Less Than Significant Impact
4. No Impact

The checklist and accompanying explanation of checklist responses provide the information and analysis necessary to assess relative environmental impacts of the Project. In doing so, the City will determine the extent of additional environmental review, if any, for the Project.

1.4 Public Review Process

In accordance with CEQA and the CEQA Guidelines, a 60-day public review period for this IS/MND commenced on July 6, 2020 and will conclude on September 4, 2020. The IS/MND has been distributed for review to interested and involved public agencies, responsible/trustee agencies, organizations, and private individuals that have requested in writing to be informed of the proposed Project. An electronic copy of the IS/MND can be viewed at https://www.smgov.net/Departments/PublicWorks/ContentCivEng.aspx?id=9673.

In accordance with CEQA Guidelines Section 15073, the IS/MND will be available for public review for not less than 30 days, and due social distancing requirements related to the Governor's Executive Orders related to COVID-19, the City has extended the public review period to 60 days. During this review period, the public will have the opportunity to provide written comments on the information contained within this IS/MND. The City's discretionary approval/refusal of the proposed Project will also be based on the information contained in this document.

In reviewing the IS/MND, interested members of the public should focus on the sufficiency of the document in identifying and analyzing potential Project impacts on the environment, as well as the sufficiency of any mitigation measures proposed to reduce potential impacts to a less-than-significant level. Comments on the IS/MND should be submitted by the end of the 60-day public review period and must be postmarked by September 4, 2020 Please submit written comments to Mr. Omeed Pour at 1685 Main Street, Mail Stop 15, Santa Monica, California 90401.

1.5 Mitigation Measures

Prior to mitigation, Project implementation would result in potentially significant impacts to air quality, biological resources, cultural resources, geology and soils, hazards and hazardous materials, noise, and transportation. However, MMs have been developed to avoid or reduce these impacts to less than significant levels. These MMs would be included in the Contractor Specifications and bid documents, as appropriate, and verified as part of the Mitigation Monitoring and Reporting Program. These MMs must be implemented to the satisfaction of the City and are listed below in Table 1-1, Mitigation Measures.

Table 1-1. Mitigation Measures

Potential Impact	Mitigation Measure
Air Quality	
On-site emissions of PM_{10} would exceed the localized significance threshold (LST) during construction activities at the Arcadia WTP and would also generate an estimated	**MM-AQ-1:** Prior to the commencement of construction activities at the Arcadia Water Treatment Plant, the City shall require its construction contractor to demonstrate that all 50-horsepower or greater diesel-powered equipment is powered with California Air Resources Board (CARB)-certified Tier 4 Interim engines. An exemption from this requirement may be granted if equipment

Table 1-1. Mitigation Measures

Potential Impact	Mitigation Measure
cancer risk above the 10 in 1 million cancer risk threshold.	with Tier 4 Interim engines are not reasonably available and the required corresponding reductions in criteria air pollutant emissions can be achieved from other combinations of construction equipment, such as using equipment with Tier 4 Final engines. Before an exemption may be granted, the City's construction contractor shall: (1) demonstrate that at least two construction fleet owners/operators in Los Angeles County were contacted and that those owners/operators confirmed Tier 4 Interim equipment could not be located within Los Angeles County during the desired construction schedule; and (2) the proposed replacement equipment has been evaluated using CalEEMod and documentation provided to the City to confirm that Project-generated emissions do not exceed applicable localized significance thresholds (LST) for nitrogen dioxide (NO_2), carbon monoxide (CO), particulate matter with an aerodynamic diameter less than or equal to 10 microns (PM_{10}), and particulate matter with an aerodynamic diameter less than or equal to 2.5 microns ($PM_{2.5}$), and the SCAQMD carcinogenic (cancer) risk threshold. If these requirements cannot be met, construction activities at the Arcadia Water Treatment Plant shall be postponed until CARB-certified Tier 4 Interim engines are available for use.
On-site emissions of PM_{10} would exceed the localized significance threshold (LST) during construction activities at the Arcadia WTP.	**MM-AQ-2:** Prior to the commencement of construction activities at the Arcadia Water Treatment Plant, the City shall require its construction contractor to water any exposed soils and/or soil stockpiles at least three times daily, or utilize another SCAQMD-approved dust control non-toxic agent in accordance with the manufacturer's specifications, to minimize fugitive dust during construction.
Biological Resources	
Trees and shrubs at the Ishihara Park and Arcadia WTP can potentially provide nesting and foraging for migratory birds. The removal of trees could result in direct or indirect impacts to nesting birds.	**MM-BIO-1:** Commencement of construction activities at the Arcadia Water Treatment Plant and Olympic Well Field shall avoid the February 1 through August 31 bird nesting season to the extent feasible. If construction activities must begin within this nesting season, a survey for nesting birds shall be conducted by a qualified biologist within 7 days before commencement of construction activities. The area surveyed shall include all clearing/construction areas, as well as areas within 100 feet of the boundaries of these areas, or as otherwise determined by the biologist. If no active bird nests are identified on, or within 100 feet of the limits of the proposed disturbance area, no further action is necessary and construction activities could commence. If active nests are found during pre-construction surveys or at any time throughout the course of construction activities during the nesting bird season, all clearing/construction activities within a minimum 100 feet of the nest shall be postponed until a wildlife biologist has identified the nesting species. If the bird species is not protected under the Migratory Bird Treaty Act (MBTA) and/or the California Fish and Game Code, no further action is required and construction activities may proceed. If the avian species is protected under the MBTA and/or the California Fish and Game Code, a minimum buffer zone shall be established by the qualified biologist based on the type of bird/raptor species identified and the construction buffer shall be established on site through the erection of cones/flagging/fencing to clearly delineate the protection zone. All construction activities shall avoid this protection zone until a qualified biologist has confirmed that the nest(s) is no longer active and the nest is vacated, and there is no evidence of second nesting attempts.

Table 1-1. Mitigation Measures

Potential Impact	Mitigation Measure
Cultural Resources	
The South Central Coastal Information Center records search identified one historic-era archaeological site (P-19-004666/CA-LAN-4666) approximately 250 feet southwest of the proposed location of well SM-10i. Additionally, it is unknown whether the Olympic Pipeline may yield intact subsurface archaeological deposits. Further, two archaeological sites were identified approximately 0.18-mile northeast of the Arcadia WTP. Therefore, there is a potential to encounter both prehistoric and historic-era archaeological deposits subsurface during Project construction.	**MM-CUL-1**: Prior to commencement of construction activities at the Olympic Well Field, Olympic Pipeline, and Arcadia Water Treatment Plant, the City's construction contractor and construction personnel shall attend and complete a Workers Environmental Awareness Program (WEAP) training conducted by a qualified archaeologist. The WEAP training shall provide: (1) the types and characteristics of archaeological materials that may be identified during construction and explain the importance of and legal basis for the protection of significant cultural resources; (2) proper procedures to follow in the event that cultural resources or human remains are uncovered during ground-disturbing activities, including procedures for work curtailment or redirection; and (3) protocols for the contact of the site supervisor and archaeological monitor upon discovery of a resource. **MM-CUL-2:** If archaeological resources (i.e., sites, features, or artifacts) are exposed during construction activities of any components of the proposed Project at the Olympic Well Field, Olympic Pipeline, and Arcadia Water Treatment Plant, all construction work occurring within 100 feet of the find shall immediately stop until a qualified archaeological principal investigator, meeting the Secretary of the Interior's Professional Qualification Standards for Archaeology, can evaluate the significance of the find and determine whether or not additional study is warranted. This work exclusion buffer may be adjusted based on the recommendation of the archaeological principal investigator. Reservation in place of any unanticipated resource should be considered the preferred approach wherever possible, and the feasibility of avoidance should be discussed with the City prior to moving forward with excavation or other potentially destructive evaluation efforts. Should it be required, temporary flagging may be installed around this resource in order to avoid any disturbances from construction equipment. Depending upon the nature of the find, the archaeological monitor in correspondence with the qualified archaeological principal investigator may simply record the find to appropriate standards (thereby addressing any data potential) and allow work to continue. If the qualified archaeological principal investigator determines the discovery to be potentially significant under California Environmental Quality Act (CEQA) or City regulations, additional efforts in conformance with requirements set forth in CEQA Section 21083.2 related to unique archeological resources shall be conducted, such avoidance of the resources, preservation in place, additional testing, and/or data, prior to allowing construction to proceed in the area of the find. **MM-CUL-3:** During construction activities at the Olympic Well Field and Arcadia Water Treatment Plant that require earthwork below five feet or disturbance of native soils, periodic archaeological monitoring shall be conducted. The frequency and duration of the periodic monitoring shall be determined by a qualified archaeological principal investigator based on inspection of exposed subsurface soils and their observed potential to contain intact cultural deposits or material. The archaeological monitor shall have the authority to temporarily halt work to inspect areas as needed for potential cultural material or deposits. In the event that archaeological resources are exposed

Table 1-1. Mitigation Measures

Potential Impact	Mitigation Measure
	during construction activities for the proposed Project's MM-CUL-2 shall be followed. The archaeological monitor shall be responsible for maintaining daily monitoring logs during monitoring. Following the completion of construction, an archaeological monitoring report with the results of the cultural monitoring program shall be submitted to the City for review and approval. Once approved, the final report will be filed with the South Central Coastal Information Center.
Geology and Soils	
Due to the presence of paleontologically sensitive sediments below the relatively thin veneer of Holocene alluvium, the Natural History Museum of Los Angeles County recommended paleontological monitoring of any excavations of below a depth of five feet below ground surface in undisturbed native sediments.	**MM-GEO-1:** Prior to commencement of any grading activity below a depth of five feet at the proposed recycled water pipeline for the Olympic Well Field Restoration, Olympic Pipeline, and Arcadia Water Treatment Plant, the City of Santa Monica shall retain a qualified paleontologist in accordance with the guidelines of the Society of Vertebrate Paleontology (SVP 2010). The paleontologist shall prepare a Paleontological Resources Impact Mitigation Program (PRIMP) for the proposed Project. The PRIMP shall be consistent with the SVP (2010) guidelines and shall outline requirements for preconstruction meeting attendance and worker environmental awareness training, adequate spot-check monitoring within the proposed Project site based on construction plans and/or geotechnical reports, procedures for adequate paleontological spot-check monitoring and discoveries treatment, paleontological methods (including sediment sampling for microvertebrate fossils), reporting, and collections management The PRIMP shall include protocols for spot-checking significant ground-disturbing activities below a depth of five feet below the ground surface or five feet below the depth of artificial fill in areas mapped as Holocene alluvium. At a minimum, the PRIMP shall require that if paleontological resources (e.g., fossils) are unearthed during grading, the paleontological monitor will temporarily halt and/or divert grading activity to allow recovery of paleontological resources. The area of discovery will be roped off with a 50-foot radius buffer. Once documentation and collection of the find is completed, the monitor will remove the rope and allow grading to recommence in the area of the find. Upon completion of the paleontological monitoring program, the qualified paleontologist shall prepare a final monitoring report documenting the results of the mitigation program. This report should include discussions of the methods used, stratigraphic section(s) exposed, fossils collected, and significance of recovered fossils.
Hazards and Hazardous Materials	
Due to some Project components located within the Olympic Well Field Contamination Plume and due to the age of the structures at the Arcadia WTP, exposed water and soil may contain hazardous levels of contamination, and impacts associated with the transport, use, or disposal of hazardous materials are potentially significant.	**MM-HAZ-1:** Prior to commencement of Project-related demolition or earth-moving activities at the Olympic Well Field and Olympic Pipeline, a Hazardous Materials Contingency Plan (HMCP) shall be developed and provided to the City for review and approval. The HMCP shall address the potential impacts related to disturbance of potentially contaminated soil, soil vapor and/or groundwater. The HMCP shall clearly identify known areas of contamination that overlap with the Project components. The HMCP shall include training procedures for construction crews for the identification, assessment, characterization, management, and proper disposal of hazardous constituents, materials, and wastes, in accordance with all applicable state and local regulations. If impacted soils or groundwater are encountered during excavation activities, the contaminated soils and/or groundwater shall be

Table 1-1. Mitigation Measures

Potential Impact	Mitigation Measure
	managed and disposed of in accordance with local and state regulations. The HMCP shall include health and safety measures, which may include periodic work breathing zone monitoring, monitoring for volatile organic compounds using a handheld organic vapor analyzer, and/or other equally effective measures in areas where known contamination is present. The City of Santa Monica or its designee shall implement the HMCP during all construction activities for the proposed Project that require ground disturbance in areas of known contamination, as outlined in the HMCP.
Construction that removes road surfaces may create wastes that contain hazardous levels of chromium and lead. Additionally, since the Arcadia WTP has been in operation since at least the 1950s, there is a potential for hazardous building materials, including lead, asbestos, PCBs, and universal wastes, to be present. Therefore, impacts associated with the transport, use, or disposal of hazardous materials are potentially significant.	**MM-HAZ-2:** Prior to commencement of demolition or construction activities at the Olympic Pipeline or Arcadia Water Treatment Plant, a hazardous materials site survey shall be conducted. The survey shall be conducted on the proposed Olympic Pipeline alignment to identify yellow traffic striping (if it is going to be disturbed/removed as part of construction) that may contain lead chromate, and on the Arcadia WTP buildings to be disturbed/demolished for asbestos, lead-based paint, polychlorinated biphenyls, and universal wastes. Following results of the hazardous materials survey, demolition or renovation plans and contract specifications shall incorporate abatement procedures for the removal of materials containing asbestos, lead, lead chromate, polychlorinated biphenyls, and universal waste items, as required. All abatement work shall be done in accordance with federal, state, and local regulations, including those of the U.S. Environmental Protection Agency, Occupational Safety and Health Administration, California Occupational Safety and Health Administration, and the South Coast Air Quality Management District.
Noise	
Installation of the Olympic Pipeline and construction at the existing Arcadia WTP could create temporary noise at levels exceed construction noise limits pursuant to Santa Monica Municipal Code Section 4.12.110 and Los Angeles Municipal Code 112.05.	**MM-NOI-1:** The City of Santa Monica shall ensure that the construction contractor(s) contract specifications for all Project-related activities at the Olympic Well Field (including the recycled water pipeline), Olympic Pipeline, and Arcadia Water Treatment Plant include the following requirements during construction activities: • Construction hours must be conducted in compliance with the applicable local regulations for the project component within each jurisdiction with respect to allowable timeframes and days of the week (including weekends and holidays). Noise from construction activities in the City of Santa Monica shall meet the standard of 80 or 85 dBA Leq over any 15-minute period, depending on the SMMC 4.12.060 Noise Zone. Noise from any operating powered equipment associated with the construction activities in the City of Los Angeles shall meet the standard of 75 dBA Leq at 50 feet over any 15-minute period. • Construction-related activities during nighttime hours (as defined by local regulation) would require a permit pursuant to Santa Monica Municipal Code Section 4.12.110 and/or would require permission from the Executive Director on behalf of the Board of Police Commissioners pursuant to Los Angeles Municipal Code Section 41.40(b). • All idling (i.e., engines running) equipment shall be kept to a minimum. • The use of noise-producing signals, including horns, whistles, alarms, and bells, shall be used for safety warning purposes only.

Table 1-1. Mitigation Measures

Potential Impact	Mitigation Measure
	• Communication with local residents shall be maintained prior to and during construction. Specifically, the local residents shall be informed of the schedule, duration, and progress of the construction and shall be provided contact information (e.g., a telephone hotline and/or email address) for noise- or vibration-related complaints. The City shall establish a process to investigate these complaints in a timely manner and, if determined to be valid, detail efforts to provide a timely resolution and response to the complainant—with copy of outcome description documented in a log for the duration of the construction activities. • All noise-producing equipment and vehicles using internal combustion engines shall be equipped with exhaust mufflers (or comparable noise-reducing exhaust flow treatments); air-inlet silencers; and, hoods, shrouds, shields, or other noise-reducing features in good operating condition that meet or exceed original factory specifications. Mobile or fixed "package" equipment (e.g., arc-welders, air compressors, generators, etc.) shall be equipped with shrouds and noise control features that are readily available for that type of equipment. • Usage of construction equipment shall be properly phased, scheduled, and positioned, so that no combination of concurrently operating equipment would cause an exceedance of the noise limit at a receptor location. In addition to the measures listed above, site-specific requirements for activities for the Arcadia WTP also include: • Concrete saws anticipated for demolition of existing on-site features (buildings, pavement, concrete slabs, etc.) shall feature commercially-available low-noise blades and portable exterior shrouds (e.g., temporary sound blankets or comparable barriers or enclosures) that can move with the equipment so as to consistently control noise emission from the operating equipment and its impact on the work surface and thereby meet the aforementioned noise limit.
Transportation	
During construction, short-term transportation-related hazards may be introduced due to the presence and use of construction vehicles and equipment including; temporary lane closures, temporary driveway blockages, temporary loss of parking, and temporary disruptions to traffic, transit, bicycle, and pedestrian movement especially in and around the pipeline alignment along Arizona Avenue, Texas Avenue, Saltair Avenue, and Berkeley Street.	**MM-TRAF-1:** Prior to the start of any Project-related construction at the Olympic Well Field and Olympic Pipeline, the City shall develop and implement a Project-specific Traffic Control Plan (TCP). The TCP shall be stamped and signed by a licensed Traffic Engineer or Civil Engineer in the State of California. The TCP shall be prepared in accordance with applicable regulations and standards, including the California Manual on Uniform Traffic Control Devices, and approved by all regulatory agencies having jurisdiction over the work locations shown in the TCP, including the City of Santa Monica and City of Los Angeles.

2 Project Description and Environmental Setting

2.1 Project Background

2.1.1 2018 Sustainable Water Master Plan

The City's Water Resources Division provides treatment and distribution of drinking water to residents and other users within its boundaries. As of 2019, the City services approximately 18,000 metered customers with a current average annual water demand of about 11,600 acre-feet/yr. Approximately 50% to 60% of the City's current water supply is derived from local groundwater resources, with the remainder supplied by imported water purchased from the MWD. The City is a charter member of MWD, which serves wholesale treated water to the City imported from the Colorado River Aqueduct and the State Water Project.

Given the growing statewide challenges associated with maintaining a safe and reliable water supply, the Santa Monica City Council in 2011 directed staff to develop a water self-sufficiency plan with the goal of meeting 100% of Santa Monica's water demand using local water sources. In turn, staff developed a Sustainable Water Master Plan (SWMP) outlining a pathway to reach water self-sufficiency, which was adopted by City Council in October 2014. In 2015, the City responded to the statewide emergency drought conditions with an aggressive water conservation effort that yielded approximately 18% decrease in water demand, with the intention of continuing city-wide conservation as additional programs are implemented.

Subsequent to the completion of the 2014 SWMP, the City obtained additional information regarding the treatment feasibility for the Olympic Well Field and production efficiency enhancements for the Arcadia WTP. Other work completed included an updated preliminary Sustainability Yield Assessment estimate of the local groundwater basin, drilling exploratory water wells to evaluate potential new local water production, completion of technical studies to evaluate the cost and viability of increasing the production efficiency of the Arcadia WTP, evaluation of impacts of new State drinking water laws on groundwater extraction, and evaluation of cost and viability of additional water conservation programs. Additionally, the State of California adopted stringent new drinking water regulations relating to groundwater contamination in December 2017. As a result of the new information and regulations, the SWMP was updated and adopted by City Council on November 27, 2018.

As outlined in the updated SWMP, the City strives to maximize local water resources and reduce reliance on costly imported water through a combination of demand reduction, water conservation and efficiency programs, and the addition of local water supplies. The major benefits of the City achieving water self-sufficiency include: (1) long-term cost benefits to ratepayers by maximizing local water resources; (2) a more sustainable and drought-resilient water supply through a diversified water supply portfolio; and (3) a reduced water supply energy footprint through

conservation and locally sourced water supplies. The SWMP includes the following key components to maximize local water resources (City of Santa Monica 2018a).

- Component 1 – Continuing and increasing water conservation efforts to permanently reduce water demand (approximately 3,100 acre-feet per year [acre-feet/yr] in water demand reduction)
- Component 2 – Develop sustainable and drought resilient alternative water supplies (approximately 2,860 acre-feet/yr)
- Component 3 – Expand local groundwater production within sustainable yield limits (approximately 2,100 acre-feet/yr)

The proposed Project has elements from Component 2 and Component 3 of the SWMP. Component 2 of the SWMP includes upgrading the Arcadia WTP with concentrate treatment technology to increase production efficiency and produce additional potable water at the existing WTP. Component 3 of the SWMP involves restoring the Olympic Well Field and expanding local groundwater production by providing advanced treatment for the contaminated groundwater basin to return Olympic Well Field to its full production capacity. One of the overarching goals of this Project is to maximize local groundwater production and produce as much potable water as possible and concurrently reduce imported MWD water supply while maintaining sustainable yield of the groundwater basin.

2.1.2 Olympic Well Field Contaminants

The Olympic Well Field plays a key role in achieving the City's water self-sufficiency goal because the Well Field could provide up to 3,200 acre-feet/yr of groundwater and is the location where purified water from the City's Sustainable Water Infrastructure Project (SWIP) would be recharged to sustain this pumping rate. The SWIP includes multiple components, including a modular reverse osmosis (RO) unit at the Santa Monica Urban Runoff Recycling Facility (SMURRF) to treat shallow brackish and saline groundwater and harvested stormwater.

Currently, the Well Field generally produces between 1,000 acre-feet/yr and 1,600 acre-feet/yr. The Olympic Well Field contains several contaminants that would require additional treatment to meet drinking water standards. The key contaminants in the Olympic Well Field include: 1,2,3-Trichloropropane (1,2,3-TCP), 1,4- Dioxane, trichloroethylene (TCE), and tetrachloroethylene (PCE). The City conducted a pilot study from 2014-2016 to evaluate treatment options for the Olympic Well Field (City of Santa Monica 2016a). The City decided against moving forward with constructing a stand-alone treatment plant at the City Yards location at 2500 Michigan Avenue or an expansion of the Arcadia WTP to treat the Olympic Well Field (without providing separate advanced treatment first to the Olympic Well Field).

Further analysis of treatment options for the Olympic Well Field was completed in 2018 due to a recently established drinking water regulation that established a maximum contaminant level (MCL) for 1,2,3-TCP at 5 parts per trillion (ppt). 1,2,3-TCP is a man-made chlorinated hydrocarbon that was historically used as an industrial solvent, cleaning and degreasing agent, and paint remover. The State Water Resources Control Board (SWRCB) established this new 5 ppt MCL and determined that granulated activated carbon (GAC) is the best available technology for treating the contamination (SWRCB 2018).

Additionally, new data on 1,4-Dioxane was available to refine the City's treatment analysis to determine if the current 1 parts per billion notification level, which serves as the anticipated future MCL, could be met once full production of the Olympic Well Field is restored. Key findings of the treatment analysis (City of Santa Monica 2019a) are listed below:

- 1,2,3-TCP was only detected at one well, SM-4, and the MCL of 5 ppt could be met through blending with other wells at full production capacity.
- 1,4-Dioxane is present in all three studied wells (two existing and one future replacement well) and could limit groundwater production from the Olympic Well Field to 845 acre-feet/yr or approximately 25% of the basin's total sustainable yield.
- Other contaminants, TCE and PCE, do not impact groundwater production from the Olympic Well Field as they would be removed through existing treatment processes at the Arcadia WTP.

To maximize groundwater production from the Olympic Well Field and comply with regulation on the key contaminants of concern, the City has proposed this Olympic Well Field Restoration and Arcadia Water Treatment Plant Expansion Project. In order to restore the Olympic Well Field to full production capacity, the following improvements are needed: groundwater well improvements, a new dedicated pipeline that would separate groundwater from the Olympic Well Field and eliminate comingling from other groundwater well fields, and a new Olympic AWTF that would be co-located at the existing Arcadia WTP.

The proposed Project would construct the Olympic Pipeline from the Olympic Well Field to the Arcadia WTP in order to separate Olympic Well Field contaminated groundwater from the Charnock Well Field groundwater for separate treatment at the Arcadia WTP. Currently, water from the Olympic and Charnock Well Fields are combined, conveyed, and treated at the Arcadia WTP as a single source. Separation of these two groundwater sources would allow the contaminated Olympic Well Field water to have treatment that specifically targets the removal of 1,4-Dioxane. The proposed Olympic Pipeline would reduce the amount of water needing treatment since only the Olympic Well Field flows, which provides up to 3,200 acre-feet/yr, contain 1,4-Dioxane. If the Olympic Well Field flows were not separated from the Charnock Well Field, approximately 14,700 acre-feet/yr (Olympic + Charnock) would need to be treated for 1,4-Dioxane. The Arcadia WTP's treatment capacity will also be expanded and upgraded with a new RO concentrate treatment system to produce additional potable water from the existing concentrate stream that is discharged to the sewer.

2.2 Project Location

The proposed Project is located within the cities of Santa Monica and Los Angeles in the western portion of the County of Los Angeles. Figure 1, Project Location and Regional Vicinity, includes a graphic depiction of the locations of the Project components, including the boundary between the two cities. For the purposes of this discussion and throughout this IS/MND, the Project location will be discussed in three components: the Olympic Well Field Restoration shown as the yellow and red squares (within the City of Santa Monica), the Olympic Pipeline (within the cities of Santa Monica and Los Angeles) shown as the dashed line, and the Olympic AWTF and the Arcadia WTP Expansion (co-located at the Arcadia WTP) outlined in black, as well as an adjacent City-owned property that would be used for staging, located at Wilshire Boulevard and Bundy Drive (within the City of Los Angeles).

2.2.1 Olympic Well Field Restoration

The Olympic Well Field is located in the City of Santa Monica generally along the alignment of Olympic Boulevard west of Centinela Avenue and east of Cloverfield Boulevard. The locations for the proposed groundwater production wells SM-8 and SM-9, and the proposed groundwater injection well SM-10i, are within the public right-of-way median of Olympic Boulevard. Therefore, they are not located within a specific parcel or located at a specific street address. Rather, these proposed wells associated with the Olympic Well Field, as well as the proposed pipelines that would connect the wells, are all entirely located within the Olympic Boulevard right-of-way, which is one of the City's key east-west boulevards.

Wells SM-8 and SM-9 are located within 600 feet of the newly constructed Los Angeles County Metropolitan Transportation Authority (Metro) Division 14, Operations and Maintenance Facility, which is a 9.7-acre and 95,000 square foot facility that provides rail car maintenance services light rail associated with the Exposition (E) Line. The E Line rail tracks are within 100 feet of SM-10i and SM-8, and within 300 feet of SM-9. Well SM-8 would be located approximately 1,400 feet east of SM-10i and west of the intersection of Olympic Boulevard and Stewart Street near the 26th Street Arts Center in the City of Santa Monica. A new 12-inch pipeline would be constructed in the median to connect SM-8 to an existing pipeline within Stewart Street. Figure 2A, Well SM-8 Location and Vicinity, provides and overview of the site and immediately surrounding areas. Well SM-9 would be located approximately 1,700 feet east of SM-8 and west of the intersection of Olympic Boulevard and Centinela Avenue near the New Roads Middle School in the City of Santa Monica. SM-3 is an existing well that would be decommissioned and is located approximately 100 feet north of the proposed SM-9 location. A new 12-inch pipeline would be constructed in the median to connect the new SM-9 to the pipeline at the decommissioned SM-3. Figure 2B, Wells SM-9 and SM-3, Location and Vicinity, provides and overview of the site and immediately surrounding areas.

Well SM-10i would be located west of the intersection of Olympic Boulevard and 26th Street near the Water Garden Office Park in the City of Santa Monica. Figure 2C, Well SM-10i Location and Vicinity, provides an overview of the site and immediately surrounding areas. SM-10i would connect to an existing 6-inch line to the south of the Olympic Boulevard median. A photograph of the typical injection well, which would be similar in design and scale to the proposed SM-10i, is included in Figure 2C.

Access to these sites for both construction activities and ongoing maintenance would be via Olympic Boulevard. There is no on-site parking at the well sites, therefore, construction vehicles and City maintenance vehicles would temporarily park in the median of Olympic Boulevard or in adjacent areas for street parking. Temporary staging areas for equipment and vehicles during construction would be located adjacent to the new well sites within the medians.

Additionally, there may be a proposed groundwater injection well SM-11i constructed at the eastern end of Ishihara Park, located north of Exposition Boulevard and west of Dorchester Avenue (2909 Exposition Park). Figure 2D, Well SM-11i Location and Vicinity, provides an overview of the site and immediately surrounding area. A photograph of the typical injection well, which would be similar in design and scale to the proposed SM-11i, is included in Figure 2D. Access to this well location is provided by either Stewart Street or Centinela Avenue. This site is designated and zoned as Mixed- Use Creative (City of Santa Monica 2017). Construction vehicles and City maintenance vehicles would temporarily park along the roadway on a first come, first serve basis, with staging areas for construction located at Ishihara Park. As shown in Figure 1, a new recycled water pipeline would be constructed in the roadway of Exposition Boulevard and Stewart Street to connect SM-11i to the planned recycled water pipeline at the Santa Monica City Yards, located at 2500 Michigan Avenue in the City of Santa Monica.

2.2.2 Olympic Pipeline

As shown in Figure 1, and listed in Table 2-1, the proposed Olympic Pipeline alignment would connect an existing pipeline within Nebraska Avenue to the Arcadia WTP. The pipeline alignment and associated trenching would be entirely contained within City-owned property and within publicly owned right-of-way within the cities of Santa Monica and Los Angeles. Trenching depth is anticipated to be approximately 8 feet to the bottom of the trench in areas where it is required to avoid other utilities beneath the roadways, and approximately 4.5 to 6 feet in depth for most of the alignment.

Table 2-1. Olympic Pipeline Alignment

Location	Length (linear feet)
City of Santa Monica	
Berkeley Avenue (from Nebraska Avenue to Colorado Avenue)	1,365
Colorado Avenue	80
Berkeley Avenue (from Colorado Avenue to Arizona Avenue)	2,035
Arizona Avenue (from Berkeley Avenue to Centinela Avenue)	765
City of Los Angeles	
Texas Avenue (from Centinela Avenue to Saltair Avenue)	1,990
Saltair Avenue	330
Total	**6,565**
Alternate alignment via Bundy Drive	*(reduction of ~ 600 linear feet)*

Source: Figure 1, Project Location and Regional Vicinity

2.2.3 Olympic Advanced Water Treatment Facility and Arcadia Water Treatment Plant Expansion

The Olympic AWTF and the Arcadia WTP Expansion would be co-located at the Arcadia WTP. The Arcadia WTP encompasses a 209,957 square foot (4.8-acre) parcel located at 1228 South Bundy Drive in the West Los Angeles Community Plan Area of the City of Los Angeles. Figure 3, Arcadia Water Treatment Plant Site, provides an overview of the existing property and identifies the on-site buildings and immediately surrounding land uses. The site is identified as Los Angeles County Assessor's Parcel Number (APN) 426-300-3270 and is zoned [Q]PF-1XL (Qualified Public Facilities in Height District 1, Extra Limited), with a General Plan land use designation of "Public Facilities". This location is approximately 1,250 feet east of the eastern limit of the City of Santa Monica. The facility is bound on the northwest by a northeast-southwest traveling alleyway that runs parallel to Wilshire Boulevard and connects Saltair Avenue and Bundy Drive; bound on the northeast by Saltair Avenue; bound on the southeast Texas Avenue; and bound on the southwest by Bundy Drive.

The adjacent property that would be used for staging includes APNs 426-300-3271, -3272, and -3273, which total 10,556 square feet (0.24-acre) and are zoned [Q]C2-1L-CDO (Qualified Commercial in Height District 1, Limited) within the West Wilshire Boulevard Community Design Overlay (CDO), with a General Plan land use designation of "Community Commercial".

Regional access to the Arcadia WTP is via the Interstate (I) 405, which is located approximately 1-mile to the northeast, exiting the Wilshire Boulevard off-ramp.

2.3 Project Objectives

The Project's specific objectives are as follows:

1. Maximize City of Santa Monica local water supplies to reduce reliance on costly imported water.
2. Ensure a high-quality, safe, and reliable water supply for City water customers.
3. Restore the Olympic Well Field to full production capacity by providing a new advanced water treatment facility to treat the contaminated Olympic Well Field groundwater basin.

2.4 Existing Conditions and Settings

2.4.1 On-Site Conditions

Olympic Well Field Restoration

The Olympic Well Field is one of the five sub-basins within the Santa Monica Groundwater Basin. As previously described in Section 2.1.2, the Olympic Well Field Restoration was identified as a key element to help the City achieve its water self-sufficiency goals. The proposed groundwater production wells SM-8 and SM-9, and the proposed groundwater injection well SM-10i, would be located within the public right-of-way median of Olympic Boulevard. As previously discussed, Well SM-10i would be located west of the intersection of Olympic Boulevard and 26th Street; well SM-8 is located west of the intersection of Olympic Boulevard and Stewart Street; and well SM-9 is located west of the intersection of Olympic Boulevard and Centinela Avenue. The existing median separates the two-lane Olympic Boulevard and is grass-covered. The median has curb cuts on all sides, and is continuous from Cloverfield Boulevard to 26th Street, then 26th Street to Stewart Street, and then Stewart Street to Centinela Avenue. There are some aboveground utility structures visible within the median along with street signage. Due to its location within the right-of-way, the median is not accessible to the public. However, there are two existing paved portions of the median west of the intersection of Olympic Boulevard and Centinela Avenue (near well SM-9), which could provide vehicle parking for city-owned vehicles.

The proposed groundwater injection well SM-11i is located at the eastern end of Ishihara Park. Ishihara Park, completed in 2017, is a City of Santa Monica Public Park and includes walkways, community gardens, and community amenities for the public (City of Santa Monica 2020). The proposed groundwater injection well would be located within an area that currently contains mature ficus trees, set back approximately 40 feet back from Exposition Boulevard. There are currently no existing recreational uses within the proposed well location. The new recycled water pipeline would be within the roadway from SM-11i at the eastern end of Ishihara Park at Exposition Boulevard to Stewart Street.

Olympic Pipeline

The entire Olympic Pipeline would be approximately 6,565 linear feet beneath the streets from Nebraska Avenue in the City of Santa Monica to the existing Arcadia WTP. The proposed Olympic Pipeline would be constructed beneath existing paved roadways (Arizona Avenue, Berkeley Avenue, Colorado Avenue, Texas Avenue) that are within the City of Santa Monica and City of Los Angeles right-of-way (see Table 2-1 in Section 2.2.2).

Olympic AWTF and Arcadia WTP Expansion

The proposed Olympic AWTF and Arcadia WTP Expansion are co-located at the existing Arcadia WTP. The Arcadia WTP is currently capable of treating up to approximately 11,300 acre-feet/yr (10 mgd) and capable of producing 9,900 acre-feet/yr (8.9 mgd) of treated water (approximately 82% recovery or efficiency) (City of Santa Monica 2019b).

Water Supply Wells

The Arcadia WTP is currently supplied with groundwater from three primary well fields: Charnock, Arcadia, and Olympic. The primary treatment objective of the Arcadia WTP is to treat the local groundwater supply to meet all drinking water requirements and be compatible with imported water supplies. In addition, the treatment processes at the Arcadia WTP are a part of the multi-barrier treatment system for the Charnock Well Field in which groundwater from the Charnock Well Field is treated at the wellhead prior to being pumped to the Arcadia WTP. The existing Charnock wells are located southeast of the City. Three of the five groundwater wells at the Charnock Well Field are contaminated with methyl tert-butyl ether and tertiary butyl alcohol. Wellhead treatment via greensand filtration and biologically activated carbon is provided at the Charnock Well Field for the three contaminated wells. After treatment, it is blended with the other two non-contaminated wells and pumped to the Arcadia WTP for further treatment.

Wells from the Olympic and Arcadia Well Fields are currently pumped directly to Arcadia WTP for treatment. Located on site at the Arcadia WTP, Arcadia Wells 4 and 5 (ARC-4 and ARC-5), have good water quality and low production capacities. To date, no volatile organic compounds (VOC), synthetic organic compounds or 1,4-dioxane (1,4-Dx) have been detected in these two wells. Despite their good water quality supply, the production of the two Arcadia wells is limited. The Santa Monica Wells 3 and 4 (SM-3 and SM-4) are located west of the Arcadia WTP in the Olympic Sub-basin or Olympic Well Field. The water supplied by Wells SM-3 and SM-4 have historically been low in synthetic organic compound concentrations compared to Charnock, and high in TCE, PCE, 1,4-dioxane and cis and trans-1,2-dichloroethylene (1,2-DCE) concentrations. In addition to these constituents, 1,2,3-trichloropropane (1,2,3-TCP) has also been detected in SM-4. SM-3 and SM-4 are located within the median of Olympic Boulevard. SM-3 is east of Centinela and SM-4 is east of Stewart Street.

Overview of Treatment at Arcadia WTP

A general process diagram for the Arcadia WTP is provided in Section 2.5.5, Arcadia WTP Expansion. The existing treatment train at the Arcadia WTP consists of:

- **Contact Basin:** The purpose of the contact tank is to provide chlorination contact time as well as flow equalization from the incoming raw water from various groundwater wells serving the Arcadia WTP. Chlorination assists in the removal of iron and manganese prior to filtration by the greensand filters.
- **Greensand Filtration System:** Greensand filtration removes particulate iron and manganese as well as other solids from the groundwater supply to protect the RO membranes from particulate fouling, the accumulation of unwanted materials. Oxidized iron is primarily removed through filtration, while manganese is removed through adsorption on to the filter media in the presence of an oxidant such as free chlorine. There are two duty and one spare pump to feed the greensand from the contact pump and six pressure greensand filters. The current greensand hydraulic loading rate is 3.0 gallons per minute (gpm).

- **Backwash Supply Tank:** Backwashing of the greensand filters is carried out using greensand filtrate that is stored in the backwash supply tank. The backwash sequence currently in place has two steps; first a 15-minute backwash at 15 gpm/ft2 of media surface area, and second a 30-minute filter to waste step.
- **Backwash Waste Tank:** The spent backwash water from the greensand filters flow by gravity to the backwash waste tank located adjacent to the greensand filter complex. Solids from the backwash waste are kept in suspension in the waste tank through operation of two submersible mixers (MXP-1101 and MXP-1102). The fluidized spent waste is then pumped to the inclined plate separator for treatment to enable the recirculation of this spent waste to the feed of the plant. In practice, however, the spent backwash waste is pumped by gravity from the inclined plate separator directly to the sewer for discharge.
- **Backwash Plate Settler:** The purpose of the inclined plate separator is to act as a backwash water recovery system to equalize and treat spent filter backwash and filter-to-waste from the greensand filtration system so it can be recycled to the head of the plant. However, the existing Arcadia WTP inclined plate separator effluent is not recycled to the head of the plant due to water quality concerns. Instead, this spent waste is drained from the existing inclined plate separator effluent manifold and sent to sewer via a 4-inch drain.
- **RO Feed Tank:** The purpose of the RO feed tank is to provide a hydraulic buffer to equalize the flow to the RO system. This enables the RO system to operate steady state, irrespective of the operation of the greensand filters.
- **RO Transfer Pumps & Cartridge Filters:** The RO transfer pumps will convey water from the RO feed tank through the cartridge filters to the RO system. The cartridge filters serve as a final barrier for removal of any particulate matter that may be present in the RO feed tank prior to feeding the RO systems. Currently, there are four cartridge filter units (3 on duty, 1 on standby) with a flow rate of 1,900 gpm.
- **RO System:** The RO system removes dissolved minerals and salts to soften the groundwater supply. The RO system also provides a multiple barrier to other target contaminants including 1,4-Dioxane and MTBE. RO concentrate is discharged to the City's sewer system via an existing 8-inch-diameter salt water line. Currently, there are four RO units with 66 in use pressure vessels and 4 spare pressure vessels. The RO support systems are included to prevent fouling of the RO membrane during periods of shutdown. These include the RO flush system and the clean-in-place system. The cleaning is triggered when the normalized permeate flow drops by more than 10%, normalized differential pressure across any stage increases by 15%, or when the normalized salt passage increases by 10%. The RO support system is comprised of a neutralization tank, RO flush tank, and two CIP makeup tanks.
- **Decarbonator:** The Arcadia WTP air strippers are referred to as decarbonators. RO permeate from the RO system is stabilized with RO bypass flows (approximately 17% to 23% of greensand filtrate is bypassed around the RO system) and passed through decarbonation towers to stabilize pH and alkalinity of the treated water. Chemicals are added to the treated water. The decarbonators remove carbon dioxide present in the RO permeate and bypass blend thereby raising the pH of the water and reducing the need for corrosion control. The decarbonator also removes target VOCs.
- **Treated Water Storage:** A 5-million-gallon (MG) reservoir is provided to meet the City's diurnal water demands. The storage reservoir is equipped with an aeration system that removes any remaining VOCs, such as trichloroethylene, that may be present before it is distributed into the potable water system.

2.4.2 Surrounding Land Uses

Olympic Well Field Restoration

SM-8, SM-9, and SM-10i, generally located between 26th Avenue and Centinela Avenue within the Olympic Boulevard median, in the Bergamot Area Plan of the City. The uses surrounding this site includes a mix of office, commercial, rail, and arts (see Table 2-2). SM-11i is within Ishihara Park and the proposed recycled water pipeline is within the existing roadway of Exposition Boulevard and Stewart Street. The surrounding land uses include single family residential, open space, and industrial. The following describes the uses in the immediate vicinity of each proposed well locations and the recycled water pipeline:

- Well SM-8: To the north of Olympic Boulevard is creative office space for a media and production company with an associated surface parking lot that is screened by vegetation. To the east, across the intersection of Olympic Boulevard and Stewart Street, is a single-story office building to the north and the Lantana Media Campus is to the south. To the south is a two-story creative office structure for XYZ, an IT Media company, and Metro Light Rail E Line. Further south is the 26th Street Arts Center with its art gallery spaces. There are no distinct uses to the west besides the continuing median and Olympic Boulevard until 26th Street.
- Well SM-9: To the north of Olympic Boulevard is Media Park Santa Monica, a commercial property with three commercial office buildings. To the east, across the intersection of Olympic Boulevard and Centinela Avenue are several single-story commercial structures. Across Centinela Avenue, uses are within the City of Los Angeles corporate boundary. To the south of Olympic Boulevard, there is an Extra Space storage building, a single-story commercial building, and a three-story commercial building. To the west, there are commercial office spaces and the median continues west until Stewart Street.
- Well SM-10i: To the north of Olympic Boulevard is an existing office park (Water Garden) with several 6-story office buildings and landscaping. To the east, across the intersection of Olympic Boulevard and 26th Avenue, are additional office buildings to the north and the Bergamot Station Metro station to the south. To the south and west of well SM-10i is the Metro Light Rail E Line and further south is an Extra Space storage building with an associated surface parking lot.
- Well SM-11i: To the north of Ishihara Park is Metro Division 14 Operations and Maintenance Facility, a train yard inclusive of a two-story in height building and associated surface parking lot, which extends the entire length of Ishihara Park along Exposition Boulevard towards the east. To the south and west across Exposition Boulevard and Dorchester Avenue, respectively, are single-family residential uses.
- Recycled Water Pipeline: To the north of Exposition Boulevard is Ishihara Park, and to the south are single family residential uses. To the west of Stewart Street and Exposition Boulevard is the Santa Monica City Yards, Gandara Park, and Bergamot Station. The east of Stewart Street and Exposition Boulevard are single family residential uses.

Olympic Pipeline

Table 2-2. Olympic Pipeline Alignment Surrounding Land Uses

Streets	Surrounding Land Uses	Nearby Zoning/Land Use Designations
City of Santa Monica		
Berkeley Avenue (from Nebraska Avenue to Colorado Avenue)	Near Berkeley Avenue and Nebraska Avenue, there are several single-story commercial buildings located to the east and west of Berkeley Avenue. At the Berkeley Avenue and Pennsylvania Avenue intersection, the land uses transition from commercial to single- and multi-family residential uses.	Conservation: Creative; Low-Density Residential
Colorado Avenue	To the north and south of Colorado Avenue and Berkeley Avenue are single- and multi-family residential uses. Additionally, there is a religious facility on the southeast corner of Colorado Avenue and Berkeley Avenue.	Low-Density Residential
Berkeley Avenue (from Colorado Avenue to Arizona Avenue)	The land uses to the east and west of Berkeley Avenue are single- and multi-family residential uses from Colorado Avenue to Santa Monica Boulevard. At the Santa Monica Boulevard intersection, there is a multi-family residential complex to the northwest, a restaurant and retail uses to the northeast, a liquor store and restaurant to the southeast, and a car dealership to the southwest. From Santa Monica Boulevard to Arizona Avenue, the land uses are single- and multi-family residential uses.	Low-Density Residential; Mixed-Use Boulevard Low
Arizona Avenue (from Berkeley Avenue to Centinela Avenue)	To the north and south of Arizona Avenue are single- and multi-family residential uses. There is a religious facility at the northwest corner of Arizona Avenue and Centinela Avenue.	Low-Density Residential
City of Los Angeles		
Texas Avenue (from Centinela Avenue to Saltair Avenue)	To the north and south of Texas Avenue are primarily multi-family residential uses. There are a few single-family residential uses.	Multi-Family Medium
Saltair Avenue	To the west is the Arcadia WTP. To the east and south are multi-family residential uses.	Multi-Family Medium; Public Facility
Bundy Drive	To the north is Wilshire Boulevard. To the east is the Arcadia WTP. To the south are single- and multi-family residential uses. To the west, across Bundy Drive, is a 20-story office building and several multi-family residential buildings.	Multi-Family Medium; Community Commercial

Source: City of Santa Monica 2019c; City of Los Angeles 2013

Olympic AWTF and Arcadia WTP Expansion

The existing Arcadia WTP is located within the West Los Angeles Community Plan in the City of Los Angeles. The areas surrounding the Arcadia WTP are designated as Multi-Family Medium and Community Commercial in the West Los Angeles Community Plan, and are zoned R3 (Multiple Dwelling Zone) and C2 (Commercial Zone). The streets surrounding the Arcadia WTP include Wilshire Boulevard to the north, Bundy Drive to the west, Texas Avenue to the south, and Saltair Avenue to the east. The land uses surrounding the Arcadia WTP include single- and multi-family residential and commercial uses. Specifically, to the north of Arcadia WTP, across an existing alley, is an

existing restaurant, retail shops, an office building, a six-story residential building, and a City of Santa Monica-owned lot on the southeast corner of Wilshire Boulevard and Bundy Drive. To the west, across Bundy Drive, is a 20-story office building and several multi-family residential buildings. To the south of the Arcadia WTP are two single-family buildings. To the south, across Texas Avenue, there are single- and multi-family residential buildings. To the east, across Saltair Avenue there are several multi-family residential buildings, and there is a commercial/retail building at the southeast corner of Wilshire Boulevard and Saltair Avenue.

2.5 Project Components

2.5.1 Olympic Well Field Restoration

Olympic Well Field Construction

The proposed Project involves the wellhead completion of up to 4 wells (SM-8, SM-9, SM-10i, and potentially SM-11i), and the decommissioning of 1 well (SM-3). The exploratory drilling for SM-8, SM-9 and SM-10i, has already occurred to determine the hydrogeological conditions and feasibility of installing the permanent wells. Furthermore, exploratory drilling for the remaining well (SM 11i) is categorically exempt from CEQA.[1] Once exploration is complete, the proposed Project would permanently equip the groundwater wells, which is subject to CEQA. Therefore, the environmental impacts associated with the well completion activities and the long-term operational impacts of Wells SM-8, SM-9, SM-10i, and SM-11i are evaluated in this IS/MND.

As shown in Figure 4A, Engineering Plans Production Wells SM-8 and SM-9, these two groundwater production wells would be located west of the intersection of Olympic Boulevard and Stewart Street. Well SM-8 requires the construction of 500 linear feet of a new 12-inch pipeline within the median to connect SM-8 to an existing pipeline within Stewart Street. The well completion activities for Well SM-8 involve disturbance of approximately 7,600 square feet of soils within the Olympic Boulevard median to accommodate the 1-foot deep concrete slab. The maximum depth of excavation would not be greater than 5-feet. This would require export of approximately 285 cubic yards of soil. Construction of Well SM-8 would involve installation of new electrical equipment, aboveground piping structures, a new concrete pad for maintenance trucks, and a sodium hypochlorite storage vault.

Well SM-9 would be a groundwater production well located west of the intersection of Olympic Boulevard and Centinela Avenue. Well SM-9 requires the construction of approximately 80 linear feet of 12-inch well discharge line to connect with the existing 10-inch asbestos cement pipe (ACP) within the existing median via a 12-inch by 10-inch ductile iron reducer. Well SM-9 involves disturbance of approximately 7,200 square feet of soils within the Olympic Boulevard median to accommodate the 1-foot deep concrete slab. The maximum depth of excavation would not be greater than 5 feet. This would require export of approximately 450 cubic yards of soil. Construction of Well SM-9 would involve installation of a new electrical equipment, aboveground piping structures, and a concrete pad for maintenance trucks. There is an

[1] The drilling of exploratory wells were approved in the past and determined to be categorically exempt from CEQA per State CEQA Guidelines Section 15306, Information Collection (i.e., Class 6 Exemption). A Class 6 exemption allows for the basic data collection, research, experimental management, and resource evaluation activities which do not result in a serious or major disturbance to an environmental resource. These may be strictly for information gathering purposes, or as part of a study leading to an action which a public agency has not yet approved, adopted, or funded. Additionally, the drilling of exploratory wells is categorically exempt from CEQA per State CEQA Guidelines Section 15306, Information Collection (i.e., Class 6 Exemption). A Class 6 exemption allows for the basic data collection, research, experimental management, and resource evaluation activities which do not result in a serious or major disturbance to an environmental resource. These may be strictly for information gathering purposes, or as part of a study leading to an action which a public agency has not yet approved, adopted, or funded

existing electrical vault and sodium hypochlorite storage vault, which would be repurposed and protected in place. The proposed Well Field sites for Well SM-8 and Well SM-9 would all be developed with above ground artistic fencing that would visually shield the piping facilities of each well site. The artistic fencing would be approximately 6 feet high. Refer to Section 3.1, Aesthetics, for a more detailed view of the proposed aboveground structure.

As shown in Figure 2B, Well SM-3 is an existing production well located approximately 100 feet north of the proposed Well SM-9 location; SM-3 would be decommissioned. This process involves the abandonment of the groundwater well in accordance with California Department of Water Resources (DWR) Well Standards regulations and Bulletin 74-81 that governs well abandonment requirements, including the removal of all material from the well, removal of the well casing and subterranean pumping equipment, and sealing the well. The existing vault, concrete/access hatch, and concrete slab would remain as-is.

Injection Wells SM-10i and SM-11i would recharge the Olympic Well Field with purified water from the City's Sustainable Water Infrastructure Project (SWIP) to replenish local groundwater supplies and maintain sustainable yield levels. Importantly, environmental impacts associated with the production of the water from the SWIP have been covered under a separate environmental analysis prepared pursuant to CEQA (City of Santa Monica 2016b); therefore, the environmental impacts associated with the SM-10i and SM-11i well completion activities and long-term operations of the injection well are evaluated in this IS/MND.

As shown in Figure 4B, Engineering Plans Injection Well SM-10i, the groundwater injection well would be located west of the intersection of Olympic Boulevard and 26th Street. The proposed Project would construct a new 6-inch diameter SM-10i injection line to connect to the existing 6-inch ductile iron pipe from the Santa Monica Urban Runoff Recycling Facility, located immediately south of the median. The well completion activities for Well SM-10i involve disturbance of approximately 7,600 square feet of soils within the Olympic Boulevard median to accommodate the 1-foot deep concrete slab. The maximum depth of excavation would not be greater than 5-feet. The well completion activities involve the construction of a subterranean pump enclosure below each at-grade pad, which would contain the well pumping equipment. This would require export of approximately 285 cubic yards of soil. The completion of the well involves construction of the well and associated electrical equipment, aboveground piping structures and fencing surrounding the aboveground structure, catch basin structure, and sodium bi-sulfate storage vault. Refer to Section 3.1, Aesthetics, for a more detailed view of the proposed aboveground structure.

As shown in Figure 2D, Well SM-11i would be a groundwater injection well located west of the intersection of Exposition Boulevard and Dorchester Avenue. Well SM-11i would require a new pipeline extension as SM-11i would connect to a planned recycled water pipeline extension from Santa Monica City Yards. Well SM-11i would recharge the Olympic Well Field with purified water from the City's SWIP to maintain sustainable yield levels. This would require export of approximately 285 cubic yards of soil. The well completion activities involve the construction of an aboveground pump enclosure below each at-grade pad, which would contain the well pumping equipment. The maximum depth of excavation would not be greater than 5-feet. Additionally, the construction activities involve new aboveground piping installation and fencing surrounding the aboveground structure. The installation of Well SM-11i could result in the removal of up to nine trees in Ishihara Park.

A new recycled water pipeline would be constructed in the roadway along Exposition Boulevard and Stewart Street to connect the new SM-11i to the planned recycled water pipeline at the Santa Monica City Yards, approved as part of the Santa Monica City Yards EIR (SCH No. 2017111053). Approximately 1,500 linear feet of recycled water pipeline would be constructed within the public right-of-way. The depth of disturbance for this Project component would be from approximately 4.5 feet to 6 feet. As a worst-case assumption, assuming no use of excavated soils for backfill, an estimated 1,110 cubic yards of soil may be exported for disposal at a landfill.

Upon completion, the injection well sites would contain within the well mechanical piping located above-ground, as depicted by photographs of typical representative injection well infrastructure in Figures 2C and 2D. Upon completion, all production wells pumping equipment would be enclosed in an above-ground decorative fenced structure, which would include a slab at grade. The visual appearance of the aboveground well equipment is described in more detail in Section 3.1, Aesthetics.

Olympic Well Field Operations

Upon operation of the production wells, approximately 3,200 acre-feet/yr of groundwater would be extracted from the Olympic Well Field. Currently, the Well Field generally produces between 1,000 acre-feet/yr and 1,600 acre-feet/yr, limited by the contaminants present. Regarding long-term operations, the wells would require ongoing chemical dosing (sodium hypochlorite or bleach) and electrical use for pumping/injection operations. These chemicals would be brought by the operators and stored in small quantities at the well site. The injection wells operate under pressure in the recycled water pipeline and may only need to be backwashed periodically (once every 6-12 months) with submersible pumps. Electrical equipment includes the submersible pumps, valves, and instrumentation. A new electrical service is likely required to power the panel. No new employees would be required to maintain the wells, and only negligible vehicle trips would be required for periodic maintenance activities.

2.5.2 Olympic Pipeline

Olympic Pipeline Construction

As previously discussed, the proposed Project would construct the Olympic Pipeline from the Olympic Well Field to the Arcadia WTP in order to separate Olympic Well Field contaminated groundwater from the Charnock Well Field groundwater for separate treatment at the Arcadia WTP. The anticipated alignment of the pipeline is described in Section 2.2.2 above. It should be noted this does not include the lateral pipeline connections that are part of the injection and production wells.

Approximately 6,565 linear feet of 16-inch transmission mainline would be constructed, with portions located both within the cities of Los Angeles and Santa Monica. Trenching within the public right-of-way would require approximately 4.5-feet wide open trenching through the length of the streets, with the possibility of horizontal directional drilling or jack and bore construction, which allow for subterranean pipeline construction, at the intersections to minimize traffic disruptions during construction. The maximum depth for this Project component at some areas would go under an existing utility at about 8 feet to the bottom of trench. Other than those isolated areas the depth varies anywhere from 4.5 feet to 6 feet. It is anticipated that approximately 100 to 200 feet of pipeline could be constructed per day, although the ultimate duration of construction would depend on the site-specific conditions, including location and depth of other utilities within the alignment.

After placement of the pipeline, at least half of the trench would require imported sand bedding surrounding the pipeline and sand-cement slurry may be used in areas of shallow overcrossings for backfill. Otherwise, the excavated soils would be used to the extent feasible as backfill. As a worst-case assumption, assuming no use of excavated soils for backfill, an estimated 4,075 cubic yards of soil may be exported for disposal at a landfill.

Excavation equipment would straddle the trench and deposit spoil material into trucks for storage outside the roadway or temporarily stockpiled within the closed traffic lane. The 16-inch pipe would be staged along the pipeline alignment, typically on the shoulder of the road and outside the trench excavation path. Excavation, trenching, and backfill technical specifications would include requirements to backfill and/or plate open excavations. Daily set-up

and break-down activities would include spot street cleaning, removing barricades, plating/covering the open trench, and removing equipment from the roadway.

During construction, lane closures, detours, and flag-men to assist vehicles and pedestrians in the vicinity of active trenching operations would be utilized, as required through mitigation set forth in Section 3.17, Transportation of this IS/MND. At the completion of trenching operations, the affected roadway would be capped and paved in accordance with City of Santa Monica and City of Los Angeles standards and requirements.

Existing subterranean utilities that are anticipated to be in the vicinity of the Olympic Pipeline alignment include the following:

- ATT Distribution
- LA Metro
- City of Los Angeles Traffic
- Los Angeles Department of Water and Power (LADWP)
- Level 3 Communications
- Verizon / MCI
- Crown Castle
- SoCal Gas
- City of Santa Monica, Water, Sewer, Storm
- Spectrum
- SCE
- Frontier / MPower Communications
- Zayo Fiber
- Metropolitan Water District

Olympic Pipeline Operations

Once construction is completed, there are no required ongoing maintenance requirements, and no new employees would be required.

2.5.3 Olympic AWTF and Arcadia Water Treatment Plant Expansion

Site Demolition

Figure 5, Arcadia Water Treatment Plant Demolition and Staging Plan, depicts the existing buildings and other areas that would be demolished to accommodate the proposed Project, which include the following:

- Concrete driveway to Saltair Avenue, grass area near driveway, and removal of 8 trees
- Grassy area adjacent to Bundy Drive
- Equipment removal from the Decarbonator Building (see Figure 5, ID #2)
- Equipment removal from the Washwater Recovery Tank (see Figure 5, ID #14)
- Maintenance Building see (see Figure 5, ID #5)
- Former Chlorination Building (see Figure 5, ID #21)

Olympic AWTF Construction

Figure 6, Arcadia Water Treatment Plant Conceptual Plan Improvements, depicts the preliminary site plan for the improvements at the facility. The locations and/or configuration of the Project components are subject to change through the design and construction process. As previously discussed, the Olympic Pipeline would deliver water from the Olympic Well Field to the new Olympic AWTF, which would be located at the Arcadia WTP site. The Olympic AWTF would remove 1,4-Dioxane, 1,2,3-TCP, TCE, and PCE contamination from the Olympic Well Field water. The proposed AWTF treatment train consists of the ultraviolet light with hydrogen peroxide advanced oxidation process (UV/H_2O_2 AOP or UV AOP) followed by a two-stage granular activated carbon (GAC) system. The treated water from the UV AOP + GAC would be blended with the Arcadia WTP's existing reverse osmosis (RO) system feed water for softening, or it could be blended with the existing RO concentrate stream for treatment through the proposed concentrate treatment processes described below. With the Olympic AWTF and increased production efficiency (90-92% recovery) at the Arcadia WTP (see discussion below), approximately 2,900 acre-feet/yr of treated water would be produced from the 3,200 acre-feet/yr extracted from the Olympic Well Field. The AWTF would provide high-quality drinking water that meets current regulatory standards, and through consultation with the SWRCB, the City is targeting to meet future anticipated regulatory standards.

The Olympic AWTF would consist of the following:

- Pretreatment Filtration
  - New contact tank for the Olympic Well Field. The contact tank will replace an existing storage facility (see Figure 5, ID # 10)
  - Two existing greensand pressure filters repurposed for pretreatment filtration of the Olympic Well Field groundwater upstream of the UV AOP system (see Figure 6, ID #9)
- UV/H2O2 AOP
  - Two new UV AOP trains, each with a total treatment capacity of 3.6 mgd (see Figure 6, ID #7)
  - New hydrogen peroxide storage and feed facility (see Figure 6, ID #8)
- GAC System
  - Four lead-lag GAC systems (total of 8 GAC vessels) using liquid phase catalytic carbon for hydrogen peroxide quenching and to provide a secondary treatment barrier for other potential VOCs that may be present (see Figure 6, ID #6)

Olympic AWTF Operations

Once construction is completed, there would be an increased demand for electricity to power the new pumps and equipment. No new employees would be required to operate or maintain the Olympic AWTF. The new facilities may require additional truck traffic every 2 to 4 weeks to provide additional chemical deliveries, such as hydrogen peroxide for the AWTF operations. However, long-term operational traffic to the Arcadia WTP would not be substantively altered.

Arcadia WTP Expansion Construction

To support development of alternative water supplies and restoration of the Olympic Well Field, treatment capacity expansion and plant upgrades are required at the Arcadia WTP. Once the new Olympic AWTF and upgrades/expansion of the Arcadia WTP are complete, the process flow schematic would be updated as shown in

Figure 7, Existing and Proposed Process Schematic for the Arcadia WTP. Note that this is only a general schematic and does not contain all components and potential operating scenarios/flexibility for the new RO concentrate treatment technology, tentatively a Closed Circuit Reverse Osmosis (CCRO) system, to enhance production efficiency at the Arcadia WTP.

As previously described, the Arcadia WTP is currently capable of treating up to approximately 11,300 acre-feet/yr (10 mgd) and produce 9,900 acre-feet/yr (8.9 mgd) of treated water, which translates to an approximately 82% recovery or efficiency. The proposed expansion and addition of new technologies to increase production efficiency at the Arcadia WTP would increase its treatment capacity to approximately 14,700 acre-feet/yr (13 mgd) and produce 13,400 acre-feet/yr (12 mgd) of treated water, which translates to an approximately 92% recovery or production efficiency.

The existing three-stage RO system at Arcadia WTP is designed with a recovery range between 70% and 80% for operational flexibility. However, the RO system is currently operating at 83% and the RO membranes were replaced in the first quarter of 2018. To optimize treatment performance and overall recovery, the existing RO system recovery may be reduced to 70% to 75% to leverage the CCRO system's capabilities and achieve an overall membrane system recovery of 90% or greater. Reducing the recovery and/or flux of the existing RO system may reduce clean-in-place (CIP) frequencies and increase membrane life.

In the existing RO system at the Arcadia WTP, a constant stream of concentrate discharge is sent directly to the sewer, with no water recovery from this flow. CCRO would use RO concentrate streams to increase recovery and efficiency of the RO system. CCRO sends its permeate flow back to the feed stream of the CCRO system to blend with incoming RO concentrate feed water. This ensures that the recoverable water in the concentrate flow is retrieved and not sent directly to waste. The increase in concentration of dissolved solids and other contaminants is managed by periodically flushing the concentrated flow to waste and feeding the RO membranes with raw water before clogging can occur. This ensures much higher recovery rates than traditional RO, which can reach approximately 83% versus CCRO alone, which can attain 98% recovery rates (City of Santa Monica 2018b).

The new CCRO system is depicted in Figure 6 as building ID #1 through ID #4. The new CCRO system would be housed in a pre-engineered structure on the south side of the existing RO building and would require pipeline and electrical upgrades throughout the system. The new CCRO system would be capable of: (1) treating RO concentrate from the existing primary RO system, and (2) blending greensand filtrate + RO concentrate from the existing primary RO system. The CCRO technology is estimated to produce 1,200 acre-feet/yr on average from Arcadia WTP's existing concentrate waste stream that is discharged into the sewer. The CCRO system includes:

- Two new CCRO feed equalization tanks (12-ft diameter and 16-ft tall each tank) to provide approximately 15 minutes of storage for the CCRO system.
- Two new CCRO skids and high-pressure pumps, each with a permeate production capacity of 734 gpm at 71% CCRO recovery, which equates to a total primary RO + CCRO system recovery of approximately 92%.
- New sulfuric acid storage and feed facility to support the CCRO system (one new 8-ft diameter and 10-ft tall sulfuric acid storage tank).

Other upgraded/expanded ancillary facilities (e.g., pumps, blowers, cartridge filters, etc.) would be constructed at the Arcadia WTP to expand the overall treatment capacity to accommodate increased groundwater production from Olympic Well Field and additional production from new technologies (e.g., CCRO). The overall intent is to operate all

four existing RO trains in duty mode, rather than the current three duty and one standby configuration, to increase overall online factor of the Arcadia WTP.

The hydraulic treatment capacity expansion enhancement of the Arcadia WTP would consist of the following:

- Replace existing greensand filtration feed pumps (or Contact Tank Pumps) to increase hydraulic pumping capacity. Three new vertical diffusion vane pumps (2 duty and one standby), each with a rated capacity of 4,550 gpm at 60 ft of head and equipped with variable frequency drives (Figure 6, ID #9).
- Reconfigure existing greensand filter piping to where four existing greensand filters would serve the existing primary RO system and the remaining two existing greensand filters would serve the new Olympic AWTF (see Figure 6, ID #9).
- Improve backwash handling capability through either 1) modify existing inclined plate separator piping manifold and drain line or 2) provide a new bypass line around the inclined plate separator to send greensand filter backwash waste directly to the sewer (Figure 5, ID #14).
- Replace existing RO Low Pressure Transfer Pumps to increase hydraulic pumping capacity to serve four duty primary RO trains at the Arcadia WTP. Three new vertical diffusion vane pumps (2 duty and one standby), each with a rated capacity of 4,500 gpm at 100 ft of head and equipped with variable frequency drives (Figure 5, ID #8).
- Add new cartridge filter with a design flow of 1,900 at a loading rate of approximately 3.3 gpm per 10-inch equivalent length (Figure 5, ID #8).
- Piping and hydraulic improvements to incorporate new CCRO skids to increase overall production efficiency (>90%) at the Arcadia WTP (see Figure 6, ID #1).
- Ability to operate all four existing RO skids in duty mode when CCRO is offline. With all four RO skids in operation, each skid is estimated to produce approximately 1,480 gpm at 82% recovery (Figure 6, ID #1).
- Replace the existing decarbonation towers with two new packed column air stripping towers. The new packed column air stripping towers will be designed for VOC removal in addition to removing carbon dioxide to increase pH. Each new packed column air stripping tower will be designed to treat approximately 3,755 gpm and have a blower capacity of 15,340 standard cubic feet per minute. Associated off-gas duct work to the vapor phase GAC would also be replaced (see Figure 6, ID#5).
- Retrofit existing sodium bisulfite chemical storage and feed system for liquid ammonium sulfate service (Figure 5, ID #10).
- Upgrade and/or expand chemical storage and feed facilities to support increased water production at the Arcadia WTP. The chemical storage and feed facilities include sodium hypochlorite, sulfuric acid, sodium hydroxide, antiscalant (or also known as threshold inhibitor), and sodium bisulfite (Figure 5, ID #10).
- Add a new RO storage concentrate and feed pad (brine storage tank; approximately 40,000 gallons) and pump station (3 pumps, 2 duty and 1 standby, with each pump rated for 750 gpm at 100-ft of head) to decouple the existing RO system from the concentrate discharge pipeline (Figure 6, ID #2).

Plant-wide improvements to support the treatment capacity expansion and production efficiency include, but may not be limited to site work, yard piping, and electrical service. The locations and/or configuration of the Project components are subject to change through the design and construction process. Other site improvements include the construction of one new electric vehicle charging station for the operation of the City's vehicle fleet.

Arcadia WTP Operations

Once construction is completed, there would be an increased demand for electricity to power the new pumps and equipment. No new employees would be required to operate or maintain the expansion at the Arcadia WTP. The new facilities may require additional truck traffic every 2 weeks to provide additional chemical deliveries, such as sulfuric acid deliveries for the CCRO operations. However, long-term operational traffic to the Arcadia WTP would not be substantively altered.

2.6 Overall Project Construction Schedule

Construction of the proposed Project is anticipated to be conducted in 3 phases, including the completion of the wells at the Olympic Well Field, the installation of the Olympic Pipeline, and the expansion/improvements at the Arcadia WTP, including the new Olympic AWTF. Although these activities would be scheduled individually, as they require different equipment and construction activities, it is possible that construction phases would overlap. Therefore, the anticipated construction schedule summarized below provides a conservative assumption of overlapping activities between all 3 phases. Construction of the proposed Project is anticipated to occur as follows:

- SM-8, SM-9, SM-10i: November 2020 through February 2021
- SM-11i: July 2023 through September 2023
- Recycled Water Pipeline: June 2023
- Olympic Pipeline: February 2021 through June 2021
- Olympic AWTF and Arcadia WTP Upgrades: January 2022 through December 2022

Note that these dates may vary from the exact dates listed here; however, the analysis assumes a construction start date of November 2020, which represents the earliest date construction would initiate. Assuming the earliest start date for construction represents the worst-case scenario for criteria air pollutant and GHG emissions because equipment and vehicle emission factors for later years would be slightly less due to more stringent standards for in-use off-road equipment and heavy-duty trucks, as well as fleet turnover replacing older equipment and vehicles in later years. For more detailed assumptions regarding construction phases, please refer to Section 3.3, Air Quality (see Table 3.3-1).

2.7 Project Approvals and Permits

2.7.1 Lead Agency: City of Santa Monica

The City of Santa Monica, as Lead Agency for the Project, has the responsibility for reviewing, processing, and approving the proposed Project. This IS/MND is intended to analyze the potential environmental impacts of all future discretionary and ministerial actions related to the proposed Project, and this IS/MND is the primary

reference document for the formulation and implementation of the Mitigation Monitoring and Reporting Program for the Project, in accordance with Section 15097 of the State CEQA Guidelines. The City of Santa Monica may approve the IS/MND if it finds, on the basis of the whole Project record, that there is no substantial evidence that the Project would have a significant effect on the environment. Construction of the Arcadia WTP Upgrades is located in the City of Los Angles. However, Cities are exempt from each other's building and zoning ordinances pursuant to California Government Code § 53091, therefore the City of Los Angeles does not have land use permitting authority over this project.

Discretionary actions subject to City's review and approval before the City Council include, but are not limited to:

- Adoption of IS/MND documentation (Santa Monica City Council)
- Authorization to amend the design-build contract to authorize construction of the Project (Santa Monica City Council)
- Other administrative and ministerial approvals would be required by the City for Project implementation. Such permits may include, but are not limited to, demolition and building permits, after-hours construction permit, and traffic control plans.

2.7.2 Responsible Agencies

A public agency, other than the lead agency, that has discretionary approval over a project is known as a "responsible agency," as defined by State CEQA Guidelines (14 CCR 15000 et seq.). The following is a list of other responsible agencies and their discretionary authority over the proposed Project:

- State Water Resources Control Board (SWRCB)
    - Division of Drinking Water: Amendment to 97-005 Permit for Domestic Water Supply

2.7.3 Other Permits and Approvals

Other permits and approvals are required to implement the proposed Project. Other permits and approvals required, and their respective agency administrators, are listed below:

- South Coast Air Quality Management District (SCAQMD)
    - Applicable air quality permits for construction activities; amendment to existing permits to operate new stationary sources of equipment that may emit air contaminants; and/or distribution and reuse of the advanced treatment water
- State Water Resources Control Board (SWRCB)
    - Coverage under National Pollutant Discharge Elimination System (NPDES) Permit No. CAS000002, General Construction Activity Storm Water Permit and Storm Water Pollution Prevention Plan (SWPPP)
- Los Angeles County Department of Public Health
    - Compliance with most recent version of the Los Angeles County Department of Public Health Guidelines for Alternative Water Sources; Indoor and Outdoor Non-Potable Uses
- City of Los Angeles
    - Coordination with City of Los Angeles for nighttime construction

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3 Initial Study Checklist and Neighborhood Impact Statement

1. Project Title:

Olympic Well Field Restoration and Arcadia Water Treatment Plant Expansion Project

2. Lead agency name and address:

City of Santa Monica
1685 Main Street
Santa Monica, California 90401

3. Contact person and phone number:

Omeed Pour, P.E.
Omeed.pour@SMGOV.NET
(310) 458-2201 ext. 2481

4. Project location: (See Section 2.2 of this IS/MND for further details on the Project location)

The Olympic Well Field is located in the City of Santa Monica generally along the alignment of Olympic Boulevard south of Centinela Avenue and north of Cloverfield Boulevard. The locations for the proposed groundwater production wells SM-8 and SM-9, and the proposed groundwater injection well SM-10i, are within the public right-of-way median of Olympic Boulevard. Proposed injection well SM-11i is located within Ishihara Park at 2909 Exposition Boulevard in the City of Santa Monica. The new recycled water pipeline would be constructed in the roadway along Exposition Boulevard and Stewart Street to connect the new SM-11i to the planned recycled water pipeline at the Santa Monica City Yards, located at 2500 Michigan Avenue in the City of Santa Monica.

The Olympic Pipeline would be entirely subsurface and contained within City-owned property and within publicly-owned right-of-way within the cities of Santa Monica and Los Angeles. The proposed alignment would travel beneath Saltair Avenue (or Bundy Drive) to Arizona Avenue to Berkeley Street, to Colorado Avenue to Berkeley Street, terminating at Nebraska Avenue.

The Olympic AWTF and the Arcadia WTP Expansion are co-located at the Arcadia WTP. The Arcadia WTP encompasses a 4.8-acre parcel located at 1228 South Bundy Drive in the West Los Angeles Community Plan Area of the City of Los Angeles.

5. **Project sponsor's name and address:**

City of Santa Monica
Department of Public Works
1685 Main Street
Santa Monica, California 90401

6. **General plan designation:**

Olympic Well Field:	N/A within the public right-of-way; Mixed Use Creative
Olympic Pipeline:	N/A within the public right-of-way
Olympic AWTF / Arcadia WTP Expansion:	Public Facilities

7. **Zoning:**

Olympic Well Field:	N/A within the public right-of-way; Mixed-Use Creative
Olympic Pipeline:	N/A within the public right-of-way
Olympic AWTF / Arcadia WTP Expansion:	[Q]PF-1XL (Qualified Public Facilities in Height District 1, Extra Limited)

8. **Description of project. (Describe the whole action involved, including but not limited to later phases of the project, and any secondary, support, or off-site features necessary for its implementation. Attach additional sheets if necessary):**

See Section 2.5, Project Components

9. **Surrounding land uses and setting (Briefly describe the project's surroundings):**

See Section 2.4, Existing Conditions and Setting

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

See Section 2.7, Project Approvals and Permits.

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

Yes, see Section 3.18, Tribal Cultural Resources.

Environmental Factors Potentially Affected

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

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

Determination (To be completed by the Lead Agency)

On the basis of this initial evaluation:

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

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

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

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

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



Signature

July 1, 2020

Date

Evaluation of Environmental Impacts

1. A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
2. All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
3. Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an Environmental Impact Report (EIR) is required.
4. "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from "Earlier Analyses," as described in (5) below, may be cross-referenced).
5. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:
   a. Earlier Analysis Used. Identify and state where they are available for review.
   b. Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
   c. Mitigation Measures. For effects that are "Less Than Significant With Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
7. Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
8. This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.
9. The explanation of each issue should identify:
   a. The significance criteria or threshold, if any, used to evaluate each question; and
   b. The mitigation measure identified, if any, to reduce the impact to less than significance

3.1 Aesthetics

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
I. AESTHETICS – Except as provided in Public Resources Code Section 21099, would the project:				
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒
b) Substantially damage scenic resources including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☒	☐
c) 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?	☐	☐	☒	☐
e) Produce extensive shadows affecting adjacent uses or property?	☐	☐	☒	☐

Existing Setting

In the City of Santa Monica, major scenic vistas are those associated with the beach, the bay, the Pier, and the bluffs. Policies in the City's Local Coastal Program Land Use Plan (LUP) are directed towards preserving and enhancing the public views associated with these resources, as well as improving the visual quality of the inland urbanized area of the Coastal Zone (City of Santa Monica 2018b). Examples of local scenic views include those of the Pacific Ocean, the Santa Monica Mountains, and urban scenic resources along major roadways. In general, public views of the Pacific Ocean are available from the coastal areas (e.g., along Pacific Coast Highway and Ocean Avenue). At some locations along north-south roadways, channeled public views of the Santa Monica Mountains are available. Public views of urban scenic resources (such as the Santa Monica Pier) are available from locations near the particular resource. In addition, a number of scenic resources including scenic highways, trees, and historic buildings, exist in the City. The Pacific Ocean, Santa Monica Bay, and Santa Monica Pier are located over 1.5 miles from the Project site and are not visible from the Project area. Additionally, public views, such as those from the Santa Monica Mountain, are not available from the Project area. There are existing trees within and in the vicinity of the Project area. The City's Land Use and Circulation Element identifies the existing coral trees within the Olympic Boulevard median as valued scenic resources.

Olympic Well Field Restoration

The proposed locations for SM-8, SM-9, and SM-10i are within the existing Olympic Boulevard median in the public right-of-way in the Bergamot Area Plan within the City of Santa Monica. As described in Section 2.4.2, the uses surrounding the proposed wells includes a mix of office, commercial, E Line Light Rail Transit (LRT), and the 26th Street Arts Center. Additionally, the proposed location for SM-11i is within the eastern portion of Ishihara Park. There are currently nine trees within the proposed location for SM-11i. The uses surrounding this site are industrial and residential. The proposed recycled water pipeline would be located within the existing roadways (Exposition Boulevard and Stewart Street). The locations for the proposed wells are relatively flat and not surrounded by any unique topographical features. There are currently no State-designated scenic highways in the City of Santa Monica (City of Santa Monica 2010a). The visual character of the Bergamot Area Plan is typical of a commercial and transit area with the single- and multi-story office buildings, commercial buildings, and a rail line that runs parallel to Olympic Boulevard. The nearest open space areas surrounding the Olympic Well Field Restoration well locations are the existing Olympic median with its coral trees, Ishihara Park, and Gandara Park, approximately 900 feet south from SM-8 and separated by the Metro Light Rail E Line.

The existing light sources surrounding the area are typical of an urban area and are associated a mix of office, commercial, and public uses, as well as surface parking lots. Interior lighting emanating from existing structures and buildings are common sources of nighttime lighting in the areas. Other sources of light in the area include light from traffic signals, lighting installed at or near building entrances, surface parking lot lights, and lighting from parking garages. Shade-sensitive land uses can be characterized as including residential, recreational, or institutional uses that contain routinely useable outdoor spaces (e.g., schools, parks, convalescent homes); commercial uses with pedestrian-oriented outdoor spaces or restaurants with outdoor eating areas; landscaping nurseries; solar arrays, etc. Such uses are considered sensitive because sunlight is important to physical comfort or commerce. Ishihara Park would be considered a sensitive shadow use.

Olympic Pipeline

City of Santa Monica

The proposed Olympic Pipeline would be located within the existing roadways (Arizona Ave, Berkeley Street, and Colorado Avenue) through the eastern portion of the City (crossing through residential neighborhoods and the Bergamot Plan area). A mix of commercial, art, mixed-use, and residential uses, surrounds the proposed Olympic Pipeline alignment, and the surrounding area is relatively flat and lacks topographical features. There are currently no State-designated scenic highways in the City of Santa Monica (City of Santa Monica 2010a). The character of Arizona Avenue and Berkeley Avenue consists primarily of large numbers of multi-story medium density residential buildings, except where there are major boulevards such as Santa Monica Boulevard and Wilshire Boulevard, which contains a mix of commercial and retail uses along the roadways. There are no nearby parks or other open spaces located along this portion of the Project site. Existing light sources in the area are associated with the interior lighting from residential and commercial buildings, as well as street lighting for safety. The majority of uses located on either side of the proposed Olympic Pipeline are primarily residential, and thus, are considered shadow sensitive uses.

City of Los Angeles

In the City of Los Angeles, the West Los Angeles Community Plan does not define scenic vistas; however, it recognizes the need to preserve open space (City of Los Angeles 1999). The proposed Olympic Pipeline within the City of Los Angeles's jurisdiction is similarly is located within the existing roadways (Texas Avenue and Saltair Avenue) through a primarily residential area. The uses surrounding the Olympic Pipeline consists of single- and multi-family residential uses and other local streets. The surrounding area is relatively flat and lacks topographical features. There are no nearby parks or other open spaces located along this portion of the Project site. The roadways surrounding the proposed Olympic Pipeline in the City of Los Angeles include Wilshire Boulevard, Bundy Drive, Texas Avenue, and Saltair Avenue. According to the West Los Angeles Community Plan, Wilshire Boulevard is designated as a Scenic Highways (City of Los Angeles 1999). The character of this portion of West Los Angeles is dominated by apartments varying in style. Existing light sources in the area are associated with the interior lighting from residential and commercial buildings, as well as street lighting for safety. The majority of uses located on either side of the proposed Olympic Pipeline are primarily residential, and thus, are considered shadow sensitive uses.

Olympic AWTF and Arcadia WTP Expansion

The existing Arcadia WTP is surrounded by a mix of commercial and residential land uses within the West Los Angeles Community Plan in the City of Los Angeles. The area is within a highly urbanized portion of the City of Los Angeles and does not contain open spaces, topographical features, nor does it offer scenic views. According to the West Los Angeles Community Plan, Wilshire Boulevard and Santa Monica Boulevard are designated as a Scenic Highways (City of Los Angeles 1999). The character of the area shifts moving towards Wilshire Boulevard, which contains a wide mix of uses, including high-rise office buildings, retail shops, restaurants, and other commercial uses. The uses to the east, west, and south of the Arcadia WTP are residential uses. Interior lighting emanating from existing structures and buildings are common sources of nighttime lighting in the Project area. Pole-mounted overhead streetlights are installed along Wilshire Boulevard, Bundy Drive, and Saltair Avenue, and other local roads surrounding the Project site and contribute to the local nighttime environment. There are shadow sensitive uses surrounding all sides of the existing Arcadia WTP.

Impact Analysis

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

Short-Term Construction Impacts for All Project Components

No Impact. All project components are within urbanized areas of the cities of Santa Monica and Los Angeles. Construction activities associated with the all Project components would be temporarily visible by motorists, pedestrians, and occupied land uses adjacent to the Project sites. Visual impacts from short-term construction activities may include mobile and stationary equipment, soil stockpiles, worker vehicles, and temporary signage and fencing, which are common visual features in urban areas. No equipment would be tall enough to impede views of or otherwise substantially effect a distant scenic vista. Therefore, the temporary visual inconvenience of construction activities would not have a substantial adverse effect on a scenic vista.

Olympic Well Field Restoration

No Impact. Wells SM-10i, SM-8, and SM-9 would be located within the existing Olympic Boulevard median, and well SM-11i would be located in the existing Ishihara Park. The proposed recycled water pipeline would be located within the existing roadways (Exposition Boulevard and Stewart Street), and would not have any above-ground features that would be publicly visible or could otherwise adversely affect a scenic vista. The proposed wells are more than 1.5 miles from scenic vistas in the City, and would not impede views of, or be large enough to substantially effect scenic vistas, such as public views of the Santa Monica Mountains. Therefore, the proposed Well Field Restoration would not have a substantial adverse effect on a scenic vista.

Olympic Pipeline

No Impact. There are no designated scenic vistas in proximity to the Olympic Pipeline alignment within either the City of Santa Monica or Los Angeles. The Olympic Pipeline would be placed below the surface within an existing road and would not have any above-ground features that would be publicly visible or could otherwise adversely affect a scenic vista.

Olympic AWTF and Arcadia WTP Expansion

No Impact. The Project site and surrounding area are not within the viewshed of a designated scenic vista. There are no scenic resources, either natural or created, within the viewshed of the Project site. The proposed improvements at the Arcadia WTP are not tall enough to hinder views of, or otherwise obstruct views of distant scenic vistas.

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

Olympic Well Field Restoration

Less-Than-Significant Impact. There are currently no State-designated scenic highways in the City of Santa Monica (City of Santa Monica 2010a). However, the Bergamot Area Plan (BAP) identifies the median along the Olympic Boulevard corridor with its coral trees as an important scenic resource and one of the limited open spaces in the surrounding area. Additionally, one of the policies in the BAP is to "protect and enhance the existing greenway character of Olympic Boulevard from Centinela Avenue to 26th Street by: preserving the existing median" (City of Santa Monica 2013). The proposed Project would result in the completion of two production wells and one injection well along the Olympic Boulevard median. The wells would contain piping aboveground as depicted in Figure 2C, and would be enclosed in an above-ground artistic fencing structure. Figure 8, Representative Production Well Site, includes a rendering of typical aboveground well structure that would be constructed at the proposed well sites. Completion of these wells under the proposed Project would not result in the removal of the coral trees within the median. Further, the Project would include proposed art installations around the wells that would be consistent with the BAP's plan for "major public art installations in visible locations throughout the Plan area, such as the Olympic Boulevard median" (City of Santa Monica 2013). The well enclosures would be designed by City commissioned artist to comply with BAP. Therefore, the proposed Project would not damage scenic resources, including the Olympic Boulevard median along the Olympic Boulevard corridor. Additionally, a second injection well would be completed within Ishihara Park

along Exposition Boulevard between Stewart Street and 30th Street, which is not considered a scenic corridor. The installation of this second injection well would result in the removal of trees; however, this would not be within a scenic corridor and the removal of trees would be within the City's authority per Section 7.10.001 of the Santa Monica Municipal Code (SMMC). Impacts would be less than significant.

Olympic Pipeline

City of Santa Monica

No Impact. There are currently no State-designated scenic highways in the City of Santa Monica (City of Santa Monica 2010a). Since there are no designated scenic highways within the Project vicinity, the proposed Project would not damage scenic resources within a state scenic highway.

City of Los Angeles

Less-Than-Significant Impact. The Olympic Pipeline crosses Santa Monica Boulevard, which is designated as a Scenic Highway by the West Los Angeles Community Plan (City of Los Angeles 2011). At the Santa Monica Boulevard intersection proposed for the Olympic Pipeline, there is a multi-family residential complex to the northwest, a restaurant and retail uses to the northeast, a liquor store and restaurant to the southeast, and a car dealership to the southwest. Construction equipment would temporarily be visible within Santa Monica Boulevard during trenching operations. All construction equipment would be limited to the public right-of-way and would not impact private property, and no impacts to trees would occur, as all construction would be within paved roadways. Upon completion of trenching and pipeline installation, the roadways would be repaired in a manner consistent to the pre-Project conditions. Therefore, the Project would not result in substantial damage to scenic resources such as scenic trees, rock outcroppings, and historic buildings within a scenic highway. Impacts would be less than significant.

Olympic AWTF and Arcadia WTP Expansion

Less-Than-Significant Impact. According to the West Los Angeles Community Plan, Wilshire Boulevard is designated as a Scenic Highways (City of Los Angeles 1999). An existing alley, restaurant, retail shops, an office building, a six-story residential building, and a City of Santa Monica-owned lot on the southeast corner of Wilshire Boulevard and Bundy Drive separate Wilshire Boulevard and the existing Arcadia WTP. The proposed Olympic AWTF and Arcadia WTP Expansion would result in some visual changes on-site; however, the new structures would be consistent with the use, character, and type of construction that is currently on the Arcadia WTP site. Although Wilshire Boulevard is designated as a Scenic Highway, the existing Arcadia WTP is not considered a scenic resource that would be damaged within the viewed of Wilshire Boulevard. Further, the existing land uses between the Project site and Wilshire Boulevard screen the existing Arcadia WTP from public view. The Project would temporarily use a lot at the southeast corner of Wilshire Avenue and Bundy Drive for construction staging; however, construction at the Arcadia WTP would be temporary (approximately one year) and would not result in substantial damage to a scenic resource within a scenic highway. Therefore, the proposed Project would not damage scenic resources within the view of Wilshire Boulevard. Additionally, there are no trees, rock outcroppings, and historic buildings within the viewshed of Olympic Boulevard that would be damaged as a result of the proposed Project. Therefore, impacts would be less than significant.

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

Short-Term Construction Impacts for All Project Components

No Impact. All project components are within urbanized areas of Santa Monica and Los Angeles. Construction activities associated with the all Project components would be temporarily visible by motorists, pedestrians, and occupied land uses adjacent to the Project sites. Visual impacts from short-term construction activities may include mobile and stationary equipment, soil stockpiles, worker vehicles, and temporary signage and fencing, which are common visual features in urban areas. Upon completion of any construction activities within public right-of-way, including public streets, the surfaces would be restored to pre-Project conditions. Further, the temporary visual inconvenience of construction activities would not conflict with applicable zoning and other regulations governing scenic quality. Therefore, no impacts would occur.

Olympic Well Field Restoration

Less-Than-Significant Impact. The proposed locations of SM-8, SM-9, and SM-10i are within an existing median in the public right-of-way within an urbanized portion of the City. The proposed location for SM-11i is within the existing Ishihara Park. Once completed, an aboveground slab at-grade well equipment arrangement with an artistic fencing structure would be constructed around each well site. Figure 8, Representative Production Well Site, includes a rendering of typical aboveground well structure that would be constructed at the proposed well sites. Completion of these wells under the proposed Project would not result in the removal of the coral trees within the median. The artistic fencing structures would be consistent with the BAP's plan for "major public art installations in visible locations throughout the Plan area, such as the Olympic Boulevard median" (City of Santa Monica 2013). The well enclosures would be designed by City commissioned artist to comply with BAP. As such, the completion of these wells would not conflict with applicable zoning and other regulations governing scenic quality. Therefore, impacts would be less than significant.

Olympic Pipeline

No Impact. The proposed Olympic Pipeline would be located entirely subsurface within existing roadways and would not have any above-ground features that would be publicly visible. The long-term operation of the pipeline would not conflict with applicable zoning or any regulations governing scenic quality.

Olympic AWTF and Arcadia WTP Expansion

Less-Than-Significant Impact. The Arcadia WTP encompasses a 209,957 square foot (4.8-acre) parcel located at 1228 South Bundy Drive in the West Los Angeles Community Plan Area of the City of Los Angeles. The Arcadia WTP is immediately surrounded by residential uses to the northeast, southeast, and southwest, and commercial land uses to the northwest adjacent to Wilshire Boulevard. The Arcadia WTP is zoned Public Facilities in a 1XL height district (basic height restriction to 30 feet) ([Q]PF-1XL) in the City of Los Angeles. Section 12.04.09, "PF" Public Facilities Zone of Los Angeles Municipal Code provides regulations

applicable to the PF Zone. The provisions of LAMC Section 12.04.09 would typically govern uses within the PF Zone, unless otherwise noted in LAMC Section 12.22, Exceptions. Per Section 12.22(A)(2), Public Utilities and Public Services, the provisions of the LAMC "shall not be construed as to limit or interfere with the construction installation, operation and maintenance for public utility purposes of water and gas pipes, mains and conduits, electric light and electric power transmission and distribution lines, telephone and telegraph lines, oil pipe lines, sewers and sewer mains, and incidental appurtenances."

The proposed Project involves construction, installation, and operation for public utility purposes, and thus, the provisions of the LAMC would not limit or interfere with the proposed Project. Further, per §53091(d) of the California Government Code, building ordinances of a county or city shall not apply to the location or construction of facilities for the production, generation, storage, treatment, or transmission of water, wastewater, or electrical energy by a local agency. Therefore, the building ordinances of the City of Los Angeles would not apply to the construction of facilities for the treatment of water as proposed by the City of Santa Monica. For these reasons, the proposed Project would not conflict with applicable zoning governing scenic quality, and thus, impacts would be less than significant.

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

Short-Term Construction Impacts for All Project Components

Less-Than-Significant Impact. The proposed Project would be constructed during daytime hours, as permitted by the construction hours set forth in the SMMC (Monday through Friday, 8:00 a.m. to 6:00 p.m., and Saturday, 9:00 a.m. to 5:00 p.m.). Any use of portable lighting elements during construction would be located within the limits of the applicable Project site and would be of short duration (for example, during the last hour of the workday in late fall and winter months). In these instances, portable lighting would be used to illuminate the development area and concentrated onto the area of active construction. Widespread use of portable lighting across the Project site during individual phases would not occur. In the event nighttime construction is required, the proposed Project would require authorization, as further described in Section 3.13, Noise. Nighttime construction, if proper authorization is received, could involve the transport of materials to and from the Arcadia WTP. Nighttime lighting associated with the transport of materials would be similar to existing nighttime lighting produced by vehicles. Due to the limited and short-term duration of construction lighting, use of lighting on the Project site during construction activities would not adversely affect day or nighttime views in the area, and impacts would be less than significant.

Olympic Well Field Restoration

Less-Than-Significant Impact. Once operational, the Well Field sites would include some lighting for personnel to access the wells at night in case of emergency. The SMMC requires that all lighting fixtures be shielded "so as not to produce obtrusive glare" onto the public right-of-way or adjacent properties and that light be primarily retained on-site ("lighting may not illuminate other properties in excess of a measurement of 0.5-foot candles of light") (Municipal Code, Section 9.21.080(C)). Compliance with the SMMC would ensure the proposed Project would not generate substantial light or glare that would adversely affect day or nighttime views in the area. Impacts would be less than significant.

Olympic Pipeline

No Impact. Once operational, the Olympic Pipeline would be entirely subsurface and would not include any lighting or involve any aboveground structure that would generate light or glare.

Olympic AWTF and Arcadia WTP Expansion

Less-Than-Significant Impact. The proposed Project involves the demolition of existing buildings, equipment removal, and new construction as part of the expansion of the existing Arcadia WTP to accommodate the new water supply from the Olympic Well Field Restoration. The Project involves the demolition of Maintenance Building, chlorination building, and equipment removal at the decarbonator and washwater recovery system and tank. Other upgraded/expanded ancillary facilities (e.g., pumps, blowers, cartridge filters, etc.) would be constructed at the Arcadia WTP. The Project would include the installation of new interior and exterior lighting fixtures in compliance with all applicable regulations of the SMMC related to lighting. For example, the SMMC requires that all lighting fixtures be shielded "so as not to produce obtrusive glare" onto the public right-of-way or adjacent properties and that light be primarily retained on-site ("lighting may not illuminate other properties in excess of a measurement of 0.5-foot candles of light") (Municipal Code, Section 9.21.080(C)).

The proposed Project would not have the potential to create glare. Consistent with SMMC requirements, low-e vision clear glass would be used for any new windows to minimize the potential for glare received off-site. The proposed Project would also be required to comply with SMMC Section 9.21.120 which prohibits the use of highly reflective materials. Section 9.21.120 (D)(3) states that no more than 25% of the surface area of any façade on any new building or addition to an existing building shall contain black or mirrored glass or other mirror-like material that is highly reflective. Adherence to SMMC standards and regulations regarding lighting and reflective materials would ensure that the Project would not result in adverse effects to daytime and nighttime views due to new lighting and glare and impacts would be less than significant.

3.1 e) Would the project produce extensive shadows affecting adjacent uses or property?

Short-Term Construction Impacts for All Project Components

Less-Than-Significant Impact. Project equipment used during construction of all Project components would be typical in scale and type as most urban construction projects, requiring equipment such as excavators, cement mortar mixers, bore/drill rigs, rollers, concrete/industrial saws, rubber-tired dozers, tractors/loaders/and backhoes, aerial lifts, cranes, and pavers (refer to Table 3.3-1). Although cranes would be used during the construction activities at the Arcadia WTP, the use would be short-term (approximately 6 months) and would not produce extensive shadows over adjacent uses. No other large equipment would be used during construction of the proposed Project. Therefore, impacts would be less than significant.

Olympic Well Field Restoration

No Impact. The proposed Well Field sites would all be developed with above ground artistic fencing that would visually shield the piping facilities of each well site. The artistic fencing would be approximately 6 feet high, as shown in Figure 8, and would not be tall enough to produce extensive shadows affecting shadow-sensitive uses or properties near the well sites.

Olympic Pipeline

No Impact. The proposed Olympic Pipeline would be placed subsurface within existing roadways and would not involve any aboveground structure that would produce extensive shadows.

Olympic AWTF and Arcadia WTP Expansion

Less-Than-Significant Impact. Under the existing conditions, the two decarbonators sit on top of a 14-foot-tall, ground concrete tank, for a total of approximately 39 feet in height. The decarbonators are situated in the interior of the Project site at the southwest corner of the existing RO building, which is approximately 29 feet in height. As proposed, the decarbonators would be demolished and replaced with new, larger capacity air stripping towers. The new air stripping towers would extend to approximately 37 feet. Additionally, the proposed CCRO building would extend to approximately 29 feet. Because the RO building, views of the proposed decarbonators would be largely screened as viewed from Saltair Avenue and would be screened by trees from the adjoining alleyway to the north. In addition, the decarbonators would be set back about 90 feet from Saltair Avenue and about 60 feet from the alley. Given its location on the site and set back distances, the new air stripping towers would not produce extensive shadows affecting adjacent uses or properties.

Nonetheless, a shade/shadow analysis was prepared for the proposed Project to consider the potential for shadow-sensitive uses to be placed in shadow by the Project. The existing residential uses to the north and east of the Arcadia WTP are considered shadow-sensitive uses. To approximate shade and shadow conditions in the surrounding area created by implementation of the proposed Project, shadows cast by the proposed Project were simulated for the spring equinox (March 20), summer solstice (June 21), winter solstice (December 21), and fall equinox (September 23) Shadow projections from the proposed Project during spring, summer, winter, and fall are shown in Figures 9A through 12C.

Spring Equinox

Shadow projections during spring equinox from the proposed Project are shown in Figures 9A, 9B, and 9C, Existing and Proposed Shadows – Spring Equinox at 9:00 a.m., 12:00 p.m., and 3:00 p.m., respectively. The depictions of project-generated shadows represent the median shade/shadow that would result from implementation of the proposed Project. As shown on the figures, a portion of the sidewalk along S Saltair Avenue adjacent to the Project site may be shaded for a few hours as a result of the proposed CCRO building. However, the adjacent residential uses to the north and east would not be shaded during any time. The proposed air strippers would not cast shadows outside of the Project site. As such, the proposed Project would not produce extensive shadows affecting adjacent uses or property during the spring, and no impacts would occur.

Summer Solstice

Shadow lengths and projections on the summer solstice are depicted in Figures 10A, 10B, and 10C, Existing and Proposed Shadows – Summer Solstice at 9:00 a.m., 1:00 p.m., and 5:00 p.m., respectively. As shown, shadows cast by the proposed Project during the summer would be shorter than those in the winter and would generally be cast onto the Project site only. Therefore, the Project would not produce extensive shadows affecting adjacent uses or property during the summer and no impact would occur.

Fall Equinox

Shadow projections during fall equinox from the proposed Project are shown in Figures 11A, 11B, and 11C, Existing and Proposed Shadows – Fall Equinox at 9:00 a.m., 1:00 p.m., and 5:00 p.m., respectively. As shown on the figures, the sidewalk along Saltair Avenue adjacent to the Project site and a portion of the roadway may be shaded for a few hours as a result of the proposed CCRO building. However, the adjacent residential uses to the north and east would not be shaded during any time. The proposed air strippers would not cast shadows outside of the Project site. As such, the proposed Project would not produce extensive shadows affecting adjacent uses or property during the spring, and no impacts would occur.

Winter Solstice

Due to the low angle of the sun, shadows cast on December 21st would be the longest in length, and therefore, represent the worst-case scenario. As shown in Figures 12A, 12B, and 12C, Existing and Proposed Shadows – Winter Solstice at 9:00 a.m., 12:00 p.m., and 3:00 p.m., respectively, shadows generated by the proposed air strippers and CCRO building at 9:00 a.m. would be cast to the north onto the Project site only. As the morning progresses, shadows cast to the north would reduce in length and would be reoriented towards the northeast. For example, by 12:00 p.m. the shadows cast by the proposed Project would no longer would be cast towards Saltair Avenue onto the sidewalk adjacent to the Project site (Figure 12B). At this time, the proposed Project would not shade any other structure outside of the Project site. At 3:00 p.m., shadows cast by the proposed Project would continue to move and elongate to the east. As shown in Figure 12C, project-generated shadows would extend across Saltair Avenue to the sidewalk near the existing two-and three-story apartment buildings. However, the shadow would not be cast onto the apartment buildings at 3:00 p.m. (see Figure 12C). After 3:00 p.m., Project-generated shadows may continue to elongate as the sun sets but are not anticipated to be extensive such that use of structures or living spaces would be substantially affected. Further, Project shadows would function in this manner for a limited duration (i.e., during the winter season). As such, the proposed Project would not produce extensive shadows affecting adjacent uses or property during the winter and impacts would be less than significant.

3.2 Agriculture and Forestry Resources

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
II. 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:				
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?	☐	☐	☐	☒

Existing Setting

Olympic Well Field Restoration

The locations for the wells, generally located between 26th Avenue and Centinela Avenue within the Olympic Boulevard median and at Ishihara Park, is within the urbanized Bergamot Area Plan. The uses surrounding this site includes a mix of office, commercial, Metro E Line, and the 26th Street Arts Center. According to the California Department of Conservation's California Important Farmland Finder, most of the County—including

the City of Santa Monica—is not mapped under the Farmland Mapping and Monitoring Program, and, thus, does not contain Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (collectively Important Farmland) (DOC 2016a). According to the California Department of Conservation's Williamson Act Parcel map for Los Angeles County, the proposed well locations are not located on or adjacent to any lands under a Williamson Act contract. The Los Angeles County Williamson Act 2015/2016 Map designates the proposed well locations and surrounding land as non-Williamson Act Land (DOC 2016b). In addition, no forest land or timberland zoning is present in the surrounding area.

Olympic Pipeline

The pipeline alignment and associated trenching would be entirely contained within publicly-owned right-of-way within the cities of Santa Monica and Los Angeles. There is no Important Farmland or Williamson Act land located along the proposed Olympic Pipeline alignment (DOC 2016a; DOC 2016b). The Project site and surrounding area are zoned Conservation: Creative Sector, Low-Density Residential, and Mixed-Use Boulevard Low in the City of Santa Monica, and Multi-Family Medium and Public Facility in the City of Los Angeles (City of Santa Monica 2019c; City of Los Angeles 2013). In addition, no forest land or timberland zoning is present in the surrounding area.

Olympic AWTF and Arcadia WTP Expansion

The existing Arcadia WTP is located within the West Los Angeles Community Plan in the City of Los Angeles. The areas surrounding the Arcadia WTP are designated as Multi-Family Medium and Community Commercial in the West Los Angeles Community Plan. There is no Important Farmland or Williamson Act land located within the Arcadia WTP (DOC 2016a; DOC 2016b). The existing Arcadia WTP is zoned [Q]PF-1XL (Qualified Public Facilities in Height District 1, Extra Limited), and thus, is not zoned for agricultural uses. In addition, the areas surrounding the Arcadia WTP are zoned R3 (Multiple Dwelling Zone) and C2 (Commercial Zone). In addition, no forest land or timberland zoning is present in the surrounding area.

Impact Analysis

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

Impacts for All Project Components

No Impact. As described above, the none of the Project sites contain Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. Additionally, none of the Project components would involve the conversion of land uses or would otherwise convert farmland to non-agricultural use.

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

Impacts for All Project Components

No Impact. As described above, the none of the Project sites contain Williamson Act land, and none of the Project sites or their surrounding land uses are zoned for agricultural uses or require a zone change or would otherwise conflict with an agricultural zone.

3.2 c) Would the project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

Impacts for All Project Components

No Impact. As described above, none of the Project sites or their surrounding land uses are zoned for forest land or timberland or require a zone change or would otherwise conflict with forest lands or timberlands.

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

Impacts for All Project Components

No Impact. As described above, none of the Project sites or their surrounding land uses contain forest land or would otherwise conflict with forest lands.

3.2 e) Would the project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

Impacts for All Project Components

No Impact. As described above, the proposed Project components are not located on or adjacent to any properties identified as Important Farmland or forestland, and Project implementation would not involve changes to the existing environment that would result in the indirect conversion of Important Farmland or forestland.

3.3 Air Quality

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

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	☐	☐	☒	☐

Existing Setting

All Project Components

Regional Setting

The Project components are located within the South Coast Air Basin (SCAB), which includes the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties, and all of Orange County, and is within the jurisdictional boundaries of the South Coast Air Quality Management District (SCAQMD). The SCAQMD administers the Air Quality Management Plan (AQMP) for the SCAB, which is a comprehensive document outlining an air pollution control program for attaining all California Ambient Air Quality Standards (CAAQS) and National Ambient Air Quality Standards (NAAQS) that are established for criteria air pollutants. Criteria air pollutants include ozone (O_3), nitrogen dioxide (NO_2), carbon monoxide (CO), sulfur dioxide (SO_2), particulate matter with an aerodynamic diameter less than or equal to 10 microns (PM_{10}), particulate matter with an aerodynamic diameter less than or equal to 2.5 microns ($PM_{2.5}$), and lead. Pollutants that are evaluated herein include VOCs and oxides of nitrogen (NO_x), which are important because they are precursors to O_3, as well as CO, sulfur oxides (SO_x), PM_{10}, and $PM_{2.5}$. The most recent adopted AQMP is the 2016 AQMP (SCAQMD 2017a), which was adopted by the SCAQMD Governing Board in March 2017. The 2016 AQMP represents a new approach to addressing air quality issues, focusing on available, proven, and cost-effective alternatives to traditional strategies while seeking to achieve multiple goals in partnership with other entities promoting reductions in GHGs and toxic risk, as well as efficiencies in energy use, transportation, and goods movement (SCAQMD 2017a).

Regarding NAAQS and CAAQS attainment status,[2] the SCAB is designated as a nonattainment area for national and California O_3 and $PM_{2.5}$ standards. The SCAB is designated as a nonattainment area for California PM_{10} standards; however, it is designated as an attainment area for national PM_{10} standards. The SCAB nonattainment status of

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

O_3, $PM_{10,}$ and $PM_{2.5}$ standards is the result of cumulative emissions from various sources of air pollutants and their precursors within the SCAB, including motor vehicles, off-road equipment, and commercial and industrial facilities. The SCAB is designated as an attainment area for national and California NO_2, CO, and SO_2 standards. Although the SCAB has been designated as partial nonattainment (Los Angeles County) for the federal rolling 3-month average lead standard, it is designated attainment for the state lead standard (CARB 2019a; EPA 2019a).[3]

The discussion in 3.3(c) evaluates the Project's potential to expose sensitive receptors to substantial pollutant concentrations and includes a localized significance threshold (LST) analysis, as recommended by the SCAQMD, to evaluate the potential of localized air quality impacts to sensitive receptors in the immediate vicinity of the Project. The Project components are located in Source Receptor Area 2 (Northwest Coastal Los Angeles County). Sensitive receptors are those individuals more susceptible to the effects of air pollution than the population at large. People most likely to be affected by air pollution include children, the elderly, and people with cardiovascular and chronic respiratory diseases. According to the SCAQMD, sensitive receptors include residences, schools, playgrounds, childcare centers, long-term healthcare facilities, rehabilitation centers, convalescent centers, and retirement homes (SCAQMD 1993). Air quality sensitive receptors near the Project components are noted below.

Olympic Well Field Restoration

Well SM-10i, Well SM-8, and Well SM-9 are within the Olympic Boulevard median surrounded by commercial uses, which are not considered a sensitive land use. The closest sensitive receptors to Well SM-10i are located approximately 1,150 feet north of the well site near Colorado Boulevard and 26th Street. For Well SM-8, the closest receptors are residences located approximately 705 feet southeast of the site near Exposition Boulevard. Residences are the closest sensitive receptors to Well SM-9, which are located 740 feet south of the site near Exposition Boulevard; residences are also located approximately 790 feet north of the site near Nebraska Street and Franklin Street. For Well SM-11i located at Ishihara Park, residences are the located approximately 115 feet south of the site across Exposition Boulevard and represent the closest receptors. For the proposed recycled water pipeline, residences located south of Exposition Boulevard are approximately 15 feet from the pipeline (located within the center of Exposition Boulevard) and represent the closest receptors; in addition, Gandara Park located to the southwest of the proposed water recycled pipeline is considered a sensitive land use.

Olympic Pipeline

The nearest sensitive-receptor land uses to Olympic pipeline are residences located adjacent to the street where the pipeline will be installed; therefore, receptors could be within 15 feet to the construction activity.

Olympic AWTF and Arcadia WTP Expansion

As shown in Figure 13, Air Quality Sensitive Receptors – Olympic AWTF and Arcadia WTP, the nearest air quality sensitive-receptor land uses to the Olympic AWTF and Arcadia WTP site are residences that are located within 15 feet to 65 feet around the site: to the south (across Texas Avenue), to the east (across Saltair Avenue), to the west (across Bundy Drive), and to the north (across the adjacent alley). Existing odor control systems do not exist at the Arcadia WTP; however, the chemical building at the existing Arcadia WTP was made of expanded metals with 75% air flow through the openings as required by the City of Los Angeles.

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

Impact Analysis

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

Impacts for All Project Components

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

- Whether the project would result in an increase in the frequency or severity of existing air quality violations, cause or contribute to new violations, or delay timely attainment of the ambient air quality standards or interim emission reductions in the AQMP.
- Whether the project would exceed the assumptions in the AQMP or increments based on the year of project buildout and phase.

To address the first criterion regarding the Project's potential to result in an increase in the frequency or severity of existing air quality violations, cause or contribute to new violations, or delay timely attainment of the ambient air quality standards or interim emission reductions in the AQMP, Project-generated criteria air pollutant emissions were estimated and analyzed for significance and are addressed under Section 3.3(b). Detailed results of this analysis are included in Appendix A, CalEEMod Data Assumptions and Results. As presented in Section 3.3(b), construction conducted under the Project would not generate criteria air pollutant emissions that would exceed the SCAQMD thresholds, and the Project is not anticipated to generate substantial operational criteria air pollutant emissions.

The second criterion regarding the Project's potential to exceed the assumptions in the AQMP or increments based on the year of Project buildout and phase is primarily assessed by determining consistency between the Project's land use designations and potential to generate population growth. In general, Projects are considered consistent with, and would not conflict with or obstruct implementation of, the AQMP if the growth in socioeconomic factors is consistent with the underlying regional plans used to develop the AQMP (per Consistency Criterion No. 2 of the SCAQMD CEQA Air Quality Handbook). The SCAQMD primarily uses demographic growth forecasts for various socioeconomic categories (e.g., population, housing, employment by industry) developed by the Southern California Association of Governments (SCAG) for its Regional Transportation Plan (RTP)/Sustainable Communities Strategy (SCS) (SCAG 2016), which is based on general plans for cities and counties in the SCAB, for the development of the AQMP emissions inventory (SCAQMD 2017a).[4] The SCAG 2016 RTP/SCS, and associated Regional Growth Forecast, are generally consistent with the local plans; therefore, the 2016 AQMP is generally consistent with local government plans.

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

As discussed in Section 2.2, the Arcadia WTP site is located in the City of Los Angeles and zoned [Q]PF-1XL (Qualified Public Facilities in Height District 1, Extra Limited), with a General Plan land use designation of "Public Facilities". The Olympic Well Field well locations SM-10i, SM-8, and SM-9, the proposed recycled water pipeline, and the proposed Olympic Pipeline are located within the public right-of-way with no specific zoning or land use designation. SM-11i would be located in Ishihara Park, which is zoned Mixed-Use Creative. The Project does not propose a change in zoning designation, and, no housing is proposed and no additional employees would be required as part of the proposed Project. Accordingly, the Project is consistent with the SCAG RTP/SCS forecasts used in the SCAQMD AQMP development. Therefore, the Project does not propose activities that would induce additional population in the Project area. Accordingly, the Project is consistent with the SCAG RTP/SCS forecasts used in the SCAQMD AQMP development.

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

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

Air pollution is largely a cumulative impact. The nonattainment status of regional pollutants is a result of past and present development, and the SCAQMD develops and implements plans for future attainment of ambient air quality standards. Based on these considerations, project-level thresholds of significance for criteria pollutants are used in the determination of whether a project's individual emissions would have a cumulatively considerable contribution on air quality. If a project's emissions would exceed the SCAQMD significance thresholds, it would be considered to have a cumulatively considerable contribution. Conversely, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant (SCAQMD 2003a). This impact evaluation focuses on regional mass daily criteria air pollutant emissions; therefore, this assessment evaluates the Project actions on the whole similar to Threshold 3.3(a).

A quantitative analysis was conducted to determine whether proposed construction activities would result in a cumulatively considerable net increase in emissions of criteria air pollutants for which the SCAB is designated as nonattainment under the NAAQS or CAAQS.

Appendix G of the CEQA Guidelines indicates that, where available, the significance criteria established by the applicable air district may be relied upon to determine whether a project would have a significant impact on air quality. The SCAQMD has established Air Quality Significance Thresholds, as revised in April 2019, which set forth quantitative emissions significance thresholds below which a project would not have a significant impact on ambient air quality (SCAQMD 2019a). The quantitative air quality analysis provided herein applies the SCAQMD thresholds to determine the potential for the Project to result in a significant impact under CEQA. The SCAQMD mass daily construction thresholds are as follows: 75 pounds per day for VOC, 100 pounds per day for NO_x, 550 pounds per day for CO, 150 pounds per day for SO_x, 150 pounds per day for PM_{10}, and 55 pounds per day for $PM_{2.5}$. The SCAQMD mass daily operational thresholds are as follows: 55 pounds per day for VOC, 55 pounds per day for NO_x, 550 pounds per day for CO, 150 pounds per day for SO_x, 150 pounds per day for PM_{10}, and 55 pounds per day for $PM_{2.5}$.

The following discussion quantitatively evaluates Project-generated impacts associated with construction and operational of the Project.

Short-Term Construction Impacts for All Project Components

Less-Than-Significant Impact. Proposed construction activities associated with the various Project components would result in the temporary addition of pollutants to the local airshed caused by on-site sources (i.e., off-road construction equipment and soil disturbance) and off-site sources (i.e., on-road haul trucks, delivery trucks, and worker vehicle trips). Construction emissions can vary substantially from day to day, depending on the level of activity; the specific type of operation; and, for dust, the prevailing weather conditions. Therefore, such emission levels can only be approximately estimated with a corresponding uncertainty in precise ambient air quality impacts.

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

Table 3.3-1 shows the construction phasing schedule, vehicle trip assumptions, and construction equipment mix used for estimating the Project-generated emissions.

Table 3.3-1. Construction Assumptions

	Schedule		One-Way Vehicle Trips			Equipment		
Phase Name	*Phase Start Date*	*Phase End Date*	*Avg. Daily Worker Trips*	*Avg. Daily Vendor Truck Trips*	*Total Haul Truck Trips*	*Equipment Type*	*Quantity*	*Usage Hours*
Olympic Well Field Restoration								
Well - SM-10 Grading - Well Pad	11/27/2020	12/10/2020	12	6	36	Cement and Mortar Mixers Excavators	1	4
Well - SM-10 Building Construction - Well Equipping	12/11/2020	1/14/2021	8	2	0	Bore/Drill Rigs (Well Drilling Rigs) Excavators	1	1
Well - SM-10 Building Construction - Artistic Fencing	1/15/2021	2/04/2021	8	2	0	Excavators	1	4
Well - SM-8 Grading - Well Pad	11/27/2020	12/10/2020	12	6	36	Cement Mortar Mixers Excavators		

Table 3.3-1. Construction Assumptions

Phase Name	Schedule		One-Way Vehicle Trips			Equipment		
	Phase Start Date	*Phase End Date*	*Avg. Daily Worker Trips*	*Avg. Daily Vendor Truck Trips*	*Total Haul Truck Trips*	*Equipment Type*	*Quantity*	*Usage Hours*
Well - SM-8 Building Construction - Well Equipping	12/11/2020	1/14/2021	8	2	0	Bore/Drill Rigs (Well Drilling Rigs)	1	1
						Excavators	1	1
Well - SM-8 Building Construction - Artistic Fencing	1/15/2021	2/04/2021	8	2	0	Excavators	1	4
Well - SM-9 Grading Well Pad	11/27/2020	12/10/2020	12	6	36	Cement and Mortar Mixers	1	4
						Excavators	1	4
Well - SM-9 Building Construction - Well Equipping	12/11/2020	1/14/2021	8	2	0	Bore/Drill Rigs (Well Drilling Rigs)	1	1
						Excavators	1	4
Well - SM-9 Building Construction - Artistic Fencing	1/15/2021	2/04/2021	8	2	0	Excavator	1	4
Well - SM-11 Grading - Well Pad	7/1/2023	7/14/2023	12	6	36	Cement and Mortar Mixers	1	4
						Excavators	1	4
Well - SM-11 Building Construction Well Equipping	7/15/2023	8/18/2023	8	2	0	Bore/Drill Rigs (Well Drilling Rigs)	1	1
						Excavators	1	4
Well - SM-11 Building Construction - Artistic Fencing	8/19/2023	9/08/2023	8	2	0	Excavators	1	4
Recycled Water Pipeline - Site Preparation	6/13/2023	6/13/2023	10	4	0	Pavers	1	8

Table 3.3-1. Construction Assumptions

Phase Name	Schedule		One-Way Vehicle Trips			Equipment		
	Phase Start Date	*Phase End Date*	*Avg. Daily Worker Trips*	*Avg. Daily Vendor Truck Trips*	*Total Haul Truck Trips*	*Equipment Type*	*Quantity*	*Usage Hours*
Recycled Water Pipeline - Grading - Installation	6/14/2023	6/27/2023	12	4		Excavators	2	8
						Rollers	1	4
Recycled Water Pipeline - Grading - Slurry Backfill	6/14/2023	6/27/2023	4	4	0	Cement and Mortar Mixers	1	4
Recycled Water Pipeline - Continual Paving	6/14/2023	6/27/2023	6	4	0	Pavers	1	8
						Rollers	1	8
Recycled Water Pipeline - Continual Pavement Striping	6/14/2023	6/27/2023	4	4	0	N/A	NA	NA
Recycled Water Pipeline - Final Paving	6/28/2023	6/29/2023	6	4	0	Pavers	1	8
						Paving Equipment (Milling Machine)	1	8
						Rollers	1	8
Recycled Water Pipeline - Final Pavement Striping	6/30/2023	6/30/2023	4	4	0	N/A	NA	NA
Olympic Pipeline								
Pipeline - Site Preparation	2/28/2021	3/5/2021	10	4	0	Pavers	1	8
Pipeline - Grading - Installation	3/6/2021	5/28/2021	12	4	510	Excavators	2	8
						Rollers	1	4

Table 3.3-1. Construction Assumptions

Phase Name	Schedule		One-Way Vehicle Trips			Equipment		
	Phase Start Date	*Phase End Date*	*Avg. Daily Worker Trips*	*Avg. Daily Vendor Truck Trips*	*Total Haul Truck Trips*	*Equipment Type*	*Quantity*	*Usage Hours*
Pipeline - Grading - Slurry Backfill	3/6/2021	5/28/2021	4	4	0	Cement and Mortar Mixers	1	4
Pipeline - Continual Paving	3/6/2021	5/28/2021	6	4	0	Pavers	1	8
						Rollers	1	8
Pipeline - Continual Pavement Striping	3/6/2021	5/28/2021	4	4	0	N/A	NA	NA
Pipeline - Final Paving	5/29/2021	6/11/2021	6	4	0	Pavers	1	8
						Paving Equipment (Milling Machine)	1	8
						Rollers	1	8
Pipeline - Final Pavement Striping	6/14/2021	6/14/2021	4	4	0	N/A	NA	NA
Olympic AWTF and Arcadia WTP Upgrades								
WTP - Demolition	1/21/2022	2/24/2022	14	0	70	Concrete/Industrial Saws	1	8
						Rubber Tired Dozers	1	8
						Tractors/Loaders/Backhoes	3	8
WTP – Site Preparation and Grading	2/1/2022	2/28/2022	12	0	84	Graders	1	8
						Rubber Tired Dozers	1	8
						Tractors/Loaders/Backhoes	2	8
WTP - Building Construction 1	3/1/2022	6/1/2022	10	2	0	Cranes	1	2
						Forklifts	1	4
						Generator Sets	1	8
						Tractors/Loaders/Backhoes	1	8

Table 3.3-1. Construction Assumptions

Phase Name	Schedule		One-Way Vehicle Trips			Equipment		
	Phase Start Date	*Phase End Date*	*Avg. Daily Worker Trips*	*Avg. Daily Vendor Truck Trips*	*Total Haul Truck Trips*	*Equipment Type*	*Quantity*	*Usage Hours*
WTP - Building Construction 2	3/1/2022	7/1/2022	12	2	0	Aerial Lifts (Manlifts)	1	4
						Cranes	1	2
						Rough Terrain Forklifts	1	8
WTP - Building Construction 3	3/1/2022	9/1/2022	12	2	0	Generator Sets	1	8
						Tractors/Loaders/Backhoes	1	8
WTP - Building Construction 4	3/1/2022	9/15/2022	16	2	0	Cranes	1	2
						Rough Terrain Forklifts	1	8
WTP - Building Construction 5	4/1/2022	5/13/2022	8	2	0	Rough Terrain Forklifts	1	8
WTP - Building Construction 6	5/1/2022	9/1/2022	24	2	0	Aerial Lifts (Manlifts)	1	4
						Bore/Drill Rigs	1	8
						Cranes	1	2
						Excavators	1	4
WTP - Building Construction 7	8/1/2022	11/1/2022	8	2	0	Aerial Lifts (Manlifts)	1	4
						Cranes	1	2
WTP - Architectural Coating	10/15/2022	1/24/2023	12	2	0	Air Compressors	1	8
WTP - Paving	11/1/2022	12/1/2022	12	4	0	Pavers	1	8
						Rollers	1	8

Note: Dates may vary from the exact dates listed here; however, the analysis assumes a construction start date of November 2020, which represents the earliest date construction would initiate. Assuming the earliest start date for construction represents the worst-case scenario for criteria air pollutant and GHG emissions because equipment and vehicle emission factors for later years would be slightly less due to more stringent standards for in-use off-road equipment and heavy-duty trucks, as well as fleet turnover replacing older equipment and vehicles in later years.

Internal combustion engines used by construction equipment, trucks, and worker vehicles would result in emissions of VOCs, NO_x, CO, PM_{10}, and $PM_{2.5}$. Additionally, PM_{10} and $PM_{2.5}$ emissions would also be generated by entrained dust, which results from the exposure of earth surfaces to wind from the direct disturbance and movement of soil. The Project would be required to comply with SCAQMD Rule 403 to control dust emissions during any dust-generating activities. SCAQMD Rule 403 requires implementation

of best available fugitive dust control measures for different sources for all construction activity sources, Dust control measures include, but are not limited to, maintain stability of soil through pre-watering of site prior to clearing, grubbing, cut and fill, and earth-moving activities; stabilize soil during and immediately after clearing, grubbing, cut and fill, and other earth-moving activities; stabilize backfill during handling and at completion of activity; and pre-water material prior to truck loading and ensure freeboard exceed six inches. While SCAQMD Rule 403 requires fugitive dust control beyond watering control measures, compliance with Rule 403 is represented in CalEEMod by assuming watering twice daily of active sites. Standard construction practices that would be employed to reduce fugitive dust emissions include watering of the active grading areas two times per day, with additional watering depending on weather conditions.

Table 3.3-2 provides estimated maximum daily construction criteria air pollutant emissions from all on-site and off-site emission sources.

Table 3.3-2. Estimated Maximum Daily Construction Emissions

Year	VOC	NO_x	CO	SO_x	PM_{10}[a]	$PM_{2.5}$[a]
	pounds per day					
2020	0.82	9.94	8.26	0.03	1.00	0.41
2021	9.04	13.92	14.41	0.03	1.08	0.64
2022	3.40	35.45	31.55	0.07	4.83	3.09
2023	1.72	11.08	14.36	0.04	1.04	0.53
Maximum Daily Emissions	**9.04**	**35.45**	**31.55**	**0.07**	**4.83**	**3.09**
SCAQMD Threshold	*75*	*100*	*550*	*150*	*150*	*55*
Threshold exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

Notes: VOC = volatile organic compound; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = sulfur oxides; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter; SCAQMD = South Coast Air Quality Management District.
See Appendix A for detailed results.

[a] These estimates reflect control of fugitive dust (watering two times daily) required by SCAQMD Rule 403, which is shown in the "mitigated" portion of the CalEEMod output in the unmitigated run.

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

Long-Term Operational Impacts for All Project Components

Less-Than-Significant Impact. Once construction associated with the wells and Olympic Pipeline is complete, no operational activities associated with these components would occur (e.g., no routine daily equipment operation or vehicle trips would be required).

Operation of the Olympic AWTF and Arcadia WTP would generate minimal additional VOC, NO_x, CO, SO_x, PM_{10}, and $PM_{2.5}$ emissions compared to existing operation at the site from mobile sources and the new improvements. Specifically, emissions would be associated with two potential additional chemical vendor truck deliveries, area sources (consumer products and architectural coatings for repainting), and energy sources (combustion of fuels used for space and water heating), which are described below. The Project would not result in a net increase in landscape maintenance equipment activity compared to the existing conditions at the Arcadia WTP.

Area Sources. CalEEMod was used to estimate operational emissions from area sources at the proposed Olympic AWTF and Arcadia WTP, including emissions from consumer product use[5] and architectural coatings[6], which were based on CalEEMod default values and the square footage of the new buildings. As noted above, no increase in landscape maintenance equipment from existing conditions is anticipated to occur. Emissions associated with natural gas usage in space heating and water heating are calculated in the building energy use module of CalEEMod, as described in the following text.[7]

Energy Sources. As represented in CalEEMod, energy sources include emissions associated with building electricity and natural gas usage (non-hearth). Inclusion of emissions from natural gas usage is conservative because the additional structures may not demand natural gas. Electricity use would contribute indirectly to criteria air pollutant emissions; however, the emissions from electricity use are only quantified for GHGs in CalEEMod, since criteria pollutant emissions occur at the power plant, which is typically off site.

CalEEMod default values for energy consumption for the additional buildings at the Arcadia WTP were applied for the Project analysis.[8] Title 24 of the California Code of Regulations serves to enhance and regulate California's building standards. The current Title 24, Part 6 standards, referred to as the 2019 Title 24 Building Energy Efficiency Standards, became effective on January 1, 2020. While the Project would be required to comply with the 2019 Title 24 Building Energy Efficiency Standards, the current version of CalEEMod assumes compliance with the 2016 Title 24 standards (CAPCOA 2017).[9] Use of energy assumptions that reflect 2016 Title 24 standards is conservative as the 2019 Title 24 standards reduce energy used and associated emissions compared to current standards.

Mobile Sources. The Project would result in no new employee trips. It was assumed that a maximum of one vendor truck (two one-way trips) for the delivery of chemicals would occur in one day. For the vendor truck emission calculation, it was assumed that 50% would be medium heavy-duty trucks and 50% would be heavy-heavy duty trucks traveling a 20-mile one-way distance.

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5 Consumer products are chemically formulated products used by household and institutional consumers, including detergents; cleaning compounds; polishes; floor finishes; cosmetics; personal care products; home, lawn, and garden products; disinfectants; sanitizers; aerosol paints; and automotive specialty products. Other paint products, furniture coatings, or architectural coatings are not considered consumer products (CAPCOA 2017). Consumer product VOC emissions are estimated in CalEEMod based on the floor area of non-residential buildings and on the default factor of pounds of VOC per building square foot per day.

6 VOC off-gassing emissions result from evaporation of solvents contained in surface coatings such as in paints and primers using during building maintenance. CalEEMod calculates the VOC evaporative emissions from application of surface coatings based on the VOC emission factor, the building square footage, the assumed fraction of surface area, and the reapplication rate. The total square footage of new development was conservatively assumed; however, the majority of the new surfaces are not anticipated to require coating. The VOC emission factor is based on the VOC content of the surface coatings, and SCAQMD's Rule 1113 (Architectural Coatings) governs the VOC content for interior and exterior coatings.

7 CalEEMod also calculates the area source emissions from the combustion of wood or natural gas in stoves and fireplaces; however, the Project does not include stoves or fireplaces.

8 The energy use from non-residential land uses is calculated in CalEEMod based on the California Commercial End-Use Survey database. Energy use in buildings (both natural gas and electricity) is divided by the program into end-use categories subject to Title 24 requirements (end uses associated with the building envelope, such as the heating, ventilation, and air conditioning (HVAC) system, water heating system, and integrated lighting) and those not subject to Title 24 requirements (such as appliances, electronics, and miscellaneous "plug-in" uses).

9 Per the CEC Impact Analysis for the 2019 Update to the California Energy Efficiency Standards for Residential and Non-Residential Buildings, the first-year savings for newly constructed non-residential buildings, are 197 gigawatt hours of electricity, 76.6 megawatt of demand, and 0.27 million therms of gas, representing reductions from the 2016 Title 24 standard of 10.7%, 9%, and 1%, respectively. In general, nonresidential buildings built to the 2019 standards are anticipated to use an estimated 30% less energy than those built to the 2016 standards.

Table 3.3-3 presents the maximum daily emissions associated with operation of the Project in 2024 at build out. The values shown are the maximum summer and winter daily emissions results from CalEEMod for area, energy, and mobile source emissions. Complete details of the emissions calculations are provided in Appendix A.

Table 3.3-3. Estimated Maximum Daily Operational Emissions

Emission Source	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
	pounds per day					
Area	1.45	0.00	0.00	0.00	0.00	0.00
Energy	0.00	0.05	0.04	0.00	0.00	0.00
Mobile	0.01	0.22	0.09	0.00	0.04	0.01
Total	**1.46**	**0.27**	**0.13**	**0.00**	**0.04**	**0.01**
SCAQMD Threshold	***55***	***55***	***550***	***150***	***150***	***55***
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

Notes: VOC = volatile organic compound; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = sulfur oxides; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter; SCAQMD = South Coast Air Quality Management District.
See Appendix A for complete results.
The values shown are the maximum summer or winter daily emissions results from CalEEMod.

As shown in Table 3.3-3, maximum daily operational emissions of VOC, NO_x, CO, SO_x, PM_{10}, and $PM_{2.5}$ generated by the Project would not exceed the SCAQMD's significance thresholds.

As previously discussed, the SCAB has been designated as a federal nonattainment area for O_3 and $PM_{2.5}$, and a state nonattainment area for O_3, PM_{10}, and $PM_{2.5}$. The nonattainment status is the result of cumulative emissions from various sources of air pollutants and their precursors within the SCAB, including motor vehicles, off-road equipment, and commercial and industrial facilities. Construction and operational activities of the Project would generate VOC and NO_x emissions (precursors to O_3) and emissions of PM_{10} and $PM_{2.5}$. However, as indicated in Tables 3.3-2 and 3.3-3, Project-generated emissions would not exceed the SCAQMD emission-based significance thresholds for VOCs, NO_x, PM_{10}, or $PM_{2.5}$.

Cumulative localized impacts would potentially occur if a project were to occur concurrently with another off-site project. Schedules for potential future projects near the Project component areas are currently unknown; therefore, potential impacts associated with two or more simultaneous projects would be considered speculative.10 However, future projects would be subject to CEQA and would require air quality analysis and, where necessary, mitigation. Criteria air pollutant emissions associated with construction activity of future projects would be reduced through implementation of control measures required by the SCAQMD. Cumulative PM_{10} and $PM_{2.5}$ emissions would be reduced because all future projects would be subject to SCAQMD Rule 403 (Fugitive Dust), which sets forth general and specific requirements for all sites in the SCAQMD. In addition, cumulative VOC emissions would be subject to SCAQMD Rule 1113 (Architectural Coatings).

Therefore, the Project would not result in a cumulatively considerable increase in emissions of nonattainment pollutants, and impacts would be less than significant during operation.

10 The California Environmental Quality Act (CEQA) Guidelines state that if a particular impact is too speculative for evaluation, the agency should note its conclusion and terminate discussion of the impact (14 CCR 15145).

Health Effects of Criteria Air Pollutants

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

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

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

Health effects associated with CO include chest pain in patients with heart disease, headache, light-headedness, and reduced mental alertness (CARB 2019b). CO tends to be a localized impact associated with congested intersections. The associated potential for CO hotspots are discussed below (in the potential to expose sensitive receptors to substantial pollutant concentrations evaluation) and determined to be less than significant. Thus, the Project's CO emissions would not contribute to significant health effects associated with CO.

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

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

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

Impacts for All Project Components

Less-Than-Significant Impact With Mitigation Incorporated. The Project would result in less than significant impacts relating to LSTs, CO hotspots, and toxic air contaminants (TACs).

Localized Significance Thresholds

The SCAQMD recommends an LST analysis to evaluate localized air quality impacts to sensitive receptors in the immediate vicinity of the Project as a result of Project activities. The impacts were analyzed using methods consistent with those in the SCAQMD's Final Localized Significance Threshold Methodology (2008a). The Project is located within Source-Receptor Area 2 (Northwest Coastal Los Angeles County). Since most Project components were near sensitive receptors, one LST set was applied. This analysis applies the SCAQMD LST values for a 1-acre site within Source-Receptor Area 34 with a receptor distance of 82 feet, given that daily disturbed area for the Project would be less than 1 acre and this is the most stringent threshold; the closest distance for the look-up table LST values is 82 feet.

Project construction activities would result in temporary on-site criteria air pollutant emissions from off-road equipment exhaust and fugitive dust generation. According to the Final Localized Significance Threshold Methodology, "off-site mobile emissions from the Project should not be included in the emissions compared to the LSTs" (SCAQMD 2008a). Trucks and worker trips associated with the Project are not expected to cause substantial air quality impacts to sensitive receptors along off-site roadways since emissions would be relatively brief in nature and would cease once the vehicles pass through the main streets. Therefore, off-site emissions from trucks and worker vehicle trips are not included in the LST analysis. The maximum daily on-site emissions generated during construction of the Project by component are presented in Table 3.3-4 and compared to the SCAQMD localized significance criteria for Source-Receptor Area 34 to determine whether Project-generated on-site emissions would result in potential LST impacts.

Table 3.3-4. Construction Localized Significance Thresholds Analysis – Unmitigated

Project Component	NO_2	CO	PM_{10}	$PM_{2.5}$
	Pounds per Day (On Site)			
SM-10i (2020/2021)	1.65	1.90	0.09	0.07
SCAQMD LST Criteria[a]	*103*	*562*	*4*	*3*
Threshold Exceeded?	**No**	**No**	**No**	**No**
SM-8 (2020/2021)	1.65	1.90	0.09	0.07
SCAQMD LST Criteria[a]	*103*	*562*	*4*	*3*
Threshold Exceeded?	**No**	**No**	**No**	**No**
SM-9 (2020/2021)	1.65	1.90	0.10	0.07
SCAQMD LST Criteria[a]	*103*	*562*	*4*	*3*
Threshold Exceeded?	**No**	**No**	**No**	**No**
SM-11i (2023)	1.03	1.88	0.05	0.04
SCAQMD LST Criteria[a]	*103*	*562*	*4*	*3*
Threshold Exceeded?	**No**	**No**	**No**	**No**

Table 3.3-4. Construction Localized Significance Thresholds Analysis – Unmitigated

Project Component	NO_2	CO	PM_{10}	$PM_{2.5}$
	Pounds per Day (On Site)			
Recycled Water Pipeline (2023)	7.85	12.42	0.43	0.36
SCAQMD LST Criteria[a]	*103*	*562*	*4*	*3*
Threshold Exceeded?	**No**	**No**	**No**	**No**
Olympic Pipeline (2021)	10.36	12.53	0.56	0.49
SCAQMD LST Criteria[a]	*103*	*562*	*4*	*3*
Threshold Exceeded?	**No**	**No**	**No**	**No**
Olympic AWTF and Arcadia WTP Expansion (2022)	33.60	28.20	4.41	2.97
SCAQMD LST Criteria[a]	*103*	*562*	*4*	*3*
Threshold Exceeded?	**No**	**No**	**Yes**	**No**

Source: SCAQMD 2008a.
Notes: NO_2 = nitrogen dioxide; CO = carbon monoxide; PM_{10} = particulate matter with a diameter less than or equal to 10 microns (coarse particulate matter); $PM_{2.5}$ = particulate matter with a diameter less than or equal to 2.5 microns (fine particulate matter); SCAQMD = South Coast Air Quality Management District; LST = localized significance threshold.
See Appendix A for detailed results.
[a] Localized significance thresholds are shown for a 1-acre disturbed area corresponding to a distance to a sensitive receptor of 82 feet in Source-Receptor Area 2 (Northwest Coastal Los Angeles County).

As shown in Table 3.3-4, proposed construction activities would not generate emissions in excess of site-specific LSTs for NO_2 (NO_x), CO, and $PM_{2.5}$ during construction of all Project components; however, on-site emissions of PM_{10} would exceed the LST during construction of the Olympic AWTF and Arcadia WTP Expansion (during overlap of the demolition and site preparation and grading phases). Therefore, localized impacts of the Project would be less than significant for NO_2 (NO_x), CO, and $PM_{2.5}$, but potentially significant for PM_{10}.

The Project would be required to implement MM-AQ-1 and MM-AQ-2 to reduce potentially significant impacts related to PM_{10} for the Olympic AWTF and Arcadia WTP Expansion component.

MM-AQ-1: Prior to the commencement of construction activities at the Arcadia Water Treatment Plant, the City shall require its construction contractor to demonstrate that all 50-horsepower or greater diesel-powered equipment is powered with California Air Resources Board (CARB)-certified Tier 4 Interim engines. An exemption from this requirement may be granted if equipment with Tier 4 Interim engines are not reasonably available and the required corresponding reductions in criteria air pollutant emissions can be achieved from other combinations of construction equipment, such as using equipment with Tier 4 Final engines. Before an exemption may be granted, the City's construction contractor shall: (1) demonstrate that at least two construction fleet owners/operators in Los Angeles County were contacted and that those owners/operators confirmed Tier 4 Interim equipment could not be located within Los Angeles County during the desired construction schedule; and (2) the proposed replacement equipment has been evaluated using CalEEMod and documentation provided to the City to confirm that Project-generated emissions do not exceed applicable localized significance thresholds (LST) for nitrogen dioxide (NO_2), carbon monoxide (CO), particulate matter with an aerodynamic diameter less than or equal to 10 microns (PM_{10}), and particulate matter with an aerodynamic diameter less than or equal

to 2.5 microns ($PM_{2.5}$), and the SCAQMD carcinogenic (cancer) risk threshold. If these requirements cannot be met, construction activities at the Arcadia Water Treatment Plant shall be postponed until CARB-certified Tier 4 Interim engines are available for use.

MM-AQ-2: Prior to the commencement of construction activities at the Arcadia Water Treatment Plant, the City shall require its construction contractor to water any exposed soils and/or soil stockpiles at least three times daily, or utilize another SCAQMD-approved dust control non-toxic agent in accordance with the manufacturer's specifications, to minimize fugitive dust during construction.

SCAQMD Rule 403 does not specifically require watering of active sites three times per day for all construction activity sources; therefore, to ensure watering three times per day (roughly every two hours per an 8-hour day), MM-AQ-2 is required. Table 3.3-5 presents the maximum daily mitigated on-site emissions generated construction of the Olympic AWTF and Arcadia WTP Expansion component assuming implementation of MM-AQ-1 and MM-AQ-2 that would reduce exhaust PM_{10} emissions and fugitive dust emissions, respectively. Since MM-AQ-1 and MM-AQ-2 only apply to the Olympic AWTF and Arcadia WTP Expansion component, onsite emissions from other Project components are the same under unmitigated and mitigated conditions and are not shown in Table 3.3-5.

Table 3.3-5. Construction Localized Significance Thresholds Analysis – Mitigated

Project Component	NO_2	CO	PM_{10}	$PM_{2.5}$
	Pounds per Day (On Site)			
Olympic AWTF and Arcadia WTP Expansion (2022)	19.90	35.20	2.53	1.38
SCAQMD LST Criteria[a]	*103*	*562*	*4*	*3*
Threshold Exceeded?	**No**	**No**	**No**	**No**

Source: SCAQMD 2008a.
Notes: NO_2 = nitrogen dioxide; CO = carbon monoxide; PM_{10} = particulate matter with a diameter less than or equal to 10 microns (coarse particulate matter); $PM_{2.5}$ = particulate matter with a diameter less than or equal to 2.5 microns (fine particulate matter); SCAQMD = South Coast Air Quality Management District; LST = localized significance threshold.
Emissions shown represent the maximum emissions during summer or winter as estimated in CalEEMod.
Estimated emissions include Tier 4 Interim equipment for all equipment over 50 horsepower (MM-AQ-1) and watering of the active grading sites three times per day (MM-AQ-2). When applying the engine tier mitigation in CalEEMod, CalEEMod assumes the diesel engine emission standards set for that selected tier and engine power class for CO, non-methane hydrocarbons (VOC), NO_x and PM. The CO standard for Tier 4 Interim is higher than what is typically observed when using non-tiered equipment, resulting in higher estimated mitigated CO emissions than unmitigated emissions in some years.
MM-AQ-1 and MM-AQ-2 only apply to the Olympic AWTF and Arcadia WTP Expansion component, so onsite emissions from other Project components are the same under unmitigated and mitigated conditions.
See Appendix A for detailed results.
[a] Localized significance thresholds are shown for a 1-acre disturbed area corresponding to a distance to a sensitive receptor of 82 feet in Source-Receptor Area 2 (Northwest Coastal Los Angeles County).

As shown in Table 3.3-5, implementation of MM-AQ-1 and MM-AQ-2 would reduce on-site construction emissions at the Olympic AWTF and Arcadia WTP site below the site-specific LST for PM_{10}. Impacts associated with localized criteria air pollutant emissions would be less than significant with incorporation of MM-AQ-1 and MM-AQ-2.

CO Hotspots

Traffic-congested roadways and intersections have the potential to generate localized high levels of CO. Localized areas where ambient concentrations exceed federal and/or state standards for CO are termed "CO hotspots." The transport of CO is extremely limited, as it disperses rapidly with distance from the source. Under certain extreme meteorological conditions, however, CO concentrations near a congested roadway or intersection may reach unhealthy levels, affecting sensitive receptors. Typically, high CO concentrations are associated with severely congested intersections operating at an unacceptable level of service (LOS) (LOS E or worse is unacceptable). Projects contributing to adverse traffic impacts may result in the formation of a CO hotspot. Additional analysis of CO hotspot impacts would be conducted if a project would result in a significant impact or contribute to an adverse traffic impact at a signalized intersection that would potentially subject sensitive receptors to CO hotspots.

At the time that the SCAQMD 1993 Handbook was published, the SCAB was designated nonattainment under the CAAQS and NAAQS for CO. In 2007, the SCAQMD was designated in attainment for CO under both the CAAQS and NAAQS as a result of the steady decline in CO concentrations in the SCAB due to turnover of older vehicles, introduction of cleaner fuels, and implementation of control technology on industrial facilities. The SCAQMD conducted CO modeling for the 2003 AQMP (Appendix V, Modeling and Attainment Demonstrations, in SCAQMD 2003b) for the four worst-case intersections in the SCAB: (1) Wilshire Boulevard and Veteran Avenue, (2) Sunset Boulevard and Highland Avenue, (3) La Cienega Boulevard and Century Boulevard, and (4) Long Beach Boulevard and Imperial Highway. At the time the 2003 AQMP was prepared, the intersection of Wilshire Boulevard and Veteran Avenue was the most congested intersection in Los Angeles County, with an average daily traffic volume of about 100,000 vehicles per day. Using CO emission factors for 2002, the peak modeled CO 1-hour concentration was estimated to be 4.6 parts per million (ppm) at the intersection of Wilshire Boulevard and Veteran Avenue. The 1-hour CO CAAQS is 20 ppm; therefore, even when adding the background CO concentrations to the added CO concentrations at the study intersections, CO emissions did not exceed the 1-hour CO CAAQS. The 2003 AQMP also projected 8-hour CO concentrations at these four intersections for 1997 and from 2002 through 2005. From years 2002 through 2005, the maximum 8-hour CO concentration was 3.8 ppm at the Sunset Boulevard and Highland Avenue intersection in 2002; the maximum 8-hour CO concentration was 3.4 ppm at the Wilshire Boulevard and Veteran Avenue in 2002. As the 8-hour CO CAAQS is 9 ppm, with the addition of background CO concentrations, the CO concentration at the study intersections did not exceed the 8-hour CO CAAQS.

Accordingly, CO concentrations at intersections would not exceed the 1-hour or 8-hour CO CAAQS unless projected daily traffic would be at least over 100,000 vehicles per day. Because operation of the Project would result in a maximum of one delivery truck round trip (two one-way trips) per day, it would not increase daily traffic volumes at any study intersection to more than 100,000 vehicles per day, a CO hotspot is not anticipated to occur and associated impacts would be less than significant. This conclusion is supported by the analysis in Section 3.17, which demonstrates that traffic impacts would be less than significant. In addition, due to continued improvement in vehicular emissions at a rate faster than the rate of vehicle growth and/or congestion, the potential for CO hotspots in the SCAB is steadily decreasing. Based on these considerations, the Project would result in a less-than-significant impact to air quality with regard to potential CO hotspots.

Health Risk Assessment

Construction

In addition to impacts from criteria pollutants, certain projects may include emissions of pollutants identified by the state and federal government as toxic air contaminants (TACs) or hazardous air pollutants. State law has established the framework for California's TAC identification and control project, which is generally more stringent than the federal project, and is aimed at TACs that are a problem in California. The state has formally identified more than 200 substances as TACs, including the federal hazardous air pollutants, and is adopting appropriate control measures for sources of these TACs.

The greatest potential for TAC emissions during Project construction would be diesel particulate emissions from heavy equipment operations and heavy-duty trucks. In an abundance of caution, a health risk assessment (HRA) was performed for the Olympic AWTF and Arcadia WTP Expansion component. Well field construction activities would occur over a short period of time (2.5 months) and pipeline construction would occur in a linear fashion where emissions would not be concentrated in one location for a prolonged period of time. Based on the anticipated duration of construction, the intensity of construction, and the location of nearby sensitive receptors (see Figure 13), the Olympic AWTF and Arcadia WTP expansion component represents the maximum condition for the construction HRA.

The Office of Environmental Health Hazard Assessment's (OEHHA's) most recent guidance is the *2015 Risk Assessment Guidelines Manual* (OEHHA 2015), which was adopted in 2015 to replace the 2003 HRA Guidance Manual. The Children's Environmental Health Protection Act of 1999 (Senate Bill [SB] 25), which requires explicit consideration of infants and children in assessing risks from air toxics, requires revisions of the methods for both non-cancer and cancer risk assessment and of the exposure assumptions in the 2003 HRA Guidance Manual. Cancer risk parameters, such as age-sensitivity factors, daily breathing rates, exposure period, fraction of time at home, and cancer potency factors were based on the values and data recommended by OEHHA as implemented in Hotspots Analysis and Reporting Program Version 2 (HARP2). SCAQMD's Modeling Guidance for American Meteorological Society/Environmental Protection Agency Regulatory Model (AERMOD) (SCAQMD 2019b) and Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis (SCAQMD 2003c) provides guidance to perform dispersion modeling for use in HRAs within the SCAB.

Health effects from carcinogenic air toxics are usually described in terms of cancer risk. The SCAQMD recommends a carcinogenic (cancer) risk threshold of 10 in one million. Some TACs increase noncancer health risk due to long-term (chronic) exposures. The Chronic Hazard Index (HIC) is the sum of the individual substance chronic hazard indices for all TACs affecting the same target organ system. The Chronic Hazard Index estimates for all receptor types used the Risk Management Policy using the Derived calculation method (SCAQMD 2017b). A hazard index less than one (1.0) means that adverse health effects are not expected. Within this analysis, noncarcinogenic exposures of less than 1.0 are considered less than significant. The SCAQMD recommends a HIC significance threshold of 1.0 (project increment) and an acute hazard index of 1.0. The exhaust from diesel engines is a complex mixture of gases, vapors, and particles, many of which are known human carcinogens. Diesel particulate matter (DPM) has established cancer risk factors and relative exposure values for long term chronic health hazard impacts. No short-term, acute relative exposure values are established and regulated and are therefore not addressed in this assessment.

The dispersion modeling was performed using the American Meteorological Society/U.S. Environmental Protection Agency Regulatory Model (AERMOD), which is the model SCAQMD requires for atmospheric dispersion of emissions. AERMOD (version 19191) is a steady-state Gaussian plume model that incorporates air dispersion based on planetary boundary layer turbulence structure and scaling concepts, including treatment of surface and elevated sources, building downwash, and simple and complex terrain (EPA 2019b).

Dudek evaluated the Project's potential cancer and noncancer health impacts using exposure periods appropriate to evaluate short-term emission increases (third trimester to 12 months). Emissions dispersion of DPM was modeled using AERMOD, then cancer risk and noncancer health impacts subsequently using the CARB HARP2. HARP2 (ADMRT, version 19121) implements the March 2015 OEHHA age-weighting methodology for assessing toxics risks. The chemical exposure results were then compared to SCAQMD thresholds to assess Project impact significance. Principal parameters of this modeling are presented in Table 3.3-6.

Table 3.3-6. Olympic AWTF and Arcadia WTP Expansion Construction Health Risk Assessment American Meteorological Society/EPA Regulatory Model Construction Principal Parameters

Parameter	Details
Meteorological Data	The SCAQMD requires the use of AERMOD for air dispersion modeling. The latest 5-year meteorological data for the Santa Monica Airport station (KSMO, Station ID 93197) from SCAQMD were downloaded, then input to AERMOD. For cancer or chronic noncancer risk assessments, the average cancer risk of all years modeled was used.
Urban versus Rural Option	Urban areas typically have more surface roughness as well as structures and low-albedo surfaces that absorb more sunlight—and thus more heat—relative to rural areas. According to SCAQMD guidelines, the urban dispersion option was selected.
Terrain Characteristics	Digital elevation model files were imported into AERMOD so that complex terrain features were evaluated as appropriate. Per SCAQMD guidance, the National Elevation Dataset dataset with resolution of 1/3 arc-second was used (SCAQMD 2019).
Emission Sources and Source Release Parameters	Air dispersion modeling of construction activities was conducted using emissions generated using CalEEMod, assuming 5 days per week and 22 days per month. For modeling construction emissions dispersion using AERMOD, it was assumed that the active construction areas would have construction activities for a duration of 12 months. The construction equipment DPM emissions was modeled as a series of volume sources located where construction activity is anticipated to occur. The volume sources were assumed to have a release height of 5 meters, an initial lateral dimension of height of 2.33 meters, and an initial vertical dimension of 4.65 meters. (EPA 2004, SCAQMD 2008a).

Notes: See Appendix A.
EPA = U.S. Environmental Protection Agency; SCAQMD = South Coast Air Quality Management District; AERMOD = American Meteorological Society/EPA Regulatory Model; DPM = diesel particulate matter; CalEEMod = California Emissions Estimator Model.

This HRA evaluated impacts using a uniform Cartesian grid of receptors spaced 50 meters apart (165 feet), 1,000 meters (3,280 feet) from the Project site, and then converted to discrete receptors. To ensure receptors near the Project site are adequately captured, a fine uniform Cartesian grid of receptors spaced 25 meters apart (82 feet), extending 500 meters (1,640 feet) from the Project site, along with a line of receptors located 20 meters (65 feet) from the plant boundary spaced 20 meters (65 feet) apart, were included, which were then converted to discrete receptors.

Use of heavy-duty construction equipment is subject to a CARB Airborne Toxics Control Measure for in-use diesel construction equipment to reduce diesel particulate emissions, and use of diesel trucks are also subject to an Airborne Toxics Control Measure. The results of the HRA for construction at the Olympic AWTF and Arcadia WTP are provided in Table 3.3-7.

Table 3.3-7. Olympic AWTF and Arcadia WTP Expansion Component Construction Activity Health Risk Assessment Results – Unmitigated

Impact Parameter	Units	Project Impact	CEQA Threshold	Level of Significance
MICR (residential)	Per Million	54.83	10.0	Potentially Significant
HIC	Not Applicable	0.062	1.0	Less than Significant

Source: Appendix A.
Notes: CEQA = California Environmental Quality Act; MICR = Maximum Individual Cancer Risk. HIC = Chronic Hazard Index.

The results of the construction analysis for the Olympic AWTF and Arcadia WTP demonstrate that the construction emissions result in a potential MICR at nearby residential receptors above the 10 in a million cancer risk threshold, but below the HIC threshold. The Project construction TACs impact associated with cancer risk from DPM emissions would be potentially significant.

To reduce DPM (exhaust PM) emissions and associated health risk, the Project shall implement MM-AQ-1, as required for the LST analysis.

Table 3.3-8 presents estimated health risk results for the construction HRA for the Olympic AWTF and Arcadia WTP Expansion Component with implementation of MM-AQ-1, which requires use of Tier 4 Interim equipment for all construction equipment above 50 horsepower.

Table 3.3-8. Olympic AWTF and Arcadia WTP Expansion Component Construction Activity Health Risk Assessment Results – Mitigated

Impact Parameter	Units	Project Impact	CEQA Threshold	Level of Significance
MICR	Per Million	5.49	10.0	Less than Significant
HIC	Not Applicable	0.0062	1.0	Less than Significant

Source: Appendix A.
Notes: CEQA = California Environmental Quality Act; MICR = Maximum Individual Cancer Risk. HIC = Chronic Hazard Index. Estimated emissions include Tier 4 Interim equipment for all equipment over 50 horsepower (MM-AQ-1).

As shown in Table 3.3-8, with implementation of MM-AQ-1, Tier 4 Interim Equipment, estimated cancer risk as a result of construction of the Olympic AWTF and Arcadia WTP component would be reduced below the 10 in a million cancer risk threshold resulting in a less than significant impact with mitigation.

Operation

Following completion of construction activities at the Olympic AWTF and Arcadia WTP, Project-related TAC emissions would cease. Health impacts associated with TACs are generally associated with long-term exposure and there are no meaningful sources of TACs for the operating phase of the Project; therefore, no

reason to expect health impacts related to TACs. Because no operational TACs are anticipated to occur as a result of operation of the Project, impacts would be less than significant.

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

Other emissions associated with the Project are anticipated to be limited to odors, which is assessed herein. The occurrence and severity of potential odor impacts depend on numerous factors. The nature, frequency, and intensity of the source; wind speed and direction; and the sensitivity of receiving location each contribute to the intensity of the impact. Although offensive odors seldom cause physical harm, they can be annoying, cause distress among the public, and generate citizen complaints.

Olympic Well Field Restoration

Less-Than-Significant Impact. During the Olympic Well Field Restoration and recycled water pipeline construction, exhaust from equipment may produce discernible odors typical of most construction sites. Potential odors produced during construction would be attributable to concentrations of unburned hydrocarbons from tailpipes of construction equipment. However, such odors would disperse rapidly from the active site and generally occur at magnitudes that would not affect substantial numbers of people. Accordingly, impacts associated with odors during construction would be less than significant.

Land uses and industrial operations associated with odor complaints include agricultural uses, wastewater treatment plants, food-processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding (SCAQMD 1993). After the wellheads are completed, no routine operational activity is associated other than additional electrical needs (addressed under GHG emissions), which would not produce an odor. Because the Project would not create any new sources of odor during operation, Project operations would result in a less than significant related to other emissions (i.e., odors).

Olympic Pipeline

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

Land uses and industrial operations associated with odor complaints include agricultural uses, wastewater treatment plants, food-processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding (SCAQMD 1993). Upon completion of the Olympic Pipeline, no routine operational activity is associated other than additional electrical needs (addressed under GHG emissions), which would not produce an odor. Because the Project would not create any new sources of odor during operation, Project operations would result in a less than significant related to other emissions (i.e., odors).

Olympic AWTF and Arcadia WTP Expansion

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

Land uses and industrial operations associated with odor complaints include agricultural uses, wastewater treatment plants, food-processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding (SCAQMD 1993). Project operational activities at the Olympic AWTF and Arcadia WTP would entail operation of water treatment facilities and equipment (for treatment of groundwater – not wastewater), and minimal additional vehicle trips to the site for deliveries, which would not result in an odor. Because the Project would not create any new sources of odor during operation, Project operations would result in a less than significant related to other emissions (i.e., odors).

3.4 Biological Resources

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
IV. BIOLOGICAL RESOURCES – Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☒	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☐	☒
c) Have a substantial adverse effect on 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?	☐	☒	☐	☐

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	☐	☐	☐	☒

Existing Setting

A desktop search was conducted using relevant regional databases for special-status species within the project's U.S Geologic Survey's Beverly Hills, California 7.5-minute topographic quadrangle (CDFW 2020; CNPS 2020). .A limited number of sensitive or special status species occurrences have been recorded within the Beverly Hills quadrant. This includes 18 special status wildlife species and 20 special status plant species. However, there were no recorded occurrences within any of the proposed Project components. Additionally, the entire Project site is located within highly developed and urbanized areas as further discussed below.

Olympic Well Field Restoration

The proposed groundwater production wells SM-8 and SM-9, the proposed groundwater injection well SM-10i, and the well to be decommissioned (SM-3) are within the public right-of-way median of Olympic Boulevard. The existing median separates the two-lane Olympic Boulevard and is grass-covered with several scattered trees. Additionally, the proposed Project would potentially include construction of injection well SM-11i within Ishihara Park, which was completed in 2017 and consists of ornamental landscaping features. There are currently nine Ficus trees (*Ficus benjamina*) located in the eastern portion of the park in the proposed location for SM-11i. The proposed recycled water pipeline alignment and associated trenching would be entirely contained within publicly-owned right-of-way within the City of Santa Monica.

The City of Santa Monica is generally urbanized, with few areas of native wildlife habitat occurring within the City limits. The nearest wildlife habitat occurs along the coast at Santa Monica State Beach. Substantial forested open space occurs in the Santa Monica Mountains, located approximately 2.8 miles to the north of Olympic Boulevard. The majority of the City of Santa Monica has been developed, paved, or landscaped, and is generally devoid of large expanses of habitat that support sensitive species. No major regional wildlife migration corridors are known to exist within the City limits. No native riparian habitat, blueline streams, wetlands, or sensitive natural communities are located in the City limits. The beach areas of the City do provide foraging and roosting opportunities for several special status species (e.g., least terns, snowy plovers). The City is not recognized as an existing or proposed Significant Ecological Area (SEA) that links wildlife populations (Los Angeles County Department of Regional Planning 2015). In addition, the City's Land Use and Circulation Element (LUCE) EIR identifies a limited number of threatened or endangered species that are likely to occur in the City (City of Santa Monica 2010a).

Olympic Pipeline

City of Santa Monica

The pipeline alignment and associated trenching would be entirely contained within City-owned property and within publicly-owned right-of-way within the City of Santa Monica. The developed/disturbed land cover consists of pavement, roads, parking areas, and generally lacks vegetation. This land cover type occurs throughout the entire study area and includes the following streets: Berkeley Avenue, Nebraska Avenue, Colorado Avenue, and Arizona Avenue. As previously addressed the City of Santa Monica and the proposed Olympic Pipeline within the City does not contain major wildlife corridors, native riparian habitat, nor natural communities.

City of Los Angeles

The pipeline alignment and associated trenching would be entirely contained within City-owned property and within publicly-owned right-of-way within the City of Los Angeles within Saltair Avenue (or Bundy Drive) and Berkeley Avenue. The Olympic Pipeline is located in an urbanized area within the City of Los Angeles and does not contain any critical habitat or support any species identified.

Olympic AWTF and Arcadia WTP Expansion

The proposed Olympic AWTF and Arcadia WTP Expansion components consist of the demolition and expansion of areas within the existing Arcadia WTP property in the City of Los Angeles. The Arcadia WTP is comprised of developed buildings, ornamental landscape, paved roads and parking lots. Due to the highly urbanized location of this plant, there are no wildlife corridors or sensitive vegetation communities that can occur within the Project area.

Impact Analysis

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

Short-Term Construction Impacts for All Project Components

Less-Than-Significant Impact. Construction activities at all Project sites would require the use of heavy equipment, grading/earthwork, and building construction, which all have the potential to generate noise and air pollutants. Therefore, short-term construction has the potential to impact urban wildlife (e.g., small mammals, birds). Potential impacts to nesting birds are discussed under Threshold 3.4(c) below. The proposed Project components would all be located on urban and fully developed properties located in an urban setting dominated by development and ornamental landscaping. Due to the existing urban land uses and roadways surrounding each site, the lack of native vegetation communities that could provide habitat for special-status species, and developed condition of the Project sites, the potential for any special-status species to occur is low. According to the Information from Planning and Consultation by the U.S Fish and Wildlife Service, the Project sites are not located within any designated critical habitat (USFWS 2020). Therefore, the potential for the Project's short-term construction activities to substantially directly or indirectly adversely affect candidate, sensitive, or special-status species, is considered low. Impacts would be less than significant and no mitigation is required.

Olympic Well Field Restoration

No Impact. As described above, there are no native vegetation communities that could provide habitat for candidate, sensitive, or special status species on the Project site or in directly adjacent properties. The operation of the Olympic Well Field would not result in any land use changes that could substantial adversely effect, either directly or through habitat modifications, any species identified as a candidate, sensitive, or special-status.

Olympic Pipeline

No Impact. As described above, there are no native vegetation communities that could provide habitat for candidate, sensitive, or special status species on the Olympic Pipeline alignment or in directly adjacent properties. The operation of the pipeline would not result in any land use changes that could substantial adversely effect, either directly or through habitat modifications, any species identified as a candidate, sensitive, or special-status.

Olympic AWTF and Arcadia WTP Expansion

No Impact. As described above, there are no native vegetation communities that could provide habitat for candidate, sensitive, or special status species on the Arcadia WTP site or in directly adjacent areas. The operation of the Olympic AWTF and Arcadia WTP Expansion would not result in any land use changes that could substantial adversely effect, either directly or through habitat modifications, any species identified as a candidate, sensitive, or special-status.

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

Olympic Well Field Restoration

No Impact. As previously stated in Section 3.4(a), the proposed well locations are not within any designated critical habitat. These wells are located in an already urbanized and developed setting and generally consists of ornamental vegetation. No riparian habitat or other sensitive natural communities exist within the project site (USFWS 2020). Therefore, no impacts to sensitive nature communities would occur.

Olympic Pipeline

No Impact. The proposed Olympic Pipeline and associated trenching would be entirely contained within City-owned property and within publicly-owned right-of-way within the cities of Santa Monica and Los Angeles. The proposed Olympic Pipeline does not contain any critical habitat within the alignment (USFWS 2020). The Olympic Pipeline would travel from the cities of Santa Monica and Los Angeles throughout the already developed streets, which generally consist of ornamental vegetation and no sensitive habitat. Therefore, no impacts to riparian or other sensitive natural communities would occur.

Olympic AWTF and Arcadia WTP Expansion

No Impact. The existing Arcadia WTP does not contain any critical habitat (USFWS 2020). Any construction associated with the Olympic AWTF and Arcadia WTP Expansion would be contained to the already developed Arcadia WTP. Therefore, no impacts to riparian or other sensitive natural communities would occur.

3.4 c) Would the project 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?

Olympic Well Field Restoration

No Impact. There are no state or federally protected wetlands within the proposed well locations. There will be no removal, filling, or hydrological interruption of any protected wetlands. Additionally, the proposed well locations do not have wetlands within the proposed Project areas. No impacts to jurisdictional waters or wetlands would occur.

Olympic Pipeline

No Impact. There are no wetlands within the proposed alignment. The proposed Olympic Pipeline is located entirely within urbanized and developed land. Therefore, it would not have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act, and no impacts would occur.

Olympic AWTF and Arcadia WTP Expansion

No Impact. There are no wetlands within the existing Arcadia WTP. The proposed Olympic pipeline is located entirely within urbanized and developed land. Therefore, it would not have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act, and no impacts would occur.

3.4 d) Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Olympic Well Field Restoration

Less-Than-Significant Impact With Mitigation Incorporated. The proposed well locations are located entirely within urbanized and developed areas. According to Los Angeles County, this Project area is not considered a Significant Ecological Area that links migratory populations (Los Angeles County Department of Regional Planning 2015). No wildlife corridors, native wildlife nursery sites, or bodies of water with fish are located within the project site. The potential proposed installation of SM-11i would result in the removal of nine Ficus trees during construction. Therefore, direct impacts to nesting birds could result from removal of potential nesting and foraging habitat. To avoid potential direct impacts to nesting birds, the proposed Project would implement mitigation measure MM-BIO-1.

MM-BIO-1 Commencement of construction activities at the Arcadia Water Treatment Plant and Olympic Well Field shall avoid the February 1 through August 31 bird nesting season to the extent feasible. If construction activities must begin within this nesting season, a survey for nesting birds shall be

conducted by a qualified biologist within 7 days before commencement of construction activities. The area surveyed shall include all clearing/construction areas, as well as areas within 100 feet of the boundaries of these areas, or as otherwise determined by the biologist. If no active bird nests are identified on, or within 100 feet of the limits of the proposed disturbance area, no further action is necessary and construction activities could commence.

If active nests are found during pre-construction surveys or at any time throughout the course of construction activities during the nesting bird season, all clearing/construction activities within a minimum 100 feet of the nest shall be postponed until a wildlife biologist has identified the nesting species. If the bird species is not protected under the Migratory Bird Treaty Act (MBTA) and/or the California Fish and Game Code, no further action is required and construction activities may proceed. If the avian species is protected under the MBTA and/or the California Fish and Game Code, a minimum buffer zone shall be established by the qualified biologist based on the type of bird/raptor species identified and the construction buffer shall be established on site through the erection of cones/flagging/fencing to clearly delineate the protection zone. All construction activities shall avoid this protection zone until a qualified biologist has confirmed that the nest(s) is no longer active and the nest is vacated, and there is no evidence of second nesting attempts.

With implementation of MM-BIO-1, impacts to nesting birds from construction-related activities would be less than significant.

Olympic Pipeline

No Impact. As previously described, the Olympic Pipeline is located entirely within urbanized and developed areas. According to Los Angeles County, the proposed alignment and surrounding area is not considered a Significant Ecological Area that links migratory populations (Los Angeles County Department of Regional Planning 2015). No wildlife corridors, native wildlife nursery sites, or bodies of water with fish are located within the project site. Therefore, no impact would occur.

Olympic AWTF and Arcadia WTP Expansion

Less-Than-Significant Impact With Mitigation Incorporated. As previously described, the existing Arcadia WTP is located entirely within an urbanized and developed area. According to Los Angeles County, the existing Arcadia WTP not considered a Significant Ecological Area that links migratory populations (Los Angeles County Department of Regional Planning 2015). No wildlife corridors, native wildlife nursery sites, or bodies of water with fish are located within the project site. Although vegetation within the existing Arcadia WTP consists of ornamental trees and shrubs, they can potentially provide nesting and foraging for migratory birds. The proposed Arcadia WTP Expansion would result in the removal of 8 ornamental trees, *Magnolia grandiflora,* during construction of the concrete driveway to Saltair Avenue. Therefore, direct impacts to nesting birds could result from removal of potential nesting and foraging habitat. To avoid potential direct impacts to nesting birds, the proposed Project would implement mitigation measure MM-BIO-1. With implementation of MM-BIO-1, impacts to nesting birds from construction-related activities would be less than significant.

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

Olympic Well Field Restoration

Less-Than-Significant Impact. The proposed Project would be required to comply with the federal Endangered Species Act, federal Migratory Bird Treaty Act (MBTA), California Endangered Species Act, California Fish and Game Code, and the SMMC, Chapter 7.40 Tree Code. However, the proposed Project is in an already developed and highly urbanized site with ornamental landscape. The proposed Project does include the removal of up to nine ficus trees at Ishihara Park. Per Section 7.40.001, the City maintains the discretion and ability to plant, maintain, and remove public trees within the public right-of-way. Additionally, coordination would be conducted with the City's Community and Cultural Services Division and the City's Urban Forester to provide replacement and/or planting of new trees as necessary. Therefore, as a City project, the proposed Project would not conflict with any local policies or ordinance regarding trees. Impacts would be less than significant.

Olympic Pipeline

No Impact. The Olympic Pipeline would be constructed within existing paved roadways and would not require the removal of any native or ornamental tree species or otherwise conflict with any local policies or ordinances protecting biological resources.

Olympic AWTF and Arcadia WTP Expansion

Less-Than-Significant Impact. The existing Arcadia WTP is located in the City of Los Angeles within an already developed location generally surrounded by urban landscaping and ornamental vegetation. The Project does not include the removal of any protected trees, however, the proposed Project does require the removal of up to eight ornamental tree species, *Magnolia grandiflora*. Per Chapter 7.40, Tree Code, the removal of any City trees require a City permit to authorize such work. Given the fact that this is a City-sponsored project, internal coordination between City departments would ensure compliance with Chapter 7.40, Tree Code. Therefore, with compliance with local policies and interdepartmental coordination regarding tree replacements would ensure that impacts would be less than significant.

Threshold

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

Impacts for All Project Components

No Impact. The Project site and surrounding area are heavily urbanized. There are no adopted Habitat Conservation Plans or Natural Community Conservation Plans that apply to the Project sites. Therefore, the proposed Project would not conflict with any approved conservation plans and no impact would occur.

3.5 Cultural Resources

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
V. CULTURAL RESOURCES – Would the project:				
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?	☐	☐	☒	☐

Existing Setting

A California Historical Resources Information System (CHRIS) records search was conducted at the South Central Coastal Information Center (SCCIC), located on the campus of California State University, Fullerton. The records search included the Project site and a 0.5-mile records search area. This search included their collections of mapped prehistoric and historic archaeological resources and historic built-environment resources, Department of Parks and Recreation Site Records, technical reports, archival resources, and ethnographic references. Additional consulted sources include historical maps of the study area, the National Register of Historic Places (NRHP), California Register of Historical Resources (CRHR), the California Historic Property Data File, the lists of California State Historical Landmarks, California Points of Historical Interest, and the Archaeological Determinations of Eligibility. A complete discussion of the CHRIS records search results, historical context, and resource evaluations for each Project site area is available in Appendix B, Cultural Resources Technical Report.

All Project Components

CHRIS Records Search Results for Previously Recorded Historic Built Environment Resources

The CHRIS records search results indicate that 21 cultural resources have been previously recorded within 0.5-mile of the Project site. Two resources were adjacent to Project components. The NRHP eligible historic-era Santa Monica Air Line railroad segment (P-19-003803) is adjacent to the proposed SM-8 and SM-10i well sites, and one resource, the Mountain View Mobile Home Park (P-19-190932) is adjacent to the proposed recycled water pipeline.

Santa Monica Air Line Segment (P-19-003803)

The Santa Monica Air Line segment is located in the Southern Pacific Railroad (SPRR) right-of-way, and is adjacent to the proposed Project site where the SPRR right-of-way shifts from running parallel to Exposition Boulevard to running south of and parallel to Olympic Boulevard, west of Stewart Street in Santa Monica. It was recorded by EDAW in 2008 as consisting of the railroad easement and extant rail-related elements, though the report and site

record both indicate that long segments of rail, and rail-related features were damaged, missing, in disuse, or not extant. Despite this, the report concludes that the Santa Monica Air Line retains integrity of location, design, setting, feeling and association – enough to convey its significance as an NRHP-eligible linear resource. The Santa Monica Air Line was recommended eligible for the NRHP by a consensus through Section 106 process, as well as listed in the CRHR. It was found eligible under Criterion A for its significant role in the creation and development of the City of Santa Monica, and as an important commuter rail system that served to sustain a critical connection between downtown Los Angeles and Santa Monica.

Mountain View Mobile Home Park (P-19-190932)

This resource is located adjacent to the proposed recycled water pipeline, and consists of the Mountain View Mobile Home Park (originally known as the Mountain View Trailer Inn). The Mountain View Mobile Home Park encompass one permanent 1948 building, a below-ground swimming pool, 75 mobile home units (as of 2010), 105 mobile home pads, and accompanying landscaping. The 1948 building is the single permanent building, and is a flat roofed, one-story structure oriented northwest by southeast, with an aluminum addition on its southwest which has rendered the building L-shaped since 1962. The mobile home park was found to be a typical example of a mobile home park created after World War II and was determined not to be a historical resource under CEQA, as it lacked historical significance, architectural merit, and integrity. The consultant, BCR Consulting, assigned the resource a status code 6Z - found ineligible for CRHR, NRHP, or Local Designation through survey evaluation.

CHRIS Records Search Results for Previously Recorded Archaeological Resources

A CHRIS Records search was conducted for the entire Project area, including the locations for each of the Project site components and a 0.5-mile radius buffer. SCCIC records indicate that 20 previously recorded cultural resources were identified outside the Project site but within the 0.5-mile records search area. Of these 20, six are archaeological resources which include one prehistoric archaeological site (P-19-001063/CA-LAN-01063), three historic-era archaeological sites (P-19-003336/CA-LAN-03336, P-19-004666/CA-LAN-4666, and P-19-004668/CA-LAN-04668), and two multi-component sites consisting of both prehistoric and historic-era archaeological sites (P-19-000382/ CA-LAN-00382 and P-19-004669/ CA-LAN-04669). A brief summary of each archaeological resource is provided below.

One prehistoric archaeological site, P-19-001063/CA-LAN-01063, consists of a sparse surface scatter of prehistoric artifacts including milling implements, cores, flaked stone tools, and debitage. The site measured 60 meters by 25 meters (approximately 196 feet by 82 feet) and likely extended beyond the recorded boundary. According to the SCCIC records, the site was partially destroyed during development in 1984. This site is outside of the current Project site and is located approximately 0.18 miles northeast of the Arcadia Water Treatment Plant. This site has not been evaluated for NRHP/CRHR eligibility.

Three historic-era archaeological sites were also identified within the records search area. Site P-19-003336/CA-LAN-03336, consists of historic-era refuse uncovered within a trench during construction monitoring. Artifacts include glass bottle fragments, milled wood, brick, butchered bone, porcelain tableware and unidentified ferrous metal fragments. This site is outside of the current Project site, approximately 0.37 miles northeast of the Arcadia Water Treatment Plant. This site has not been evaluated for NRHP/CRHR eligibility. Site P-19-004666/CA-LAN-4666 consists of a historic refuse deposit that includes brick, terra cotta pipe fragments, concrete rubble, glass shards, a folding chair, and a coffee jar as well as a brick wall segment was. The historic-era refuse deposit was identified beneath the Santa Monica Air Line track and was interpreted as associated with the twentieth century

railroad construction and activity. This archeological site is outside of the current Project site, approximately 250 feet southwest of the southern terminus of the existing pipeline for the current Project, approximately 250 feet southwest of the new proposed SM-10i well location, on the south side of West Olympic Boulevard west of its the intersection with 26th Street. This site has not been evaluated for NRHP/CRHR eligibility. The third historic-era archaeological site is P-19-004668/CA-LAN-04668, which consists of a historic-era refuse deposit primarily composed of cosmetic containers dating between the 1940s and 1960s. The refuse deposit is located adjacent to the Santa Monica Air Line ROW and within the vicinity of numerous buildings previously housing cosmetic companies. The site is located outside the current Project site, approximately 0.11 miles northeast of the intersection of West Olympic Boulevard and South Centinela Avenue.

One multi-component site, P-19-000382/ CA-LAN-00382, consists of the historic-era University High School campus built on a prehistoric village site that is located around a collection of freshwater springs known as Serra Springs. The prehistoric site was first reported circa 1925 during the construction of the University High School Campus. The prehistoric site included burials, stone and bone tools, grinding implements, and marine shell. A California Historical Landmark plaque was placed at the site of the springs in 1954, as it is a place thought to have been visited by Portola's 1769 expedition. Ground disturbance in 1974 unearthed an additional burial of Native American origin in an intact portion of the site. The main building on the campus was determined eligible for the NRHP in 1995. A 2009 through 2012 campus-wide monitoring program uncovered historic-era deposits consisting of household refuse dating between circa 1890 and 1960, a stone-and-mortar foundation, as well as prehistoric milling implements, flaked stone tools, and marine shell. All artifacts uncovered during monitoring were found in a disturbed context. The prehistoric component of the site was evaluated in 2013 with status code 3CS, which indicates that it appears eligible for the CRHR. The University High School Main building was evaluated in 1995 with status code 2S2, which indicates that it was determined eligible for the NRHP. The Serra Springs within the site was approved as California Historical Landmark No. 522 in 1954. This large multi-component site is outside of the current Project site, approximately 0.18 miles northeast of the Arcadia Water Treatment Plant.

The second multi-component site, P-19-004669/CA-LAN-04669, consists of a large scatter of historic-era debris, a brick-lined well feature, a prehistoric isolated bifacial hand stone, as well as marine shell fragments and one abalone shell. The historic-era refuse was attributed to an Asian restaurant located on the parcel in the mid-twentieth century. This site is outside of the current Project site, approximately 0.09 miles or 500 feet southwest of the intersection of West Olympic Boulevard and South Centinela Avenue. This site has not been evaluated for NRHP/CRHR eligibility.

Historical Overview

Olympic Well Field Restoration

The first well field to provide water for City of Santa Monica was located near the San Vicente Springs, northeast of City of Santa Monica, which continued to provide water for City of Santa Monica from 1875 to the 1910s. The City of Santa Monica has extracted groundwater from the various wells in the Santa Monica Basin since 1924. In 1924, the Charnock Well Field first began providing water to the City of Santa Monica, but wells appear at various private water company sites as early as 1918, including at the Arcadia property and along Olympic Boulevard. Two wells, including the SM-3 well site, along Olympic Boulevard were installed between 1968 and 1970, according to aerial imagery. After a 10-week closure in 1980, The Santa Monica City Council approved reopening of the well. The Olympic well sites accounted for 12% of the City water supply in 1980 (ARG/HRG 2018; LAT 1980; Sanborn 1918, 1921, 1924; Santa Monica Outlook 1924; UCSB 2019).

Olympic Pipeline

The City of Santa Monica water mains were first installed along Harvard Avenue and another along Franklin Avenue, connecting Olympic Avenue wells, Charnock wells, and MWD water to the Arcadia WTP sometime between 1956 and 1968. The neighborhood it passes through however has been around since at least the 1940s. In a 1940 aerial photograph, small, single-family homes begin to appear along Wellesley Avenue, Amherst Avenue, and Centinela Avenue By the 1947 aerial photograph, single-family homes dominate the streets where the planned Olympic Pipeline will be installed, and the area near the railroad has become increasingly industrial. Multi-family homes begin to appear in the 1960s (ARG/HRG 2018; UCSB 2019).

Olympic AWTF and Arcadia WTP Expansion

The Arcadia WTP parcel, located at 1228 South Bundy Drive (APN 4263-003-270), was originally developed in 1904 and had water infrastructure, including several wells, by 1910. Nearly all original development has been demolished, leaving only later developments, the earliest of which is the 1924 5-million gallon reservoir, and a few 1958 and 1966 historic-age buildings. The site has had several modern development periods, with 4 buildings added in 1994 and 10 buildings added in 2010.

Impact Analysis

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

The Arcadia WTP located at 1228 South Bundy Drive in the City of Los Angeles, California (APN: 4263-003-270), and the Olympic Well Field well sites on Olympic Boulevard between Centinela Avenue and 26th Street were evaluated for historical significance. These were the only two resources that met the age requirements for evaluation. All other resources are less than 45 years in age and do not require evaluation at this time. The completion of the potential SM11i wellhead at Ishihara Park and the construction of the Olympic Pipeline would not result in the demolition of any built resources and were therefore not included in the historical significance evaluation. As a part of preparing the Cultural Resources Technical Report (Appendix B) for the proposed Project, a pedestrian survey, windshield survey, and records search to develop appropriate historic context and evaluate the potentially historic resources was conducted. This search was conducted in consideration of NRHP, CRHR, and City of Santa Monica Structure of Merit and Landmark designation criteria.

No historical resources were identified within the Project site as a result of the current study. However, one previously recorded historical resource was identified in close proximity to the Project site: the Santa Monica Air Line (P-19-003803), located roughly 60 feet south of the proposed SM-8 well site and 90 feet south of the proposed SM-10i well site, within the railroad right-of-way. The proposed Project would not demolish, relocate or cause any direct change to the resource which would result in a substantial adverse change as defined in CEQA guidelines §15064.5.

Olympic Well Field Restoration

No Impact. One historic age resource was identified in the Olympic Well Field Restoration area as a result of the reconnaissance-level survey: the SM-3 well site. This resource was evaluated for significance under applicable federal, state and local criteria and does not appear eligible for listing in the NRHP, CRHR, or as

a City of Santa Monica Structure of Merit or Landmark due to a lack of important historical associations, lack of architectural significance, and insufficient integrity. Nor does it appear eligible as contributors to an historic district. As such, the SM-3 well site does not appear to be historical resources for the purposes of CEQA. No historic age resources were identified in the Olympic Well Field Restoration area as a result of the reconnaissance-level survey and desktop review. Therefore, the proposed Olympic Well Field Restoration would not cause a substantial direct adverse change in the significance of a historical resource for the purposes of CEQA.

Additionally, the cultural resources assessment for Olympic Well Field Restoration site analyzed the results of the CHRIS records search, Sacred Lands File (SLF) search, California Historical Resources Information (HRI) database, and extensive archival research. The Project proposes to construct the well completion equipment for four (4) new groundwater wells (SM-8, SM-9, SM-10i, and SM-11i), and decommission one groundwater well (SM-3) in the median of Olympic Boulevard. SM-10i would be located west of the intersection of Olympic Boulevard and 26th Street, and SM-8 would be located approximately 1,400 feet east of SM-10i and west of the intersection of Olympic Boulevard and Stewart Street. These two proposed well locations are adjacent to the Santa Monica Air Line right-of-way, however, the new well sites are proposed more than 50 feet north of the Santa Monica Air Line, and will consist of a mostly subsurface structure, with low-profile equipment on the surface, just above grade. This Santa Monica Air Line is eligible under Criterion A for its significant role in the creation and development of the City of Santa Monica, and as an important commuter rail system that served to sustain a critical connection between downtown Los Angeles and Santa Monica. The proposed new well construction will be low-profile and is consistent with the overarching industrial and municipal uses of the surrounding area, including the historical industrial, railroad adjacent setting still extant along this segment of Olympic Boulevard. Therefore, the Project, as proposed, will not diminish the setting of the adjacent Santa Monica Air Line segment and will not impact the ability of the resource as a whole to convey its significance.

No other adjacent resources were identified as a result of the records search or survey that could be indirectly impacted by the proposed Project. As a result, the proposed Project will have a less than significant impact on historical resources under CEQA. No further management recommendations are required for this adjacent resource.

Olympic Pipeline

No Impact. No historic age resources were identified in the study area of the Olympic Pipeline as a result of the reconnaissance-level survey. Therefore, the proposed Olympic Pipeline would not directly cause a substantial adverse change in the significance of a historical resource for the purposes of CEQA.

Additionally, the cultural resources assessment for the Olympic Pipeline analyzed the results of the CHRIS records search, SLF search, California HRI database, and extensive archival research. No additional cultural resources were identified adjacent to the Olympic Pipeline study area, which might be indirectly affected by the Project. Further, the proposed Olympic Pipeline segment would remain entirely within the street right-of-way, would be entirely subsurface, and would have no impact to adjacent buildings and structures along the proposed alignment. Additionally, the Olympic Pipeline work proposes no modifications to existing streetscape features. As such, the proposed Project would not indirectly affect any adjacent historic-age structures.

Olympic AWTF and Arcadia WTP Expansion

No Impact. One historic age resource was identified in the Olympic AWTF and Arcadia WTP Expansion area as a result of the reconnaissance-level survey: the Arcadia WTP. This resource was evaluated for significance under applicable federal, state and local criteria and the Arcadia WTP does not appear eligible for listing in the NRHP, CRHR, or as a City of Santa Monica Structure of Merit or Landmark due to a lack of important historical associations, lack of architectural significance, and insufficient integrity. Nor does it appear eligible as a contributor to an historic district. As such, the Arcadia WTP does not appear to be historical resources for the purposes of CEQA. Therefore, the proposed Olympic AWTF and Arcadia WTP Expansion would not directly cause a substantial adverse change in the significance of a historical resource for the purposes of CEQA.

Additionally, the cultural resources assessment for the Olympic AWTF and Arcadia WTP Expansion analyzed the results of the CHRIS records search, SLF search, California HRI database, and extensive archival research. No additional cultural resources were identified adjacent to the Olympic AWTF and Arcadia WTP Expansion area, which might be indirectly affected by the Project. The proposed replacement of the equipment within the Decarbonator Building would result in the placement of new larger air stripping towers, which could be 4 to 5-feet taller than the existing RO Building height. However, this potential height increase would not result in a change in the character or use of the site, would not cast shadows on adjacent land uses, and would not result in a visual intrusion to any potential nearby historical resources. The Arcadia WTP will continue to operate but would feature new buildings that would be comparable size and scale to existing buildings on site. As such, the proposed Project would not indirectly affect any adjacent historic-age structures.

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

Olympic Well Field Restoration

Less-Than-Significant Impact With Mitigation Incorporated. The CHRIS records search and Native American Heritage Commission's (NAHC's) SLF review did not identify cultural resources within the Project's Olympic Well Field Restoration footprint. A survey for archaeological resources was not conducted as the location of the wells as they are within developed or maintained landscaped areas in the center of a heavily traveled roadway corridor. However, SCCIC records did identify one historic-era archaeological site (P-19-004666/CA-LAN-4666) approximately 250 feet southwest of the proposed location of well SM-10i's temporary staging and permanent well pad impact areas. Specifically, the site was identified on the south side of West Olympic Boulevard, on the north side of old Bergamot Station. The site measures approximately 150 feet (46 meters) northeast-southwest by 20+ feet (6 meters) northwest-southeast and the resources were encountered approximately 3 feet (1 meter) below the ground surface (bgs) during construction trenching activities monitored by Cogstone Resources Management Inc. in support of the Exposition Rail Line Segment II (Expo II) Project. Given the shallow depth when the resources for the site were encountered, it is possible that similar subsurface archaeological deposits could be encountered during ground-disturbing activities for well SM-10i and as such, archaeological sensitivity within this location is low to moderate. If such unanticipated discoveries were encountered, impacts to encountered resources could be potentially significant. However, with the implementation of a workers environmental awareness program (WEAP) training under MM-CUL-1, implementation of MM-CUL-2 for the inadvertent

discovery of archaeological resources, and archaeological monitoring under MM-CUL-3, potentially significant impacts to archaeological resources would be reduced to less-than-significant levels.

MM-CUL-1 Prior to commencement of construction activities at the Olympic Well Field, Olympic Pipeline, and Arcadia Water Treatment Plant, the City's construction contractor and construction personnel shall attend and complete a Workers Environmental Awareness Program (WEAP) training conducted by a qualified archaeologist. The WEAP training shall provide: (1) the types and characteristics of archaeological materials that may be identified during construction and explain the importance of and legal basis for the protection of significant cultural resources; (2) proper procedures to follow in the event that cultural resources or human remains are uncovered during ground-disturbing activities, including procedures for work curtailment or redirection; and (3) protocols for the contact of the site supervisor and archaeological monitor upon discovery of a resource.

MM-CUL-2 If archaeological resources (i.e., sites, features, or artifacts) are exposed during construction activities of any components of the proposed Project at the Olympic Well Field, Olympic Pipeline, and Arcadia Water Treatment Plant, all construction work occurring within 100 feet of the find shall immediately stop until a qualified archaeological principal investigator, meeting the Secretary of the Interior's Professional Qualification Standards for Archaeology, can evaluate the significance of the find and determine whether or not additional study is warranted. This work exclusion buffer may be adjusted based on the recommendation of the archaeological principal investigator. Reservation in place of any unanticipated resource should be considered the preferred approach wherever possible, and the feasibility of avoidance should be discussed with the City prior to moving forward with excavation or other potentially destructive evaluation efforts. Should it be required, temporary flagging may be installed around this resource in order to avoid any disturbances from construction equipment. Depending upon the nature of the find, the archaeological monitor in correspondence with the qualified archaeological principal investigator may simply record the find to appropriate standards (thereby addressing any data potential) and allow work to continue. If the qualified archaeological principal investigator determines the discovery to be potentially significant under the California Environmental Quality Act (CEQA) or City regulations, additional efforts in conformance with requirements set forth in CEQA Section 21083.2 related to unique archeological resources shall be conducted, such avoidance of the resources, preservation in place, additional testing, and/or data, prior to allowing construction to proceed in the area of the find.

MM-CUL-3 During construction activities at the Olympic Well Field and Arcadia Water Treatment Plant that require earthwork below five feet or disturbance of native soils, periodic archaeological monitoring shall be conducted. The frequency and duration of the periodic monitoring shall be determined by a qualified archaeological principal investigator based on inspection of exposed subsurface soils and their observed potential to contain intact cultural deposits or material. The archaeological monitor shall have the authority to temporarily halt work to inspect areas as needed for potential cultural material or deposits. In the event that archaeological resources are exposed during construction activities for the proposed Project's MM-CUL-2 shall be followed. The archaeological monitor shall be responsible for maintaining daily monitoring logs during monitoring. Following the completion of

construction, an archaeological monitoring report with the results of the cultural monitoring program shall be submitted to the City for review and approval. Once approved, the final report will be filed with the South Central Coastal Information Center.

Olympic Pipeline

Less-Than-Significant Impact With Mitigation Incorporated. The CHRIS records search and NAHC's SLF review did not identify cultural resources within the Project's proposed Olympic Pipeline footprint, which is entirely developed and as such, a survey for the presence of archaeological resources was not conducted. Less than 10% of the Olympic Pipeline was previously surveyed/investigated and as such, it is unknown whether the Olympic Pipeline may yield intact subsurface archaeological deposits. If such unanticipated discoveries were encountered, impacts to encountered resources could be potentially significant. However, with the implementation of WEAP training under MM-CUL-1 and MM-CUL-2, which requires that all construction work occurring within 100 feet of the find shall immediately stop until a qualified archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards for Archaeology, can evaluate the significance of the find, potentially significant impacts to archaeological resources would be reduced to less-than-significant levels. Therefore, impacts would be less than significant with MM-CUL-1 and MM-CUL-2 incorporated.

Olympic AWTF and Arcadia WTP Expansion

Less-Than-Significant Impact With Mitigation Incorporated. The CHRIS records search and NAHC's SLF review did not identify cultural resources within the Project's proposed Olympic AWTF and Arcadia WTP Expansion footprint and an archaeological survey was not conducted as this portion of the Project is entirely developed and has not been previously surveyed or investigated. Although there were no archaeological resources identified within the footprint of the proposed Olympic AWTF and Arcadia WTP Expansion footprint, two archaeological sites were identified approximately 0.18 miles northeast of the AWTP, One prehistoric archaeological site, P-19-001063/CA-LAN-01063 consisting of a sparse surface scatter or prehistoric artifacts. The second archaeological resource is a large multi-component site, P-19-000382/ CA-LAN-00382, consisting of the historic-era University High School campus built on a prehistoric village site that is located around a collection of freshwater springs known as Serra Springs. Because the AWTP impact area has not been previously surveyed or investigated, there is a potential to encounter both prehistoric and historic-era archaeological deposits subsurface during Project construction. If such unanticipated discoveries were encountered, impacts to encountered resources could be potentially significant. However, with the implementation of WEAP training under MM-CUL-1, protocol for the inadvertent discovery of archaeological resources under MM-CUL-2, and archaeological monitoring under MM-CUL-3, potentially significant impacts to archaeological resources would be reduced to less-than-significant levels. Therefore, impacts would be less than significant with MM-CUL-1 through MM-CUL-3 incorporated.

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

Impacts for All Project Components

Less-Than-Significant Impact. No prehistoric or historic burials were identified within the Olympic Well Field Restoration, Olympic Pipeline, or Olympic AWTF and Arcadia WTP Expansion areas as a result of the CHRIS records search or NAHC SLF review. However, SCCIC records indicate that a previously recorded multi-

component site consisting of both prehistoric and historic-era resources (P-19-000382/CA-LAN-00382) included the identification of prehistoric burials. This site is located approximately 0.18-mile northeast of the Arcadia WTP, and the likelihood of encountering human remains subsurface within this portion of the Project site is low. In the event human remains are inadvertently encountered during construction activities, impacts would be potentially significant. The discovery of human remains would require handling in accordance with California Public Resources Code.

In accordance with Section 7050.5 of the California Health and Safety Code, if human remains are found within the Project site, the county coroner shall be immediately notified of the discovery. No further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains can occur until the county coroner has determined, within two (2) working days of notification of the discovery, the appropriate treatment and disposition of the human remains. If the county coroner determines that the remains are, or are believed to be, Native American, he or she must notify the NAHC in Sacramento within 24 hours. In accordance with California Public Resources Code, Section 5097.98, the NAHC must immediately notify those persons it believes to be the most likely descendant of the deceased Native American. The most likely descendant shall complete his/her inspection within 48 hours of being granted access to the site. The designated most likely descendant would then determine, in consultation with the property owner, the disposition of the human remains. In addition to compliance with regulations, the WEAP training requirements under MM-CUL-1, which requires workers to be trained in the identification of cultural resources prior to commencement of construction activities, would also apply to the discovery of human remains. Compliance with regulations would ensure that potential disturbance of any human remains, including those interred outside of dedicated cemeteries, would be less than significant.

3.6 Energy

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
VI. Energy – Would the project:				
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?	☐	☐	☒	☐

Existing Setting

Electricity

City of Santa Monica: Olympic Well Field Restoration and Olympic Pipeline

Before May 1, 2019, Southern California Edison (SCE) was the electricity service purchasers and provider for all residential and commercial customers in the City of Santa Monica. Since May 2019, Clean Power Alliance became the new electricity supplier for the City of Santa Monica; therefore, electrical needs for the Olympic Well Field and the portions of the Olympic Pipeline within the City of Santa Monica would be serviced by Clean Power Alliance. Clean Power Alliance is a Joint Powers Authority (JPA) made up of public agencies across Los Angeles and Ventura counties working together to bring clean, renewable power to Southern California. With the recent switch in energy supplier, Clean Power Alliance purchases clean power and SCE delivers it to customers. Electricity customers in Santa Monica are automatically defaulted to have 100% renewable energy serving their electricity needs. Alternatively, customers can opt to have their electricity power consisting of 50% renewable content or 36%, or opt out of the Clean Power Alliance to remain with SCE as their energy supplier.

City of Los Angeles: Olympic Pipeline and Olympic AWTF and Arcadia WTP Expansion

LADWP is the utility provider for the Olympic AWTF and Arcadia WTP as well as portions of the Olympic Pipeline within the City of Los Angeles. LADWP provides electric services to 1.5 million customers, located in the City and in the Owens Valley. According to LADWP, customers consumed approximately 24 billion kilowatt-hours of electricity in 2016 (CEC 2018). LADWP receives electric power from a variety of sources. According to the LADWP Briefing Book 2017–2018, 29% of LADWP's power came from renewable energy sources in 2016, including biomass/waste, geothermal, small hydroelectric, solar, and wind sources (LADWP 2017). Although California has the world's fifth-largest economy and many energy-intensive industries, the state has one of the lowest per capita energy consumption levels in the United States (EIA 2020).

Natural Gas

All Project Components

Southern California Gas Company (SoCalGas) serves the cities of Santa Monica and Los Angeles, including all of the Project component sites. SoCalGas serves 21.6 million customers in a 20,000-square-mile service area that includes over 500 communities (SoCalGas 2018). In 2016, which is the most recent year for which data is available, SoCalGas delivered 5,123 million therms of natural gas, with the majority going to residential uses. Demand for natural gas can vary depending on factors such as weather, price of electricity, the health of the economy, environmental regulations, energy-efficiency programs, and the availability of alternative renewable energy sources. Natural gas is available from a variety of in-state and out-of-state sources and is provided throughout the state in response to market supply and demand.

Petroleum

All Project Components

Overall, the transportation sector accounts for two-fifths of California's end-use energy consumption (EIA 2020). According to the EIA, California used approximately 683 million barrels of petroleum in 2017 (EIA 2019). This

equates to a daily use of approximately 1.9 million barrels of petroleum. There are 42 U.S. gallons in a barrel, so California consumes approximately 78.6 million gallons of petroleum per day, adding up to an annual consumption of 29 billion gallons of petroleum. However, technological advances, market trends, consumer behavior, and government policies could result in significant changes in fuel consumption by type and in total. At the federal and state levels, various policies, rules, and regulations have been enacted to improve vehicle fuel efficiency, promote the development and use of alternative fuels, reduce transportation-source air pollutants and GHG emissions, and reduce vehicle miles traveled (VMT).

Impact Analysis

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

Short-Term Construction Impacts for All Project Components

Less-Than-Significant Impact. For this analysis of energy use, all components of the Projects are assessed together. The estimated consumption for electricity, natural gas, and petroleum is discussed below.

Electricity. Temporary electric power for as-necessary lighting and electronic equipment would be provided by Clean Power Alliance or LADWP depending on the Project component. The amount of electricity used during construction would be minimal because typical demand would stem from electrically powered hand tools. The electricity used for construction activities would be temporary and minimal; therefore, Project construction would not result in wasteful, inefficient, or unnecessary consumption of electricity.

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

Petroleum. Heavy-duty construction equipment associated with construction activities for construction would rely on diesel fuel, as would vendor trucks involved in delivery of materials to the Project site. Construction workers would travel to and from the Project site throughout the duration of construction. It is assumed in this analysis that construction workers would travel in gasoline-powered light-duty vehicles.

Heavy-duty construction equipment of various types would be used during most phases of Project construction. Appendix A lists the assumed equipment usage for each phase of construction. The Project's construction equipment is estimated to operate a total combined 17,179 hours.

Fuel consumption from construction equipment was estimated by converting the total carbon dioxide (CO_2) emissions from each construction phase to gallons using the conversion factors for CO_2 to gallons of gasoline or diesel. Construction is estimated to occur intermittently from 2020 to 2023 based on the construction phasing schedule.

The conversion factor for gasoline is 8.78 kilograms per metric ton (MT) CO_2 per gallon, and the conversion factor for diesel is 10.21 kilograms per MT CO_2 per gallon (The Climate Registry 2019). The estimated diesel fuel usage from construction equipment is shown in Table 3.6-1.

Table 3.6-1. Construction Equipment Diesel Demand

Project Component	Pieces of Equipment	Equipment CO_2 (MT)	kg CO_2/Gallon	Gallons
Olympic Well Field - Well SM-10i	5	7.08	10.21	693.16
Olympic Well Field - Well SM-8	5	7.08	10.21	693.16
Olympic Well Field - Well SM-9	5	7.08	10.21	693.16
Olympic Well Field - Well SM-11i	5	7.08	10.21	693.75
Recycled Water Pipeline	10	9.30	10.21	910.40
Olympic Pipeline	10	54.92	10.21	5,379.01
Olympic AWTF and Arcadia WTP Expansion	32	298.48	10.21	29,233.90
			Total	**38,296.55**

Sources: Pieces of equipment and equipment CO_2 (Appendix A); kg CO_2/Gallon (The Climate Registry 2019).
Notes: CO_2 = carbon dioxide; MT = metric ton; kg = kilogram.

Fuel estimates for total worker, vendor, and haul truck fuel consumption are provided in Table 3.6-2.

Table 3.6-2. Construction Worker, Vendor, and Haul Truck Petroleum Demand

Project Component	Trips	Vehicle MT CO_2	kg CO_2/ Gallon	Gallons
Worker Vehicles (Gasoline)				
Olympic Well Field - Well SM-10i	440	2.21	8.78	252.23
Olympic Well Field - Well SM-8	440	2.21	8.78	252.23
Olympic Well Field - Well SM-9	440	2.21	8.78	252.23
Olympic Well Field - Well SM-11i	440	2.02	8.78	230.32
Recycled Water Pipeline	302	1.32	8.78	149.77
Olympic Pipeline	1,674	8.28	8.78	942.74
Olympic AWTF and Arcadia WTP Expansion	10,272	48.97	8.78	5,577.43
			Total	**7,656.96**
Vendor Trucks (Diesel)				
Olympic Well Field - Well SM-10i	140	1.73	10.21	169.84
Olympic Well Field - Well SM-8	140	1.73	10.21	169.84
Olympic Well Field - Well SM-9	140	1.73	10.21	169.84
Olympic Well Field - Well SM-11i	140	1.66	10.21	162.27
Recycled Water Pipeline	176	2.08	10.21	204.01
Olympic Pipeline	1,024	12.62	10.21	1,236.12
Olympic AWTF and Arcadia WTP Expansion	1,474	18.00	10.21	1,762.91
			Total	**3,874.84**
Haul Trucks (Diesel)				
Olympic Well Field - Well SM-10i	36	1.39	10.21	135.89
Olympic Well Field - Well SM-8	36	1.39	10.21	135.89
Olympic Well Field - Well SM-9	56	2.16	10.21	211.38
Olympic Well Field - Well SM-11i	36	1.30	10.21	127.27
Recycled Water Pipeline	140	4.05	10.21	568.06
Olympic Pipeline	510	19.44	10.21	1,903.88

Table 3.6-2. Construction Worker, Vendor, and Haul Truck Petroleum Demand

Project Component	Trips	Vehicle MT CO_2	kg CO_2/ Gallon	Gallons
Olympic AWTF and Arcadia WTP Expansion	154	5.80	10.21	568.06
			Total	3,479.32

Sources: Trips and vehicle CO_2 (Appendix A); kg CO_2/Gallon (The Climate Registry 2019).
Notes: MT = metric ton; CO_2 = carbon dioxide; kg = kilogram.

In summary, construction of the Project is conservatively anticipated to consume 7,657gallons of gasoline and 45,651gallons of diesel. By comparison, Countywide total petroleum use by vehicles is expected to be 4.7 billion gallons per year by 2020 (CARB 2019c). Based on these assumptions, approximately 69 billion gallons of petroleum would be consumed in California over the course of the Project's construction phase based on the California daily petroleum consumption estimate of approximately 78.6 mgd (EIA 2019). This would be a fraction of petroleum that would be consumed in California and Countywide over the course of the construction period. Therefore, impacts to energy resources during construction would be less than significant.

Long-Term Operational Impacts for All Project Components

Less-Than-Significant Impact. For this analysis of energy uses, all components of the Project are assessed together. The estimated consumption for electricity, natural gas, and petroleum is discussed below.

Electricity. The operational phase of the Project would require electricity for multiple purposes including building heating and cooling, lighting, water treatment processes, and for water and wastewater conveyance. The estimation of operational building energy was based on the CalEEMod estimated annual electricity consumption estimate. Supply, conveyance, treatment, and distribution of water for the Project would also require the use of electricity. Similarly, wastewater generated by the Project requires the use of electricity for conveyance and treatment. Water consumption estimates for the Project and associated electricity consumption from water use and wastewater generation were estimated using CalEEMod default values and the square footage of the new buildings. In addition, the City estimates that the Project would result in a net increase in electricity from the wells of 1,621,000 kilowatt-hours (kWh) per year and a net increase in electricity from the Arcadia WTP of 3,355,000 kWh per year.

Because the Project would increase the supply of local groundwater in replacement of imported water, there would be a reduction in electricity associated with imported water source. For imported water, electricity is needed to supply and transport the water from sources in other parts of California, as well as treat and distribute the water; however, for local groundwater, electricity is only needed for pumping, treatment, and local distribution. Accordingly, electricity associated with supply of water is avoided as a result of replacing the imported water source with local groundwater. As previously explained, the existing capacity of the Arcadia WTP is 10 mgd, with an existing production of 8.9 mgd. The Project would increase capacity of the Arcadia WTP to 13 mgd, with an estimated future production of 12 mgd. It is conservatively assumed that the Project would result in a net increase in 2 mgd at a minimum (12 mgd future production - 10 mgd existing capacity). Accordingly, implementation of the Project would avoid electricity associated with supply of 2 mgd of water. Table 3.6-3 presents the electricity demand for the Project.

Table 3.6-3. Project Operations – Electricity Demand

Project Facility	kWh/year
Project Buildings	116,550
Water/Wastewater	35,968
Wells and Treatment Plant Net Increase	4,976,000
Subtotal	5,128,518
Avoided Electricity	7,100,710
Total (Net)	**(1,972,192)**

Source: Appendix A.
Notes: kWh = kilowatt-hour.
Numbers noted in parenthesis represent a negative number.

As shown in Table 3.6-3, when considering avoided electricity associated with replacing imported water with local groundwater, there is a net reduction in electricity demand for the City's water supply. For disclosure, for Los Angeles County, electricity demand in 2018 was 67,856 million kWh (CEC 2018a). Impacts related to operational electricity use would be less than significant.

Natural Gas. Natural gas consumption during operation would be required for various purposes, including building heating and cooling. For building consumption, default natural gas generation rates in CalEEMod for the Project land uses and climate zone were used. Table 3.6-4 presents the estimated natural gas demand for the Project.

Table 3.6-4. Project Operations – Natural Gas Demand

Project Facility	kBtu/year
Project Buildings	190,050

Source: Appendix A.
Notes: kBtu = thousand British thermal units.

As shown in Table 3.6-4, the Project would consume approximately 190,050 thousand British thermal units (kBtu) per year. For disclosure, in 2018, SoCalGas delivered approximately 2,921 million therms (292.1 billion kBtu) to Los Angeles County (CEC 2018b). The Project is subject to statewide mandatory energy requirements as outlined in Title 24, Part 6, of the California Code of Regulations. Title 24, Part 11, contains additional energy measures that are applicable to Project under the California Green Building Standards Code (CALGreen). This would apply to the new R.O. Building (see Figure 6, ID#1) and the new Electric Room (see Figure 6, ID#4). Overall, due to the inherent increase in efficiency of building code regulations, the Project would not result in a wasteful use of energy. Impacts related to operational natural gas use would be less than significant.

Petroleum. The fuel consumption resulting from the Project's operational phase would be attributable to minimal delivery truck trips delivering chemical supplies to the Arcadia WTP site. Similar to construction worker and truck trips, fuel consumption for operation was estimated by converting the total CO_2 emissions from the vendor truck trips to gallons using the conversion factors for CO_2 to gallons of gasoline or diesel. Based on the assumed vehicle mix (50% medium heavy-heavy duty trucks and 50% heavy-heavy duty trucks) and the countywide proportion of gasoline and diesel on-road VMT, the vehicles associated with

Project operations were assumed to be approximately 7% gasoline powered and 93% diesel powered. The estimated fuel use from Project operational mobile sources is shown in Table 3.6-5.

Table 3.6-5. Project Operations – Petroleum Consumption

Fuel	Vehicle MT CO_2	kg CO_2/Gallon	Gallons
Gasoline	1.03	8.78	117.85
Diesel	14.23	10.21	1,393.27
		Total	**1.511.12**

Source: Appendix A.
Notes: CO_2 = carbon dioxide; kg = kilogram; MT = metric ton.

As depicted in Table 3.6-5, mobile sources from the Project would result in approximately 1,511 gallons of petroleum fuel usage per year. For context only, California as a whole consumes approximately 28.7 billion gallons of petroleum per year (EIA 2019). Over the lifetime of the Project, the fuel efficiency of the vehicles being used by the vendor trucks is expected to increase. As such, the amount of petroleum consumed as a result of vehicular trips to and from the Project site during operation would decrease over time due to advances in fuel economy.

In summary, although the Project would increase petroleum use during operation as a result of minimal delivery trucks traveling to and from the Arcadia WTP site, the use would be a small fraction of the statewide use and, due to efficiency increases, would diminish over time. Given these considerations, petroleum consumption associated with the Project would not be considered inefficient or wasteful and would result in a less than significant impact.3.6 b) Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Impacts for All Project Components

Less-Than-Significant Impact. For this analysis of energy impacts, all components of the Project are assessed together.

Part 6 of Title 24 of the California Code of Regulations was established in 1978 and serves to enhance and regulate California's building standards. Part 6 establishes energy efficiency standards for residential and non-residential buildings constructed in California to reduce energy demand and consumption. Part 6 is updated periodically (every 3 years) to incorporate and consider new energy efficiency technologies and methodologies. Title 24 also includes Part 11, CALGreen. CALGreen institutes mandatory minimum environmental performance standards for all ground-up, new construction of commercial and state-owned buildings. The Project would meet Title 24 and CALGreen standards to reduce energy demand and increase energy efficiency.

As discussed in Section 3.8, GHG emissions, the Project would not conflict with the various City of Santa Monica plans that would reduce energy use, including the City of Santa Monica Climate Action and Adaptation Plan and the Sustainable City Plan. In addition, the Project would result in a net reduction in electricity use when considering the avoided electricity associated with importing water, as shown in Table 3.6-3.

Overall, the Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency; therefore, impacts during construction and operation of the Project would be less than significant.

3.7 Geology and Soils

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
VII. GEOLOGY AND SOILS – Would the project:				
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☒	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	☐	☐	☒	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐

Existing Setting

Olympic Well Field Restoration

The Olympic Well Field is located in a seismically active region, as several prominent and well-known faults are located in the greater Los Angeles area. The closest fault to the proposed Olympic Well Field is the Holocene-active[11] Santa Monica Fault Zone, located approximately 0.6-mile to the northwest (CGS 2018a). Seismic hazards associated with this fault, as well as other faults within the region, include strong ground shaking, surface rupture, seismically induced landslides, and liquefaction. According to the California Geological Survey (CGS) *Earthquake Zones of Required Investigation, Beverly Hills Quadrangle*, the Olympic Well Field would not be located within an area susceptible to earthquake-induced landslides and would not be located within an Earthquake Fault Zone (i.e., not within a zone susceptible to surface ruptures). However, proposed Well SM-9 would be located within a liquefaction zone (CGS 2018a). Figure 14, Existing Geological Conditions, shows the relevant liquefaction and fault zones near the Project site.

Non-seismic hazards that could potentially affect the Project site include subsidence and expansive soils. Subsidence is the permanent collapse of the pore space within a soil or rock and downward settling of the surface of the earth relative to its surrounding area. This phenomenon can result from the extraction of water or oil, peat loss, liquefaction, or the addition of water to the land surface—a condition called "hydrocompaction". According to the United States Geological Survey (USGS) *Areas of Land Subsidence in California*, no instances of subsidence have been recorded within the Project area (USGS 2019).

Geologic units underlying the proposed Olympic Well Field consist of alluvium, comprised of unconsolidated and generally uneroded, alluvial gravel, sand, and silt-clay (Dibblee 1991). Expansive soils are the seasonal swelling of soils containing clay minerals. Repeated shrinking and swelling can result in structural damage, particularly if wetting and drying does not occur uniformly throughout the soil. As the Project is underlain by soils that contain clay minerals, there is a potential for on-site soil expansion.

Olympic Pipeline

Similar to the Olympic Well Field, the proposed Olympic Pipeline alignment is located in a seismically active region. According to the CGS *Earthquake Zones of Required Investigation, Beverly Hills Quadrangle*, the Olympic Pipeline alignment would not be located within an area susceptible to earthquake-induced landslides. However, a segment of the alignment, from Saltair Avenue to Berkeley Street, would be located within an Earthquake Fault Zone associated with the Santa Monica Fault. In addition, the portion of the pipeline alignment from Saltair Avenue to Centinela Avenue would be located within a liquefaction zone (CGS 2018a).

Geologic units underlying the pipeline alignment consist of alluvium and older alluvium. The alluvium is comprised of unconsolidated and generally uneroded, alluvial gravel, sand, and silt-clay. The older alluvium is comprised of unconsolidated to weakly consolidated (eroded where elevated) pebble-gravel, sand, silt, and clay (Dibblee 1991). No known instances of subsidence have been recorded in the Olympic Pipeline area (USGS 2019). In addition, as the Project is underlain by soils that contain clay minerals, there is a potential for on-site soil expansion.

[11] Holocene-active faults: faults that have moved during the past approximately 11,700 years (i.e., Holocene time). These faults exhibit signs of geologically recent movement, are most likely to experience movement in the near future, and are capable of surface rupture. These faults are also considered "active faults."

Olympic AWTF and Arcadia WTP Expansion

Similar to both the Olympic Well Field Restoration and Olympic Pipeline sites, the Olympic AWTF and Arcadia WTP are located within a seismically active region. According to the CGS *Earthquake Zones of Required Investigation, Beverly Hills Quadrangle*, the Olympic AWTF and Arcadia WTP Expansion components of the Project are not located within an area susceptible to earthquake-induced landslides. However, these components of the Project would be located within an Earthquake Fault Zone associated with the Santa Monica Fault. In addition, the southwest corner of the Arcadia WTP is located within a liquefaction zone (CGS 2018a).

Geologic units underlying the Olympic AWTF and Arcadia WTP consist of alluvium, comprised of unconsolidated and generally uneroded, alluvial gravel, sand, and silt-clay (Dibblee 1991). No known instances of subsidence have been recorded within this portion of the Project (USGS 2019). In addition, as these facilities are underlain by soils that contain clay minerals, there is a potential for on-site soil expansion.

Impact Analysis

3.7 a) Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

Olympic Well Field Restoration

Less-Than-Significant Impact. Surface fault rupture occurs when seismically induced fault movement breaks through the ground surface. Surface fault rupture may also accompany fault creep or natural or man-induced subsidence. As shown in Figure 14, the Olympic Well Field Restoration component of the Project is not located within a zone susceptible to surface rupture. The closest Earthquake Fault Zone is located approximately 0.6-mile to the northwest, at the closest point, associated with the Santa Monica Fault. Given that no known active faults underlie the Project site, the potential for on-site surface rupture is low. The wellhead completion activities would not exacerbate existing hazards because the Project does not involve subterranean activities that could exacerbate risks of fault rupture, such as high-pressure fracking-related deep wastewater disposal, steam injection, or other water flooding operations into subsurface layers. The proposed two new groundwater injections wells and two new productions wells would be operated in a manner that maintains the sustainable yield of the groundwater table, such that production and injection quantities would be balanced. The new wells include meters at the wellheads to track the quantity of water being injected and extracted. This meter data informs the groundwater model estimates to facilitate a balance between groundwater injection and groundwater pumping.

Additionally, the proposed Project would not bring people or habitable structures into areas potentially susceptible to substantial adverse effects related to fault rupture. Therefore, the Olympic Well Field component of the Project would not directly or indirectly cause potential adverse effects involving the rupture of a known earthquake fault.

Olympic Pipeline

Less-Than-Significant Impact. Surface fault rupture occurs when seismically induced fault movement breaks through the ground surface. Surface fault rupture may also accompany fault creep or natural or man-induced subsidence. A portion of the Olympic Pipeline alignment, generally from Saltair Avenue to Berkeley Street, is located within an Alquist-Priolo Fault Zone associated with the Holocene-active, Santa Monica Fault.

The Alquist-Priolo Earthquake Fault Zoning Act is a state law that regulates development projects near active faults to mitigate the hazard of surface fault rupture. Surface fault rupture poses a hazard to structures because the damage can result in the structural collapse of a building, potentially resulting in injuries or loss of life, or may render a building uninhabitable and require costly repairs (CGS 2018b). The Alquist-Priolo Fault Zone Act prohibits structures for human occupancy (i.e. habitable structures) to be constructed across Holocene-active faults (PRC Section 2621-2630). The Seismic Hazards Mapping Act defined human occupancy as a structure used or intended to support a "human occupancy rate of more than 2,000 person-hours per year." The proposed Olympic Pipeline would not meet the definition for structures providing human occupancy under the Seismic Hazards Mapping Act and thus no additional studies or protective measures (such as a buffer) would be necessary for construction of the Olympic Pipeline. As the pipeline does not involve the construction of structures for human occupancy across the traces of an active fault, the Project would not conflict with the Alquist-Priolo Earthquake Fault Zoning Act. Furthermore, trenching for pipeline construction are commonplace short-term activities and the long-term operation of pipelines beneath roadways occur in fault zones throughout California; such activities would not substantially affect the potential for the rupture of a fault. Therefore, the Olympic Pipeline component of the Project would not directly or indirectly cause potential adverse effects involving the rupture of a known earthquake fault and impacts would be less than significant.

Olympic AWTF and Arcadia WTP Expansion

Less-Than-Significant Impact. As shown in Figure 14, the Olympic AWTF and Arcadia WTP Expansion components of the Project are located within an Alquist-Priolo Fault Zone associated with the Santa Monica Fault. The Alquist-Priolo Fault Zone Act requires that new habitable structures constructed across Holocene-active faults (PRC Section 2621-2630) establish buffers and/or other protective measures around the trace of the fault. However, no proposed structures for human occupancy would be constructed within the Arcadia WTP as part of the Project.

Furthermore, the City implements General Plan Safety Element Policy 1.3, which requires geotechnical investigations in areas of potential seismic or geologic hazards, through the City Guidelines for Geotechnical Reports (City of Santa Monica 2010b). The guidelines establish standards for data and analysis that must be included in the geotechnical investigations, peer review of the data, and demonstration of compliance with applicable California Building Code (CBC) regulations and standards for review, set forth by the California Geological Survey Special Publication 117 – Guidelines for Evaluating and Mitigating Seismic Hazards in California.

Prior to development, a standard, final design-level geotechnical investigation of the Project site would be completed, including an evaluation of potential regional and localized geologic hazards, including faulting. Based on the local geologic conditions, this report would provide geotechnical recommendations to mitigate the potential for structural damage as a result of surface fault rupture. Typical geotechnical recommendations would include over-excavation of incompetent materials, compaction of backfilled soils,

and foundation specifications designed to resist seismic hazards. In addition, proposed facilities at the Olympic AWTF and Arcadia WTP would be constructed in accordance with provisions of the 2019 CBC, which has been codified in the California Code of Regulations (CCR) as Title 24, Part 2, and is based on the 2018 International Building Code. The CBC pertains to the construction of all buildings, utilities, etc. The purpose of the CBC is to "establish minimum requirements to safeguard the public health, safety and general welfare through structural strength, means of egress facilities, stability, access to persons with disabilities, sanitation, adequate lighting and ventilation and energy conservation; safety to life and property from fire and other hazards attributed to the built environment; and to provide safety to fire fighters and emergency responders during operations" (CCR, Title 24, Volume 1). Chapter 16, Structural Design, of the CBC include seismic design requirements. The CBC requires that every structure, including non-structural components that are attached to structures, must have structural design information related to seismic loads and be designed and constructed to resist the effects of earthquake motions (CCR, Title 24, Volume 2, Chapter 16).

While infrastructure damage may be unavoidable as a result of surface fault rupture, all facilities would be constructed in compliance with recommendations of the final design-level geotechnical investigation and applicable building code requirements. Additionally, the Project construction and operation would not increase or exacerbate the potential for fault rupture to occur because the Project does not involve subterranean activities that could exacerbate risks of fault rupture, such as high-pressure fracking-related deep wastewater disposal, steam injection, or other water flooding operations into subsurface layers. Therefore, the Olympic AWTF and Arcadia WTP components of the Project would not directly or indirectly cause potential adverse effects involving the rupture of a known earthquake fault and impacts would be less than significant.

3.7 a) Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

ii) Strong seismic ground shaking?

Impacts for All Project Components

Less-Than-Significant Impact. The Project components are all located within a seismically active region that is known for its many active faults and historic seismicity. Seismically induced ground shaking could potentially damage the proposed Project components, including the wells, proposed Olympic Pipeline, and water treatment infrastructure. Proposed facilities would be constructed in accordance with applicable provisions of the Santa Monica Building Code and/or the CBC, thus minimizing the potential for damage. The degree of ground shaking that is felt at a given site depends on the distance from the earthquake source (epicenter), the magnitude of the earthquake, the type of subsurface material on which the site is situated, and topography. While infrastructure damage may be unavoidable as a result of seismically induced ground movement, Project construction and operation would not increase or exacerbate existing environmental conditions, as discussed under the discussion for3.7(a)(i) above. Therefore, the Project would not directly or indirectly cause potential adverse effects involving seismically induced ground shaking and impacts would be less than significant.

3.7 a) Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

iii) Seismic-related ground failure, including liquefaction?

Impacts for All Project Components

Less-Than-Significant Impact. Seismic-related ground failure can include hazards such as liquefaction, earthquake-induced landslides, and seismically induced settlement. (Landslides are addressed below in 3.7(a)(iv)). As previously discussed and as shown in Figure 14, according to the CGS Earthquake Zones of Required Investigation, Beverly Hills Quadrangle, Well SM-9 and SM-11i, a portion of the proposed recycled water pipeline, a portion of the pipeline alignment from Saltair Avenue to Centinela Avenue, and the southwest corner of the Arcadia WTP is located within a liquefaction zone. While the portions of the Project site could be subject to seismic-related ground failure, including liquefaction, the Project would not increase or exacerbate the potential for seismic-related ground failure to occur. Liquefaction could be induced by groundwater recharge activities, as this process results in shallower groundwater, which in turn could result in liquefaction-induced ground failure, including lateral spreading. However, the proposed Project would construct two injection wells to ensure the groundwater is maintained at sustainable levels. Therefore, the proposed Project would not directly or indirectly cause potential adverse effects involving seismically induced ground failure and impacts would be less than significant.

3.7 a) Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

iv) Landslides?

Impacts for All Project Components

No Impact. The Olympic Well Field and Olympic Pipeline is characterized by gentle, southwest sloping, paved terrain that would not be susceptible to landslides (USGS 2015). The Olympic AWTF and Arcadia WTP components of the Project are characterized by relatively flat, even terrain that would not be susceptible to landslides (USGS 2015). In addition, the Project site is not located within an area of potential seismically induced landslides, as designated by CGS (2018a). The nearest landslide area is located approximately 0.3-mile to the southwest of the Olympic Well Field and approximately 0.5-mile to the northwest of the Olympic Pipeline and existing Arcadia WTP (CGS 2018a). Therefore, the proposed Project would not directly or indirectly cause potential adverse effects involving landslides and no impact would occur.

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

Olympic Well Field Restoration

Less-Than-Significant Impact. The proposed Olympic Well Field component of the Project would be located within the Olympic Boulevard median. Demolition activities would include abandonment of Well SM-3, and removal of 285 to 450 cubic yards of soil from the well sites in order to accommodate the proposed concrete slabs. Abandonment of Well SM-3 would include removal of a concrete vault cover associated with the well (Figure 2B). Construction activities would include creation of temporary staging areas within the landscaped medians, construct the well completion and pumping equipment, and construction of a new pipelines to connect the proposed wells to existing lines (described further in Section 2.5.1, Olympic

Pipeline Restoration). Pump and pipe installation would require excavation, trenching, and temporary stockpiling of soils pending trench backfill or off-site disposal. Permanent paved well pads would be constructed around the new wells (Figures 2A, 2B, 2C, and 2D).

Each of these activities would expose soils that could be susceptible to erosion as a result of rain, windy conditions, and/or construction vehicles traveling over the exposed soils. However, because the proposed Project in its entirety (i.e., the proposed wells, pipeline, and Arcadia WTP) would disturb more than 1.0 acre of soil, the City of Santa Monica through its construction contractor would be required to implement a SWPPP, in compliance with the National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with the Construction and Land Disturbance Activities (Order No 2009-009-DWQ, as amended by 2010-0014-DWQ and 2012-0006-DWQ, NPDES No. CAS000002) (also known as the Construction General Permit) or the latest approved general permit requirements for stormwater discharge at construction sites. SWPPPs are required to include erosion control measures, such as covering exposed soil stockpiles, lining the perimeter of construction areas with sediment barriers, and protecting storm drain inlets. These measures would control and reduce erosion and loss of topsoil during demolition and construction to a less than significant level. Paving of well pads would prevent long term erosion surrounding the new wells. Upon completion of construction, the areas of the proposed wellhead completions would be restored to their existing condition. Therefore, impacts associated with erosion would be less than significant.

Olympic Pipeline

Less-Than-Significant Impact. The Olympic Pipeline would be constructed entirely within publicly-owned right-of-way (Arizona Avenue, Berkeley Avenue, and Texas Avenue) within the cities of Santa Monica and Los Angeles. Trenching within the public right-of-way would require approximately 4.5-foot-wide open trenching through the length of the streets, with the possibility of horizontal directional drilling or jack and bore construction, which would allow for subterranean pipeline construction. Excavated soils would be temporarily stockpiled pending backfill and/or off-site disposal. After placement of the pipeline, at least half of the trench would require imported sand bedding surrounding the pipeline and sand-cement slurry may be used in areas of shallow overcrossings for backfill. Otherwise, the excavated soils would be used to the extent feasible as backfill.

Construction activities including open trenching, horizontal directional drilling, and jack and bore construction would produce exposed soils that could be susceptible to erosion as a result of rain, windy conditions, and/or construction vehicles traveling over the exposed soils. Similar to the Olympic Well Field Restoration component of the Project, the City of Santa Monica through its construction contractor would be required to implement a SWPPP, in compliance with the Construction General Permit. The SWPPP would include erosion control measures, such as covering exposed soil stockpiles, lining the perimeter of construction areas with sediment barriers, and protecting storm drain inlets. These measures would control and reduce erosion and loss of topsoil to a less than significant level. Once construction is complete, with the exception of minor appurtenant features, the pipeline would either be located underground or would be paved over, and additional operational impacts related to soil erosion or loss of topsoil would not occur. Therefore, impacts related to soil erosion or the loss of topsoil would be less than significant.

Olympic AWTF and Arcadia WTP Expansion

Less-Than-Significant Impact. The Arcadia WTP is located in an urban and well-developed area of Los Angeles. As illustrated in Figure 5, numerous buildings and a concrete driveway would be demolished as part of the Project. In addition, grassy areas and eight trees would be removed during demolition activities. As illustrated in Figure 6, new construction for the Olympic AWTF would include pretreatment filtration equipment, UV/H202 AOP equipment, and a GAC system. And as illustrated in Figure 7, new construction associated with the Arcadia WTP Expansion would include CCRO equipment and upgraded/expanded ancillary facilities (e.g., pumps, blowers, cartridge filters, etc.). Temporary staging areas would be created in two existing grassy areas.

Similar to the Olympic Well Field Restoration and Olympic Pipeline components of the Project, the City of Santa Monica through its construction contractor would be required to implement a SWPPP, in compliance with the Construction General Permit. SWPPPs are required to include erosion control measures, such as covering exposed soil stockpiles, lining the perimeter of construction areas with sediment barriers, and protecting storm drain inlets. These measures would control and reduce erosion and loss of topsoil to a less than significant level during demolition and construction. Once construction is complete, the temporary staging areas would return to existing conditions. Additionally, the City would ensure the existing Arcadia WTP is compliant with SMMC Chapter 7.10, which specifies best management practices (BMPs) and other measures to reduce polluted runoff, such as erosion. Therefore, impacts associated with erosion on- or off-site would be less than significant.

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

Impacts for All Project Components

Less-Than-Significant Impact. As previously discussed, the Olympic Well Field, Olympic Pipeline, and existing Arcadia WTP are not located in an area susceptible to landslides or with documented ground subsidence. It is unclear whether collapsible soils are present. While Well SM-9 and the southwest corner of the Arcadia WTP are located within a zone of liquefaction, the Project would not increase or exacerbate the potential for seismic-related ground failure to occur because the Project does not involve activities that could cause ground failure or subsidence. The proposed two new groundwater injections wells and two new productions wells would be operated in a manner that maintains the sustainable yield of the groundwater table, such that production and injection quantities would be balanced. The new wells include meters at the wellheads to track the quantity of water being injected and extracted. This meter data informs the groundwater model estimates to facilitate a balance between groundwater injection and groundwater pumping.

As with all development within the City, the Arcadia WTP is required to comply with the Santa Monica Building Code (SMMC Chapters 8.18 and 8.48 through 8.80). The Olympic Pipeline and wells are not habitable structures and would not be subject to the Santa Monica Building Code. Measures to minimize the risk of soil settlement, subsidence, and soil collapse associated with temporary excavations are included in the Santa Monica Building Code, with specific provisions for seismic design as it relates to seismically induced settlement. Additionally, as required by the City's plan check process, prior to the issuance of a building permit for the proposed Project, a site-specific final geotechnical report would be prepared for review and approval by the City's Building and Safety Division. The proposed Project would be

required to meet the most recent building safety criteria and construction design recommendations of the site-specific final geotechnical reports that would be prepared for the construction of Project buildings. Construction and operation of the proposed Project would not cause local geologic units or soils to become unstable and would not result in on- or off-site landslides, lateral spreading, subsidence, liquefaction or collapse. As such, impacts would be less than significant.

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

Impacts for All Project Components

Less-Than-Significant Impact. Expansive soils are clay-based soils that increase in volume when wet and shrink when dry. As previously discussed, the Project components are underlain by alluvial sediments consisting of gravel, sand, and silt-clay, as well as older alluvium sediments consisting of pebble-gravel, sand, silt, and clay. As such, soils underlying the Project may contain expansive clay. These soils could potentially damage the proposed pipeline connections as part of the Olympic Well Field Restoration and the Olympic Pipeline, particularly if wetting and drying does not occur uniformly throughout the soil. However, after trenching and placement of the pipelines, at least half of the trench would require imported sand bedding surrounding the pipeline and sand-cement slurry may be used in areas of shallow overcrossings for backfill. This standard pipeline construction technique of surrounding the pipe with non-expansive sand and/or sand-cement slurry would minimize the potential for expansive soils to damage the connection pipeline. As a result, construction and operation of the Olympic Well Field Restoration and Olympic Pipeline component of the Project would not create substantial direct or indirect risks to life or property in association with potentially expansive soils.

The Olympic AWTF and Arcadia WTP site is a fully graded and developed property that has been previously constructed in accordance with applicable building code standards. Further, the proposed facilities associated with the Olympic AWTF and Arcadia WTP component would be constructed in accordance with recommendations in a Project-specific, geotechnical investigation using a previous geotechnical investigation conducted in 2010 as the baseline. The geotechnical baseline report would be submitted to the City for review and stamped by the geotechnical engineer licensed by the State of California upon approval. Additionally the Project would comply with provisions of the CBC, thus minimizing the potential for damage to structures on the site related to expansive soils. Therefore, the proposed Project would not create substantial direct or indirect risks to life or property in association with potentially expansive soils, and impacts would be less than significant.

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

Impacts for All Project Components

No Impact. No septic tanks or alternative wastewater disposal systems are proposed. Therefore, no impact associated with the use of such systems would occur.

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

Impacts for All Project Components

Less-Than-Significant Impact With Mitigation Incorporated. According to the Natural History Museum of Los Angeles County (LACM) paleontological records search results (Appendix C), which were received on February 5, 2020, and surficial geological mapping by Dibblee (1991) at a 1:24,000 scale, the proposed Project is underlain by Holocene (~< 11,700 years ago) alluvium (map unit Qa) with Pleistocene (~2.58 million to 11,700 years ago) marine deposits (Qom) mapped just to the south. While the Holocene alluvium has low paleontological sensitivity on the surface due to its young age, older, Pleistocene age deposits with high paleontological sensitivity underlie the Holocene alluvium at a relatively shallow depth in this area. The LACM reported two Pleistocene localities near the Project site. The closest locality (LACM 5462), which is located along Pennsylvania Avenue, north of the Olympic Boulevard, yielded a fossil specimen of extinct lion (*Felis atrox*) from a shallow depth of six feet bgs. The next closest vertebrate fossil locality (LACM 7879), located near the intersection of Rose Avenue and Penmar Avenue, approximately 1.6 miles south of SM-11i, yielded fossil specimens of horse (*Equus*) and ground sloth (*Paramylodon*) from a depth greater than 11 feet bgs (Appendix C).

Due to the presence of paleontologically sensitive sediments below the relatively thin veneer of Holocene alluvium, the LACM recommended paleontological monitoring of any excavations of below a depth of five feet bgs in undisturbed native sediments (Appendix C), and thus, impacts are potentially significant. The maximum depth of excavation for the Olympic Well Field Component would not be greater than 5-feet; thus, impacts are potentially significant for the Olympic Pipeline, and Olympic AWTF and Arcadia WTP components of the Project.

MM-GEO-1 Prior to commencement of any grading activity below a depth of five feet at the proposed recycled water pipeline for the Olympic Well Field Restoration, Olympic Pipeline, and Arcadia Water Treatment Plant, the City of Santa Monica shall retain a qualified paleontologist in accordance with the guidelines of the Society of Vertebrate Paleontology (SVP 2010). The paleontologist shall prepare a Paleontological Resources Impact Mitigation Program (PRIMP) for the proposed Project. The PRIMP shall be consistent with the SVP (2010) guidelines and shall outline requirements for preconstruction meeting attendance and worker environmental awareness training, adequate spot-check monitoring within the proposed Project site based on construction plans and/or geotechnical reports, procedures for adequate paleontological spot-check monitoring and discoveries treatment, paleontological methods (including sediment sampling for microvertebrate fossils), reporting, and collections management. The PRIMP shall include protocols for spot-checking significant ground-disturbing activities below a depth of five feet below the ground surface or five feet below the depth of artificial fill in areas mapped as Holocene alluvium. At a minimum, the PRIMP shall require that if paleontological resources (e.g., fossils) are unearthed during grading, the paleontological monitor will temporarily halt and/or divert grading activity to allow recovery of paleontological resources. The area of discovery shall be roped off with a 50-foot radius buffer. Once documentation and collection of the find is completed, the monitor shall remove the rope and allow grading to recommence in the area of the find. Upon completion of the paleontological monitoring program, the qualified paleontologist shall prepare a final monitoring report documenting the results of the mitigation program. This report shall include discussions of the methods used, stratigraphic section(s) exposed, fossils collected, and significance of recovered fossils.

Incorporation of MM-GEO-1 would reduce construction related impacts to paleontological resources to a less-than-significant level.

3.8 Greenhouse Gas Emissions

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
VIII. GREENHOUSE GAS EMISSIONS – Would 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?	☐	☐	☒	☐

Existing Setting

All Project Components

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

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

Gases in the atmosphere can contribute to climate change both directly and indirectly.[12] The Intergovernmental Panel on Climate Change developed the global warming potential (GWP) concept to compare the ability of each GHG to trap heat in the atmosphere relative to another gas. The reference gas used is CO_2; therefore, GWP-weighted emissions are measured in metric tons of CO_2 equivalent (MT CO_2e). Consistent with CalEEMod Version 2016.3.2, this GHG emissions analysis assumed the GWP for CH_4 is 25 (emissions of 1 MT of CH_4 are equivalent to emissions of 25 MT of CO_2), and the GWP for N_2O is 298, based on the Intergovernmental Panel on Climate Change Fourth Assessment Report (IPCC 2007).

The City of Santa Monica and the City of Los Angeles has developed and adopted plans, goals, and policies that will reduce GHG emissions, which are summarized below.

Santa Monica Sustainable City Plan

The Santa Monica City Council initially adopted the Santa Monica Sustainable City Plan (Sustainability Plan) in September 1994, with updates occurring three times, most recently in January 2014. It was designed to help the City of Santa Monica (City) and the community think, plan, and act more sustainability. The Sustainable City Plan includes goals and strategies for the City and community to conserve and enhance local resources, safeguard human health and the environment, maintain a healthy and diverse economy, and improve the livability and quality of life for all community members in the City. To assess progress on meeting citywide goals, nine target areas were identified: resource conservation, environmental and public health, transportation, sustainability local economy, open space and land use, housing, community education and civic participation, human dignity, and arts and culture. For each target area, numerical indicators were developed to help the City achieve each goal by 2020 (City of Santa Monica 2014).

Santa Monica Climate Action and Adaptation Plan

In May 2019, the City of Santa Monica adopted the Climate Action and Adaptation Plan (CAAP). The CAAP provides the roadmap for the City to achieve carbon neutrality by 2050 and to prepare and adapt for climate change impacts. The CAAP focuses on eight Citywide objectives in three sectors: zero net carbon buildings, zero waste and sustainable mobility. The CAAP also lays out a framework for increasing Santa Monica's resilience to climate change through four sectors: Climate Ready Community, Water Self-Sufficiency, Coastal Flooding Preparedness and Low Carbon Food & Ecosystems. The CAAP identifies areas in local government, community building and support to augment by including climate change considerations and adaptation measures.

The intent of the CAAP is to provide overarching policy direction with respect to climate change through Citywide objectives and broad strategies to reduce GHG emissions. The CAAP is not a regulatory plan to be applied on a project by project basis. Rather, the City recognizes that GHG reduction goals cannot be achieved by individual projects alone, but instead requires a comprehensive Citywide approach that would include the enactment of future plans, changes to existing ordinances, and an integrated and sustainable approach to land use/transportation planning.

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

Santa Monica Land Use and Circulation Element Policies

The City of Santa Monica's Land Use and Circulation Element (LUCE) was adopted in 2010 (last amended in 2017), and is the primary land use and transportation planning document governing existing and future land uses in the City. The LUCE encompasses the community's vision for Santa Monica's future; and establishes goals, policies, and development criteria for land uses and circulation in the City. The Plan's goals are to preserve the City's neighborhoods, reduce GHG emissions, improve mobility and circulation, and encourage the creation of new housing near transit and serves as the City's guiding document for the future.

Santa Monica Municipal Code

The City of Santa Monica's Green Building Standards Code (reflected in SMMC Chapters 8.106 and 8.108) and Energy Reach Code (SMMC Chapter 8.36.010) establishes a set of green building and energy efficiency requirements for new buildings. These requirements address energy efficiency (requiring that on average new buildings be approximately 10% and 15% more efficient than 2016 California Energy Code requires), with requirements for solar energy use and provisions for electric vehicle charging capacity. Further, Chapter 8.108 includes requirements for energy efficient landscaping and water conservation; and construction and demolition waste recycling, with a required diversion rate for construction and demolition waste of 70%.

The SMMC also includes requirements for individual development projects to support alternative modes of transportation, thereby reducing VMT and associated GHG emissions. Section 9.53 of the SMMC, Transportation Demand Management (TDM), includes provisions for development of TDM Plans for individual projects and payment of TDM fees to support City efforts for TDM outreach and Transportation Management Organizations formation activities.

Impact Analysis

3.8 a) Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

The following GHG emissions analysis addresses both impact analysis (a) and (b) noted above. OPR's CEQA Guidelines encourage lead agencies to make use of programmatic mitigation plans and programs from which to tier when they perform individual project analyses. Section 15183.5 of the CEQA Guidelines states that a lead agency may determine that a project's incremental contribution to a cumulative effect is not cumulatively considerable if the project complies with the requirements in a previously adopted mitigation program, or plan for the reduction of GHG emissions.

Short-Term Construction Impacts for All Project Components

Less-Than-Significant Impact. Construction of the Project would result in GHG emissions, which are primarily associated with use of off- road construction equipment, on-road haul and vendor trucks, and worker vehicles. The SCAQMD Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold (2008b) recommends that "construction emissions be amortized over a 30-year Project lifetime, so that GHG reduction measures will address construction GHG emissions as part of the operational GHG reduction strategies." Thus, the total construction GHG emissions were calculated, amortized over 30 years, and added to the total operational emissions. The determination

of significance, therefore, is addressed in the operational emissions discussion following the estimated construction emissions.

CalEEMod was used to calculate the annual GHG emissions based on the construction scenario described in Section 3.3, Air Quality. On-site sources of GHG emissions include off-road equipment and off-site sources include haul trucks, vendor trucks, and worker vehicles. Table 3.8-1 presents construction GHG emissions for the Project in each year of construction from on-site and off-site emission sources.

Table 3.8-1. Estimated Annual Construction Greenhouse Gas Emissions

Year	CO_2	CH_4	N_2O	CO_2e
	Metric Tons per Year			
2020	23.14	0.00	0.00	23.24
2021	110.13	0.02	0.00	110.72
2022	367.01	0.08	0.00	368.97
2023	34.05	0.00	0.00	17.83
Total	**534.33**	**0.10**	**0.00**	**520.76**
			Amortized Construction Emissions	**17.36**

Source: See Appendix A for complete results.
Notes: CO_2 = carbon dioxide; CH_4 = methane; N_2O = nitrous oxide; CO_2e = carbon dioxide equivalent.

As shown in Table 3.8-1, the estimated total GHG emissions during construction would be approximately 23 MT CO_2e in 2020, 111 MT CO_2e in 2021, 369 MT CO_2e in 2022, and 18 MT CO_2e in 2023, for a total of 521 MT CO_2e over the construction period. Estimated Project-generated construction emissions amortized over 30 years would be approximately 17 MT CO_2e per year. As with Project-generated construction air quality pollutant emissions, GHG emissions generated during construction of the Project would be short-term in nature, lasting only for the duration of the construction period, and would not represent a long-term source of GHG emissions. As stated above, construction emissions are amortized and added to operational emissions to estimate total Project-generated GHG emissions.

Long-Term Operational Impacts for All Project Components

Less-Than-Significant Impact. CalEEMod Version 2016.3.2 was used to estimate potential Project-generated operational GHG emissions from natural gas combustion, electrical generation, mobile sources, solid waste, and water supply and wastewater treatment. No area sources that generate GHG emissions are associated with the Project as no increase in landscape maintenance equipment activity from existing conditions is anticipated as a result of the Project. In addition, avoided electricity emissions and associated GHG emissions resulting from use of local groundwater in replacement of imported water is also estimated. Emissions from each category is discussed in the following text with respect to the Project. For additional details, see Section 3.3, Air Quality, for a discussion of operational emission calculation methodology and assumptions, specifically for area, energy (natural gas), and mobile sources. Operational year 2024 was assumed to be the first full year of operation following completion of construction.

Energy Sources. The Project would result in additional energy consumption at the Olympic AWTF and Arcadia WTP Project associated with new improvements and buildings, which was estimated based on CalEEMod land use defaults and square footage of the new Project buildings. For non-residential buildings, CalEEMod energy

intensity value (electricity or natural gas usage per square foot per year) assumptions were based on the California Commercial End-Use Survey database. Emissions are calculated by multiplying the energy use by the utility carbon intensity (pounds of GHGs per kilowatt-hour for electricity or 1,000 British thermal units for natural gas) for CO_2 and other GHGs. Since the new buildings at the Arcadia WTP site are located within the City of Los Angeles, electricity GHG emissions were estimated in CalEEMod using the emissions factors for LADWP. The intensity factor for CO_2 was based on the LADWP 2016 Power Integrated Resource Plan (2015 value, LADWP 2016), and the CH_4 and N_2O intensity factors were derived from CalEEMod Version 2016.3.2 (CAPCOA 2017).

In addition, the Project would result in a net increase in electricity associated with the wells and the Arcadia WTP: 1,621,000 kWh per year and 3,355,000 kWh per year, respectively. The GHG emissions associated with the addition of 4,976,000 kWh per year was estimated in a spreadsheet model based on CalEEMod equations and assumptions. For the wells (1,621,000 kWh per year), which are located within the City of Santa Monica, carbon intensity values were conservatively based on SCE; however, as noted in Section 3.6, the Clean Power Alliance serves the City of Santa Monica, which provides 100% renewable energy, which has a GHG intensity value of zero. The SCE energy use intensity factor was adjusted consistent with SCE's 2017 Power Content Label, which reported that 32% of the power mix was generated by eligible renewable sources (SCE 2017). For the Arcadia WTP (3,355,000 kWh per year), which is located within the City of Los Angeles, the LADWP intensity values were applied and adjusted consistent with the building energy assumptions noted above.

SB X1 2 established a target of 33% from renewable energy sources for all electricity providers in California by 2020 and SB 350 calls for further development of renewable energy, with a target of 50% by 2030. As such, GHG emissions associated with Project electricity would continue to decrease over time.

Mobile Sources. As discussed in Section 3.3, the Project would result in no new employee trips. It was assumed that a maximum of one vendor truck (two one-way trips) for the delivery of chemicals would occur in one day. For the vendor truck emission calculation, it was assumed that 50% would be medium heavy-duty trucks and 50% would be heavy-heavy duty trucks traveling a 20-mile one-way distance.

Regulatory measures related to mobile sources include AB 1493 (Pavley) and related federal standards. AB 1493 required that CARB establish GHG emission standards for automobiles, light-duty trucks, and other vehicles determined by CARB to be vehicles that are primarily used for noncommercial personal transportation in the state. In addition, the National Highway Traffic Safety Administration and EPA have established corporate fuel economy standards and GHG emission standards, respectively, for automobiles and light-, medium-, and heavy-duty vehicles. Implementation of these standards and fleet turnover (replacement of older vehicles with newer ones) will gradually reduce emissions from the Project's motor vehicles. The effectiveness of fuel economy improvements was evaluated to the extent it was captured in the EMFAC2014 emission factors for motor vehicles in 2024.

Solid Waste. The Olympic AWTF and Arcadia WTP Project components would generate minor additional solid waste associated with the new buildings, and therefore, result in CO_2e emissions associated with landfill off-gassing. CalEEMod default values for solid waste generation were used to estimate GHG emissions associated with solid waste. It was assumed that the Project would have a 50% solid waste diversion rate, consistent with the solid waste diversion requirements of Assembly Bill 939, Integrated Waste Management Act. It should be noted that this is a conservative assumption, as the goal for the state is 75% diversion by 2020 in accordance with Assembly Bill 341 in addition to more stringent diversion goals established by the City of Santa Monica.

Water and Wastewater. Supply, conveyance, treatment, and distribution of water for the project require the use of electricity, which would result in associated indirect GHG emissions. Similarly, wastewater generated by the Project requires the use of electricity for conveyance and treatment, along with GHG emissions generated during wastewater treatment. Water consumption estimates for both indoor and outdoor water use and associated electricity consumption from water use and wastewater generation were estimated using CalEEMod default values for the Olympic AWTF and Arcadia WTP Project additional buildings. See discussion under energy regarding the estimate of electricity emissions associated with the wells and the Arcadia WTP.

Avoided Water Source Electricity GHG Emissions. As explained in Section 3.6, Energy, because the Project would increase the supply of local groundwater and reduce the use of imported water, there is a reduction in electricity due to the reduction of imported water and a reduction in corresponding GHG emissions. Both imported and local groundwater requires electricity for treatment and distribution; however, use of local groundwater requires electricity for pumping, but not long-distance conveyance. Accordingly, electricity associated with supply of imported water is avoided as a result of replacing the imported water source with local groundwater. As previously explained, the existing capacity of the Arcadia WTP is 10 mpg, with an existing production of 8.9 mgd. The Project would increase capacity of the Arcadia WTP to 13 mgd, with an estimated future production of 12 mgd. It is conservatively assumed that the Project would result in a net increase in 2 mgd at a minimum (12 mgd future production - 10 mgd existing capacity). Accordingly, implementation of the Project would avoid electricity associated with supply of 2 mgd of water. GHG emissions that would be avoided by replacing the water source was estimated based the default CalEEMod water electricity intensity factor for supply, treatment, distribution, and wastewater treatment, the utility GHG intensity factors for LADWP, and the assumption that the Project would replace 730 million gallons per year of imported water with local groundwater.

Table 3.8-2 presents the estimated operational GHG emission from area sources, energy usage, motor vehicles, solid waste generation, and water usage and wastewater generation, amortized construction emissions, and the net change in emissions when considering avoided GHG emissions associated with water supply.

Table 3.8-2. Estimated Annual Operational GHG Emissions

Emission Source	CO_2	CH_4	N_2O	CO_2e
	Metric Tons per Year			
Project Emissions				
Area	0.00	0.00	0.00	0.00
Energy	69.99	0.01	0.00	70.18
Mobile	15.26	0.00	0.00	15.38
Solid waste	1.32	0.08	0.00	3.28
Water supply and wastewater (buildings)	17.09	0.00	0.00	17.76
Wells and the Arcadia WTP electricity increase	2,165.01	0.06	0.01	2,710.53
			Total	**2,817.13**
			Amortized Construction Emissions	*17.36*
			Operation + Amortized Construction Total	**2,834.49**

Table 3.8-2. Estimated Annual Operational GHG Emissions

Emission Source	CO_2	CH_4	N_2O	CO_2e
	Metric Tons per Year			
Avoided Emissions				
Water Supply (Electricity)	3,645.98	0.09	0.02	**3,654.07**

Notes: CO_2 = carbon dioxide; CH_4 = methane; N_2O = nitrous oxide; CO_2e = carbon dioxide equivalent
See Appendix A for detailed results.
Avoided water supply (electricity) emissions represent the estimated GHG emissions reduction associated with replacing imported water with local groundwater and the associated reduction in electricity from supply.
Number noted in parenthesis represent a negative number.

As shown in Table 3.8-2, Project operation would result in approximately 2,817 MT CO_2 per year as a result of new building operation and the increase in electricity associated with the wells and Arcadia WTP. With amortized construction emissions, estimated operational emissions and amortized construction emissions is estimated to be 2,834 MT CO_2 per year. When considering the avoided GHG emissions associated with replacing imported water with local groundwater (3,654 MT CO_2 per year), net Project-generated emissions are negative resulting in a potential GHG emissions benefit.

3.8 b) Would the project generate conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Impacts for All Project Components

Less-Than-Significant Impact. The proposed Project would not generate conflict with the Santa Monica Sustainable City Plan, the Santa Monica Climate Action and Adaptation Plan Goals, the Santa Monica Land Use and Circulation Element Policies, the SMMC, SCAG's 2016 RTP/SCS, CARB's Scoping Plan, and SB 32 and Executive Order (EO) S-3-05. A discussion regarding each is provided below.

Project Consistency with the Santa Monica Sustainable City Plan

As discussed previously, the City of Santa Monica adopted its Sustainable City Plan in September 1994 (most recently updated in January 2014), which is a long-term plan to reduce GHG emissions from municipal operations and community activities within the City, and would also help Santa Monica become a more "sustainable" city. Table 3.8-3 provides an overview of applicable goals within the Sustainable City Plan and the Project's consistency with it.

Table 3.8-3. Consistency with Applicable Sustainable City Plan GHG Emission Reduction Strategies

Sustainable City Plan Goals	Analysis of Project's Potential to Conflict with Targets
Resource Conservation	
Goal 1. Significantly decrease overall community consumption, specifically the consumption of non-local, non-renewable, non-recyclable and non-recycled materials, water, and energy and fuels.	***No conflict.*** The Project aims to enhance sustainability of the City of Santa Monica's water supply through developing alternative water supplies and expanding local groundwater supplies to eliminate reliance on purchase of imported water supplies. Accordingly, an objective of the Project is to conserve resources.

Table 3.8-3. Consistency with Applicable Sustainable City Plan GHG Emission Reduction Strategies

Sustainable City Plan Goals	Analysis of Project's Potential to Conflict with Targets
Goal 2. The City should take a leadership role in encouraging sustainable procurement, extended producer responsibility and should model innovative strategies to become a zero waste city.	The Project would divert as much waste during construction as required in accordance with State law. Furthermore, the Project would. divert at least 75% of its Construction and Waste Debris in compliance with SMMC 8.108, Construction and Demolition Material Waste Management Plans. The Project would not inhibit the City from reducing water demand or per capita water use. Note that the Project would reduce GHG emissions from replacing imported water with local groundwater. The new Project buildings at the Arcadia WTP site would meet all applicable energy efficiency standards and the Project would not inhibit the City from improving the GHG efficiency within the City.
Goal 3. Within renewable limits, encourage the use of local, non-polluting, renewable and recycled resources (water, energy, and material resources).	
Environmental and Public Health	
Goal 1. Protect and enhance environmental health and public health by minimizing and where possible eliminating: a. The use of hazardous or toxic materials by residents, businesses and city operations; b. The levels of pollutants entering the air, soil and water; and c. The risks that environmental problems pose to human and ecological health.	***No conflict.*** As discussed in Section 3.9, the proposed Project may require the use of minor amounts of hazardous substances, such as solvents, lubricants, and adhesives. Use of these products would be in accordance with requirements and recommendations in the Safety Data Sheet (described in Section 3.9, Hazards and Hazardous Materials) and would be managed in accordance with federal, state, and local laws and regulations. Contaminated groundwater potentially pumped through the new production wells would be directed to the existing Arcadia WTP or new Olympic AWTF in the same manner as the existing wells and would be treated in accordance with various federal and state regulations. As further discussed in Section 3.19, Utilities and Service Systems, the Project operations would continue coordination with LA Sanitation with regard to discharges from the existing Arcadia WTP to ensure compliance with the Industrial Wastewater Permit issued by the City of Los Angeles.
Goal 2. Ensure that no one geographic or socioeconomic group in the city is being unfairly impacted by environmental pollution.	***No conflict.*** The Project would not be a significant source of criteria air pollutants or TACs. TAC exposure to nearby residential receptors at the Arcadia WTP site would occur for a short duration (1 year) and would be mitigated as discussed in Section 3.3.
Goal 3. Increase consumption of fresh, locally produced, organic produce to promote public health and to minimize resource consumption and negative environmental impacts.	***Not applicable.*** The Project does not involve produce or any food products.
Transportation	
Goal 1. Create a multi-modal transportation system that minimizes and, where possible, eliminates pollution and motor vehicle congestion while ensuring safe mobility and access for all without compromising our ability to protect public health and safety.	***No conflict.*** The Project would generate a maximum of one delivery truck round trip per day, resulting in a minimal net increase in vehicle trips to and from the site. By nature of the chemical deliveries, alternative modes of transport such as pedestrian or bicycle is not feasible. The Project would not impede the City from achieving its transportation and mobility goals.
Goal 2. Facilitate a reduction in automobile dependency in favor of affordable alternative, sustainable modes of travel.	

Source: City of Santa Monica 2014.

As shown in Table 3.8-3, the Project does not conflict with any of the GHG-reducing measures or goals within the Sustainable City Plan and thus, is consistent with this plan.

Project Consistency with the Santa Monica Climate Action and Adaptation Plan Goals

Project consistency with the City's CAAP is presented in Table 3.8-4.

Table 3.8-4. Consistency with Applicable City of Santa Monica CAAP Goals

Measure	Analysis of Project's Potential to Conflict with Measures
Zero Net Carbon Buildings	
Achieve 100% renewable grid electricity.	***No conflict.*** As shown in Table 3.8-2, the operational emissions and amortized construction emissions is estimated to be 2,834 MT CO2 per year. When considering the avoided GHG emissions associated with replacing imported water with local groundwater (3,654 MT CO2 per year), net Project-generated emissions are negative resulting in a potential GHG emissions benefit. The proposed Project would not develop new land uses that would generate new demands for fossil fuels.
Install 100 megawatts of local solar energy.	
Reduce fossil fuel use 20% in existing buildings.	
Discourage fossil fuels in new buildings.	
Zero Waste	
Divert 95% of waste from landfills.	***No conflict.*** The Project consists of the installation of groundwater wells, water pipeline, and water treatment improvements at the Arcadia WTP. No additional significant sources of waste would be generated from the Project.
Sustainable Mobility	
Convert 25% of commuter trips to transit.	***No conflict.*** The Project would generate a maximum of one delivery truck round trip per day, which will likely not be a local trip. The Project would not increase commuter trips to and from the Project site. Due to the nature of the deliveries being chemicals, trips cannot be made by foot, bike, scooter, or skateboard.
Convert 50% of local trips to foot, bike, scooter and skateboard.	
Convert 50% of vehicles to electric or zero emission.	

Source: City of Santa Monica 2019d.

As shown in Table 3.8-4, the Project does not conflict with any of the GHG-reducing measures of the CAAP and thus, is consistent with this plan.

Project Consistency with the Santa Monica Land Use and Circulation Element Policies

The City's LUCE was adopted in 2010 (last amended in 2017), and is the primary land use and transportation planning document governing existing and future land uses in the City. The LUCE encompasses the community's vision for Santa Monica's future; and establishes goals, policies, and development criteria for land uses and circulation in the City. The Plan's goals are to preserve the City's neighborhoods, reduce GHG emissions, improve mobility and circulation, and encourage the creation of new housing near transit and serves as the City's guiding document for the future. Table 3.8-5 shows the Project's consistency with applicable City of Santa Monica LUCE policies.

Table 3.8-5. Consistency with Applicable City of Santa Monica LUCE Policies

Measure	Analysis of Project's Potential to Conflict with Measures
Section 2.1 - Linking Land Use and Transportation Policy to Address Climate Change	
Goal LU2: Integrate Land Use and Transportation for Greenhouse Gas (GHG) Emission Reduction. Integrate land use and transportation, carefully focusing new development on transit rich boulevards and in the districts, to crate sustainable active pedestrian-friendly centers that decrease reliance on the automobile, increase walking, bicycling and transit use and improving community quality of live.	***Not Applicable.*** The Project would not create new land uses or involve transportation-related operations. No new populations or employees would be generated by the Project that could involve pedestrian-supportive infrastructure.
Section 3.1: Sustainability and Climate Change	
S1.1 Pro-actively cooperate with the State to implement AB 32, which calls for reducing GHG emissions to 1990 levels by 2020 and 80% below 1990 levels by 2050.	***No conflict.*** As described in Table 3.8-4, the City's CAAP was developed to meet the City's goal of carbon neutrality. As discussed in Table 3.8-4, the Project is consistent with the goals in the CAAP.
S1.3 Implement the LUCE policies to achieve the following GHG reduction targets as reflected in the Sustainable City Plan Goals: Reduce community-wide GHG emissions to 15% below 1990 levels by 2015.	
S2.1 Implement the VMT reduction policies of the Land Use and Circulation Element of the General Plan including, but not limited to: focusing new growth in mixed-use, transit-oriented districts; focusing new growth long existing corridors and nodes; supporting the creation of complete, walkable neighborhoods with goods and services within walking distance of most homes; and, promoting and supporting a wide range of pedestrian, bicycle and transit improvements in the City.	***Not Applicable.*** The Project would not create new land uses or involve transportation-related operations. No new populations or employees would be generated by the Project that could involve pedestrian-supportive infrastructure, or bicycle and transit improvements.
S2.2 In cooperation with the state and SCAG, proactively promote the implementation of SB 375, in particular utilizing its incentives for transit-oriented development. The City will also ensure that its local plans are consistent with the Sustainable Communities Strategy (SCS) plan requirement of SB 375.	
S2.3 Advance the No Net New Trips goal in the Land Use and Circulation Element with TDM projects such as expanded rideshare programs, parking management strategies, as well as development impact fees for public transit infrastructure.	
S3.1 Actively strive to implement the City's "zero net" electricity consumption goal by 2020 through a wide variety of programs and measures, including the generation of renewable energy in the City and energy efficiency measures.	***No conflict.*** The Project would result in a net reduction in electricity use when considering the avoided electricity associated with supplying water, as shown in Table 3.6-3.
S3.2 Consider a requirement for all new residential buildings to use net zero energy by 2020 and all new commercial buildings by 2030.	***Not applicable.*** These are City goals and not applicable to individual projects.

Table 3.8-5. Consistency with Applicable City of Santa Monica LUCE Policies

Measure	Analysis of Project's Potential to Conflict with Measures
S4.1 Explore creating an ordinance to require solar installations, both photovoltaic and hot water, on new construction projects.	
S5.1 Continue to maintain a building code and prescriptive compliance options that meet or exceed state requirements for energy, water and other sustainability standards. Specifically, pursue California Energy Commission goals to achieve "zero net" energy buildings by 2020 for low-rise residential buildings and 2030 for commercial buildings and achieve a LEED equivalent local building code by 2020.	*No conflict.* The Project's minimal addition structural square footage would be constructed in accordance with applicable building code and energy efficiency standards. The proposed Project does not involve the construction of habitable structures.
S5.6 Encourage cool roofs or green roofs on new buildings.	*No conflict.* The Project's minimal addition structural square footage would be constructed in accordance with applicable building code and energy efficiency standards. The proposed Project does not involve the construction of habitable structures that would require heating or cooling infrastructure.
S5.8 Encourage installation of electrical outlets in loading zones and on the exterior of new buildings to reduce emissions from gas-powered landscape maintenance and operating refrigeration for delivery trucks.	*No conflict.* The Project would not result in new landscape area and no net increase in landscape maintenance equipment or landscaping irrigation is needed.
S6.3 Implement landscape water conservation requirements for new construction projects.	
S8.1 Expand solid waste diversion strategies such as increased commercial recycling collection and outreach, expanded food waste collection, composting and waste to energy conversion programs.	*No conflict.* The Project would divert at least 75% of its Construction and Waste Debris in compliance with SMMC 8.108, Construction and Demolition Material Waste Management Plans.

Source: City of Santa Monica 2017.

Santa Monica Municipal Code

The Project would not conflict with the City of Santa Monica's Green Building Standards Code (reflected in SMMC Chapters 8.106 and 8.108) and Energy Reach Code (SMMC Chapter 8.36.010) as the Project would meet the mandatory measures of the CALGreen Code. The Project would not result in a net increase in employee vehicle trips and would result in a minor increase in delivery trucks to the site; therefore, it would not conflict with the SMMC requirements for alternative modes of transportation or TDM measures.

Project Consistency with SCAG's 2016 RTP/SCS

At the regional level, SCAG has adopted the 2016–2040 RTP/SCS for the purpose of reducing GHG emissions attributable to passenger vehicles in the City and surrounding areas. Although the RTP/SCS does not regulate land use or supersede the exercise of land use authority by SCAG's member jurisdictions (e.g., the City), the RTP/SCS is a relevant regional reference document for purposes of evaluating the connection of land use and transportation patterns and the corresponding GHG emissions. The 2016 RTP/SCS

provides broad direction and guidance for future development – encouraging the development of new uses in areas well served by transit, and in urban infill areas.

Project Consistency with CARB's Scoping Plan

The Scoping Plan (approved by CARB in 2008 and updated in 2014 and 2017) provides a framework for actions to reduce California's GHG emissions and requires CARB and other state agencies to adopt regulations and other initiatives to reduce GHGs. The Scoping Plan is not directly applicable to specific projects, nor is it intended to be used for project-level evaluations.[13] Under the Scoping Plan, however, there are several state regulatory measures aimed at the identification and reduction of GHG emissions. CARB and other state agencies have adopted many of the measures identified in the Scoping Plan. Most of these measures focus on area source emissions (e.g., energy usage, high-GWP GHGs in consumer products) and changes to the vehicle fleet (i.e., hybrid, electric, and more fuel-efficient vehicles) and associated fuels (e.g., Low Carbon Fuel Standard), among others.

The Scoping Plan recommends strategies for implementation at the statewide level to meet the goals of AB 32 and establishes an overall framework for the measures that will be adopted to reduce California's GHG emissions. Table 3.8-6 highlights measures that have been, or will be, developed under the Scoping Plan and presents the Project's consistency with Scoping Plan measures. The Project would comply with all regulations adopted in furtherance of the Scoping Plan to the extent required by law and to the extent that they are applicable to the project.

Table 3.8-6. Project Consistency with Scoping Plan GHG Emission Reduction Strategies

Scoping Plan Measure	Measure Number	Project Consistency
Transportation Sector		
Advanced Clean Cars	T-1	*No conflict.* The Project would result in a nominal net increase in vehicle trips to the site relating to deliveries. Nonetheless, the owner of the delivery trucks would purchase vehicles in compliance with CARB vehicle standards that are in effect at the time of vehicle purchase.
Low Carbon Fuel Standard	T-2	*No conflict.* This is a statewide measure that cannot be implemented by a project applicant or lead agency. Nonetheless, this standard would be applicable to the fuel used by vehicles that would access the project site (i.e., motor vehicles driven by the Project's delivery trucks would use compliant fuels).
Regional Transportation-Related GHG Targets	T-3	*Not applicable.* The Project is not related to developing GHG emission reduction targets. To meet the goals of SB 375, the 2016-2040 RTP/SCS is applicable to the Project. The Project would not preclude the implementation of this strategy.

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

Table 3.8-6. Project Consistency with Scoping Plan GHG Emission Reduction Strategies

Scoping Plan Measure	Measure Number	Project Consistency
Advanced Clean Transit	N/A	*Not applicable.* The Project would not prevent CARB from implementing this measure.
Last-Mile Delivery	N/A	*Not applicable.* The Project would not prevent CARB from implementing this measure.
Reduction in VMT	N/A	*Not applicable.* The Project would not prevent CARB from implementing this measure.
Vehicle Efficiency Measures 1. Tire Pressure 2. Fuel Efficiency Tire Program 3. Low-Friction Oil 4. Solar-Reflective Automotive Paint and Window Glazing	T-4	*No conflict.* The Project would not result in an increase in light-duty vehicles that would access the Project site. In addition, the Project would not prevent CARB from implementing this measure.
Ship Electrification at Ports (Shore Power)	T-5	*Not applicable.* The Project would not prevent CARB from implementing this measure.
Goods Movement Efficiency Measures 1. Port Drayage Trucks 2. Transport Refrigeration Units Cold Storage Prohibition 3. Cargo Handling Equipment, Anti-Idling, Hybrid, Electrification 4. Goods Movement Systemwide Efficiency Improvements 5. Commercial Harbor Craft Maintenance and Design Efficiency 6. Clean Ships 7. Vessel Speed Reduction	T-6	*Not applicable.* The Project would not prevent CARB from implementing this measure.
Heavy-Duty Vehicle GHG Emission Reduction • Tractor-Trailer GHG Regulation • Heavy-Duty Greenhouse Gas Standards for New Vehicle and Engines (Phase I)	T-7	*No conflict.* Heavy-duty vehicles traveling to and from the site for deliveries would be required to comply with CARB GHG reduction measures. In addition, the Project would not prevent CARB from implementing this measure.
Medium- and Heavy-Duty Vehicle Hybridization Voucher Incentive Proposed Project	T-8	*No conflict.* The Project medium- and heavy-duty vehicles (e.g., delivery trucks) could take advantage of the vehicle hybridization action, which would reduce GHG emissions through increased fuel efficiency. In addition, the Project would not prevent CARB from implementing this measure.
Medium and Heavy-Duty GHG Phase 2	N/A	*Not applicable.* The Project would not prevent CARB from implementing this measure.
High-Speed Rail	T-9	*Not applicable.* The Project would not prevent CARB from implementing this measure.

Table 3.8-6. Project Consistency with Scoping Plan GHG Emission Reduction Strategies

Scoping Plan Measure	Measure Number	Project Consistency
Electricity and Natural Gas Sector		
Energy Efficiency Measures (Electricity)	E-1	*No conflict.* The Project would comply with the current Title 24 Building Energy Efficiency Standards. In addition, the Project would not prevent CARB from implementing this measure.
Energy Efficiency (Natural Gas)	CR-1	*No conflict.* The Project would comply with the current Title 24 Building Energy Efficiency Standards. In addition, the Project would not prevent CARB from implementing this measure.
Solar Water Heating (California Solar Initiative Thermal Program)	CR-2	*No conflict.* The Project is not anticipated to require substantial amounts of hot water to make solar water heating feasible.
Combined Heat and Power	E-2	*Not applicable.* The Project would not prevent CARB from implementing this measure.
Renewables Portfolio Standard (33% by 2020)	E-3	*No conflict.* The electricity used by the Project would benefit from reduced GHG emissions resulting from increased use of renewable energy sources.
Renewables Portfolio Standard (50% by 2050)	N/A	*No conflict.* The electricity used by the Project would benefit from reduced GHG emissions resulting from increased use of renewable energy sources.
SB 1 Million Solar Roofs (California Solar Initiative, New Solar Home Partnership, Public Utility Programs) and Earlier Solar Programs	E-4	*Not applicable.* The Project would not prevent CARB from implementing this measure. The Project would involves the equipping and installation of groundwater wells, installation of the Olympic pipeline, and improvements at the Arcadia WTP to expand treatment capacity. As an infrastructure project, installation of solar would not be feasible.
Water Sector		
Water Use Efficiency	W-1	*No conflict.* The Project would support CARB in implementing this measure by replacing imported water supply with local groundwater supply, which would increase overall efficiency in the water supply system.
Water Recycling	W-2	*No conflict.* The Project would not prevent CARB from implementing this measure. Injection Wells SM-10i and SM-11i would recharge the Olympic Well Field with previously treated water from the City's Sustainable Water Infrastructure Project (SWIP) to maintain sustainable yield levels; thereby, reusing urban runoff.
Water System Energy Efficiency	W-3	*No conflict.* As with W-1, the Project would support CARB in implementing this measure by replacing imported water supply with local groundwater supply, which would increase overall efficiency in the water supply system.
Reuse Urban Runoff	W-4	*No Conflict.* The Project would not prevent CARB from implementing this measure Injection Wells SM-10i and SM-11i would recharge the Olympic Well Field with

Table 3.8-6. Project Consistency with Scoping Plan GHG Emission Reduction Strategies

Scoping Plan Measure	Measure Number	Project Consistency
		previously treated water from the City's Sustainable Water Infrastructure Project (SWIP) to maintain sustainable yield levels; thereby, reusing urban runoff.
Renewable Energy Production	W-5	*No conflict.* The Project would not prevent CARB from implementing this measure. Additionally, the Project would reduce the City's carbon footprint by contributing to the reduction/elimination of imported State Water Project water.
Green Buildings		
State Green Building Initiative: Leading the Way with State Buildings (Greening New and Existing State Buildings)	GB-1	*No conflict.* The Project would be required to be constructed in compliance with state or local green building standards in effect at the time of building construction.
Green Building Standards Code (Greening New Public Schools, Residential and Commercial Buildings)	GB-1	*No conflict.* The Project's buildings would meet green building standards that are in effect at the time of design and construction.
Beyond Code: Voluntary Programs at the Local Level (Greening New Public Schools, Residential and Commercial Buildings)	GB-1	*No conflict.* Project's buildings would meet green building standards that are in effect at the time of design and construction.
Greening Existing Buildings (Greening Existing Homes and Commercial Buildings)	GB-1	*Not applicable.* This is applicable for existing buildings only.
Industry Sector		
Energy Efficiency and Co-Benefits Audits for Large Industrial Sources	I-1	*Not applicable.* The Project would not prevent CARB from implementing this measure.
Oil and Gas Extraction GHG Emission Reduction	I-2	*Not applicable.* The Project would not prevent CARB from implementing this measure.
Reduce GHG Emissions by 20% in Oil Refinery Sector	N/A	*Not applicable.* The Project would not prevent CARB from implementing this measure.
GHG Emissions Reduction from Natural Gas Transmission and Distribution	I-3	*Not applicable.* The Project would not prevent CARB from implementing this measure.
Refinery Flare Recovery Process Improvements	I-4	*Not applicable.* The Project would not prevent CARB from implementing this measure.
Work with the Local Air Districts to Evaluate Amendments to Their Existing Leak Detection and Repair Rules for Industrial Facilities to Include Methane Leaks	I-5	*Not applicable.* The Project would not prevent CARB from implementing this measure.
Recycling and Waste Management Sector		
Landfill Methane Control Measure	RW-1	*Not applicable.* The Project would not prevent CARB from implementing this measure.
Increasing the Efficiency of Landfill Methane Capture	RW-2	*Not applicable.* The Project would not prevent CARB from implementing this measure.

Table 3.8-6. Project Consistency with Scoping Plan GHG Emission Reduction Strategies

Scoping Plan Measure	Measure Number	Project Consistency
Mandatory Commercial Recycling	RW-3	*Consistent.* During both construction and operation of the Project, the project would comply with all state regulations related to solid waste generation, storage, and disposal, including the California Integrated Waste Management Act, as amended.
Increase Production and Markets for Compost and Other Organics	RW-3	*Not applicable.* The Project would not prevent CARB from implementing this measure.
Anaerobic/Aerobic Digestion	RW-3	*Not applicable.* The Project would not prevent CARB from implementing this measure.
Extended Producer Responsibility	RW-3	*Not applicable.* The Project would not prevent CARB from implementing this measure.
Environmentally Preferable Purchasing	RW-3	*Not applicable.* The Project would not prevent CARB from implementing this measure.
Forests Sector		
Sustainable Forest Target	F-1	*Not applicable.* The Project would not prevent CARB from implementing this measure.
High GWP Gases Sector		
Motor Vehicle Air Conditioning Systems: Reduction of Refrigerant Emissions from Non-Professional Servicing	H-1	*Consistent.* The Project's employees would be prohibited from performing air conditioning repairs, including for the HVAC system in the new CCRO Building for the electrical room, and would be required to use professional servicing.
SF_6 Limits in Non-Utility and Non-Semiconductor Applications	H-2	*Not applicable.* The Project would not prevent CARB from implementing this measure.
Reduction of Perfluorocarbons (PFCs) in Semiconductor Manufacturing	H-3	*Not applicable.* The Project would not prevent CARB from implementing this measure.
Limit High GWP Use in Consumer Products	H-4	*Consistent.* The Project would not result in an increase in employees. Nonetheless, the Arcadia WTP existing employees would use consumer products that would comply with the regulations that are in effect at the time of manufacture.
Air Conditioning Refrigerant Leak Test During Vehicle Smog Check	H-5	*Consistent*. Motor vehicles driven by the Project's delivery trucks would comply with the leak test requirements during smog checks.
Stationary Equipment Refrigerant Management Program – Refrigerant Tracking/Reporting/Repair Program	H-6	*Not applicable.* The Project would not prevent CARB from implementing this measure.
Stationary Equipment Refrigerant Management Program – Specifications for Commercial and Industrial Refrigeration	H-6	*Not applicable.* The Project would not prevent CARB from implementing this measure.
SF_6 Leak Reduction Gas Insulated Switchgear	H-6	*Not applicable.* The Project would not prevent CARB from implementing this measure.

Table 3.8-6. Project Consistency with Scoping Plan GHG Emission Reduction Strategies

Scoping Plan Measure	Measure Number	Project Consistency
40% Reduction in Methane and Hydrofluorocarbon (HFC) Emissions	N/A	*Not applicable.* The Project would not prevent CARB from implementing this measure.
50% Reduction in Black Carbon Emissions	N/A	*Not applicable.* The Project would not prevent CARB from implementing this measure.
Agriculture Sector		
Methane Capture at Large Dairies	A-1	*Not applicable.* The Project would not prevent CARB from implementing this measure.

Notes: GHG = greenhouse gas; CARB = California Air Resources Board; VMT = vehicle miles traveled; SB = Senate Bill; N/A = not applicable; SF_6 = sulfur hexafluoride.

As shown in Table 3.8-6, the Project would not conflict with any of the Scoping Plan measures and therefore, the Project is consistent with this plan.

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

The Project would not impede the attainment of the most recent State GHG reduction goals identified in SB 32 and EO S-3-05 and. SB 32 establishes a statewide goal of reducing GHG emissions to 40% below 1990 levels by 2030 while EO S-3-05 establishes a statewide goal of reducing GHG emissions to 80% below 1990 levels by 2050. While there are no established protocols or thresholds of significance for that future year analysis; CARB forecasts that compliance with the current Scoping Plan puts the state on a trajectory of meeting these long-term GHG goals, although the specific path to compliance is unknown (CARB 2014).

CARB has expressed optimism with regard to both the 2030 and 2050 goals. It states in the First Update to the Climate Change Scoping Plan that "California is on track to meet the near-term 2020 GHG emissions limit and is well positioned to maintain and continue reductions beyond 2020 as required by AB 32" (CARB 2014, p. ES2). With regard to the 2050 target for reducing GHG emissions to 80% below 1990 levels, the First Update to the Climate Change Scoping Plan states the following (CARB 2014, p. 34):

> This level of reduction is achievable in California. In fact, if California realizes the expected benefits of existing policy goals (such as 12,000 megawatts of renewable distributed generation by 2020, net zero energy homes after 2020, existing building retrofits under AB 758, and others) it could reduce emissions by 2030 to levels squarely in line with those needed in the developed world and to stay on track to reduce emissions to 80% below 1990 levels by 2050. Additional measures, including locally driven measures and those necessary to meet federal air quality standards in 2032, could lead to even greater emission reductions.

In other words, CARB believes that the state is on a trajectory to meet the 2030 and 2050 GHG reduction targets set forth in AB 32, EO B-30-15, and EO S-3-05. This is confirmed in the 2017 Scoping Plan which states the following (CARB 2017):

> The Scoping Plan builds upon the successful framework established by the Initial Scoping Plan and First Update, while also identifying new, technologically feasible, and

> cost-effective strategies to ensure that California meets its GHG reduction targets in a way that promotes and rewards innovation, continues to foster economic growth, and delivers improvements to the environment and public health, including in disadvantaged communities.

As discussed previously, the Project is consistent with the City of Santa Monica's Sustainable City Plan, Climate Action and Adaptation Plan, LUCE; the City of Los Angeles Green New Deal; SCAG's 2016 RTP/SCS; and CARB's 2017 Scoping Plan, and would not conflict with the state's trajectory toward future GHG reductions. In September 2018, EO B-55-18 was signed which commits the state to total carbon neutrality by 2045. However, since the specific path to compliance for the state in regards to the long-term goals will likely require development of technology or other changes that are not currently known or available, specific additional mitigation measures for the Project would be speculative and cannot be identified at this time. The Project's consistency would assist in meeting the City's contribution to GHG emission reduction targets in California. With respect to future GHG targets under SB 32 and EO S-3-05, CARB has also made clear its legal interpretation is that it has the requisite authority to adopt whatever regulations are necessary, beyond the AB 32 horizon year of 2020, to meet SB 32's 40% reduction target by 2030 and EO S-3-05's 80% reduction target by 2050; this legal interpretation by an expert agency provides evidence that future regulations will be adopted to continue the state on its trajectory toward meeting these future GHG targets.

Summary

Based on the considerations previously outlined, the Project would not generate substantial GHG emissions or conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs, and no mitigation is required. This impact would be less than significant.

3.9 Hazards and Hazardous Materials

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
IX. HAZARDS AND HAZARDOUS MATERIALS – Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☒	☐	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☒	☐	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☒	☐	☐

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☒	☐	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☐	☒
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☒	☐	☐
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☐	☒

Existing Setting

All Project Components

California Government Code Section 65962.5 requires that information regarding environmental impacts of hazardous substances and wastes be maintained and provided at least annually to the Secretary for Environmental Protection. Commonly referred to as the Cortese List, this information must include the following: sites impacted by hazardous wastes, public drinking water wells that contain detectable levels of contamination, underground storage tanks with unauthorized releases, solid waste disposal facilities from which there is migration of hazardous wastes, and all cease and desist and cleanup and abatement orders. While the Cortese List is no longer maintained as a single list, the following databases provide information that meet the Cortese List requirements:

1. List of Hazardous Waste and Substances sites from Department of Toxic Substances Control (DTSC) Envirostor database (Health and Safety Codes 25220, 25242, 25356, and 116395);
2. List of Leaking Underground Storage Tank (LUST) Sites by County and Fiscal Year from the State Water Resources Control Board (Water Board) GeoTracker database (Health and Safety Code 25295);
3. List of solid waste disposal sites identified by the Water Board with waste constituents above hazardous waste levels outside the waste management unit (Water Code Section 13273 subdivision (e) and California Code of Regulations Title 14 Section 18051));

4. List of "active" Cease and Desist Orders (CDO) and Cleanup and Abatement Orders (CAO) from the Water Board (Water Code Sections 13301 and 13304); and
5. List of hazardous waste facilities subject to corrective action pursuant to Section 25187.5 of the Health and Safety Code, identified by DTSC.

As part of this analysis, the Cortese List databases were reviewed for contaminated sites that could impact the environmental conditions of the Project site. Dudek conducted a search for sites within 0.5-mile of all proposed Project components. Dudek reviewed available information on GeoTracker and EnviroStor for each of the sites of concern identified in the Cortese List databases, as well as other hazardous material sites that could impact the Project, including voluntary cleanup sites and corrective action sites, not otherwise included on the Cortese List. For all sites within 0.5-mile of the Project, Dudek determined, based on the regulatory status, available documentation, extent of documented contamination, and distance from the proposed Project, if the site of concern would likely impact the environmental condition of the proposed Project. Existing environmental hazards are identified in Figure 15, Project Site Hazards.

In addition to the hazardous material sites identified on GeoTracker and EnviroStor, Dudek reviewed the location of hazardous material pipelines identified in the National Pipeline Mapping System public database (NPMS 2020), and oil and gas wells identified in the California Department of Conservation Geologic Energy Management Division. The National Pipeline Mapping System public database provides the location and information on gas and hazardous liquid transmission pipelines that are under the jurisdiction of the Pipeline and Hazardous Materials Safety Administration. Dudek did not identify pipelines that run adjacent to or transect the proposed Project. The online Well Finder is a mapping application that provides information on the location and status of oil and gas wells and other related features and facilities located throughout the State of California. No oil and gas wells were identified within the Project site, nor is the proposed Project located within an oil well field. Two idle oil and gas wells are located approximately 0.3-mile north of the northern pipeline section and the existing Arcadia WTP. The proposed Project does not overlap the Methane and Methane Buffer Zones, as identified by the City of Los Angeles Bureau of Engineering (City of Los Angeles 2004).

Much of the land surrounding the proposed Project is highly developed, and overall the Project area lacks any lands considered wildlands or wildland–urban interfaces. According to the California Department of Forestry and Fire Protection's Fire Hazard Severity Zones maps, the proposed Project locations are neither moderately, highly, nor very highly susceptible to wildland fire (CAL FIRE 2007).

Dudek conducted a search of active (CSCD 2020) and proposed schools (CDE 2020) located within 0.25 miles of the proposed Project components. Schools identified below are also shown in Figure 15.

Olympic Well Field Restoration

The proposed Olympic Well Field Restoration footprint was not identified on a Cortese List database. One Cortese List site was identified on EnviroStor within 0.5-mile of the proposed Olympic Well Field Restoration:

- Colorado Place, Broadway & Cloverfield Blvd, was the site of a former clay quarry and landfill. The site was proposed for development in 1990 and underwent a Preliminary Endangerment Assessment. Documents available through DTSC indicate that there was soil and soil-vapor contamination. Based on the results of the Preliminary Endangerment Assessment, the site was delisted and received a no further action (NFA)

designation in 1991. Based on the distance from the proposed Project (0.3-mile from SM-10i) and NFA status, this site does not appear to have impacted the environmental conditions of the proposed Project.

Multiple Cortese List sites (closed LUST sites) and other cleanup sites were identified on GeoTracker within 0.5-mile of the proposed Olympic Well Field Restoration. The following sites were determined to be sites of concern to the proposed Project:

- Olympic Well Field Contamination Plume: The proposed groundwater wells SM-8 and SM-9, and injection wells SM-10i and SM-11i are located within the radius of influence of the Olympic Well Field restoration project. The groundwater in this area is impacted by volatile organic compounds (VOCs) associated with historical manufacturing, fabrication, and other activities by multiple companies. Contamination has been documented in the Olympic Well Field since at least 1982 (ICF 2017). The most recent groundwater monitoring report (ICF 2020) interprets the groundwater contamination plumes in the shallower B-zone aquifer (100 to 120 feet bgs, approximately) as approximated in Figure 15. Parties reportedly responsible for the Olympic Well Field groundwater contamination include the former Gillette and Boeing Facilities, and the Bergamot Arts Center. Most of these facilities have conducted remediation and investigation efforts and have obtained NFA status with the Regional Water Quality Control Board (RWQCB). Ongoing groundwater monitoring is conducted and reported by the City of Santa Monica; data is submitted to the Los Angeles RWQCB under the Corporate Yards LUST Cleanup File (T0603799303). The two primary contaminants in the Olympic Well Field are PCE and TCE; other VOCs are also present (ICF 2020). Based on recent groundwater monitoring data (ICF 2020), the proposed wells SM-8, SM-9, SM-10i and SM-11i will likely be located within VOC contamination plumes in the deeper B- and C-zone aquifers. This groundwater contamination may also impact soil and soil vapor within the contamination zones (area of plume at depth of groundwater; B-zone aquifer is greater than 100 feet bgs). Recent data collected in 2019 indicated that concentrations of VOCs in wells SM-3 and SM-4[14] within the Olympic Well Field, are as shown in Table 3.9-1.

Table 3.9-1 2019 Groundwater Data for SM-3 and SM-4

VOCs (measured in µg/L)	SM-3	SM-4
Chloroform	1.4	3.6
PCE	6.8	39
TCE	3.4	52
1,2,3-Trichloropropane	ND	0.00540
1,1-Dichloroethylene	ND	1.9
Cis-1,2-Dichloroethylene	ND	1.7
Total Trihalomethanes (THM)	1.4	3.6

ND = not detected above laboratory method detection limit
µg/L = micrograms per liter

- Former Boeing/Douglas A7 Plant: The proposed location of SM-11i is within Ishihara Park, which is located on the former Boeing/Douglas Plant A7. The site was redeveloped in 2014-2015 as a Metro rail station and public park. The site is currently undergoing remediation under the oversight of the Los Angeles RWQCB, and is part of the Olympic Well Field restoration project. Remediation of the site is required under

[14] SM-4 is located within the median of Olympic Boulevard east of Stewart Street. This well would not be altered by and is not a part of the proposed Project.

Cleanup and Abatement Order (CAO) Number R4-2012-0171, which obligates Boeing to restore and replace the groundwater impacted by former operations (State of California 2012). The CAO includes a Settlement and Release agreement, which specifies rights, duties, and obligations for Boeing and the City of Santa Monica with regard to restoration and replacement of groundwater. The most recent investigation at the Former Boeing/Douglas Plant A7 was a human health risk assessment on potential impacts of soil vapor contamination at the site (Geosyntec 2016). The results of the human health risk assessment determined that residual soil vapor contamination is below target health risks for current/hypothetical future residents and/or industrial workers. In 2013, a supplemental groundwater assessment was conducted on the site (Avocet 2013). Four groundwater monitoring wells were installed and sampled. Shallow groundwater depths ranged from 36.81 to 51.56 feet bgs. TCE was detected in each well at concentrations ranging from 9.2 µg/L to 90 µg/L. Additionally, chloroform (4.7 to 28 µg/L), 1,1-DCE (1.2 µg/L to 7.8 µg/L), and PCE (9.6 µg/L) were detected in multiple samples. This groundwater contamination is similar to that identified in the Olympic Well Field Contamination Plume; however this contamination plume is in the shallow A-zone aquifer (30 to 50 feet bgs), rather than the deeper B-zone and C-zone aquifers (approximately 100 to 120 feet, and 150 to 170 feet bgs, respectively). The A-zone TCE contamination plumes, as interpreted (Avocet 2013), are shown in Figure 15. This groundwater contamination may also impact soil and soil vapor conditions within the contamination zones (area of plume at depth of groundwater). Investigation is ongoing at this site; a work plan for additional groundwater assessment was submitted to the Los Angeles RWQCB in May 2020 (EA Engineering Analytics 2020).

Olympic Pipeline

Asbestos was widely used in a variety of building materials up until the 1980s. This includes components used for construction of plant utilities (like clarifiers, buildings, piping, and pump stations) such as caulking, cement, fireproofing materials, and tar. It also includes asbestos-cement (transite) piping. The EPA released a partial ban on asbestos-containing materials in 1989, but a full ban on the use and marketing of asbestos-containing materials did not occur until April 2019. The United States also banned lead-based paint for use in housing in 1978; however, lead-based paint use in commercial structures was not included in this ban. In addition, universal waste items containing hazardous materials (e.g., polychlorinated biphenyls, metals) may be present, including fluorescent light ballasts, mercury thermometers, and batteries. Yellow traffic striping located along the roadways of the proposed pipeline alignment, especially traffic striping applied prior to 2000, may contain high levels of lead chromate. Lead chromate in yellow traffic striping can contain approximately 20,000 parts per million (ppm) lead and 5,000 ppm hexavalent chromium. Debris generated during removal activities could meet the definition of hazardous waste (Caltrans 2011).

Multiple Cortese List sites (closed LUST sites) and other cleanup sites were identified on GeoTracker within 0.5-mile of the proposed Olympic Well Field Restoration. The following sites were determined to be sites of concern to the proposed Project:

- Olympic Well Field Contamination Plume: Portions of the Olympic Pipeline would pass through the Olympic Well Field contamination plume, specifically the southern portion from Pennsylvania Avenue to Nebraska Avenue, and from SM-8 to Stewart Street. According to a report completed on the former Boeing/Douglas A7 Plant (Avocet 2013), shallow (A-zone) groundwater is at a depth of approximately 36 to 52 feet bgs. Maximum detected concentrations of VOCs in this aquifer at the Former Boeing/Douglas A7 Plant included 1,1-DCE (7.8 µg/L), chloroform (28 µg/L), TCE (90 µg/L), and PCE (9.6 µg/L) (Avocet 2013). The approximate boundaries of the TCE plume in the A-zone are similar to the Olympic Well Field Contamination

Plume (Avocet 2013). While impacts to soil vapor in connection with the Boeing/Douglas A7 Plant are reportedly below health risks for residents and industrial workers, there may be soil and soil vapor impacts off the Boeing/Douglas A7 Plant site associated with A-zone groundwater contamination within the contamination zones (area of plume at depth of groundwater).

- Pen Factory: The section of pipeline extending eastward from SM-8 would lie adjacent to the former Pen Factory site. This site is a known contributor to the Olympic Well Field groundwater contamination plume, and is also undergoing remediation for soil and soil vapor contamination. Recent soil sampling data (Ramboll 2015) and sub-slab vapor sampling data (Ramboll 2019) do not include data from the Olympic Blvd right-of-way. However, sample results adjacent to the right-of-way do not show detections of contaminants above commercial/industrial risk-based concentrations. PCE had the highest concentrations in soil vapor along the Olympic Blvd right-of-way at 25.8 and 27.8 µg/m3. These concentrations are below the commercial/industrial environmental screening level (ESL)[15] of 67 µg/m3. Therefore, the remaining contamination at the Pen Factory site is not likely to have a significant impact on the proposed Project.

Olympic AWTF and Arcadia WTP Expansion

The proposed Olympic AWTF and Arcadia WTP Expansion are co-located at the existing Arcadia WTP. Under the existing conditions, the Arcadia WTP submits facility information, a hazardous materials inventory, an emergency response/contingency plan, and Aboveground Petroleum Storage Act (APSA) documentation to California Environmental Protection Agency's California Environmental Reporting System (CERS). Pursuant to the federal Emergency Planning and Community Right to Know Act and the APSA, all handlers of hazardous materials, are required to submit their information to CERS for an annually review (CAL OES 2019). The hazardous materials at the existing Arcadia WTP are recorded and identified as part of CERS. The Arcadia WTP has an existing Consolidated Emergency Response/Contingency Plan, which identifies procedures for containing spills, releases, fires, or explosions, and prevents associated harm to persons, property, and the environment; facility evacuation; arrangements for emergency services; emergency equipment, its location, and capabilities; and employee training on operations and hazards. In addition, the Arcadia WTP maintains a Spill Prevention, Control, and Countermeasure (SPCC) Plan related to oil spills from the 5,000 gallon aboveground electric generator gas tank located on the site. The facility maintains data and maps of the property related to the locations of the numerous eye-wash stations, electrical shut-off components, and eye-wash safety shower facilities throughout the Arcadia WTP; as well as the types and amounts of chemicals stored at the various buildings on the property (City of Santa Monica 2019e).

Existing Training Protocols

The City of Santa Monica conducts formal and informal trainings on all facility operations and hazards. Formal training is provided by the City's Risk Management Division through certified training vendors and fellow employees. Formal trainings are recorded and training documents are distributed to employees. Informal trainings are usually provided by fellow employees or supervisors in a form of on-the-job training meetings. The City provides additional hazardous materials management training for those employees that would be exposed to hazardous materials in

[15] The ESLs were developed by the San Francisco Regional Water Quality Control Board as conservative screening levels for over 100 chemicals found at sites with contaminated soil and groundwater. ESLs are not intended to establish policy or regulation, but are used state-wide on a variety of sites to evaluate potential impacts due to environmental contamination. In Dudek's experience, regulatory agencies state-wide have used these ESLs for conservative cleanup goals. In this context, they are referenced as a conservative screening level for proposed Project implementation (e.g. worker safety, disposal).

the workplace. In addition, all new employees are trained in the various levels of emergency response to ensure their ability to effectively respond to an emergency at each facility. All staff are initially trained in the following:

- City of Santa Monica Emergency Planning and Response
- Familiarity with all treatment processes
- Hazards associated with each treatment process
- Hazards Communications and Safety Training
- Proper handling of all chemicals used in the facilities
- Proper use of Personal Protective Equipment
- Fire safety
- Lockout-tagout procedures
- How to work with corrosives, solvents, flammables, and reactive
- Respiratory protection
- Confined Space
- Employee's right to know law
- First aid for various chemicals
- Vehicle and crane operations and safety
- Non-routine tasks
- Training records
- Emergency coordination
- Proposition 65 compliance chemical list and labeling of hazardous materials

In addition, the City provides annual trainings on all safety topics listed above and on any changes in the law, procedures, and policies, that includes, but may not be limited to: (1) handling regulated substances; (2) hazards and proper handling of all chemicals used in the treatment process; (3) changes in the treatment process; (4) maintenance procedures in the treatment process; and (5) review of all accidents associated with the use of hazardous chemicals (City of Santa Monica 2019e). Additionally, refresher trainings are conducted when new process equipment is installed.

Database Search Results

Based on a review of historic aerial photographs (NETR 2020), the Arcadia WTP was constructed prior to 1952. Expansion and redevelopment of the various structures occurred throughout the lifetime of the plant, between 1952 and present day. As the Arcadia WTP was constructed before the 1950s, there is a potential for hazardous building materials to be present. The proposed Project may require demolition and rehabilitation of existing structures, which could disturb hazardous building materials and create an impact to the environment.

One Cortese List site was identified within 0.5-mile of the existing Arcadia WTP, as follows:

- **Former Mobil Service Station 18-LDM:** This former gasoline service station is located at 12054 Wilshire Blvd, which is located within the proposed Project footprint at the east corner of Wilshire Blvd and S Bundy Drive (see Figure 15). The site would be used as a staging area for construction of the proposed Project. A leaking underground storage tank was reported on the site in 1989. Monitoring wells were installed both on the former Mobil Service Station site and on the Arcadia WTP property. Following remediation and monitoring activities, the site received regulatory closure (NFA) in 2009. The NFA letter (LA RWQCB 2009) stated residual concentrations of soil contaminants were below EPA soil screening levels, residual concentrations of groundwater contaminants in the production aquifer (B-zone) were below EPA Maximum Contaminant Levels (MCLs), the contaminant plume was limited to the site and was decreasing, and the potential for vapor intrusion was reportedly insignificant. Additionally, the remaining contamination has likely naturally attenuated since the NFA was received in 2009. Reportedly, wells on the former Mobil Service Station site and the Arcadia WTP site have been abandoned. While this site is located within the footprint of the proposed Project, it is not likely to impact the proposed Project.

Impact Analysis

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

Olympic Well Field Restoration

Construction

Less-Than-Significant Impact With Mitigation Incorporated. Construction would include well completion activities for two new production wells (SM-8 and SM-9) and two new injection wells (SM-10i and SM-11i), as well as construction of the proposed recycled water pipeline and artistic fencing enclosures. Construction would require the use of heavy machinery and equipment. Potentially hazardous materials used during construction may include gasoline, diesel fuel, lubricating oil, grease, adhesive materials, solvents, paints, and other materials that potentially contain hazardous substances. The materials used would not be in such quantities or stored in such a manner as to pose a significant safety or environmental hazard. Project construction workers would be trained in safe handling and hazardous materials use, as required. Activities at the Project site, including those conducted by a contractor, shall comply with existing federal, state, and local regulations regarding hazardous material use, storage, disposal, and transport to prevent Project-related risks to public health and safety. All on-site generated waste that meets hazardous criteria shall be stored, manifested, transported, and disposed of in accordance with federal, state, and local requirements. On-site generated contaminated waste shall be stored, transported, and disposed of as required by federal, state, and local requirements, and will be either treated or disposed of at an authorized and permitted facility, as required.

The wells are located within the Olympic Well Field Contamination Plume, as discussed in the Existing Setting section above. The wells would be installed to the depth of the B-zone and C-zone aquifers. While ground-disturbing activities associated with new well component installation are not anticipated to extend greater than 8 feet bgs, installation of well piping, pumps, and initiating groundwater flow could expose workers to contaminated groundwater. Additionally, decommissioning of SM-3 would require removal of well components and casings that have been exposed to contaminated media within the Olympic Well Field Contamination Plume. Contaminated materials associated with these activities may require special handling, transportation, and disposal procedures. Therefore, impacts related to the handling, transport, and use of hazardous materials is considered potentially significant. As such, MM-HAZ-1, a hazardous material contingency plan would be required that addresses the potential contamination associated with completion of the proposed wells.

MM-HAZ-1 Prior to commencement of Project-related demolition or earth-moving activities at the Olympic Well Field and Olympic Pipeline, a Hazardous Materials Contingency Plan (HMCP) shall be developed and provided to the City for review and approval. The HMCP shall address the potential impacts related to disturbance of potentially contaminated soil, soil vapor and/or groundwater. The HMCP shall clearly identify known areas of contamination that overlap with the Project components. The HMCP shall include training procedures for construction crews for the identification, assessment, characterization, management, and proper disposal of hazardous constituents, materials, and wastes, in accordance with all applicable state and local regulations. If impacted soils or groundwater are encountered during excavation activities, the contaminated soils and/or groundwater shall be

managed and disposed of in accordance with local and state regulations. The HMCP shall include health and safety measures, which may include periodic work breathing zone monitoring, monitoring for volatile organic compounds using a handheld organic vapor analyzer, and/or other equally effective measures in areas where known contamination is present. The City of Santa Monica or its designee shall implement the HMCP during all construction activities for the proposed Project that require ground disturbance in areas of known contamination, as outlined in the HMCP.

Handling, discharge, and disposal of groundwater, if required, would require proper permitting, testing, and documentation in accordance with federal, state, and local discharge requirements and permits. Compliance with existing federal, state, and local regulations, implementation of MM-HAZ-1, and limited excavation depths will adequately identify and address potentially contaminated environmental media, such that the routine transportation and disposal of investigation derived waste during well construction has a less than significant impact after mitigation to the public or the environment.

Operation

Less-Than-Significant Impact. Operation of the proposed wells would not be expected to create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. Maintenance of the proposed wells may require the use of minor amounts of hazardous substances, such as solvents, lubricants, and adhesives. The wells would also require ongoing chemical dosing (sodium hypochlorite or bleach) and electrical use for pumping/injection operations. These chemicals would be stored in small quantities at the well site. The Hazard Communication Standard (29 CFR 1910.1200(g)), requires that the chemical manufacturer, distributor, or importer provide Safety Data Sheets for each hazardous chemical to describe the proper handling, transportation, cleanup, and protective measures. Use of these products would be in accordance with requirements and recommendations in the Safety Data Sheet and would be managed in accordance with federal, state, and local laws and regulations. Operators tasked with handling treatment chemicals would be properly trained in chemical handling and transportation. Remaining contaminated soils would be subsurface. Contaminated groundwater pumped through the new production wells would be directed via the Olympic Pipeline to the new Olympic AWTF for treatment to remove contaminants. Transportation of the water would be through subsurface pipelines, and would not expose the public or the environment to potentially contaminated groundwater. Therefore, impacts would be less than significant.

Olympic Pipeline

Construction

Less-Than-Significant Impact With Mitigation Incorporated. As discussed in the Olympic Well Field Restoration section, potentially hazardous materials used during construction would not be in such quantities or stored in such a manner as to pose a significant safety or environmental hazard. Project construction workers would be trained in safe handling and hazardous materials use, as required. Activities at the Project site, including the site preparation, grading, slurry backfill, and paving by a contractor, shall comply with existing federal, state, and local regulations regarding hazardous material use, storage, disposal, and transport to prevent Project-related risks to public health and safety.

The proposed Olympic Pipeline alignment would be constructed within existing roadways. Traffic striping on the roads may contain hazardous levels of lead and hexavalent chromium. Construction that removes road surfaces may create wastes that contain hazardous levels of chromium and lead. Prior to road surface removal, a lead survey would be conducted in accordance with MM-HAZ-2, which will include collecting and analyzing samples of the traffic striping prior to its removal. Proper identification, delineation, and abatement of potentially hazardous materials would prevent potential exposure of hazardous materials to the public or the environment during transportation and disposal of potentially contaminated media.

MM-HAZ-2 Prior to commencement of demolition or construction activities at the Olympic Pipeline or Arcadia Water Treatment Plant, a hazardous materials site survey shall be conducted. The survey shall be conducted on the proposed Olympic Pipeline alignment to identify yellow traffic striping (if it is going to be disturbed/removed as part of construction) that may contain lead chromate, and on the Arcadia WTP buildings to be disturbed/demolished for asbestos, lead-based paint, polychlorinated biphenyls, and universal wastes. Following results of the hazardous materials survey, demolition or renovation plans and contract specifications shall incorporate abatement procedures for the removal of materials containing asbestos, lead, lead chromate, polychlorinated biphenyls, and universal waste items, as required. All abatement work shall be done in accordance with federal, state, and local regulations, including those of the U.S. Environmental Protection Agency, Occupational Safety and Health Administration, California Occupational Safety and Health Administration, and the South Coast Air Quality Management District.

Portions of the pipeline would be constructed within the Olympic Well Field Contamination Plume, specifically the extent along Berkeley Street from Nebraska Avenue to Pennsylvania Avenue, and SM-8 to Stewart Street, approximately. Construction and installation of the pipeline would require excavation up to a maximum depth of 8 feet bgs to avoid preexisting utilities. Potential impacts associated with the Olympic Well Field Contamination Plume and other former industrial operations (see Former Boeing/Douglas A7 Plant discussion, above) at the maximum proposed excavation depth would be related to potential soil vapor contamination. Implementation of MM-HAZ-1, would adequately identify and address potentially contaminated soil vapor in the portion of the pipeline that would be within the Olympic Well Field contamination plume.

Compliance with existing federal, state, and local regulations, as well as implementation of MM-HAZ-1 and MM-HAZ-2, will adequately identify and address potentially contaminated environmental media and hazardous materials such that the routine use, transportation, and disposal during construction has a less than significant impact after mitigation to the public or the environment.

Operation

Less-Than-Significant Impact. Operation of the Olympic Pipeline would be passive and subsurface and is not expected to create a hazard to the public or environment. Maintenance of the proposed pipeline may require the use of minor amounts of hazardous substances, such as solvents, lubricants, and adhesives. Use of these products would be in accordance with requirements and recommendations in the Safety Data Sheet and would be managed in accordance with federal, state, and local laws and regulations. Remaining contaminated soils, if any, would be subsurface and paved over. Contaminated groundwater potentially pumped through the proposed Olympic Pipeline would be directed to the existing Arcadia WTP or proposed Olympic AWTF in the same manner as the existing pipeline. Transportation of the water would be subsurface

and would not expose the public or the environment to potentially contaminated groundwater. Therefore, routine use, transportation, and disposal during operation would have a less than significant impact to the public or the environment.

Olympic AWTF and Arcadia WTP Expansion

Construction

Less-Than-Significant Impact With Mitigation Incorporated. As discussed in previous sections, potentially hazardous materials used during construction would not be in such quantities or stored in such a manner as to pose a significant safety or environmental hazard. Project construction workers would be trained in safe handling and hazardous materials use, as required. Activities at the Project site, including those conducted by a contractor, shall comply with existing federal, state, and local regulations regarding hazardous material use, storage, disposal, and transport to prevent Project-related risks to public health and safety.

As the Arcadia WTP has been in operation since at least the 1950s, there is a potential for hazardous building materials, including lead, asbestos, polychlorinated biphenyls (PCBs), and universal wastes, to be present. A hazardous building material survey and abatement would be conducted in accordance with MM-HAZ-2 on structures and appurtenances, such as water pipelines, scheduled for demolition or rehabilitation.

The Arcadia WTP currently receives and processes water that contains VOC contamination. The new Olympic AWTF is proposed to treat water coming directly from the Olympic Well Field, which also contains VOC contamination. It is not anticipated that construction of the proposed Project would interfere with ongoing Arcadia WTP operations. The new Olympic AWTF would not receive the contaminated water until fully operational. Therefore, impacts related to the transportation of contaminated groundwater are not anticipated.

Compliance with existing federal, state, and local regulations, as well as implementation of MM-HAZ-2, will adequately identify and address potentially hazardous materials such that the routine use, transportation, and disposal during construction would have a less than significant impact after mitigation to the public or the environment.

Operation

Less-Than-Significant Impact. Operation of the new Olympic AWTF and expanded Arcadia WTP would include pre-treatment filtration, UV/H2O2 AOP, and a GAC system. Hazardous materials, including hydrogen peroxide, would be required for operation of the system. Additionally, maintenance of the system may require use of minor amounts of hazardous materials, such as solvents, paints, and adhesives. Use of these products would be in accordance with requirements and recommendations in the Safety Data Sheet and would be managed in accordance with federal, state, and local laws and regulations. As required by state and local regulations, storage of hazardous materials would be reported to the local regulatory agency and a hazardous material business plan (HMBP) would be completed and submitted to the local agency. The City would be required to prepare or update their existing hazardous materials inventory, an emergency response/contingency plan, and APSA documentation pursuant to Emergency Planning and Community Right to Know Act and APSA for operations at the Olympic AWTF and Arcadia WTP. The Consolidated Emergency Response/Contingency Plan identifies procedures for containing spills, releases, fires, or explosions, and prevents associated harm to persons, property, and the environment; facility evacuation;

arrangements for emergency services; emergency equipment, its location, and capabilities; and employee training on operations and hazards. In addition, the SPCC Plan related to oil spills would identify location of oils storage containers, oil spill controls, methods for inspection and testing, and emergency procedures and notification.

Water treatment and discharge permits for wastewater, would be obtained and followed in accordance with federal, state, and local laws and regulations. As such, routine use, transportation, and disposal during operation would have a less than significant impact to the public or the environment.

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

Olympic Well Field Restoration

Construction

Less-Than-Significant Impact With Mitigation Incorporated. As discussed in the above sections, ground-disturbing activities associated with new well component installation are not anticipated to extend greater than 8 feet bgs. However, installation of well piping, pumps, and initiating groundwater flow could expose workers to contaminated groundwater. Additionally, decommissioning of SM-3 would require removal of well components and casings that have been exposed to contaminated media. The construction associated with wells is regulated by the California Department of Water Resources. Permitting and enforcement are carried out by local enforcing agencies, which is Los Angeles County Department of Health Services, for the proposed Project. The standards for well construction are outlined by California Well Water Standards – Bulletin 74-81 & 74-90 to exclude contamination or pollution from surface drainage. Additionally, water well construction activities must be performed only by a licensed C-57 Water Well Contractor, which would further ensure proper well construction to prevent foreseeable upset and accident conditions (DWR 2020). Should discharges be required during construction that aren't covered under the California Well Water Standards, the City would be required to submit a notice of intent to the appropriate agencies and get appropriate discharge permissions. As the area is wholly urbanized, discharges would likely be either to the sanitary or storm sewers. Sanitary discharges would require permissions from the sanitary district, while storm sewer discharges would require permissions from both the City and regional water board. Submittal of applications and notice of intent are required by law under the Clean Water Act prior to discharge. Depending upon the quality of the discharged water, pretreatment may be required, which would be established following submittal of the notice of intent to discharge. Further, implementation of MM-HAZ-1 would require a HMCP to be implemented that would address proper identification, handling, and disposal procedures for contaminated media during construction. The HMCP would include release response and reporting procedures in the event of a release of hazardous materials to the environment. With implementation of MM-HAZ-1, potential impacts to the public or environment due to upset and accident conditions would be less than significant with mitigation incorporated.

Operation

Less-Than-Significant Impact. Once operational, the wells for the proposed Project would not be expected to 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. Hazardous materials

used for operation and maintenance of the wells would be in accordance with requirements and recommendations in the Safety Data Sheet, and would be managed in accordance with federal, state, and local laws and regulations. Operators tasked with handling treatment chemicals would be properly trained in chemical handling and transportation. The wells would be designed in accordance the Department of Water Resources Bulletin 74, which sets minimum standards for wells with the purpose of protecting California's groundwater quality. Impacts would be less than significant.

Olympic Pipeline

Construction

Less-Than-Significant Impact With Mitigation Incorporated. As discussed in the above sections, construction of the pipeline is limited to 8 feet below ground surface; thus contaminated groundwater would not be encountered. However, potentially contaminated soil vapor may be encountered in the portion of the proposed pipeline that is within the Olympic Well Field contamination plumes (see Figure 15). Implementation of MM-HAZ-1 would require a HMCP to be implemented that would address proper identification, handling, and disposal procedures for contaminated media, as well as health and safety procedures in the event a release of hazardous soil vapor occurs during construction. A hazardous material survey and abatement would be conducted in accordance with MM-HAZ-2 to identify potential lead and chromium contamination in yellow traffic striping (if it will be removed during construction). With implementation of MM-HAZ-1, MM-HAZ—2, and limited excavation such that contaminated media is not impacted, potential impacts to the public or environment due to upset and accident conditions would be less than significant after mitigation.

Operation

Less-Than-Significant Impact. Although unlikely, during operation of the Olympic Pipeline, a catastrophic release could occur resulting in release of large quantities of contaminated water, causing flooding and potential exposure of contaminants to the public and the environment. The City of Santa Monica has a Hazard Mitigation Plan (HMP) that addresses critical facilities and potential results of catastrophe (fire, earthquake, etc.). The HMP is created under Federal Emergency Management Agency (FEMA) guidelines, rules, and regulations, as well as applicable state and local regulations. The HMP would be updated to include emergency procedures for catastrophic release from the proposed Olympic Pipeline and would address the potential for flooding and exposure of contaminated water to the public and the environment. With adherence to federal, state, and local regulations, including those related to emergency response plans and procedures, potential impacts due to reasonably foreseeable upset and accident conditions would be less than significant.

Olympic AWTF and Arcadia WTP Expansion

Construction

Less-Than-Significant Impact With Mitigation Incorporated. As discussed in the sections above, there is a potential for hazardous building materials, including lead, asbestos, PCBs, and universal wastes, to be present. Demolition and disposal of these materials without proper abatement could case an upset or accident condition. A hazardous building material survey and abatement would be conducted in accordance with MM-HAZ-2 on structures and appurtenances, such as water pipelines, scheduled for demolition or

rehabilitation. With implementation of MM-HAZ-2, impacts from foreseeable upset or accident conditions would be less than significant with mitigation incorporated.

Operation

Less-Than-Significant Impact. Although unlikely (due to adherence to strict regulations), a catastrophe, such as a fire or earthquake, could result in damage to hazardous material storage containers or water treatment containers at the Arcadia WTP, causing a release of large quantities of hazardous materials and/or contaminated water. Operational permits and plans, including the HMBP and water discharge permits, would require emergency release and spill response plans and procedures, in the event of catastrophic release. Additionally, the City of Santa Monica HMP would be updated to include emergency procedures for catastrophic release at the new Olympic AWTF and expanded Arcadia WTP. With adherence to federal, state, and local regulations, potential impacts due to reasonably foreseeable upset and accident conditions would be less than significant.

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

Olympic Well Field Restoration

Less-Than-Significant Impact With Mitigation Incorporated. Santa Monica Community College, 1660 Stewart Street, is located approximately 0.14-mile north of the proposed SM-8. New Roads K-12, 3131 Olympic Blvd, is located approximately 0.03-mile northwest of the proposed SM-9 (CSCD 2020; CDE 2020). Hazardous materials required for construction and operation would be transported, handled, stored, and disposed of in accordance with federal, state, and local laws and regulations, as described in the previous analysis sections. Hazardous materials used during construction of the proposed Project would be stored within proposed Project boundaries. Once operational, there would be no hazardous materials stored at the wellheads. HMBPs, spill prevention plans, and emergency response plans would be developed as required by federal, state, and local regulations. These regulations and requirements provide protection from emissions and releases of hazardous materials to the environment, including nearby schools.

Hazardous materials associated with environmental contamination would be managed by the HMCP, as described in MM-HAZ-1, which would mitigate the risk of hazardous emissions to the environment. Therefore, impacts related to emissions or handling of hazardous materials near schools would be less than significant with mitigation incorporated.

Olympic Pipeline

Less-Than-Significant Impact With Mitigation Incorporated. New Roads school, 3131 Olympic Blvd, is located approximately 0.03-mile northwest of the proposed pipeline that connects SM-9 to the former SM-3. Lighthouse Christian Academy, 1424 Yale Street, is located approximately 0.19-mile west-southwest of the proposed Olympic Pipeline (CSCD 2020; CDE 2020). Hazardous materials required for construction pipeline would be transported, handled, stored, and disposed of in accordance with federal, state, and local laws and regulations, as described in the previous analysis sections. Hazardous materials used during construction of the pipeline would be stored within the immediate site area, away from nearby schools. HMBPs, spill prevention plans, and emergency response plans would be developed as required by state

and local regulations. These regulations and requirements provide protection from emissions and releases of hazardous materials to the environment, including nearby schools. Hazardous environmental media, including soil vapor, would be managed by the HMCP, as described in MM-HAZ-1, which would mitigate the risk of hazardous emissions to the environment. Hazardous materials associated with potential lead and chromium contaminated yellow traffic striping would be identified and abated as described in MM-HAZ-2. Therefore, impacts related to emissions or handling of hazardous materials near schools would be less than significant with mitigation incorporated. There would be no hazardous materials required for operation of the pipeline.

Olympic AWTF and Arcadia WTP Expansion

Less-Than-Significant Impact With Mitigation Incorporated. University High School Charter, 11800 Texas Avenue, is located approximately 0.21-mile east of the Arcadia WTP. Brockton Avenue Elementary, 1309 Armacost Avenue, is located approximately 0.08-mile east of the Arcadia WTP (CSCD 2020; CDE 2020). Hazardous materials required for construction and operation of the WTP would be transported, handled, stored, and disposed of in accordance with federal, state, and local laws and regulations, as described in the previous analysis sections. Hazardous materials used during construction and operation of the proposed Project would be stored within proposed Project boundaries. HMBPs, spill prevention plans, and emergency response plans would be developed as required by state and local regulations. These regulations and requirements provide protection from emissions and releases of hazardous materials to the environment, including nearby schools. Hazardous materials associated with potential hazardous building materials (asbestos, lead-based paint, PCBs) would be identified and abated as described in MM-HAZ-1. Therefore, impacts related to emissions or handling of hazardous materials near schools would be less than significant after mitigation.

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

Olympic Well Field Restoration

Construction

Less-Than-Significant Impact With Mitigation Incorporated. The proposed wells are located within the footprint of the Olympic Well Field Contamination Plume, which includes Cortese List sites (see Existing Setting). SM-11i is also located in the footprint of the Former Boeing/Douglas Plant A7, which is also within the footprint of the Olympic Well Field Contamination Plume. Groundwater in this area has documented VOC contamination above regulatory cleanup levels in all documented aquifers (A-, B-, and C-zone aquifers). In addition, contaminated soil vapor may be present in the area that is within the Olympic Well Field contamination plume, especially those areas with documented contamination in the A-zone shallow aquifer (30 to 50 feet bgs). While ground-disturbing activities associated with new well component installation are not anticipated to extend greater than 8 feet bgs, installation of well piping, pumps, and initiating groundwater flow could expose workers to contaminated groundwater. Hazardous materials associated with environmental contamination would be managed by the HMCP, as described in MM-HAZ-1, which would mitigate the risk of creating a hazard to the public or the environment. However, the Project itself is proposed to restore the Olympic Well Field to full production capacity and remove key contaminants by

constructing the Olympic Pipeline from the Olympic Well Field to the Arcadia WTP in order to separate Olympic Well Field contaminated groundwater from the Charnock Well Field groundwater for separate treatment at the Arcadia WTP. With implementation of MM-HAZ-1, hazards to the public or the environment from a hazardous material sites would be less than significant after mitigation.

Operation

Less-Than-Significant Impact. Once operational, the proposed Project would not be expected to create a hazard to the public or the environment due to the presence of contaminated sites. The Project itself is proposed to restore the Olympic Well Field to full production capacity and remove key contaminants by constructing the Olympic Pipeline from the Olympic Well Field to the Arcadia WTP in order to separate Olympic Well Field contaminated groundwater from the Charnock Well Field groundwater for separate treatment at the Arcadia WTP. Excavations would be backfilled, contaminated water would be confined to the well and attached piping, and the site would be secured from public access, removing the potential for subsurface contamination to be exposed to the public or the environment. Impacts would be less than significant.

Olympic Pipeline

Construction

Less-Than-Significant Impact With Mitigation Incorporated. Portions of the pipeline overlap the Olympic Well Field Contamination Plume, which includes Cortese List sites. The Pen Factory site is also located adjacent to proposed pipeline that connects SM-8 to the existing pipeline. However, as discussed in the Existing Setting section, it is unlikely this site has impacted the environmental conditions of the Project site. As discussed in the above section, potential impacts due to the environmental contamination would be managed as described in MM-HAZ-1, which would mitigate the risk of creating a hazard to the public or environment from a hazardous material site. With implementation of MM-HAZ-1, hazards to the public or the environment from a hazardous material sites would be less than significant with mitigation incorporated.

Operation

Less-Than-Significant Impact. Once operational, the proposed Project would not be expected to create a hazard to the public or the environment due to the presence of contaminated sites. The proposed Olympic Pipeline would operate within the subsurface and excavations would be backfilled and repaved, minimizing the potential for subsurface contamination to be exposed to the public or the environment. Impacts would be less than significant.

Olympic AWTF and Arcadia WTP Expansion

Construction

Less-Than-Significant Impact. . The Former Mobil gasoline service station, which is a Cortese List site, is located within the Project site. However, as discussed in the Existing Setting section, the remaining contamination would not likely impact the proposed Project. As discussed in the previous sections, water from the Olympic Well Field is likely to contain VOC contamination, which would be processed and removed through the Olympic AWTF and Arcadia WTP as designed. Water would not be received by the AWTF until construction was complete. Operation of the Arcadia WTP is not expected to be interrupted during construction. Impacts would be less than significant.

Operation

Less-Than-Significant Impact. Once operational, the proposed Project would not be expected to create a hazard to the public or the environment due to the presence of contaminated sites. The treatment systems would operate as designed, thereby removing groundwater contaminants associated with the Olympic Well Field Contamination Plume. Operation of the Olympic AWTF and Arcadia WTP would be permitted and monitored in accordance with federal, state, and local laws and regulations. Impacts related to nearby contaminated sites are within the subsurface and have been determined to be below risk thresholds by the regulatory agency. Impacts would be less than significant.

3.9 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?

Impacts for All Project Components

No Impact. The Santa Monica Municipal Airport, which is located approximately 0.8-mile from SM-11i, approximately 0.9-mile from the Olympic Pipeline at Centinela Avenue and Olympic Boulevard, and approximately 1.6 miles south of the existing Arcadia WTP at the closest points. However, the proposed Project components are not identified as being located within the Airport Influence Area for the Santa Monica Municipal Airport (ALUC 2003). Furthermore, on February 1, 2017, the City entered a consent decree with the Federal Aviation Administration to close Santa Monica Municipal Airport in 2028 and shorten the runway from 4,973 feet in length to 3,500 feet by December 7, 2017 to reduce the number flight operations at the airport. Under this agreement, the City is required to maintain stable and continuous operations at Santa Monica Municipal Airport until its closure on December 31, 2028 (City of Santa Monica 2018c). The Project site is also more than 2 miles from the Los Angeles International Airport. Further, the proposed Project would not involve placing people or structures in proximity to aircraft operations. Therefore, no impacts associated with public airport hazards would occur.

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

Olympic Well Field Restoration

Less-Than-Significant Impact. The proposed Project would not impair or physically interfere with an adopted emergency response plan or a local, state, or federal agency's emergency evacuation plan. Operationally, the proposed Olympic Well Field Restoration would not materially change the characteristics of the area surrounding the proposed production wells and injection wells location in a way that would alter emergency response or evacuation plans. Emergency access along Olympic Boulevard and other roadways would be maintained at all times during construction. As such, the proposed Project would not physically interfere with an adopted emergency response plan or emergency evacuation plan. Therefore, impacts would be less than significant.

Olympic Pipeline

Less-Than-Significant Impact With Mitigation Incorporated. The proposed Project involves the construction of the new Olympic Pipeline with existing roadways in the Cities of Santa Monica and Los Angeles. Upon completion of construction, the roadways would be restored to its preconstruction conditions, and therefore, would not interfere with an emergency response plan or emergency evacuation plan. During construction, short-term transportation-related hazards may be introduced due to the presence and use of construction vehicles and equipment including; lane closures, driveway blockages, loss of parking, and disruptions to traffic, transit, bicycle, and pedestrian movement especially in and around the pipeline alignment along Arizona Avenue, Texas Avenue, Saltair Avenue, and Berkeley Street. This may result in a potentially significant safety hazard to construction workers and/or the public; therefore, mitigation would be required. Therefore, incorporation of MM-TRAF-1, as described in Section 3.17(c), would ensure that any temporary impacts to emergency vehicle flow and/or ingress/egress to facilities is coordinated in advance with emergency service providers and law enforcement. This coordination would ensure that provision of sufficient emergency service, access, and evacuation will occur during construction, if necessary. Implementation of MM-TRAF-1 would prevent potentially significant impacts to local emergency service providers. Therefore, impacts would be less than significant with incorporation of mitigation.

Olympic AWTF and Arcadia WTP Expansion

Less-Than-Significant Impact. The proposed Project would not impair or physically interfere with an adopted emergency response plan or a local, state, or federal agency's emergency evacuation plan. Operationally, the proposed Olympic AWTF and Arcadia WTP Expansion would not materially change the characteristics of the existing Arcadia WTP in a way that would alter emergency response or evacuation plans. Emergency access along Wilshire Boulevard and other roadways would be maintained at all times during construction. As such, the proposed Project would not physically interfere with an adopted emergency response plan or evacuation plan. Therefore, impacts would be less than significant.

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

Impacts for All Project Components

No Impact. The area surrounding the proposed Project is highly developed, and as a whole, the Project area lacks any lands considered wildlands or wildland–urban interfaces. According to the California Department of Forestry and Fire Protection's Fire Hazard Severity Zones maps, the proposed well locations, Olympic Pipeline alignment, and existing Arcadia WTO are neither moderately, highly, nor very highly susceptible to wildland fire (CAL FIRE 2007). Therefore, no impacts associated with wildland fires would occur.

3.10 Hydrology and Water Quality

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
X. HYDROLOGY AND WATER QUALITY – Would the project:				
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:				
i) result in substantial erosion or siltation on or off site;	☐	☐	☒	☐
ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off site;	☐	☐	☒	☐
iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	☐	☒	☐
iv) impede or redirect flood flows?	☐	☐	☐	☒
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☐	☒
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☐	☒

Existing Setting

All Project Components

Surface Water Quality

Water quality for all surface water and groundwater within the greater Los Angeles area is regulated under the jurisdiction of the Los Angeles Regional Water Quality Control Board (RWQCB). Water quality standards for all waters in the region are discussed in the region's Basin Plan. Section 303(d) of the federal Clean Water Act (CWA) requires states to identify the waters of the state that do not meet the CWA's national goal of "fishable, swimmable" waters and to develop total maximum daily loads for such waters, with oversight of the United States Environmental Protection Agency (EPA). These waters are commonly referred to as "impaired." A total maximum daily load is a quantifiable assessment of potential water quality issues, contributing sources, and load reductions or control actions needed to restore or protect bodies of water.

Groundwater

Regionally, the Project area is underlain by the Santa Monica Basin. The basin is located in western Los Angeles County and overlies the entire City of Santa Monica, Culver City, Beverly Hills, and portions of western Los Angeles. The basin has a surface area of 50.2 square miles of mostly flat to mildly hilly terrain. The basin is bounded by impermeable rocks of the Santa Monica Mountains to the north, the Ballona Escarpment (Bluffs) to the south, the Newport-Inglewood fault to the east, and the Pacific Ocean to the west. Extensive faulting within the basin results in five district subbasins including: the Arcadia subbasin, Olympic subbasin, Coastal subbasin, Chamock subbasin, and the Crestal subbasin (City of Santa Monica 2016c).

In accordance with the Sustainable Groundwater Management Act (SGMA), the California DWR has classified the Santa Monica Basin as having a medium priority for enacting a Groundwater Sustainability Plan (GSP). Under SGMA, medium and high priority basins are required to submit a GSP or an alternative plan to the DWR by 2022 to ensure that sustainable groundwater goals are met by 2042 (DWR 2019). In response to this prioritization, the Santa Monica City Council has authorized the City to participate in the formation of a Groundwater Sustainability Agency (GSA) over the Santa Monica Basin in collaboration with LADWP, the City of Beverly Hills, Culver City, and Los Angeles County. The GSA will develop and implement a GSP to ensure groundwater is managed on a sustainable basis (SMPW 2019).

Santa Monica's aquifers are replenished by rainfall; through percolation of stream runoff along canyons, streams, and gullies, especially along the front of the Santa Monica Mountains; and by irrigation return, water Development of homes, schools, and businesses over the last century has steadily reduced the amount of rainfall-runoff able to percolate into the groundwater system. Much of the water now flows along paved streets and into lined storm drains where it flows directly to the ocean. Currently, the only areas that may significantly recharge Santa Monica Basin are aquifers within Santa Monica Canyon and large country clubs throughout the area. Much of Santa Monica has extensive residential developments with large lawns. These lawns, as well as the open spaces of golf courses and city parks, provide some additional areas for deep percolation and recharge of excess irrigation. However, the amount of water returned to the aquifer is maybe 5% to 10% of the irrigation and rainfall in these areas (City of Santa Monica 2015).

Drinking Water Quality Standards

Drinking water statutes are codified in the California Code of Regulations (CCR)– Title 17 and 22; Corporations Code, Education Code, Food and Agricultural Code, Government Code, Health and Safety Code, Public Resources Code, and Water Code. Drinking water standards are called maximum contaminant levels (MCLs). MCLs are found in Title 22 of the CCRs. Primary MCLs address health concerns and aesthetics, such as taste and odor, are addressed by secondary MCLs.

Olympic Well Field Restoration

As previously discussed in Section 2.1.2, Oil Well Field Contaminants, the Olympic Well Field contains several contaminants that would require additional treatment to meet drinking water standards. The key contaminants in the Olympic Well Field include: 1,2,3-Trichloropropane (1,2,3-TCP), 1,4- Dioxane, TCE, and PCE.

The Project area is located in the coastal plain, a gently south sloping area of low relief, containing only a few depressions or ponding areas. At its lowest point, the Project is approximately 150 feet above mean sea level (msl) along Olympic Boulevard (USGS 2019). The Project area and the surrounding area is predominately paved and developed. The existing Olympic Boulevard median is grass-covered. Additionally, Ishihara Park includes ornamental vegetation and pervious areas. Nonetheless, the predominance of impervious surfaces in the Olympic Well Field Restoration area prevents water from percolating into the ground, increasing the amount of runoff reaching the storm drain infrastructure.

Existing stormwater runoff from the areas surrounding the proposed well locations is conveyed via sheet flow and curb drains to the adjacent streets, which then directs flows to subsurface storm drains. It appears that stormwater flows in the Project area travel through municipal storm drains until converging into the 12-inch, reinforced cement concrete, Kenter Canyon Drain. Kenter Canyon Drain eventually drain into the Santa Monica Bay (LACDPW 2019).

The proposed Project is located in an area identified by FEMA as being within Zone X (FEMA 2019), which indicates an area of minimal (<0.2%) flood. In addition, the nearest wellhead is approximately 2.1 miles from the ocean and is not located adjacent to any standing bodies of water, the Project site would not be susceptible to tsunamis and seiches.

Olympic Pipeline

The proposed Olympic Pipeline alignment is located in the coastal plain, a gently south sloping area of low relief, containing only a few depressions or ponding areas. The pipeline alignment and associated trenching would be entirely contained within City-owned property and within publicly-owned right-of-way within the Cities of Santa Monica and Los Angeles. The predominance of impervious surfaces prevents water from percolating into the ground, increasing the amount of runoff reaching the storm drain infrastructure.

According to the Los Angeles County Department of Public Works (LACDPW) Los Angeles County Storm Drain System and regional topographic patterns (USGS 2015), it appears a segment of the proposed new pipeline extending mid-way between South Bundy Drive and Amherst Avenue, flow through municipal storm drains before discharging into the Ballona Creek. For the remainder of the alignment, it appears that stormwater flows through municipal storm drains until converging into the 132-inch, reinforced cement concrete, Kenter Canyon Drain. Both Ballona Creek and the Kenter Canyon Drain eventually drain into the Santa Monica Bay (LACDPW 2019).

The proposed Olympic Pipeline is located in an area identified by FEMA as being within Zone X (FEMA 2019), which indicates an area of minimal (<0.2%) flood. In addition, as the Project is approximately 2.75 miles from the ocean at its closest point and is not located adjacent to any standing bodies of water, the Project site would not be susceptible to tsunamis and seiches.

Olympic AWTF and Arcadia WTP Expansion

The existing Arcadia WTP is located on a relatively flat parcel and is approximately 250 feet above mean sea level (msl) (USGS 2019). The Arcadia WTP and the surrounding area is predominately paved and developed. Vegetation within and near the Project area consists of maintained lawns and ornamental vegetation, as well as shrubs and trees located in isolated planter areas. The predominance of impervious surfaces prevents water from percolating into the ground, increasing the amount of runoff reaching the storm drain infrastructure. Undeveloped land has a much higher rate of recharge.

Existing stormwater runoff from the Project site is conveyed via sheet flow and curb drains to the adjacent streets, which then directs flows to subsurface storm drains. According to the LACDPW's Los Angeles County Storm Drain System and regional topographic patterns (USGS 2015), it appears that the Arcadia WTP flow through municipal storm drains before discharging into the Ballona Creek. Ballona Creek contains the following 303(d) contaminants: cadmium, chlordane, DDT (Dichlorodiphenyltrichloroethane), and dieldrin (SWRCB 2017).

The proposed Project is located in an area identified by FEMA as being within Zone X (FEMA 2019), which indicates an area of minimal (<0.2%) flood. In addition, as the Project is approximately 3.0 miles from the ocean and is not located adjacent to any standing bodies of water, the Project site would not be susceptible to tsunamis and seiches.

Impact Analysis

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

Olympic Well Field Restoration

Construction

Less-Than-Significant Impact. Water quality impacts could occur during construction as a result of spilled or leaked petroleum products and/or entrainment of sediment, debris, or other construction-related materials into stormwater runoff. In addition, construction may involve certain non-stormwater discharges, including excavation dewatering discharge that, if improperly performed, could contribute pollutants to the local storm drain system or receiving waters.

To avoid adverse impacts on water quality, the City of Santa Monica and/or its construction contractors would conduct construction activities in accordance with the statewide Construction General Permit (Order No. 2009-0009-DWQ/CAS000002, as amended), which require the implementation of a SWPPP. The SWPPP would include all applicable BMPs necessary to meet discharge prohibitions, effluent limitations, and other performance standards specified in the permit. The following list includes examples of BMPs that would be implemented during construction of the project:

- Storm drain inlets in the construction area would be surrounded by gravel bags or other suitable methods of filtration.
- All potential hazardous wastes would be contained, transported, and disposed of in accordance with applicable regulations.

- Construction work areas would be regularly swept and kept clean, orderly, and free of trash.
- Upon completion of construction activities, the area would be restored to pre-construction conditions.
- All authorized non-storm water discharges would be identified in the SWPPP along with BMPs that would be implemented to eliminate or reduce pollutants, which may include the use of settling tanks or screens to reduce suspended sediment loads.

The specific location and type of BMPs to be implemented would be outlined in the SWPPP, which must be prepared by a qualified SWPPP professional. Construction would not begin until a waste discharge identification number and letter of coverage have been received from the SWRCB. Compliance with the Construction General Permit and the associated SWPPP prepared for the project would result in less than significant impacts to water quality during construction and excavation. Therefore, construction impacts associated with water quality standards would be less than significant

Operation

Less-Than-Significant Impact Operationally, the proposed Olympic Well Field Restoration would not materially change the characteristics of the area surrounding the proposed wells in a way that would result in loss of topsoil affecting downstream waterways. In addition, the proposed wells are not located within a site of significant groundwater infiltration; thus, impacts to groundwater quality would be less than significant. The wells would be designed in accordance the Department of Water Resources Bulletin 74, which sets minimum standards for wells with the purpose of protecting California's groundwater quality. Further, the proposed Project itself involves expanding local groundwater production by providing advanced treatment for the contaminated groundwater basin to return Olympic Well Field to its full production capacity, thus restoring the Olympic Well Field. The proposed Project would not result in a substantial increase in impervious area with the exception of grading pads around the well sites. However, the increase in impervious area would be over an existing median and within a City-park that has already been developed and does not serve as a significant groundwater recharge area or an area near a surface body of water. The wells would be constructed in accordance with the City's Municipal Code requirements, including Chapter 7.10, Runoff Conservation and Sustainable Management, which addresses the City's requirement to minimize potential adverse impacts to receiving waters, through runoff reductions, and Low-Impact Development (LID) and Green Infrastructure requirements, as applicable. Best practices at the well sites may include the use of permeable paving materials (e.g. pervious concrete and porous asphalt, pervious concrete and plastic modular and interlocking paving materials) and/or directing rainwater or runoff to permeable areas for infiltration. Therefore, operational impacts associated with water quality standards would be less than significant.

Olympic Pipeline

Construction

Less-Than-Significant Impact. Water quality impacts could occur during construction as a result of spilled or leaked petroleum products and/or entrainment of sediment, debris, or other construction-related materials into stormwater runoff. In addition, construction may involve certain non-stormwater discharges, including excavation dewatering discharge that, if improperly performed, could contribute pollutants to the local storm drain system or receiving waters.

To avoid adverse impacts on water quality, the City of Santa Monica and/or its construction contractors would conduct construction activities in accordance with the statewide Construction General Permit (Order No. 2009-0009-DWQ/CAS000002, as amended), which require the implementation of a SWPPP. The SWPPP would include all applicable BMPs necessary to meet discharge prohibitions, effluent limitations, and other performance standards specified in the permit. Sediment-control BMPs may include stabilized construction entrances, sediment filters on existing inlets, or the equivalent to reduce erosion impacts and to prevent, to the extent feasible, stormwater runoff conveying sediments to downstream receiving water (measured listed above). Compliance with the Construction General Permit and the associated SWPPP prepared for the project would result in less than significant impacts to water quality during construction and excavation. Therefore, construction impacts associated with the proposed Olympic Pipeline would be less than significant.

Operation

Less-Than-Significant Impact Operationally, the proposed Olympic Pipeline would not materially change the characteristics of the roadways in a way that would result in loss of topsoil affecting downstream waterways, which could impact downstream water quality. In addition, the existing roadways do not provide significant groundwater infiltration and installation of the below grade pipeline would not change the impervious nature of the roadway; thus, impacts to groundwater quality would be less than significant. Further, the proposed Project itself involves restoring the Olympic Well Field and expanding local groundwater production by providing advanced treatment for the contaminated groundwater basin to return Olympic Well Field to its full production capacity. Therefore, operational impacts associated with water quality standards would be less than significant.

Olympic AWTF and Arcadia WTP Expansion

Construction

Less-Than-Significant Impact. Water quality impacts could occur during construction as a result of spilled or leaked petroleum products and/or entrainment of sediment, debris, or other construction-related materials into stormwater runoff. In addition, construction may involve certain non-stormwater discharges, including excavation dewatering discharge that, if improperly performed, could contribute pollutants to the local storm drain system or receiving waters.

To avoid adverse impacts on water quality, the City of Santa Monica and/or its construction contractors would conduct construction activities in accordance with the statewide Construction General Permit (Order No. 2009-0009-DWQ/CAS000002, as amended), which require the implementation of a SWPPP. The SWPPP would include all applicable BMPs necessary to meet discharge prohibitions, effluent limitations, and other performance standards specified in the permit. Sediment-control BMPs may include stabilized construction entrances, sediment filters on existing inlets, or the equivalent to reduce erosion impacts and to prevent, to the extent feasible, stormwater runoff conveying sediments to downstream receiving water (measured listed above). Compliance with the Construction General Permit and the associated SWPPP prepared for the project would result in less than significant impacts to water quality during construction and excavation.

If high groundwater is encountered during excavations, groundwater would be removed during the excavation, either by pumping it from the ground through dewatering wells that have been installed adjacent to the site or by using sump pumps at the bottom of the excavation. The extracted groundwater would be pumped into a settling tank, tested, and then treated for any contaminants before discharged to the sewer. The City of Santa Monica would be required to comply with all applicable permit conditions. Therefore, construction impacts associated with water quality would be less than significant.

Operation

Less-Than-Significant Impact. Operationally, the proposed Olympic AWTF and Arcadia WTP Expansion would not materially change the characteristics of the alignment in a way that would result in loss of topsoil affecting downstream waterways, which could impact downstream water quality. In addition, the proposed Project is not located within a site of significant groundwater infiltration; thus, impacts to groundwater quality would be less than significant. Further, the proposed Project itself involves restoring the Olympic Well Field and expanding local groundwater production by providing advanced treatment for the contaminated groundwater basin to return Olympic Well Field to its full production capacity. Proposed development would predominately occur in previously developed areas, which are paved.

The operations of the Olympic Well Field Restoration component could potentially result in an increase in brine discharge at the existing Arcadia WTP because an increase in local water supply flow would run through the treatment train and generate RO concentrates. However, coordination with LA Sanitation with regard to discharges from the existing Arcadia WTP would ensure the proposed Project would continue to comply with the Industrial Wastewater Permit issued by the City of Los Angeles. Currently, the City is approved to discharge 44,317 gallons per day to the City of Los Angeles sewer system at the northern end of the existing Arcadia WTP (LA Sanitation 2018). The proposed Project would not request additional sewer disposal capacity from LA Sanitation for the greensand filter backwash, which currently goes to LA Sanitation's sewer because the Project proposes to reduce the RO concentrates that will be discharged (Pour, pers. comm. 2020). Therefore, there the proposed Olympic Well Field Restoration can be served by LA Sanitation's existing sewer disposal line to ensure the proposed Project does not exceed wastewater discharge requirements. Impacts would be less than significant.

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

Olympic Well Field Restoration

Less-Than-Significant Impact. The proposed Olympic Well Field Restoration consists of the installation of up to four wells. Operation of the proposed Project would not interfere with groundwater recharge. The two proposed production wells (SM-8, SM-9) would harvest groundwater and convey it to the Olympic AWTF for treatment. As such, the production wells would allow for groundwater recovery and the injection wells (SM-10i, SM-11i) would recharge the Olympic Well Field with purified water from the City's SWIP to maintain sustainable yields. Further, the proposed Project itself involves restoring the Olympic Well Field and expanding local groundwater production by providing advanced treatment for the contaminated groundwater basin to return Olympic Well Field to its full production capacity. As such, the proposed Project would not deplete groundwater supplies or interfere substantially with groundwater recharge, and impacts would be less than significant.

Olympic Pipeline

No Impact. The proposed Olympic Pipeline would not require the permanent use of water supplies, which could decrease groundwater supplies. Rather the pipeline would convey groundwater. In addition, the existing and proposed pipeline alignment are located with existing roadways that are impervious, and thus, does not support groundwater recharge. Therefore, the construction and operations associated with the proposed Project would not decrease groundwater or interfere substantially with groundwater recharge that may impede sustainable groundwater management. As such, no impact would occur.

Olympic AWTF and Arcadia WTP Expansion

Less-Than-Significant Impact. Construction of the proposed Project would not substantially increase the amount of impermeable surface area on-site and would not substantially interfere with groundwater recharge. Operation of the proposed Project would not interfere with groundwater recharge. A portion of the groundwater would be harvested and sent to the Olympic AWTF during operation of the proposed Project. However, the production wells would allow for groundwater recovery and the injection wells would recharge the Olympic Well Field with purified water from the City's SWIP to maintain sustainable yields. Further, the proposed Project itself involves restoring the Olympic Well Field and expanding local groundwater production by providing advanced treatment for the contaminated groundwater basin to return Olympic Well Field to its full production capacity. As such, the proposed Project would not deplete groundwater supplies or interfere substantially with groundwater recharge, and impacts would be less than significant.

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

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

Short-Term Construction Impacts for All Project Components

Less-Than-Significant Impact. All Project components are within urbanized areas of the cities of Santa Monica and Los Angeles. Construction of the proposed Project may temporarily alter the on-site drainage patterns at the construction sites, but such alterations would be temporary and limited to the active construction sites. Construction of the proposed Project would not alter the course of a stream or river. During construction, the proposed Project would implement sediment-control BMPs in accordance with the SWPPP to reduce soil erosion or siltation on- or off-site, including through stabilizing temporary stockpiles. These measures would reduce off-site runoff to less than or equal to existing conditions. As such, the proposed Project would not result in substantial erosion or siltation on- or off-site and impacts would be less than significant.

Long-Term Operational Impacts for All Project Components

No Impact. Operations of the proposed Project would not alter the course of a stream or river. Proposed drainage patterns would remain mostly unchanged compared to existing conditions. On-site stormwater would be conveyed to storm drain grated inlets which would drain through the municipal underground storm

system. As such, the proposed Project would not result in substantial erosion or siltation on- or off-site and impacts would be less than significant.

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

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

Short-Term Construction Impacts for All Project Components

Less-Than-Significant Impact. All Project components are within urbanized areas of the cities of Santa Monica and Los Angeles. Construction of the proposed Project may temporarily alter the on-site drainage patterns at the construction sites, but such alterations would be temporary and limited to the active construction sites. Construction of the proposed Project would not alter the course of a stream or river. During construction, the proposed Project would implement BMPs in accordance with the SWPPP to limit stormwater runoff volumes and rates. Impacts would be less than significant.

Olympic Well Field Restoration

Less-Than-Significant Impact. The proposed wells for the Olympic Well Field Restoration would be constructed within the existing Olympic Boulevard median and within Ishihara Park. All well completion sites are currently vegetated and pervious. Each well site and associated artistic enclosure structure is anticipated to be approximately 22 feet wide by 40 feet long, or approximately 880 square feet in size. Each well site would be immediately surrounded by pervious grassy surfaces, which is expected to absorb runoff from the site. Additionally, the well sites are located adjacent to existing facilities complete with storm drainage facilities (i.e., Olympic Boulevard and Ishihara Park), which would accommodate the anticipated runoff. All construction projects, including the well completion activities, must be constructed in accordance with the City's Municipal Code requirements, including Chapter 7.10, Runoff Conservation and Sustainable Management, which addresses the City's requirement to minimize potential adverse impacts to receiving waters, through runoff reductions, and LID and Green Infrastructure requirements, as applicable. Best practices at the well sites may include the use of permeable paving materials (e.g. pervious concrete and porous asphalt, pervious concrete and plastic modular and interlocking paving materials) and/or directing rainwater or runoff to permeable areas for infiltration.

The proposed Project would not substantially change the amount of stormwater runoff from the Project site and surrounding area due to the small size of the new impervious areas (approximately 880 square feet). The well completions would result in minor additional amounts of surface runoff due to the new impervious surfaces; however, this runoff would sheetflow into adjacent vegetated areas within the median (or for well 11i to Ishihara Park), and into existing stormwater drainage facilities. Therefore, the proposed Olympic Well Field Restoration would not substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off site. Impacts would be less than significant.

Olympic Pipeline

No Impact. The proposed Olympic Pipeline alignment is located within existing roadways that are currently impervious, and thus, the post-Project condition would not change the amount of stormwater runoff from the site.

Less-Than-Significant Impact. The proposed Olympic AWTF and Arcadia WTP Expansion would require the removal of up to 0.69-acre of vegetated grassy area with impervious surfaces to accommodate the new facilities. The Project site is approximately 4.8 acres in size; therefore, the proposed Project would result in a potentially 14% increase in impervious surfaces on the Project site. Impervious surfaces result in additional stormwater runoff, which could increase the potential for on-site or off-site flooding.

All construction projects, including the Olympic AWTF and Arcadia WTP Expansion, would be constructed in accordance with the City's Municipal Code requirements, including Chapter 7.10, Runoff Conservation and Sustainable Management, which addresses the City's requirement to minimize potential adverse impacts to receiving waters, through runoff reductions, and LID and Green Infrastructure requirements, as applicable.

According to Section 7.10.090(d) of the SMMC, for any development requiring runoff mitigation volume on a premises equal to or greater than 15,000 square feet, a Runoff Mitigation Plan must be prepared to demonstrate the store and use of 100% of the stormwater quality design volume generated from that development, and such collected rainwater must be used directly, on-site and/or off-site, for allowed non-potable applications, replacing municipal potable water. LID design elements that may be used at the Olympic AWTF and Arcadia WTP Expansion may include, but not be limited to:

(1) Direct rainwater or runoff to rainwater or stormwater harvesting systems (rain barrels or cisterns) for non-potable uses;
(2) Use pervious areas with LID strategies to allow for rainwater or stormwater management or temporary storage for more infiltration of water into the ground through such means as:
    (A) Bio-retention/bio-infiltration,
    (B) Green roofs, green strips, green transportation infrastructure, including parkways and medians. The use of landscaped BMPs to mitigate rainwater or runoff from impervious areas must include the appropriate storage volume for the calculated mitigation volume storage/retention capacity,
    (C) Bio-swales,
    (D) Landscapes (e.g., bio-infiltration). The use of landscapes to mitigate rainwater or runoff from impervious areas must include the appropriate mitigation volume storage/retention capacity,
    (E) Pervious paving materials, such as, but not limited to, pervious concrete and porous asphalt, pervious concrete and plastic modular and interlocking paving materials, and equivalent materials. The use of this BMP to mitigate runoff from impervious areas shall include the appropriate mitigation volume storage/retention capacity;

(3) Direct rainwater or runoff to permeable areas for infiltration through LID strategies. The use of pervious areas to mitigate rainwater or runoff from impervious areas shall include the appropriate stormwater quality design volume storage/retention capacity:

(A) Orient roof rainwater and direct downspouts towards pervious surfaces, infiltration pits (drywells), French drains, or other structural BMPs rather than directly to impervious surfaces, such as driveways and parking lots (unless permeable and with the required storage capacity), so that water is used beneficially and sustainably instead of flowing off-site to the municipal separate storm sewer system,

(B) Grade the parcel to divert flow to pervious areas,

(C) Use retention structures or terrain (e.g., terraces, curbs or berms) to slow rainwater or runoff and retain it on-site,

(D) Remove or design curbs, and berms to direct water from impervious surfaces (e.g., parking lots, unless pervious) to drain to pervious or landscaped areas,

(E) For structures without roof gutters and downspouts, all runoff must fall onto or drain directly or indirectly to pervious areas having proper grading and storage/retention volume for the required mitigation volume, and pose no threat to structural integrity or adjacent structures,

(F) Impervious surface parking lots (with no sub-surface parking) shall have rainwater directed to pervious areas, temporary storage or infiltrating areas, including sunken planters and/or other LID retention or infiltration BMPs. Where surface BMPs mitigate rainwater from impervious areas, they shall include the appropriate storage/retention mitigation volume.

Incorporation of appropriate BMPs would ensure that the proposed Project would not substantially change the amount of stormwater runoff from the Project site and surrounding area. Therefore, the proposed Olympic AWTF and Arcadia WTP Expansion would not substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off site. Impacts would be less than significant.

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

iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or

Olympic Well Field Restoration

Less-Than-Significant Impact. As previously discussed, the Project does not increase runoff greater than existing conditions, would improve stormwater quality, and would not exceed the local stormwater capacity. For these reasons, the Project would have less than significant impacts. Refer to Section 3.10(a) above for a discussion of water quality impacts.

Olympic Pipeline

Less-Than-Significant Impact. The proposed Project involves the construction of Olympic Pipeline within existing roadways in the Cities of Santa Monica and Los Angeles. The proposed pipeline would be constructed within existing paved roadways and would not increase impervious areas nor alter on- or off-

site drainage such that increased stormwater flows would occur. Therefore, the proposed Project would not create or contribute to increased runoff, and no impacts would occur.

Olympic AWTF and Arcadia WTP Expansion

Less-Than-Significant Impact. As previously discussed, the Project does not increase runoff greater than existing conditions, would improve stormwater quality, and would not exceed the local stormwater capacity. For these reasons, the Project would have less than significant impacts. Refer to Section 3.10(a) above for a discussion of water quality impacts.

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

iv) impede or redirect flood flows?

Impacts for All Project Components

No Impact. The proposed well locations, Olympic Pipeline, and exiting Arcadia WTP are within Zone X of the FEMA Flood Map Service Area (FEMA 2019). Zone X is considered an area of minimal flood hazard (i.e., outside of the 100-year flood zone). As such, implementation of the proposed Project would occur within a flood zone as well as would not divert, impede or redirect flood flows. As a result, no impact would occur.

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

Impacts for All Project Components

No Impact. As previously discussed, the Project site is in an area of minimal flood hazard and thus has low potential for flooding. In addition, the nearest wellhead, the Olympic Pipeline, and existing Arcadia WTP are approximately 2.1, 2.7, and 3.0 miles from the Pacific Ocean, respectively. Additionally, there are not enclosed bodies of waters, such as lakes or reservoirs nearby (DOC 2019). As such, there is no potential for tsunamis or seiches to affect the Project site As a result, no impacts would occur.

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

Olympic Well Field Restoration

Less-Than-Significant Impact. As previously discussed, the proposed Project would comply with all applicable water quality-regulatory requirements, including the implementation of a SWPPP, stormwater BMPs, and LID design, which would minimize potential off-site surface water quality impacts and contribute to a reduction in water quality impacts within the overall Ballona Creek Watershed and the South Santa Monica Bay Watershed. In addition, with compliance with these regulatory requirements, the Project would reduce potential water quality impairment of surface waters such that existing and potential beneficial uses of key surface water drainages throughout the jurisdiction of the Los Angeles RWQCB Basin Plan would not be adversely impacted. As a result, the Project would not conflict with or obstruct the Los Angeles RWQCB Basin Plan.

With respect to groundwater management, SGMA empowers local agencies to form GSAs to manage basins sustainability and requires those GSA to adopt GSPs for crucial groundwater basins in California. A GSP is currently being established for the Santa Monica Basin as it was considered to a medium-priority basin. Furthermore, the Project would not substantially deplete these groundwater supplies or interfere substantially with groundwater recharge. As a result, the Project would not conflict with or obstruct any groundwater management plans, and impacts would be considered less than significant.

Olympic Pipeline

Less-Than-Significant Impact. The Project would comply with all applicable water quality-regulatory requirements, including the implementation of a SWPPP, stormwater BMPs, and LID design, which would minimize potential off-site surface water quality impacts and contribute to a reduction in water quality impacts within the overall Ballona Creek Watershed and the South Santa Monica Bay Watershed. In addition, with compliance with these regulatory requirements, the Project would reduce potential water quality impairment of surface waters such that existing and potential beneficial uses of key surface water drainages throughout the jurisdiction of the Los Angeles RWQCB Basin Plan would not be adversely impacted. As a result, the Project would not conflict with or obstruct the Los Angeles RWQCB Basin Plan.

With respect to groundwater management, SGMA empowers local agencies to form GSAs to manage basins sustainability and requires those GSA to adopt GSPs for crucial groundwater basins in California. A GSP is currently being established for the Santa Monica Basin as it was considered to a medium-priority basin. Furthermore, the Project would not substantially deplete these groundwater supplies or interfere substantially with groundwater recharge. As a result, the Project would not conflict with or obstruct any groundwater management plans, and impacts would be considered less than significant.

Olympic AWTF and Arcadia WTP Expansion

Less-Than-Significant Impact. As previously discussed, the proposed Project would comply with all applicable water quality-regulatory requirements, including the implementation of a SWPPP, stormwater BMPs, and LID design, which would minimize potential off-site surface water quality impacts and contribute to a reduction in water quality impacts within the overall Ballona Creek Watershed and the South Santa Monica Bay Watershed. In addition, with compliance with these regulatory requirements, the Project would reduce potential water quality impairment of surface waters such that existing and potential beneficial uses of key surface water drainages throughout the jurisdiction of the Los Angeles RWQCB Basin Plan would not be adversely impacted. As a result, the Project would not conflict with or obstruct the Los Angeles RWQCB Basin Plan.

With respect to groundwater management, SGMA empowers local agencies to form GSAs to manage basins sustainability and requires those GSA to adopt GSPs for crucial groundwater basins in California. A GSP is currently being established for the Santa Monica Basin as it was considered to a medium-priority basin. Furthermore, the Project would not substantially deplete these groundwater supplies or interfere substantially with groundwater recharge. As a result, the Project would not conflict with or obstruct any groundwater management plans, and impacts would be considered less than significant.

3.11 Land Use and Planning

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XI. LAND USE AND PLANNING – Would the project:				
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?	☐	☐	☒	☐

Existing Setting

Olympic Well Field Restoration

The proposed groundwater production wells SM-8 and SM-9, and the proposed groundwater injection well SM-10i are within the City of Santa Monica's public right-of-way median of Olympic Boulevard. The existing median separates the two-lane Olympic Boulevard. SM11i is located within Ishihara Park. The proposed recycled water pipeline would be constructed within existing roadways (Exposition Boulevard and Stewart Street). Therefore, they are not located within a specific parcel or located at a specific street address. The wellfield and surrounding area is located with the Bergamot Area Plan (City of Santa Monica 2019c). The uses surrounding the wellfield includes a mix of office, commercial, rail, and arts.

Olympic Pipeline

The proposed Olympic Pipeline would be constructed within existing roadways that are within the City of Santa Monica and City of Los Angeles. The Olympic Pipeline is located within several streets including Berkeley Avenue, Nebraska Avenue, Colorado Avenue, Arizona Avenue, Centinela Avenue, Texas Avenue, and Saltair Avenue. Additionally, there is the option for an alternative alignment via Bundy Drive. The surrounding areas are zoned Conservation: Creative Sector, Low-Density Residential, and Mixed-Use Boulevard Low in the City of Santa Monica and Multi-Family Medium and Public Facility in the City of Los Angeles.

Olympic AWTF and Arcadia WTP Expansion

The existing Arcadia WTP is zoned [Q]PF-1XL (Qualified Public Facilities in Height District 1, Extra Limited), with a General Plan land use designation of "Public Facilities". The adjacent property that would be used for staging includes APNs 426-300-3271, -3272, and -3273, which total 10,556 square feet (0.24-acre) and are zoned [Q]C2-1L-CDO (Qualified Commercial in Height District 1, Limited) within the West Wilshire Boulevard Community Design Overlay (CDO), with a General Plan land use designation of "Community Commercial".

Impact Analysis

3.11 a) Would the project physically divide an established community?

Olympic Well Field Restoration

No Impact. The physical division of an established community typically refers to the construction of a linear feature (such as a major highway or railroad tracks) or removal of a means of access (such as a local road or bridge) that would impair mobility within an existing community or between a community and outlying area. Under the existing condition, the proposed well locations for SM8, 9, and 10i would be located within the existing Olympic Boulevard median. SM11i would be located within existing Ishihara Park. The proposed recycled water pipeline would be constructed within existing roadways (Exposition Boulevard and Stewart Street). No new physical separation of communities would occur as a result of the proposed wells, as the existing land use patterns in the area would be maintained. Therefore, no impacts associated with physical division of an established community would occur.

Olympic Pipeline

No Impact. The proposed Olympic Pipeline would be located entirely underground; therefore, the pipeline would not physically divide an established community and there would be no impact.

Olympic AWTF and Arcadia WTP Expansion

Less-Than-Significant Impact. The proposed Olympic AWTF and Arcadia WTP Expansion would be co-located at the existing Arcadia WTP. The proposed Project would not divide an established community. Rather, the proposed Olympic AWTF and Arcadia WTP Expansion would occur within an existing public facility owned and operated by the City of Santa Monica. Therefore, impacts associated with the physically division of an established community would be less than significant.

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

All Project Components

Less-Than-Significant Impact. The Project involves constructing the Olympic Pipeline from the Olympic Well Field to the Arcadia WTP in order to separate Olympic Well Field contaminated groundwater from the Charnock Well Field groundwater for separate treatment at the Arcadia WTP. The City's relevant Planning Documents include the LUCE and the Bergamot Area Plan, which both consider future population growth to ensure sufficient capacity. Additionally, the City's SWMP, Climate Action and Adaptation Plan, and Sustainable City Plan are relevant to the proposed Project. The Arcadia WTP portion of the Project is located within the City of Los Angeles boundaries but is owned and operated by the City of Santa Monica. Because the proposed Project involves upgrades and expansions to the existing Arcadia WTP, the proposed use is consistent with the City of Los Angeles' Public Facilities designation. As previously discussed in Section 3.1(c), the building ordinances of the City of Los Angeles would not apply to the construction of facilities for the treatment of water as proposed by the City of Santa Monica. Further, as discussed in Section 2.7, the appropriate permits and approvals would be obtained from the City of Los Angeles to ensure the proposed Project complies with applicable plans, policies, and regulations.

The proposed wells, SM-8, SM-9, and SM-10i, associated with the Olympic Well Field, as well as the proposed pipelines that would connect the wells, are all entirely located within the Olympic Boulevard right-of-way. The proposed recycled water pipeline would be constructed within existing roadways (Exposition Boulevard and Stewart Street). As such, there are no associated land use designations. SM-11i is within Ishihara Park and is designated as Mixed-Use Creative. Although there is no land use designation for SM-8, SM-9, and SM-10i, the existing median on Olympic Boulevard is recognized as an important open space resource in the BAP (City of Santa Monica 2013). Construction impacts associated with the wells would be short-term and as discussed within this IS/MND would not significant impacts upon implementation of mitigation measures. Once the completed, the wells would contain piping aboveground as depicted in Figure 2C, and would be enclosed in an above-ground artistic fencing structure. Figure 8, Representative Production Well Site, includes a rendering of typical aboveground well structure that would be construction at the proposed well sites. Further, these installations would be consistent with the BAP's plan for "major public art installations in visible locations throughout the Plan area, such as the Olympic Boulevard median" (City of Santa Monica 2013). The well enclosures would be designed by City commissioned artist to comply with BAP. The proposed Olympic Pipeline would be located belowground and would not conflict with current land policies, programs, or regulations. Therefore, the proposed uses associated with the Project would not with the land use and zoning designations.

Additionally, the proposed Project has been set forth as part of the City's goal to increase water self-sufficiency through strategies identified in the SWMP. The SWMP has identified expanding local groundwater production as one of the key components to maximize local water resources and reduce reliance on costly imported water. Currently, the Olympic Well Field generally produces between 1,000 acre-feet/yr and 1,600 acre-feet/yr. However, the Olympic Well Field contains several contaminants that would require additional treatment to meet drinking water standards. The proposed Project would restore the Olympic Well Field to full production capacity through groundwater well improvements, a new dedicated pipeline that would separate groundwater from the Olympic Well Field and eliminate comingling from other groundwater well fields, and a new Olympic AWTF that would be co-located at the existing Arcadia WTP. The proposed Project would maximize production at the Olympic Well Field, which would be consistent with the SWMP's intent to expand local groundwater production and aid the City in its goal to achieve increased water self-sufficiency. Therefore, the proposed Project is consistent with the City's SWMP.

Further, as discussed previously, the City of Santa Monica adopted its Sustainable City Plan in September 1994 (most recently updated in January 2014), which is a long-term plan to reduce GHG emissions from municipal operations and community activities within the City, and would also help Santa Monica become a more "sustainable" city. Table 3.8-3, provided in Section 3.8, Greenhouse Gas Emissions, provides an overview of applicable goals within the Sustainable City Plan and the Project's consistency with it. The Project aims to enhance sustainability of the City of Santa Monica's water supply through developing alternative water supplies and expanding local groundwater supplies to eliminate reliance on purchase of imported water supplies. Accordingly, an objective of the Project is to conserve resources. As shown in Table 3.8-3, the Project does not conflict with any of the GHG-reducing measures or goals within the Sustainable City Plan and thus, is consistent with this plan. Additionally, Table 3.8-4 provided in Section 3.8, Greenhouse Gas Emissions, provides the Project's consistency with the City's CAAP. The operational emissions and amortized construction emissions is estimated to be 2,834 MT CO2 per year. When considering the avoided GHG emissions associated with replacing imported water with local groundwater (3,654 MT CO2 per year), net Project-generated emissions are negative resulting in a potential GHG

emissions benefit. As shown in Table 3.8-4, the Project does not conflict with any of the GHG-reducing measures of the CAAP and thus, is consistent with this plan.

For these reasons, the project would not 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. Impacts would be less than significant.

3.12 Mineral Resources

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XII. MINERAL RESOURCES – Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	☐	☒

Existing Setting

Olympic Well Field Restoration

The California Geologic Energy Management Division is responsible for monitoring the drilling, operation, maintenance, and abandonment of oil, gas, and geothermal wells with the intention of environmental protection, public health and safety, and general environmental conservation methods. There are no wells located on the Project site (CalGEM 2020).

DOC, Division of Mines and Geology, mapped mineral resource zones within Los Angeles County. According to DOC's Mineral Lands Classification Map, the proposed well locations and recycled water pipeline are not located within an area with known mineral resources. The Project site is designated as Mineral Resources Zone (MRZ)-1, an area where adequate information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence (DOC 1979).

Olympic Pipeline

There are no wells located on the Project site (CalGEM 2020). Additionally, the proposed Olympic Pipeline is designated as MRZ-1, an area where adequate information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence (DOC 1979).

Olympic AWTF and Arcadia WTP Expansion

There are no wells located on the Project site (CalGEM 2020). Additionally, the location for the Olympic AWTF and Arcadia WTP Expansion is designated as MRZ-1, an area where adequate information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence (DOC 1979).

Impact Analysis

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

Olympic Well Field Restoration

No Impact. The proposed well and recycled water pipeline locations are identified as MRZ-1, which is defined as areas where no significant construction aggregate deposits are present, or where it is judged that little likelihood exists for their presence (DOC 1979). Therefore, the proposed Project would not result in the loss of known mineral resources and there would be no impact.

Olympic Pipeline

No Impact. The proposed Olympic Pipeline alignment is within an area identified as MRZ-1, which is defined as areas that have no significant construction aggregate deposits are present, or where it is judged that little likelihood exists for their presence (DOC 1979). Therefore, the proposed Project would not result in the loss of known mineral resources and there would be no impact.

Olympic AWTF and Arcadia WTP Expansion

No Impact. The location of the existing Arcadia WTP identified as MRZ-1, which is used to define areas where adequate information indicates that no significant construction aggregate deposits are present, or where it is judged that little likelihood exists for their presence (DOC 1979). Therefore, the proposed Project would not result in the loss of known mineral resources and there would be no impact.

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

Olympic Well Field Restoration

No Impact. According to the City of Santa Monica's Conservation Element, the only mineral activity in the past has been the removal of sand from the beaches for construction and other purposes. No other mineral exploration or mining has occurred or is expected (City of Santa Monica 1975). In addition, there are no known mineral resources located within the proposed well locations and surrounding area (DOC 1979). Therefore, no impacts associated with loss of availability of a known mineral resource would occur.

Olympic Pipeline

City of Santa Monica

No Impact. As discussed above, no mineral extraction occurs within the City. Additionally, the Project site is not designated as an existing mineral extraction area by the State (DOC 1979). Therefore, the proposed Olympic Pipeline would not result in the loss of a mineral resource recovery site, and no impacts would occur.

City of Los Angeles

No Impact. Per the City of Los Angeles guidance, a significant impact would occur if the Project site were located within a MRZ-2 area or potential mineral resource area. As discussed above, the proposed Olympic Pipeline within the City of Los Angeles is not located within a known mineral resource area. Therefore, no impacts associated with the loss of availability of a known mineral resources would occur,

Olympic AWTF and Arcadia WTP Expansion

No Impact. Per the City of Los Angeles guidance, a significant impact would occur if the Project site were located within a MRZ-2 area or potential mineral resource area. As discussed above, the location of the existing Arcadia WTP within the City of Los Angeles is not located within a known mineral resource area. Therefore, no impact associated with loss of availability of a locally important mineral resource recovery site would occur.

3.13 Noise

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XIII. NOISE – Would the project result in:				
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☒	☐	☐
b) Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☒	☐

Existing Setting

Olympic Well Field Restoration

SM-8, SM-9, and SM-10i are located between 26th Avenue and Centinela Avenue within the Olympic Boulevard median. Surrounding land uses includes a mix of office, commercial, the Metro Light Rail E Line alignment and Bergamot Station, and the 26th Street Arts Center. SM-11i and the proposed recycled water pipeline are within Ishihara Park and within the existing roadway, respectively. The surrounding land uses include single family residential, open space, and industrial. The following describes the land uses in the immediate vicinity of each of the four proposed well locations and the recycled water pipeline:

- Well SM-10i: To the north of Olympic Boulevard is an existing office park with several 6-story office buildings and landscaping. To the east, across the intersection of Olympic Boulevard and 26th Avenue, are additional office buildings to the north and the Bergamot Station Metro station to the south. To the south and west of well SM-10i is the Metro Light Rail E Line and further south is an Extra Space storage building with an associated surface parking lot.
- Well SM-8: To the north of Olympic Boulevard is an office space for a media and production company with an associated surface parking lot that is screened by vegetation. To the east, across the intersection of Olympic Boulevard and Stewart Street, is a single-story office building to the north and the Lantana Media Campus, a flexible long-term and short-term leasing space, is to the south. To the south is a two-story office structure for XYZ, an IT Media company, and Metro Light Rail E Line. Further, south are art gallery spaces. There are not distinct uses to the west besides the continuing median and Olympic Boulevard until 26th Street.
- Well SM-9: To the north of Olympic Boulevard is Media Park Santa Monica, a commercial property with three commercial office buildings. To the east, across the intersection of Olympic Boulevard and Centinela Avenue are several single-story commercial structures. Across Centinela Avenue, uses are within the City of Los Angeles corporate boundary. To the south of Olympic Boulevard, there is an Extra Space storage building, a single-story commercial building, and a three-story commercial building. To the west, there are commercial office spaces and the median continues west until Stewart Street.
- Well SM-11i: To the north of Ishihara Park is Metro Division 14 Operations and Maintenance Facility, a train yard inclusive of a two-story in height building and associated surface parking lot, which extends the entire length of Ishihara Park along Exposition Boulevard towards the east. To the south and west across Exposition Boulevard and Dorchester Avenue, respectively, are single-family residential uses.
- Recycled Water Pipeline: To the north of Exposition Boulevard is Ishihara Park, and to the south are single family residential uses. To the west of Stewart Street and Exposition Boulevard is the Santa Monica City Yards, Gandara Park, and Bergamot Station. The east of Stewart Street and south of Exposition Boulevard are single family residential uses.

Represented by locations Olympic #3 and Olympic #4 in Table 3.13-1, the existing outdoor ambient sound environment of these above-listed areas was measured during a field survey conducted on October 1, 2019. Collected sample sound pressure level (SPL) measurements at these locations, along with documented investigator observations regarding perceived or witnessed acoustical contributors to this baseline or pre-Project noise environment, appear in Table 3.13-1.

Table 3.13-1. Measured Existing Outdoor Ambient Sound Levels

Receptor	Location/Address	Time (hh:mm)	L_{eq} (dBA)	L_{max} (dBA)	L_{90} (dBA)	Notes (observed sound sources)
Arcadia Property Line #1	along Bundy Drive, north of Texas Avenue	09:24 a.m. – 09:39 a.m.	76.2	89.9	65.4	Distant traffic, nearby traffic on Bundy Drive
Arcadia Property Line #2	along Saltair Avenue, north of Texas Avenue	09:50 a.m. – 10:05 a.m.	61.9	76.9	59.0	Distant traffic, nearby traffic on Saltair Avenue, consistent hum from plant
Arcadia Property Line #3	along Texas Avenue	10:12 a.m. – 10:28 a.m.	62.2	77.7	55.4	Distant traffic, nearby traffic on Texas Avenue
Arcadia Property Line #4	northern property line (along alley)	10:34 a.m. – 10:49 a.m.	67.1	74.0	65.0	Distant traffic, consistent hum from plant, pumps, metallic rattling noise
Olympic #1	1628 Wellesley Avenue (residential)	11:22 a.m. – 11:37 a.m.	56.3	69.6	51.4	Light traffic on Idaho Avenue, gardening noise, occasional aircraft flyover
Olympic #2	1728 Wellesley Avenue (residential)	11:45 a.m. – 12:00 p.m.	58.2	80.5	51.4	Distant traffic, occasional aircraft flyover
Olympic #3	3131 Olympic Boulevard (New Roads School)	12:20 p.m. – 12:35 p.m.	77.6	87.4	62.9	Nearby traffic on Olympic Boulevard
Olympic #4	On median, east of Stewart (near 3000 Olympic Boulevard)	12:53 p.m. – 01:07 p.m.	77.5	85.3	64.3	Nearby traffic on Olympic Boulevard, constant hum from subsurface well vault

Notes: L_{eq} = equivalent continuous sound level (time-averaged sound level); L_{max} = maximum sound level during the measurement interval; L_{90} = sound pressure level exceeded 90% of the measured time period; dBA = A-weighted decibels.

Olympic Pipeline

City of Santa Monica

Described in more detail under Section 2 of this MND, the vicinities of the proposed alignment within the City of Santa Monica boundary can be summarized as follows:

- Berkeley Avenue (from Nebraska Avenue to Colorado Avenue): Near Berkeley Avenue and Nebraska Avenue, there are several single-story commercial buildings located to the east and west of Berkeley Avenue. At the Berkeley Avenue and Pennsylvania Avenue intersection, the land uses transition from commercial to single- and multi-family residential uses. Zone = Conservation: Creative Sector; Low-Density Residential
- Colorado Avenue: To the north and south of Colorado Avenue and Berkeley Avenue are single- and multi-family residential uses. Additionally, there is a religious facility on the southeast corner of Colorado Avenue and Berkeley Avenue. Zone = Low-Density Residential
- Berkeley Avenue (from Colorado Avenue to Arizona Avenue): The land uses to the east and west of Berkeley Avenue are single- and multi-family residential uses from Colorado Avenue to Santa Monica Boulevard. At the Santa Monica Boulevard intersection, there is a multi-family residential complex to the northwest, a restaurant and retail uses to the northeast, a liquor store and restaurant to the southeast, and a car dealership to the southwest. From Santa Monica Boulevard to Arizona Avenue the land uses return to single- and multi-family residential uses. Zone = Low-Density Residential; Mixed-Use Boulevard Low
- Arizona Avenue (from Berkeley Avenue to Centinela Avenue): To the north and south of Arizona Avenue are single- and multi-family residential uses. There is a religious facility at the northwest corner of Arizona Avenue and Centinela Avenue. Zone = Low-Density Residential

City of Los Angeles

Described in more detail under Section 2 of this MND, the vicinities of the proposed alignment within the City of Los Angeles boundary can be summarized as follows:

- Texas Avenue (from Centinela Avenue to Saltair Avenue): To the north and south of Texas Avenue are primarily multi-family residential uses. There are a few single-family residential uses. Zone = Multi-Family Medium
- Saltair Avenue: To the west is the Arcadia WTP. To the east and south are multi-family residential uses. Zone = Multi-Family Medium; Public Facility

The existing outdoor ambient sound environment of these above-listed pipeline areas is represented by measurement locations Olympic #1 and Olympic #2 in Table 3.13-1.

Olympic AWTF and Arcadia WTP Expansion

The existing Arcadia WTP is located within the West Los Angeles Community Plan in the City of Los Angeles. The areas surrounding the Arcadia WTP are designated as Multi-Family Medium and Community Commercial in the West Los Angeles Community Plan. The streets surrounding the Arcadia WTP include Wilshire Boulevard to the north, Bundy Drive to the west, Texas Avenue to the south, and Saltair Avenue to the east. The land uses surrounding the Arcadia WTP include single- and multi-family residential and commercial uses as follows:

- To the north of Arcadia WTP, across an existing alley, is an existing restaurant, retail shops, an office building, a six-story residential building, and a City of Santa Monica-owned lot on the southeast corner of Wilshire Boulevard and Bundy Drive.
- To the west, across Bundy Drive, is a 20-story office building and several multi-family residential buildings.
- To the south of the Arcadia WTP are two single-family buildings. For purposes of construction and operation noise and vibration analysis, these two on site residences will be assessed for potential significant impact with respect to City of Santa Monica regulations.
- To the south, across Texas Avenue, there are single- and multi-family residential buildings. To the east, across Saltair Avenue there are several multi-family residential buildings, and there is a commercial/retail building at the southeast corner of Wilshire Boulevard and Saltair Avenue.

The existing outdoor ambient sound environment of these above-listed areas near the Arcadia WTP site is represented by measurement locations Arcadia Property Line #1, #2, #3, and #4 in Table 3.13-1.

All Project Components

Assumptions

The following construction noise impact assessment and mitigation measures require the following conditions to be true:

- Noise emission from construction equipment operating under full power, with proper noise control features installed, yield reference L_{max} noise levels at a reference distance of 50 feet that do not exceed the "Spec. 721.560 L_{max}" dBA values or the "Actual Measured L_{max}", whichever is lower, from Table 1 of the Federal Highway Administration (FHWA) *Roadway Construction Noise Model* (RCNM) *User's Guide* (FHWA 2006).
- The cumulative duration of expected full-power operation for construction equipment over any 15-minute period of time, expressed as a fraction of that period, must not (unless otherwise noted) exceed the "acoustical usage factor" (AUF) values as listed in Table 1 of the aforementioned RCNM *User's Guide*. These percentage values represent the cumulative portion of time during which equipment is operating at full power, and are used to derive an L_{eq} value from the reference L_{max} value at 50 feet based on the following expression: $L_{eq} = L_{max} - 10*LOG(AUF)$, where AUF ranges from 0 to 1). This is consistent with the Federal Transportation Authority (FTA) construction noise assessment technique.
- For the Olympic Pipeline construction activity, the following construction equipment is anticipated for each distinct listed phase:
  - Site Preparation – paver
  - Installation – excavator, dump truck, roller
  - Slurry Backfill – concrete mixer truck

  - Continual and Final Paving – paver, roller
  - Continual Pavement Striping – flat-bed truck
  - Final Paving – paver, roller, pavement scarifier (or comparable feature in milling machine)
- For the Recycle Water Pipeline construction activity, the following construction equipment is anticipated for each distinct listed phase:
  - Site Preparation – paver
  - Installation – up to two (2) excavators, one roller
  - Slurry Backfill – concrete mixer truck
  - Continual and Final Paving – paver, roller
  - Final Paving – paver, roller, pavement scarifier (or comparable feature in milling machine)

The predictions assume equipment usage would be sequential and not concurrent, unless multiple pieces of operating equipment are sufficiently distant from one another and a receptor. For example, the analysis assumes that an excavator and a roller would not be operating simultaneously at the same distance to a given receptor location. When the excavator is operating, it must have an L_{max} of 79 dBA (2 decibels [dB] less than the reference value, reflecting additional on-board noise control [e.g., better exhaust treatment]); or, have an AUF no more than 25%. When a milling machine is operating (in particular, the component comparable to a pavement scarifier), it must have an L_{max} of 79 dBA (6 dB less than the reference value, reflecting additional on-board noise control [e.g., better exhaust treatment]); or, have an AUF no more than 10%.

- For the Olympic AWTF and Arcadia WTP Expansion, the following construction equipment is anticipated for each distinct listed phase:
  - Demolition – concrete saw, dozer, backhoe
  - Site Preparation and Grading – grader, dozer, backhoe
  - Building Construction 1 – forklift (man lift), crane, generator (<25kVA), backhoe
  - Building Construction 2 – man lift, crane, gradall (rough-terrain forklift)
  - Building Construction 3 – generator (<25kVA), backhoe
  - Building Construction 4 – crane, gradall (rough-terrain forklift)
  - Building Construction 5 – gradall (rough-terrain forklift)
  - Building Construction 6 – man lift, crane, gradall (rough-terrain forklift), excavator, drill rig truck (bore/drill rig)
  - Building Construction 7 – man lift, crane, gradall (rough-terrain forklift)
  - Architectural Coating – compressor (air)
  - Paving – paver, roller

Based on predictions, the noisiest of these above phases is Demolition, during which time equipment usage would be sequential and not concurrent, unless multiple pieces of operating equipment are sufficiently distant from a receptor. When the concrete saw is operating, it must feature 8 dBA of sound attenuation (i.e., quieter rotating blade, portable shroud) to reduce its full-power noise level from 90 dBA to 82 dBA, and still operate with an AUF of no more than 20% (per the FHWA RCNM *User's Guide*).

For any phase, when a dozer is operating, it must have an L_{max} of 79 dBA (3 dB less than the reference value, reflecting additional on-board noise control [e.g., better exhaust treatment]); or, have an AUF no more than 20%.

When a gradall (all-terrain forklift) is operating, it must have an L_{max} of 79 dBA (4 dB less than the reference value, reflecting additional on-board noise control [e.g., better exhaust treatment]); or, have an AUF no more than 17%. When a grader is operating, it must have an L_{max} of 79 dBA (6 dB less than the reference value, reflecting additional on-board noise control [e.g., better exhaust treatment]); or, have an AUF no more than 10%. When an excavator is operating, it must have an L_{max} of 79 dBA (2 dB less than the reference value, reflecting additional on-board noise control [e.g., better exhaust treatment]); or, have an AUF no more than 25%.

Impact Analysis

3.13 a) Would the project result in 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?

Olympic Well Field Restoration

Construction

Less-Than-Significant Impact With Mitigation Incorporated. SMMC Section 4.12.110(a) permits construction activity from 8:00 a.m. to 6:00 p.m. on weekdays (Monday to Friday) and 9:00 a.m. to 5:00 p.m. on Saturdays. SMMC 4.12.110(b) permits the noise levels from construction activities, at the receiving location, during these allowable timeframes to be 20 dB louder than the usual standard for the Noise Zone (I [residential], II [commercial], III [industrial]) as defined by SMMC Section 4.12.060(a). Additionally, per SMMC Section 4.12.110, "a permit may be issued authorizing construction activity during the times prohibited by this Section whenever it is found to be in the public interest. The person obtaining the permit shall provide notification to persons occupying property within a perimeter of five hundred feet of the site of the proposed construction activity prior to commencing work pursuant to the permit." Since the new wells are proposed to be installed near low-density housing or commercial/mixed-use areas, the allowable construction noise limits would depend on the receptor location and be as follows:

- For Noise Zone II (commercial or mixed-use): 85 dBA L_{eq} (i.e., 65 dBA [for Noise Zone II, 7:00 a.m. to 10:00 p.m.] + 20 dB = 85 dBA) for any 15-minute period during allowable daytime hours; and,
- For Noise Zone I (low-density housing):
  - Monday through Friday -- 80 dBA L_{eq} (i.e., 60 dBA [for Noise Zone I, 7:00 a.m. to 10:00 p.m.] + 20 dB = 80 dBA) for any 15-minute period during allowable daytime hours
  - Saturday -- 80 dBA L_{eq} (i.e., 60 dBA [for Noise Zone I, 8:00 a.m. to 10:00 p.m.] + 20 dB = 80 dBA) for any 15-minute period during allowable daytime hours

With the edge of the construction area for each of the four new well installation sites being at least 50 feet from the nearest receiving land use, and as the detailed predictions in Appendix D, Noise Modeling Data, show for each anticipated phase, predicted noise associated with preparing concrete pads for the new wells and installing equipment is expected to be compliant with the 80 dBA limit value. Therefore, construction noise impacts at SM-10i, SM-9, SM-9, and SM-11i would be less than significant.

However, for the recycled water pipeline component of the Project connecting SM-11i to the Santa Monica City Yards, the applicable threshold would be 80 dBA 15-minute L_{eq} value at nearby existing residences on the southern side of Exposition Boulevard between Stewart Street and Dorchester Avenue. Pipeline installation along Exposition Boulevard could create temporary noise at levels anticipated to be either

compliant with the 80 dBA L_{eq} 15-minute limit or require a degree of noise mitigation. Please refer to Appendix D for details on pipeline construction noise prediction. Given the potential for the construction of the proposed recycled water pipeline to exceed construction noise limits pursuant to SMMC Section 4.12.110, impacts are potentially significant and mitigation is required.

MM-NOI-1 The City of Santa Monica shall ensure that the construction contractor(s) contract specifications for all Project-related activities at the Olympic Well Field (including the recycled water pipeline), Olympic Pipeline, and Arcadia Water Treatment Plant include the following requirements during construction activities:

- Construction hours must be conducted in compliance with the applicable local regulations for the project component within each jurisdiction with respect to allowable timeframes and days of the week (including weekends and holidays). Noise from construction activities in the City of Santa Monica shall meet the standard of 80 or 85 dBA L_{eq} over any 15-minute period, depending on the SMMC 4.12.060 Noise Zone. Noise from any operating powered equipment associated with the construction activities in the City of Los Angeles shall meet the standard of 75 dBA L_{eq} at 50 feet over any 15-minute period.
- Construction-related activities during nighttime hours (as defined by local regulation) would require a permit pursuant to Santa Monica Municipal Code Section 4.12.110 and/or would require permission from the Executive Director on behalf of the Board of Police Commissioners pursuant to Los Angeles Municipal Code Section 41.40(b).
- All idling (i.e., engines running) equipment shall be kept to a minimum.
- The use of noise-producing signals, including horns, whistles, alarms, and bells, shall be used for safety warning purposes only.
- Communication with local residents shall be maintained prior to and during construction. Specifically, the local residents shall be informed of the schedule, duration, and progress of the construction and shall be provided contact information (e.g., a telephone hotline and/or email address) for noise- or vibration-related complaints. The City shall establish a process to investigate these complaints in a timely manner and, if determined to be valid, detail efforts to provide a timely resolution and response to the complainant—with copy of outcome description documented in a log for the duration of the construction activities.
- All noise-producing equipment and vehicles using internal combustion engines shall be equipped with exhaust mufflers (or comparable noise-reducing exhaust flow treatments); air-inlet silencers; and, hoods, shrouds, shields, or other noise-reducing features in good operating condition that meet or exceed original factory specifications. Mobile or fixed "package" equipment (e.g., arc-welders, air compressors, generators, etc.) shall be equipped with shrouds and noise control features that are readily available for that type of equipment.
- Usage of construction equipment shall be properly phased, scheduled, and positioned, so that no combination of concurrently operating equipment would cause an exceedance of the noise limit at a receptor location.

In addition to the measures listed above, site-specific requirements for activities for the Arcadia WTP also include:

- Concrete saws anticipated for demolition of existing on-site features (buildings, pavement, concrete slabs, etc.) shall feature commercially-available low-noise blades and portable exterior shrouds (e.g., temporary sound blankets or comparable barriers or enclosures) that can move with the equipment so as to consistently control noise emission from the operating equipment and its impact on the work surface and thereby meet the aforementioned noise limit.

Construction of the recycled water pipeline within the City of Santa Monica would be considered less than significant with implementation of mitigation MM-NOI-1.

Operation

Less-Than-Significant Impact. Per SMMC 4.12.060 (a), Santa Monica's nighttime noise limit for "Noise Zone II" commercial districts is 60 dBA L_{eq} for a 15-minute continuous period during nighttime hours. The actual zoning of land uses in the vicinity of the proposed SM-8, SM-9, and SM-10i include "Mixed Use Creative" (MUC), "Bergamot Transit Village" (BTV), and "Conservation Art Center" (CAC). Near proposed SM-11i, to be located in Ishihara Park that abuts Exposition Boulevard, and the proposed recycled water pipeline along Exposition Boulevard and a portion of Stewart Street, are existing homes within a "low density housing" zone that would be considered a type I noise zone within which 50 dBA L_{eq} (over a 15-minute period) would apply during nighttime hours. Because the new pumps may operate during all hours, day and night, higher noise limits during daytime hours within the Noise Zone I and II areas are conservatively ignored for the purposes of this analysis.

Measured SPL from a comparably featured existing operating well in the Olympic Well Field serves as a reference sound source for each of the anticipated future noise emissions from newly added Olympic Well Field Injection Well (SM-10i), SM-8, and SM-9 pumps. Predicted sound propagation from their anticipated operation (see Appendix D for details) are below 60 dBA L_{eq} where the Olympic Boulevard right-of-way abuts the commercially-zoned properties; and, would thus be compliant with the Santa Monica nighttime sound level threshold. Operation of SM-11i would be predicted to yield a noise level at existing residences along Exposition Boulevard that is compliant with the more stringent 50 dBA Leq limit. Please refer to Appendix D for details of the operation noise prediction, which includes a colorized illustration of predicted sound propagation from each of these proposed new operating pumps and their above-surface surroundings. Operation of the proposed recycled water pipeline would be subsurface and thus not expected to result in perceptible airborne noise levels to the surrounding community Therefore, operational noise impacts associated with the Olympic well Field Restoration component of the Project would be less than significant.

Olympic Pipeline

City of Santa Monica

Construction

Less-Than-Significant Impact With Mitigation Incorporated. Where the proposed pipeline traverses land within the jurisdiction of the City of Santa Monica, SMMC Section 4.12.110 permits construction noise to be 20 dB louder than the usual standard for the Noise Zone (I [residential], II [commercial], III [industrial])

as defined by SMMC Section 4.12.060(a). Additionally, per SMMC Section 4.12.110, "a permit may be issued authorizing construction activity during the times prohibited by this Section whenever it is found to be in the public interest. The person obtaining the permit shall provide notification to persons occupying property within a perimeter of five hundred feet of the site of the proposed construction activity prior to commencing work pursuant to the permit." Since some of the new pipeline segments are proposed to be installed within commercial areas, the allowable construction noise limit would be 85 dBA L_{eq} for any 15-minute period during allowable daytime hours as described by SMMC Section 4.12.110. Other portions of the alignment are near residential land uses, which means the applicable threshold would be a more stringent 80 dBA 15-minute L_{eq} value. Pipeline installation along Olympic Boulevard could create temporary noise at levels anticipated to be either compliant with the 80 dBA L_{eq} 15-minute limit or require a degree of noise mitigation. Please refer to the afore-described MM-NOI-1, and Appendix D for details on pipeline construction noise prediction. Given the potential for the construction of the proposed Olympic Pipeline to exceed construction noise limits pursuant to SMMC Section 4.12.110, impacts are potentially significant and mitigation is required.

Pipeline construction within the City of Santa Monica would be considered less than significant with implementation of mitigation MM-NOI-1.

Operation

Less-Than-Significant Impact. Normal operation of the proposed Olympic Pipeline would be subsurface and thus not expected to result in perceptible airborne noise levels to the surrounding community. Noise emission from inspection and maintenance activities required to ensure function of this public utility would be infrequent, temporary in nature, and thus not considered a significant impact. Therefore, operations of the proposed Olympic Pipeline in the City of Santa Monica would be less than significant.

Olympic Pipeline

City of Los Angeles

As previously discussed in Section 3.1(c), per §53091(d) of the California Government Code, building ordinances of a county or city shall not apply to the location or construction of facilities for the production, generation, storage, treatment, or transmission of water, wastewater, or electrical energy by a local agency. Therefore, the building ordinances of the City of Los Angeles would not apply to the construction of facilities for the treatment of water as proposed by the City of Santa Monica. However, potential noise impacts to sensitive receptors within the City of Los Angeles jurisdiction have been analyzed herein.

Construction

Less-Than-Significant Impact With Mitigation Incorporated. Los Angeles Municipal Code 112.05 (a) prohibits construction equipment noise louder than 75 dBA at 50 feet, but this requirement:

> "shall not apply where compliance therewith is technically infeasible. The burden of proving that compliance is technically infeasible shall be upon the person or persons charged with a violation of this section. Technical infeasibility shall mean that said noise limitations cannot be complied with despite the use of mufflers, shields, sound barriers and/or other noise reduction device or techniques during the operation of the equipment."

LAMC 41.40 (a) prohibits construction work between 9:00 p.m. and 7:00 a.m. However, per LAMC 41.40(b), the Executive Director on behalf of the Board of Police Commissioners may grant permission for construction, repair or excavation work that benefits the public interest to occur within the hours from 9:00 p.m. to 7:00 a.m.

There is the potential for temporary noise from operating construction equipment and processes to cause an increase in outdoor noise level at nearby noise-sensitive receivers along the pipeline alignment. Please refer to Appendix D for details on pipeline construction noise prediction. To minimize these effects and mitigate potentially significant impact with respect to exceedance of LAMC 112.05, on-site construction activities should implement mitigation measure MM-NOI-1. With implementation of mitigation MM-NOI-1, the proposed Project would be considered less than significant.

Operation

Less-Than-Significant Impact. Normal operation of the pipeline would be subsurface and thus not expected to result in perceptible airborne noise levels to the surrounding community. Noise emission from inspection and maintenance activities required to ensure function of this public utility would be infrequent, temporary in nature, and thus not considered a significant impact. Therefore, pipeline operation for the proposed Project would be considered less than significant.

Olympic AWTF and Arcadia WTP Expansion

As previously discussed in Section 3.1(c), per §53091(d) of the California Government Code, building ordinances of a county or city shall not apply to the location or construction of facilities for the production, generation, storage, treatment, or transmission of water, wastewater, or electrical energy by a local agency. Therefore, the building ordinances of the City of Los Angeles would not apply to the construction of facilities for the treatment of water as proposed by the City of Santa Monica. However, potential noise impacts to sensitive receptors within the City of Los Angeles jurisdiction have been analyzed herein.

Construction

Less-Than-Significant Impact With Mitigation Incorporated. As previously mentioned in the preceding paragraphs regarding pipeline construction, LAMC 112.05 (a) prohibits construction equipment noise louder than 75 dBA at 50 feet where feasible, and allows construction work only between 7:00 a.m. and 9:00 p.m. However, per LAMC 41.40(b), the Executive Director on behalf of the Board of Police Commissioners may grant permission for construction, repair or excavation work that benefits the public interest to occur within the hours from 9:00 p.m. to 7:00 a.m.

Nonetheless, there is the potential for noise from concurrently operating construction equipment and processes on site to cause an increase in outdoor noise level at nearby noise-sensitive receivers, such as those in sufficient proximity along Saltair Avenue, Texas Avenue, and Bundy Drive. Such increased noise levels, depending on the existing outdoor ambient sound environment, would be temporary. To minimize these effects and mitigate potentially significant impact with respect to exceedance of LAMC 112.05, on-site construction activities should implement mitigation measures MM-NOI-1. With implementation of mitigation MM-NOI-1, noise from construction activities at the Arcadia WTP site would be less than significant.

Operation

Less-Than-Significant Impact. Per LAMC 111.02 (d) Table II, the City of Los Angeles presumed ambient levels are 50 dB day / 40 dB night for the R3-zoned land uses that adjoin Bundy Drive, Texas Avenue, and Saltair Ave (as supported by the City of Los Angeles zoning map (City of Los Angeles 2019). These are understood to be L_{eq} values, based on the definition of "ambient noise" per LAMC 111.01(a). However, Table 3.13-2 shows the 15-minute duration outdoor SPL measurements performed during daytime hours in the vicinities of these locations. Although nighttime sound levels were not measured, samples of daytime background (L_{90}) sound levels were measured and (for purposes of this analysis) assumed to represent continuous or otherwise steady sources of sound throughout the day and night. While such steady sounds could include the indistinct aggregate din of far-away traffic and building HVAC, the proximity of the existing and operating Arcadia WTP facilities strongly suggest that their multiple continuous and/or "steady-state" sources (e.g., pumps, blowers, motors, etc.) are dominant, which is supported by investigator comments summarized in Table 3.13-1.

The statistical L_{90} values are lower than the L_{eq} values during the same measurement period because they quantify what sound pressure level is exceeded 90% of the time over the course of a measurement duration (in this case, 15 minutes). Therefore, continuous sources of sound, such as a pump or HVAC system, would be reasonably represented by an L_{90} value. Intermittent sources of sound, such as nearby roadway traffic, would not be represented well by L_{90}, but instead causes the overall ambient measurement (L_{eq}) to be higher than the L_{90} value. Thus, at night when roadway traffic volumes and corresponding noise contribution would be less than the daytime acoustic contribution, the L_{90} values influenced most by the contribution of continuous sources of noise such as the operating Arcadia WTP facilities can reasonably serve as an estimate of the nighttime ambient noise level. In a manner consistent with the above-mentioned difference (i.e., 50 – 40 = 10 dB) between daytime and nighttime, presumed outdoor ambient sound levels for the R3-zoned receiving land uses per LAMC 111.02(d) could be used to estimate nighttime L_{eq} as being 10 dB less than the daytime L_{eq} value.

Predicted aggregate noise from operating new on-site equipment associated with the proposed Olympic AWTF and Arcadia WTP Expansion is tabulated in Table 3.13-2, with studied receptor positions corresponding with callouts appearing in Figure 3 of Appendix D that details the prediction methodology. Table 3.13-2 compares predicted Project operation noise levels with the estimated outdoor ambient nighttime sound levels and shows that resulting differences are less than a 5 dBA increase to the outdoor sound environment at the studied receptors. With such noise level increases being no more than 5 dB as allowed by LAMC 112.02, the operational noise impact to the nearest NSR would be considered less than significant.

Table 3.13-2. Measured Baseline Sound Levels versus Predicted Arcadia WTP Expansion Operations Noise

Receptor Location[1]	Measured Daytime L_{eq} (dBA)	Estimated Nighttime L_{eq} ~ Measured Daytime L_{90} (dBA)	Predicted Arcadia WTP Expansion Operation L_{eq} (dBA)	Difference (dB) Between Estimated Nighttime L_{eq} and Predicted Expansion L_{eq}	Difference Compliant with LAMC 112.02?
Arcadia Property Line #1	76.2	65.4	55.9	9.5	Yes
Arcadia Property Line #2	61.9	59.0	36.0	23.0	Yes
Arcadia Property Line #3	62.2	55.4	39.5	15.9	Yes
Arcadia Property Line #4	67.1	65.0	55.8	9.2	Yes
Bundy Drive North[2]	76.2	65.4	44.8	20.6	Yes
Bundy Drive South[2]	76.2	65.4	36.3	29.1	Yes
Saltair Avenue South[3]	61.9	59.0	45.7	13.3	Yes
Saltair Avenue North[3]	61.9	59.0	51.2	7.8	Yes
Texas Avenue West[4]	62.2	55.4	34.6	20.8	Yes
Texas Avenue East[4]	62.2	55.4	37.4	18	Yes
On-site Receptor #1[2]	76.2	65.4	46.5	18.9	Yes
On-site Receptor #2[2]	76.2	65.4	45.1	20.3	Yes

Notes:
Leq = energy-equivalent sound level; L90 = sound level exceeded 90% of the time; dBA = A-weighted decibel; dB = decibel; LAMC = Los Angeles Municipal Code

1 Shown in Figure 3 of Appendix D
2 due to proximity, assumed same as Property Line #1 outdoor ambient Leq and L90
3 due to proximity, assumed same as Property Line #2 outdoor ambient Leq and L90
4 due to proximity, assumed same as Property Line #3 outdoor ambient Leq and L90

Even if the actual nighttime existing outdoor ambient L_{eq} values were consistently 10 dB less than the measured daytime L_{eq} values presented in Table 3.13-2, the predicted operation noise levels would still not be more than 5 dB greater at the studied locations, and thus compliant with LAMC 112.02. Please refer to Appendix D for details on the calculations for the predicted Arcadia WTP Expansion operation L_{eq} values appearing in Table 3.13-2. Therefore, noise associated with operation of the Olympic AWTF and Arcadia WTP Expansion would be considered less than significant.

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

Olympic Well Field Restoration

Less-Than-Significant Impact. SMMC Section 4.12.070 does have a vibration threshold with respect to perception without instrument, but exempts vibration from construction activities. Historic structures or other cultural resources, if present and sufficiently proximate to the construction activities, may deserve more stringent vibration velocity thresholds per California Department of Transportation (Caltrans) or other state standards. As further discussed in Section 3.5, Cultural Resources, the new well sites are proposed more than 50 feet north of the Santa Monica Air Line, and will consist of a mostly subsurface structure, with low-profile equipment on the surface, just above grade. This Santa Monica Air Line is eligible under Criterion A for its significant role in the creation and development of the City of Santa Monica, and as an important commuter rail system that served to sustain a critical connection between downtown Los Angeles

and Santa Monica. The proposed new well construction will be low-profile and is consistent with the overarching industrial and municipal uses of the surrounding area, including the historical industrial, railroad adjacent setting still extant along this segment of Olympic Boulevard. Therefore, the Project, as proposed, will not diminish the setting of the adjacent Santa Monica Air Line segment and will not impact the ability of the resource as a whole to convey its significance. Therefore, the proposed well locations and recycled water pipeline alignment would not directly or indirectly impact historic structures or potentially significant cultural resources. Therefore, potential construction vibration impacts associated with the proposed Project would be less than significant.

Olympic Pipeline

City of Santa Monica

Less-Than-Significant Impact. SMMC Section 4.12.070 does have a vibration threshold with respect to perception without instrument, but exempts vibration from construction activities. Historic structures or other cultural resources, if present and sufficiently proximate to the construction activities, may deserve more stringent vibration velocity thresholds per California Department of Transportation (Caltrans) or other state standards. As further discussed in Section 3.5, Cultural Resources, the proposed alignment is not proximate to historic structures or potentially significant cultural resources. Therefore, potential construction vibration impacts associated with the proposed Project would be less than significant.

City of Los Angeles

Less-Than-Significant Impact. The LAMC does not include ground vibration criteria. Guidance from Caltrans is typically applied and understood to be 0.2 inches per second (ips) peak particle velocity (PPV) with respect to human annoyance and potential building risk to older residential structures (Caltrans 2013). So long as pile driving is not expected to be involved in construction activities, the likely piece of construction equipment with the greatest vibration generation would be a roller-type compactor, which FTA guidance indicates has a reference PPV of 0.21 ips at a reference distance of 25 feet (FTA 2006). With residential-type sensitive receivers no closer than 30 feet to the planned new pipeline alignments on Texas Avenue, Bundy Drive, and Saltair Avenue, the predicted PPV for the roller at these closest residential structures would be 0.16 ips and thus compliant with this guidance. As further discussed in Section 3.5, Cultural Resources, the proposed alignment is not proximate to historic structures or potentially significant cultural resources. Therefore, potential construction vibration impacts associated with the proposed Project would be less than significant.

Olympic AWTF and Arcadia WTP Expansion

Less-Than-Significant Impact. The LAMC does not include ground vibration criteria. Guidance from Caltrans is typically applied and understood to be 0.2 ips PPV with respect to human annoyance and potential building risk to older residential structures. So long as pile driving is not expected to be involved in construction activities, the likely piece of construction equipment with the greatest vibration generation would be a roller-type compactor, which FTA guidance indicates has a reference PPV of 0.21 ips at a reference distance of 25 feet. With residential-type sensitive receivers no closer than 65 feet to the planned nearest pavement work at the existing Arcadia WTP, the predicted PPV for the roller at these closest residential structures would be 0.05 ips and thus compliant with this guidance. As further discussed in

Section 3.5, Cultural Resources, the existing Arcadia WTP is not proximate to historic structures or potentially significant cultural resources. Therefore, potential construction vibration impacts associated with the proposed Project would be less than significant.

3.13 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?

Impacts for All Project Components

Less-Than-Significant Impact. The proposed Olympic Well Field Restoration does not include the construction of habitable structures, and thus, would not expose new residential or employees to aviation traffic noise. Construction workers would be temporarily exposed to aviation traffic noise because the proposed well locations, Olympic Pipeline, and existing Arcadia WTP are approximately 0.8-mile, 0.9-mile, and 1.6 miles from the Santa Monica Municipal Airport at its closest point, respectively. Nonetheless, the proposed Project is located at a sufficient distance from and perpendicular to takeoff and landing flight pathways. Therefore, such exposures would be less than significant compared to proximate Project construction noise and the pre-existing outdoor ambient sound environment dominated by roadway traffic. Impacts due to aviation traffic noise exposure would be less than significant.

3.14 Population and Housing

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XIV. POPULATION AND HOUSING – Would the project:				
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?	☐	☐	☐	☒

Existing Setting

Olympic Well Field Restoration

The proposed wells SM8, SM9, and SM10 associated with the Olympic Well Field are all located within the Olympic Boulevard median and SM11i, would be at Ishihara Park. There is no existing housing within the proposed well locations. The proposed recycled water pipeline would be subsurface within existing roadway, and thus, there is no existing housing.

Olympic Pipeline

The pipeline alignment and associated trenching would be entirely contained within existing roadways within the cities of Santa Monica and Los Angeles. There is no existing housing within the proposed Olympic Pipeline alignment.

Olympic AWTF and Arcadia WTP Expansion

The existing Arcadia WTP contains two houses that are used for City employees for site operators. No changes related to the structure, occupancy, or operations of these houses is proposed.

Impact Analysis

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

Impacts for All Project Components

Less-Than-Significant Impact. Under the proposed Project, no housing is proposed and no additional permanent employees would be required. The proposed Project would restore the Olympic Well Field's pumping capacity to expand local groundwater supplies to eliminate reliance on purchase of imported water supplies. Although the Project would increase capacity of local water sources, the purpose of the Project is to meet the City's existing and projected water demand with an increase in local water supply and a reduction in imported water sources. As such, the proposed Project would not generate population growth and thus, would not be considered growth inducing. Therefore, direct and indirect growth impacts would be less than significant.

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

Impacts for All Project Components

No Impact. The proposed Project would not require the demolition or alteration of existing housing. The proposed Project would not displace people or require replacement housing. Therefore, no impacts would occur.

3.15 Public Services

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

Existing Setting

Olympic Well Field Restoration

The Project area is served by the Santa Monica Fire Department, which provides fire protection and emergency services to the City. The Santa Monica Fire Department operates four stations throughout the City. The nearest fire station is Station 3 (132 19th Street) located approximately 0.6-mile west of the Project site at its closest point.

The Project area is served by the Santa Monica Police Department, which provides police protection services to the City. The Santa Monica Police Department is located at 333 Olympic Drive approximately 1.7 miles southwest of the Project site at its closest point.

The Project area is served by the Santa Monica-Malibu Unified School District. The Santa Monica-Malibu Unified School District provides primary and secondary public education to students in the local area.

Recreational areas near the SM-8, SM-9, and SM-10i along Olympic Boulevard include Bergamot Station and art galleries and Gandara Park. The proposed location for SM-11i is located within Ishihara Park. The proposed recycled water pipeline would be located within Stewart Street near Gandara Park.

Olympic Pipeline

City of Santa Monica

A portion of the pipeline alignment and associated trenching would be contained within publicly-owned roadways within the City of Santa Monica. The nearest fire station is Station 3 (132 19th Street) located approximately 0.6-mile west of the closest well. The Santa Monica Police Department is located at 333 Olympic Drive approximately

2.3 miles southwest of the proposed alignment at its closest point. There are no City-owned parks or public facilities along the proposed alignment.

City of Los Angeles

A portion of the pipeline alignment and associated trenching would be contained within existing publicly-owned roadways within the City of Los Angeles. The Project area is served by the Los Angeles Fire Department (LAFD), which provides fire protection and emergency services to the County. The nearest LAFD fire station is Station 59 – West Los Angeles located at 11505 Olympic Boulevard, Los Angeles, approximately 1.3 miles southeast of the proposed alignment at its closest point.

The Project area is served by the Los Angeles Police Department, which provides police protection services to the West Los Angeles community. The West Los Angeles Police Station is located at 1663 Butler Avenue, Los Angeles, approximately 0.8-mile east of the proposed alignment at its closest point.

The Project area is served by the Los Angeles Unified School District. The Los Angeles Unified School District provides primary and secondary public education to students in the local area. There are no City-owned parks or public facilities along the proposed alignment.

Olympic AWTF and Arcadia WTP Expansion

The existing Arcadia WTP is surrounded by a mix of commercial and residential land uses within the West Los Angeles Community Plan in the City of Los Angeles. The nearest LAFD fire station is Station 59 – West Los Angeles located at 11505 Olympic Boulevard, Los Angeles, approximately 1.3 miles southeast of the proposed alignment at its closest point. The West Los Angeles Police Station is located at 1663 Butler Avenue, Los Angeles, approximately 0.8-mile east of the proposed alignment at its closest point. The area is within a highly urbanized portion of the City of Los Angeles and does not contain open spaces or recreational opportunities.

Impact Analysis

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

Fire protection?

Olympic Well Field Restoration and Olympic Pipeline

Less-Than-Significant Impact. Based on the proximity of the Well Field and the Olympic Pipeline to the existing fire services, and since the proposed well locations and pipeline are within developed areas of the cities of Santa Monica and Los Angeles, it is anticipated the proposed Project could be served by existing fire services without adversely affecting personnel-to-resident ratios, response times, or other performance objectives. The potential need for fire protection services would occur primarily during the short-term construction of the Project, when heavy construction equipment with combustion engines and construction workers are working at the Project site. It is anticipated that existing Santa Monica Fire Department and LAFD resources could adequately serve the Well Field and the Olympic Pipeline during construction

activities, as no unusually combustible, flammable, or hazardous materials would be present. The proposed Project would not induce population or employment growth nor result in the addition of any new land uses or habitable structures that might require fire protection. There would no need for long-term fire or emergency medical services since these Project components are not considered uses with a high fire risk and would not entail the use of significant quantities of highly flammable materials. Therefore, impacts associated with the need for new or expanded fire protection facilities would be less than significant.

Olympic AWTF and Arcadia WTP Expansion

Less-Than-Significant Impact. The Olympic AWTF and Arcadia WTP expansion components would result in water treatment process changes and a new chemical storage facility when compared to the existing condition. The presence of more and new chemicals on the Project site would potentially result in the need for additional fire services due to the presence of additional hazardous materials.

As previously discussed under Section 3.9 above, under the existing conditions, the Arcadia WTP submits facility information, a hazardous materials inventory, an emergency response/contingency plan, and APSA documentation to California Environmental Protection Agency's CERS. Pursuant to the federal Emergency Planning and Community Right to Know Act and the APSA, all handlers of hazardous materials, are required to submit their information to CERS for an annually review (CAL OES 2019). The hazardous materials at the existing Arcadia WTP are recorded and identified as part of CERS. The Arcadia WTP has an existing Consolidated Emergency Response/Contingency Plan, which identifies procedures for containing spills, releases, fires, or explosions, and prevents associated harm to persons, property, and the environment; facility evacuation; arrangements for emergency services; emergency equipment, its location, and capabilities; and employee training on operations and hazards. In addition, the Arcadia WTP maintains an SPCC Plan related to oil spills from the 5,000 gallon aboveground electric generator gas tank located on the site. All applicable plans and documentation must be updated upon Project implementation to ensure adequate regulatory oversight of the facility. Additionally, the City of Santa Monica would coordinate with LAFD to ensure the Project would not conflict with LAFD regulations or otherwise result in fire-related hazards that could affect LAFD services.

Per §53091(d) of the California Government Code, building ordinances of a county or city do not apply to the location or construction of facilities for the production, generation, storage, treatment, or transmission of water, wastewater, or electrical energy by a local agency. Therefore, the building ordinances of the City of Los Angeles would not apply to the construction of facilities for the treatment of water as proposed by the City of Santa Monica. However, the Title 17 and Title 22 of the California Code of Regulations (CCR), which include the official standards developed and approved by the American Water Works Association, set forth the standards for the construction and operation of water treatment plants. Construction and operation of the Olympic AWTF and Arcadia WTP in compliance with existing regulatory standards and requirements would ensure that the Project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, and that any impacts related to the maintenance of acceptable service ratios, response times, or other performance objectives would be less than significant.

Police protection?

Olympic Well Field Restoration and Olympic Pipeline

Less-Than-Significant Impact. Based on the proximity of the Well Field and the Olympic Pipeline to the existing police services, and since the proposed well locations and pipeline are within developed areas of the cities of Santa Monica and Los Angeles, it is anticipated the proposed Project could be served by existing police services without adversely affecting personnel-to-resident ratios, response times, or other performance objectives. The potential need for police protection services would occur primarily during the short-term construction of the Project, when heavy construction equipment and materials would be temporarily stored at the site, and construction workers would be working at the Project site. It is anticipated that existing Santa Monica Police Department and Los Angeles Police Department resources could adequately serve workers at the Well Field and the Olympic Pipeline site during construction activities, as activities would be relatively brief and would not involve unusual activities that would require additional police services. The proposed Project would not induce population or employment growth nor result in the addition of any new land uses or habitable structures that might require police protection. There would no need for long-term police with the implementation of the Project components. Therefore, impacts associated with the need for new or expanded police protection facilities would be less than significant.

Olympic AWTF and Arcadia WTP Expansion

No Impact. The Olympic AWTF and Arcadia WTP expansion would expand the water treatment capacity at the property, but would be a continuation of the existing land use and would not generate new employees or otherwise increase demands for police services. The proposed Project would not induce population or employment growth nor result in the addition of any new land uses or habitable structures that might require police protection. There would no need for long-term police with the implementation of the Project components. During construction activities, the property would continue to be adequately secured with fencing and gated entrance, as in the current condition. Based on the proximity of the Project site to the existing police station, it is anticipated that the proposed Project could be served without adversely affecting personnel-to-resident ratios, response times, or other performance objectives. Therefore, there would be no short-term or long-term impact to police services.

Schools?

Impacts of All Project Components

No Impact. The proposed Project would not involve a housing component that would result in population growth and increased demands on existing schools within the area. Therefore, no impact to schools would occur.

Parks?

Impacts of All Project Components

No Impact. Once completed, no housing is proposed and no additional employees would be required. The proposed Project would not involve a housing component or substantially increase employment opportunities within the City because the construction would be short-term and temporary, and construction

workers are anticipated to come from the surrounding area; therefore, the proposed Project would not substantially increase the use of existing neighborhood and regional parks or other recreational facilities. No impacts would occur.

Other public facilities?

Impacts of All Project Components

No Impact. The proposed Project would not involve a housing component or increase employment opportunities within the cities of Santa Monica or Los Angeles because the construction would be short term and temporary, and construction workers are anticipated to come from the surrounding area. The proposed Project would not generate new permanent residents in the cities of Santa Monica or Los Angeles who would use public facilities. The proposed Project would not involve a housing component or increase employment opportunities that would result in population growth. Therefore, additional demands on other public facilities, such as library or health care services would not occur as a result of Project implementation. No impacts would occur.

3.16 Recreation

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XVI. RECREATION				
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?	☐	☐	☒	☐

Existing Setting

Olympic Well Field Restoration

The City of Santa Monica provides 27 parks, 3 community gardens, 5 public grounds (e.g., Annenberg Beach House, Civic Auditorium, Community Center), 245 acres of open space (state beach), and multiple special use areas (e.g., Third Street Promenade, Santa Monica Place, Cove Skate park, Swim Center). Recreational areas near the SM-8, SM-9, and SM-10i along Olympic Boulevard include Bergamot Station and art galleries and Gandara Park. The proposed location for SM-11i is located within Ishihara Park. The proposed recycled water pipeline would be located within Stewart Street near Gandara Park.

Olympic Pipeline

City of Santa Monica

A portion of the pipeline alignment and associated trenching would be contained within publicly-owned right-of-way within the City of Santa Monica. The developed/disturbed land cover consists of pavement, roads, parking areas, and generally lacks vegetation. There are no City-owned parks along the proposed alignment.

City of Los Angeles

A portion of the pipeline alignment and associated trenching would be contained within publicly-owned right-of-way within the City of Los Angeles. The developed/disturbed land cover consists of pavement, roads, parking areas, and generally lacks vegetation. There are no City-owned parks along the proposed alignment.

Olympic AWTF and Arcadia WTP Expansion

The existing Arcadia WTP is surrounded by a mix of commercial and residential land uses within the West Los Angeles Community Plan in the City of Los Angeles. The area is within a highly urbanized portion of the City of Los Angeles and does not contain open spaces or recreational opportunities.

Impact Analysis

3.16 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?

Impacts for All Project Components

No Impact. Once completed, no housing is proposed and no additional employees would be required. The proposed Project would not involve a housing component or substantially increase employment opportunities within the City because the construction would be short-term and temporary, and construction workers are anticipated to come from the surrounding area; therefore, the proposed Project would not substantially increase the use of existing neighborhood and regional parks or other recreational facilities. No impacts would occur.

3.16 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?

Impacts for All Project Components

Less-than-Significant Impact. The installation of SM-11i would be located at the eastern end of Ishihara Park; however, the proposed installation would not involve construction of recreational facilities or require the construction of recreational facilities. The impacts associated with the proposed Project as evaluated throughout this IS/MND have determined all potential adverse environmental impacts associated with the proposed Project would have no impact, less than significant impact, or less than significant impact with mitigation incorporated. The proposed Project would not include the construction of a recreational facility or the construction or expansion of recreational facilities that could have an adverse effect on the environment. In addition, the proposed Project would not induce population growth such that the expansion

of existing recreational facilities is required. Therefore, no impacts associated with the construction or expansion of recreational facilities would occur.

3.17 Transportation

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

Existing Setting

All Project Components

Regional access to the study area is provided by the Santa Monica Freeway (I-10) in the east-west direction, the San Diego Freeway (I-405) and the Pacific Coast Highway in the north-south direction. The nearest ramp interchange with I-10 is at Cloverfied Boulevard and 20th Street to the west of the proposed Project and at Centinela Avenue to the east of the proposed Project. The nearest ramp interchange with I-405 is at Wilshire Boulevard, approximately a mile east of the Arcadia WTP facility.

Roadways

City of Santa Monica

The City of Santa Monica's LUCE provides roadway classifications for the automobile network in the City. The City of Los Angeles Mobility Element 2035 provides Citywide General Plan Circulation System maps that have established street classifications and designations. The following presents a description of the existing street network conditions in the study area.

- **Olympic Boulevard** is designated as a Parkway (east of Lincoln Avenue) in the City's LUCE. Parkways are streets that serve as a linear park, incorporating continuous landscape, recreational bikeways, and pedestrian paths. Olympic Boulevard is a four-lane roadway, with two travel lanes in each direction and a wide tree-lined

median. The posted speed limit of 40 miles per hour and parking is not allowed along the segment in the study area. Per proposed LUCE Bicycle Network, it is an Auto/Transit Priority Street where bicycles are allowed with parallel routes prioritized. Sidewalks are constructed along this roadway and per proposed LUCE Pedestrian Network, this roadway is a recreation destination for walking.

- **Exposition Boulevard** is designated as a Neighborhood Street in the City's LUCE. Which are neighborhood streets that provides access primarily abutting uses and autos travel slow enough for people to stop in the street.
- **Stewart Street** is designated by the City's LUCE as a minor avenue, meaning it serves local auto and bicycle trips. In addition, there are bicycle lanes, bicycle paths, and streets designed so that cars and bicycles can mix comfortably.
- **Wilshire Boulevard** is designated as a Boulevard in the City's LUCE. Boulevards are regional transportation corridors with continuous mixed use and commercial land uses that provide access for all forms of transportation but emphasize transit and walking. Wilshire Boulevard is a four-lane roadway, with two travel lanes in each direction and a center two-way left turn lane that provides access to abutting mixed and commercial land uses. There are sidewalks and on-street parking is available along both sides of the street. The posted speed limit is generally 35 miles per hour. A potential haul route for transporting construction waste has been identified along Wilshire Boulevard from the WTP facility to a site in West LA.
- **Colorado Avenue** is designated as a Secondary Avenue which is considered an integral part of the City's circulation system. Colorado Boulevard is located between Broadway and Olympic boulevard, it extends from the eastern City of Santa Monica limit at Centinela Avenue to Lincoln Boulevard. Colorado Avenue has one travel lane in each direction with sidewalks and parking along both sides of the street. The posted speed limit is 30 mph. The pipeline alignment would be approximately 80 feet along Colorado Avenue between its staggered intersections with Berkeley Street. It should be noted that there is northbound left-turn restriction at this intersection from Colorado Avenue onto Berkeley Street during the AM and PM peak hours.
- **Centinela Avenue** is designated by the City's LUCE as a Secondary Avenue, which distributes auto trips into minor avenues and neighborhood streets. The segment of Centinela Avenue between Nebraska Avenue and Olympic Boulevard has one travel lane in each direction with a center two-way left turn lane. There are sidewalks and parking along both sides of the street. The posted speed limit is 35 miles per hour.
- **Nebraska Avenue** is designated by the City's LUCE as a minor avenue, meaning it serves local auto and bicycle trips. In addition, there are bicycle lanes, bicycle paths, and streets designed so that cars and bicycles can mix comfortably. The roadway segment of Nebraska Avenue between Centinela Avenue and Stewart Street has one travel lane in each direction with sidewalks and metered parking along both sides of the street. There is no posted speed limit along this roadway in the study area.
- **Berkeley Street** is designated as a Neighborhood Street that provides access primarily to abutting properties. In the study area the segments of Berkeley Avenue along which the pipeline would be constructed are from Arizona Avenue and Colorado Avenue and from Colorado Avenue to Nebraska Avenue. Berkeley Avenue is a two-lane undivided roadway, with one travel lane in each direction. It has sidewalks and on-parking along both sides of the street. There is no posted speed limit along this roadway in the study area.
- **Arizona Avenue** is a two-lane undivided roadway with one travel lane in each direction. It has sidewalks and parking along both sides of the street. There is a striped bicycle lane along this roadway. There is no posted speed limit along this roadway. The pipeline alignment along the segment of Arizona Avenue from Centinela Avenue to Berkeley Street would be within the City of Santa Monica.

City of Los Angeles

- **Texas Avenue** is a Collector street, east of Centinela Avenue, in the West Los Angeles Community Plan Circulation map. It is two-lane undivided roadway with sidewalks and parking along both sides of the street. The pipeline alignment along the segment of Texas Avenue from Centinela Avenue to Saltair Avenue would be within the City of Los Angeles.
- **Saltair Avenue** is a Local Street in the West Los Angeles Community Plan Circulation map. It is two-lane undivided roadway with sidewalks and parking along both sides of the street. The pipeline alignment along the segment of Saltair Avenue from Berkeley Street to Arcadia WTP would be within the City of Los Angeles.

Transit System

Public transit service in the City of Santa Monica consists of the City's Big Blue Bus municipal bus system as well as other regional bus lines operated by the Los Angeles County Metropolitan Transportation Authority (Metro).

- **Big Blue Bus Line 2** (Wilshire Boulevard) — Line 2 runs from downtown Santa Monica to UCLA. Service headways of about 15 minutes are provided during weekday peak periods and about 20 minutes during weekday off-peak periods and on weekends. The stop closest to the WTP site is at Bundy Drive and Wilshire Boulevard, south of Saltair Avenue.
- **Big Blue Bus Line 5** (Olympic Boulevard-Century City) — Line 5 runs from downtown Santa Monica to Century City and the Rimpau Transit Center via Colorado Avenue, Olympic Boulevard, and Pico Boulevard. Headways are about 20 minutes during weekday peak periods and about 30 minutes during weekday off-peak periods and on weekends. The stop closest to the well fields is at 26th Street and Olympic Boulevard, near the 26th Street/Bergamot station.
- **Route 14** (Centinela Avenue and Bundy Drive) – Route 14 runs from Brentwood to Inglewood via Centinela Avenue and Bundy Drive. Headways are about 15 minutes during weekday peak periods and over 20 minutes during weekday off-peak periods and on weekends. The stop closest to the WTP site is at Bundy Drive and Wilshire Boulevard, south of Saltair Avenue.
- **Route 16** (Wilshire Boulevard/Bundy Drive-Marina Del Ray) – Route 16 runs from West Los Angeles to Marina Del Ray via Wilshire Boulevard with stop at 26th Street/Bergomot Station. Headways are about 25 minutes during weekday peak periods and about 30 minutes during weekday off-peak periods. There is no service on weekends. The stop closest to the WTP is at Bundy Drive and Wilshire Boulevard, south of Saltair Avenue and closest to the well fields is at 26th Street and Olympic Boulevard, near the 26th Street/Bergamot station.
- **Route 43** (San Vicente Boulevard-26th Street-SMC) – Route 43 runs from Brentwood to Santa Monica College Campus via Olympic Boulevard and 26th Street/Bergamot Station. Headways are about 30 minutes with no midday or weekend. The stop closest to the Project is at 26th Street and Olympic Boulevard, near the 26th Street/Bergamot station.

The LA Metro provides transit service in the Project study area. LA Metro Routes 20 and 720 provide bus service within the study area.

- **Route 20** (Downtown Los Angeles to Downtown Santa Monica) – Route 20 runs from Downtown Los Angeles to Downtown Santa Monica via Wilshire Boulevard. Headways are about 12-15 minutes during weekday peak periods and about 20–30 minutes during off-peak and weekends. The stop closest to the WTP site is at Bundy Drive and Wilshire Boulevard, south of Saltair Avenue.
- **Rapid Line 720** - Line 720 offers limited service on Wilshire Boulevard, continuing to an eastern terminus in the City of Commerce. Buses run at up at 8-12 minute headways during peak weekday hours and 15 minute headways during off peak and weekends. The stop closest to the Project is at Bundy Drive and Wilshire Boulevard. The stop closest to the WTP site is at Bundy Drive and Wilshire Boulevard, south of Saltair Avenue.

Metro Exposition Line

The Metro Exposition Light Rail Line (E Line) runs along Colorado Avenue and parallel to Olympic Boulevard in the study area and connects downtown Santa Monica and downtown Los Angeles. The closest station to the Project is 26th Street/ Bergamot Station. The E Line started operation in Santa Monica in May 2016 and provides service every 6 minutes during weekday peak periods and every 12 minutes during weekday off-peak periods and on weekends.

Impact Analysis

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

Impacts for All Components

Less-Than-Significant Impact. The Project site is in close proximity to a variety of alternative transportation facilities. The Metro Light Rail E Line provides regional rail service in close proximity to the Well Field. Metro Light Rail E Line operates every 6-12 minutes. Additionally, the Big Blue Bus and Metro provide bus service close to all three Project components. The majority of these lines have service frequency or headways of 30 minutes or less, with peak-hour headways of 8 to 15 minutes. The construction of the proposed Project would not disrupt existing rail/bus service nor would it require the relocation of existing bus stops. No new employees would be generated by the proposed Project, and only negligible vehicle trips would be required for periodic maintenance activities. As such, no long-term operational impacts related to transit, roadway, bicycle, and pedestrian facilities are anticipated with the proposed Project. Therefore, the proposed Project would not conflict with policies, programs, or plans supporting transit, roadway, bicycle and pedestrian facilities and impacts would be less than significant.

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

Section 15064.3 of the revised CEQA Guidelines was adopted by OPR on December 28, 2018, and states that vehicles miles traveled (VMT) is the appropriate measure of transportation impacts. Section 15064.3(c) also states that the provisions of this section shall apply prospectively (i.e., only applicable to

new projects after date of adoption) and must be implemented statewide by July 1, 2020. As stated in CEQA Guidelines Section 15064.3(c), the provisions of Section 15064.3 shall apply prospectively.

As of the time of this writing, the City anticipates adoption of VMT thresholds on June 9, 2020. The City's draft proposed VMT thresholds indicates that utility and government uses of 50,000 sf or less or those that result in less than 50 net new FTE employees would not result in significant VMT impacts.[16] The proposed Project is a utility project that would be less than 50,000 sf and would not generate an increase in employees. Therefore, temporary construction-related trips and nominal operations and maintenance trips would be minimal, resulting in less than significant VMT impacts.

Impacts for All Project Components

Less-Than-Significant Impact. As described above, the proposed Project would not develop a new (permanent) land use, but would temporarily generate construction trips.

As described previously, construction of the proposed Project would result in a temporary increase in local trips and associated VMT as a result of construction-related workforce trips and material deliveries, and construction activities occurring within the public right-of-way.

Potential increases in vehicle trip generation as a result of Project construction would vary based on the construction activity, location, equipment needs, and other factors. As summarized under 3.17a, the proposed Project components, would not generate significant amount of daily or peak hour trips. Further, once construction is completed, no new employees would be generated by operations the proposed Project, and only negligible VMT would be generated for periodic maintenance activities. Therefore, the proposed Project would not conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b). Impacts would be less than significant.

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

Olympic Well Field Restoration and Olympic Pipeline

Less-Than-Significant Impact With Mitigation Incorporated. During construction, short-term transportation-related hazards may be introduced due to the presence and use of construction vehicles and equipment including; lane closures, driveway blockages, loss of parking, and disruptions to traffic, transit, bicycle, and pedestrian movement especially in and around the pipeline alignment along Stewart Street, Exposition Boulevard, Arizona Avenue, Texas Avenue, Saltair Avenue, and Berkeley Street. This may result in a potentially significant safety hazard to construction workers and/or the public; therefore, mitigation would be required. To minimize these potential safety hazards, mitigation measure MM-TRAF-1 would be implemented.

MM-TRAF-1 Prior to the start of any Project-related construction at the Olympic Well Field and Olympic Pipeline, the City shall develop and implement a Project-specific Traffic Control Plan (TCP). The TCP shall be stamped and signed by a licensed Traffic Engineer or Civil Engineer in the State of California. The TCP shall be prepared in accordance with applicable regulations and standards, including the California Manual on Uniform Traffic Control Devices, and approved by all regulatory agencies

[16] http://santamonicacityca.iqm2.com/Citizens/Detail_Meeting.aspx?ID=1229

having jurisdiction over the work locations shown in the TCP, including the City of Santa Monica and City of Los Angeles.

The construction of the proposed wells and pipeline would be conducted in accordance with the Standard Specifications for Public Works Construction (Greenbook), traffic control plans approved by City of Santa Monica, and the WATCH Manual to allow acceptable LOS, traffic safety, and emergency access to the site during construction. With implementation of MM-TRAF-1, impacts related to hazards during construction would be reduced to less than significant levels. Once operational, the maintenance, repair, and inspections for the proposed Project would be similar in nature to what is currently occurring for the existing Well Field. Therefore, no new impacts would occur. As such, impacts would be limited to the construction period and would be less than significant with mitigation incorporated.

Olympic AWTF and Arcadia WTP Expansion

The demolition, construction and improvements activities related to of the Olympic AWTF and Arcadia WTP Expansion would occur on the existing site located at 1228 South Bundy Drive. Construction vehicles, equipment and activities would occur on-site and there would not involve any construction work on the public right-of-way. The Contractor shall follow standard construction practices and ensure there are no hazardous geometric design features or incompatible uses on the Project site, and the impacts would be less than significant.

3.17 d) Would the project result in inadequate emergency access?

Impacts for All Project Components

Less-Than-Significant Impact With Mitigation Incorporated. Emergency access requirements are established in the City's Fire Code and the Santa Monica Fire Department. As previously discussed, construction vehicles would temporarily access the Project site via local roadways. The primary off-site impacts from the movement of construction trucks would include short-term and intermittent effects on traffic operations because of slower movements and larger turning radii of delivery and haul trucks compared to passenger vehicles. However, the majority of the proposed construction locations are close to major roadways and freeways, including Wilshire Boulevard, Olympic Boulevard, I-405 and I-10, and travel on local streets would be minimal. Furthermore, incorporation of a Traffic Control Plan, as required by MM-TRAF-1, and adherence to the Greenbook and WATCH Manual would ensure that any temporary impacts to emergency vehicle flow and/or ingress/egress to properties along the alignment are coordinated in advance with emergency service providers and law enforcement to ensure that provision of sufficient emergency service, access, and evacuation can occur during construction if necessary.

Implementation of a Traffic Control Plan with applicable traffic control plans and adherence to the Greenbook and WATCH Manual would reduce impacts to emergency access to less than significant levels. Once operational, the proposed Project would not include any impediments to emergency access. Additionally, vehicular trips for maintenance, repair, and inspection during operation of the Well Field would be minimal and would be similar in quantity and nature to those currently occurring in the area for existing WTP facility. Therefore, no new impacts to emergency access would occur during operation. As such, impacts would be limited to the construction period and would be less than significant with mitigation incorporated.

3.18 Tribal Cultural Resources

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XVIII. TRIBAL CULTURAL RESOURCES				
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:				
a) 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	☐	☐	☐	☒
b) 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?	☐	☐	☒	☐

Existing Setting

All Project Components

CHRIS Records Search Results for Previously Recorded Historic Resources

A CHRIS Records search was conducted for the entire Project area, including the locations for each of the Project site components and a 0.5-mile radius buffer. This search included their collections of mapped prehistoric and historic archaeological resources and historic built-environment resources, Department of Parks and Recreation Site Records, technical reports, archival resources, and ethnographic references. Additional consulted sources include historical maps of the study area, the NRHP, CRHR, the California Historic Property Data File, the lists of California State Historical Landmarks, California Points of Historical Interest, and the Archaeological Determinations of Eligibility. A complete discussion of the CHRIS records search results, historical context, and resource evaluations for each Project site area is available in Appendix B, Cultural Resources Technical Report.

Sacred Lands File Search

Dudek contacted the California NAHC on October 3, 2019 to request a search of the SLF. Results of the SLF (received October 21, 2019) were positive. Because the SLF search does not include an exhaustive list of Native American cultural resources, the NAHC suggesting contacting five Native American individuals and/or tribal

organizations who may have direct knowledge of cultural resources in or near the proposed Project site. No informal tribal consultation was initiated by Dudek for the proposed Project.

Assembly Bill 52 Consultation

The Project is subject to compliance with AB 52 (PRC 21074), which requires consideration of impacts to Tribal Cultural Resources as part of the CEQA process, and that the lead agency notify California Native American Tribal representatives (that have requested notification) who are traditionally or culturally affiliated with the geographic area of the proposed Project. All NAHC-listed California Native American Tribal representatives that have requested project notification pursuant to AB 52 were sent letters by the City on February 19, 2020. The letters contained the project location, project description, CHRIS records search results, SLF results, outline of AB 52 timing, request for consultation, and contact information for the appropriate lead agency representative. Documents related to AB 52 consultation are on file with the City of Santa Monica.

Impact Analysis

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

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

The Arcadia WTP located at 1228 South Bundy Drive in the City of Los Angeles, California (APN: 4263-003-270), and the Olympic Well Field well sites on Olympic Boulevard between Centinela Avenue and 26th Street were evaluated for historical significance. These were the only two resources that met the age requirements for evaluation. All other resources are less than 45 years in age and do not require evaluation at this time. The completion of the potential SM11i wellhead at Ishihara Park and the construction of the Olympic Pipeline would not result in the demolition of any built resources and were therefore not included in the historical significance evaluation.

Olympic Well Field Restoration

No Impact. One historic age resource was identified in the Olympic Well Field Restoration area as a result of the reconnaissance-level survey: the SM-3 well site. This resource was evaluated for significance under applicable federal, state and local criteria and does not appear eligible for listing in the NRHP, CRHR, or as a City of Santa Monica Structure of Merit or Landmark due to a lack of important historical associations, lack of architectural significance, and insufficient integrity. Nor does it appear eligible as contributors to an historic district. As such, the SM-3 well site does not appear to be historical resources for the purposes of CEQA. No historic age resources were identified in the Olympic Well Field Restoration area as a result of the reconnaissance-level survey and desktop review. Therefore, the proposed Olympic Well Field Restoration would not cause a substantial direct adverse change in the significance of a historical resource for the purposes of CEQA.

Additionally, the cultural resources assessment for Olympic Well Field Restoration site analyzed the results of the CHRIS records search, SLF search, California Historical Resources Information (HRI) database, and extensive archival research. The Project proposes to construct the well completion equipment for four (4) new groundwater wells (SM-8, SM-9, SM-10i, and SM-11i), and decommission one groundwater well (SM-3) in the median of Olympic Boulevard. SM-10i would be located west of the intersection of Olympic Boulevard and 26th Street, and SM-8 would be located approximately 1,400 feet east of SM-10i and west of the intersection of Olympic Boulevard and Stewart Street. These two proposed well locations are adjacent to the Santa Monica Air Line right-of-way, however, the new well sites are proposed more than 50 feet north of the Santa Monica Air Line, and will consist of a mostly subsurface structure, with low-profile equipment on the surface, just above grade. This Santa Monica Air Line is eligible under Criterion A for its significant role in the creation and development of the City of Santa Monica, and as an important commuter rail system that served to sustain a critical connection between downtown Los Angeles and Santa Monica. The proposed new well construction will be low-profile and is consistent with the overarching industrial and municipal uses of the surrounding area, including the historical industrial, railroad adjacent setting still extant along this segment of Olympic Boulevard. Therefore, the Project, as proposed, will not diminish the setting of the adjacent Santa Monica Air Line segment and will not impact the ability of the resource as a whole to convey its significance.

No other adjacent resources were identified as a result of the records search or survey that could be indirectly impacted by the proposed Project. As a result, the proposed Project will have a less than significant impact on historical resources under CEQA. No further management recommendations are required for this adjacent resource. As such, the proposed Project would not indirectly affect any adjacent historic-age structures.

Olympic Pipeline

No Impact. No historic age resources were identified in the study area of the Olympic Pipeline as a result of the reconnaissance-level survey. Therefore, the proposed Olympic Pipeline would not directly cause a substantial adverse change in the significance of a historical resource for the purposes of CEQA.

Additionally, the cultural resources assessment for the Olympic Pipeline analyzed the results of the CHRIS records search, SLF search, California HRI database, and extensive archival research. No additional cultural resources were identified adjacent to the Olympic Pipeline study area, which might be indirectly affected by the Project. Further, the proposed Olympic Pipeline segment would remain entirely within the street right-of-way, would be entirely subsurface, and would have no impact to adjacent buildings and structures along the proposed alignment. Additionally, the Olympic Pipeline work proposes no modifications to existing streetscape features. As such, the proposed Project would not indirectly affect any adjacent historic-age structures.

Olympic AWTF and Arcadia WTP Expansion

No Impact. One historic age resource was identified in the Olympic AWTF and Arcadia WTP Expansion area as a result of the reconnaissance-level survey: the Arcadia WTP. This resource was evaluated for significance under applicable federal, state and local criteria and the Arcadia WTP does not appear eligible for listing in the NRHP, CRHR, or as a City of Santa Monica Structure of Merit or Landmark due to a lack of important historical associations, lack of architectural significance, and insufficient integrity. Nor does it

appear eligible as a contributor to an historic district. As such, the Arcadia WTP does not appear to be historical resources for the purposes of CEQA. Therefore, the proposed Olympic AWTF and Arcadia WTP Expansion would not directly cause a substantial adverse change in the significance of a historical resource for the purposes of CEQA.

Additionally, the cultural resources assessment for the Olympic AWTF and Arcadia WTP Expansion analyzed the results of the CHRIS records search, SLF search, California HRI database, and extensive archival research. No additional cultural resources were identified adjacent to the Olympic AWTF and Arcadia WTP Expansion area, which might be indirectly affected by the Project. The proposed replacement of the equipment within the Decarbonator Building would result in the placement of new larger air stripping towers, which could be 4 to 5-feet taller than the existing RO Building height. However, this potential height increase would not result in a change in the character or use of the site, would not cast shadows on adjacent land uses, and would not result in a visual intrusion to any potential nearby historical resources. The Arcadia WTP will continue to operate but would feature new buildings that would be comparable size and scale to existing buildings on site. As such, the proposed Project would not indirectly affect any adjacent historic-age structures.

3.18 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:

ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?

All Project Components

Less-Than-Significant Impact. All NAHC-listed California Native American Tribal representatives who have requested project notification pursuant to AB 52 (California Public Resources Code, Section 21074) were sent letters by the City on February 19, 2020. As of date of this document, no written letters were received to initiate consultation. One phone call took place between the City and a Native American representative from the Gabrieleno Band of Mission Indians – Kizh Nation. Because project construction would be conducted in a location that has been previously disturbed, the City and Native American representative agreed there is little concern over the potential discovery of tribal resources on the Project site. Therefore, potential impacts to tribal cultural resources would be less than significant.

3.19 Utilities and Service Systems

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

Existing Setting

All Project Components

Water Supply

Water supply for the Project is provided by the City of Santa Monica Water Resources Division, Public Works Department. The City of Santa Monica distributes water to the entirety of the City of Santa Monica. The estimated current resident population served by the City's water system is approximately 93,283 people. According to the City of Santa Monica's 2015 Urban Water Management Plan, from 2010 to 2015, approximately 45% of Santa Monica's Water was purchased from Municipal Water District, 54% came from groundwater, and 1% came from recycled water from the Santa Monica Urban Runoff Recycling Facility. Santa Monica's groundwater supply is exclusively pumped from the Santa Monica Basin (City of Santa Monica 2016c).

In accordance with the SGMA, the DWR has classified the Santa Monica Basin as having a medium priority for enacting a GSP. Under SGMA, medium and high priority basins are required to submit a GSP or an alternative plan to the DWR by 2022 to ensure that sustainable groundwater goals are met by 2042 (DWR 2019). In response to this prioritization, the Santa Monica City Council has authorized the City to participate in the formation of a GSA over the Santa Monica Basin in collaboration with LADWP, the City of Beverly Hills, Culver City, and Los Angeles County. The GSA will develop and implement a GSP to ensure groundwater is managed on a sustainable basis (SMPW 2019).

Sewer Infrastructure

The City of Los Angeles owns and operates three sewer collection systems for the City, as well as 29 satellite agencies, including the City of Santa Monica. These sewer collection systems consist of the Hyperion System, Terminal Island System, and Los Angles Regional System (Harbor Gateway). Collectively, when last measured in January 2019, these systems conveyed approximately 272 mgd of wastewater via approximately 6,439 miles of gravity mains, 33 miles of force mains, and 46 pumping plants. The Project site is located within the Hyperion System (LA Sanitation 2019a).

Currently, wastewater from the Project site is conveyed through existing sewer lines located within adjacent streets. These flows are conveyed to the Hyperion Water Reclamation Plant, which on average, treats 275 MGD wastewater on a dry weather day. Because wastewater entering Hyperion Water Reclamation Plant can double on rainy days, the plant was designed to accommodate both dry and wet weather days with a maximum daily flow of 450 MGD and peak wet weather flow of 800 MGD (LA Sanitation 2019b).

Solid Waste

LA Sanitation & Environment is responsible for the collection of refuse, recyclables, yard trimmings, and bulky items within the City of Los Angeles. Waste collected from the City is taken to the Central L.A Recycling & Transfer Station, which is located at 2201 E. Washington Boulevard, Los Angeles 90021, and has a permitted capacity of 4,025 tons per day (LA Sanitation 2019b).

Within the City of Santa Monica, Santa Monica Public Work's Solid Waste Management Division provides refuse and recycling services to residential customers within the City (Santa Monica Public Works 2019). Waste collected by the City of Santa Monica Public Works' is transferred to a local transfer station, such as the Southern California Disposal Transfer Station, which located at 1908 Frank Street, Santa Monica, CA 90404 and has a permitted capacity of 1,056 tons per day (LADPW 2019). For both the Central L.A Recycling & Transfer Station and Southern California Disposal Transfer Station facilities, transferred waste is processed and sorted before being conveyed to a nearby landfill. The closest landfills the Project site include the Calabasas Landfill and the Scholl Canyon Landfill. Details on these landfills are provided below (CalRecycle 2020).

- The Calabasas Landfill is located approximately 16.0 miles to the northwest of the Project site, located at 5300 Lost Hills Road, Agoura, CA 91301. This landfill is owned and operated by the County of Los Angeles. The Calabasas Landfill has a maximum permitted daily capacity of 3,500 tons.
- The Scholl Canyon Landfill is located approximately 17 miles northeast of the Project site, located at 3001 Scholl Canyon Road, Glendale, CA 91206. This landfill is owned and operated by the County of Los Angeles. The Scholl Canyon Landfill has a maximum permitted daily capacity of 3,400 tons.

Olympic Well Field Restoration

The wells and the surrounding area is predominately paved and developed. The existing Olympic Boulevard median that separates the two-lane Olympic Boulevard and is grass-covered with several scattered trees. Additionally, Ishihara Park includes ornamental vegetation and grassy areas, as well as paved areas. Nonetheless, the predominance of impervious surfaces associated with developed properties and roadways in the Olympic Well Field Restoration area prevents water from percolating into the ground. Stormwater from the Project site surrounding properties flows through municipal storm drains until converging into the 12-inch, reinforced cement concrete, Kenter Canyon Drain. Kenter Canyon Drain eventually drain into the Santa Monica Bay (LACDPW 2019). Existing subterranean utilities within Olympic Boulevard include a 48-inch storm drain mainline and 15-inch laterals, communications infrastructure, and water lines.

Olympic Pipeline

The pipeline alignment would be entirely contained within existing roadways (public rights-of-way) within the cities of Santa Monica and Los Angeles. The roadways are fully paved, which prevents water from percolating into the ground. According to the LACDPW's Los Angeles County Storm Drain System and regional topographic patterns (USGS 2015), it appears a segment of the proposed new pipeline extending mid-way between South Bundy Drive and Amherst Avenue, flow through municipal storm drains before discharging into the Ballona Creek. For the remainder of the alignment, it appears that stormwater flows through municipal storm drains until converging into the 12-inch, reinforced cement concrete, Kenter Canyon Drain. Both Ballona Creek and the Kenter Canyon Drain eventually drain into the Santa Monica Bay (LACDPW 2019). Existing utilities within Nebraska Avenue include subterranean 12-inch sewer line, communications infrastructure, 27-inch storm drain mainline and 18-inch laterals, and 12-inch water line. There are no existing subterranean utilities within Berkeley Street, until its intersection with Colorado Avenue, which contains subterranean electrical infrastructure, communications infrastructure, 12-inch sewer line, and a 12-inch water line. From Colorado Avenue, Berkeley Street includes a 12-inch water line, with stormdrain laterals connecting to the 36-inch storm drain mainlines within Broadway and Santa Monica Boulevard. Arizona Avenue contains a 24-inch water line, and 8-inch water line, communications infrastructure, and an 8-inch sewer line. Texas Avenue includes a 30-inch water line, 6-inch water line, communications infrastructure, which intersect with a 30-inch storm drain lines and 10-inch sewer line. At Bundy Drive, the utilities within Texas Avenue include an 8-inch brine line, 6-inch water line, electrical infrastructure, communications infrastructure, and an 8-inch sewer line. Infrastructure within Saltair Avenue includes a 8-inch sewer line, 42-inch storm drain, and 6-inch water line.

Olympic AWTF and Arcadia WTP Expansion

The Arcadia WTP and the surrounding area is predominately paved and developed, with approximately 1 acre of the 4.8-acre site being vegetated with grass and trees. Vegetation within and near the Project area consists of maintained lawns and ornamental vegetation, as well as shrubs and trees located in isolated planter areas. According to the LACDPW's Los Angeles County Storm Drain System and regional topographic patterns (USGS 2015), it appears that runoff from the Arcadia WTP sheetflows off of the site through municipal storm drains before discharging into the Ballona Creek.

Impact Analysis

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

Olympic Well Field Restoration

Water Facilities

Less-Than-Significant Impact. The construction of the proposed Well Field would require short-term use of water for dust suppression, which would be delivered via water truck and would not require connections to the existing water infrastructure.

The operation of the proposed Olympic Well Field restoration would not result in new or expanded water facilities beyond those analyzed as part of the proposed Project, the impacts of which are addressed in Sections 3.1 through 3.21 of this IS/MND. One of the overarching goals of this Project is to maximize local groundwater production and produce as much potable water as possible and concurrently reduce imported MWD water supply while maintaining sustainable yield of the groundwater basin. The replacement of existing MWD deliveries with local supplies would not directly or indirectly increase demands for potable water or otherwise result in the relocation or construction of new or expanded water facilities beyond those analyzed in this IS/MND.

Wastewater Facilities

Less-Than-Significant Impact. The construction activities associated with the wellhead completions would not generate wastewater, as workers would be provided portable restrooms that would be disposed through a certified vendor. No connections to existing sewage infrastructure are required.

The operations of the Olympic Well Field would not generate sewage, although it could result in an increase in wastewater discharge at the Arcadia WTP because an increase in local groundwater supply flow would run through the treatment train and generate RO concentrates. After treatment, the generated discharge is disposed into the Hyperion System. Currently, wastewater from the Arcadia WTP is conveyed through existing sewer lines located within adjacent streets to the Hyperion Water Reclamation Plant. However, coordination with LA Sanitation with regard to discharges from the existing Arcadia WTP would ensure the proposed Project would continue to comply with the Industrial Wastewater Permit issued by the City of Los Angeles. Currently, the City is approved to discharge 44,317 gallons per day to the City of Los Angeles sewer system at the northern end of the existing Arcadia WTP (LA Sanitation 2018). The proposed Project would not request additional sewer disposal capacity from LA Sanitation for the greensand filter backwash, which currently goes to LA Sanitation's sewer, because the Project proposes to reduce the quantity of RO concentrates that will be discharged (Pour pers. comm. 2020). Therefore, there the proposed Olympic Well Field Restoration can be served by LA Sanitation's existing sewer disposal (brine) line. Impacts to wastewater treatment facilities due to additional groundwater generated at the Olympic Well Field would be less than significant.

Stormwater Drainage Facilities

Less-Than-Significant Impact. Construction would require the conversion of grassy areas to paved impervious surfaces. The proposed Olympic Well Field Restoration would be constructed within an existing median that separates the two-lane Olympic Boulevard and within Ishihara Park. Both locations are currently vegetated. As described in Section 3.10, Hydrology and Water Quality, the proposed Project would not substantially change the amount of stormwater runoff from the Project site and surrounding area. The well completions would result in minor additional amounts of surface runoff due to the new impervious surfaces; however, this runoff would sheetflow into adjacent vegetated areas within the median or Park, and into existing stormwater drainage facilities. Therefore, the proposed Olympic Well Field Restoration would not require or result in the relocation or expansion of construction of new or expanded stormwater facilities. Impacts would be less than significant.

Electric Power and Natural Gas Facilities

Less-Than-Significant Impact. As discussed in Section 3.6, Energy, the amount of electricity used during construction would be minimal because typical demand would stem from electrically powered hand tools. No natural gas use is anticipated during construction. The electricity used for construction activities would be temporary and minimal; therefore, short-term Project construction would not require new or expanded electricity or natural gas facilities.

Operational activities associated at the Well Field would not generate the need for natural gas, but the proposed wells would operate under pressure and would require electrical equipment to power the pumps, valves, and instrumentation. However, when considering avoided electricity associated with replacing imported water with local groundwater, there is a net reduction in electricity demand for the City's water supply. Local connections at the well sites to existing electrical subterranean infrastructure would be constructed, and no new electrical infrastructure would be required. The City would coordinate with SCE prior to connection. Therefore, the proposed Olympic Well Field Restoration would not require or result in the relocation or expansion of construction of new or expanded electrical or natural gas facilities. Impacts would be less than significant.

Telecommunications Facilities

No Impact. The proposed Project would not generate population growth or construct habitable facilities; therefore, the Well Field would not require telecommunications facilities.

Olympic Pipeline

Water Facilities

Less-Than-Significant Impact. The construction of the proposed Olympic Pipeline would require short-term use of water for dust suppression, which would be delivered via water truck and would not require connections to the existing water infrastructure. The operation of the proposed Olympic Pipeline would not result in new or expanded water facilities beyond those analyzed as part of the proposed Project, the impacts of which are addressed in Sections 3.1 through 3.21 of this IS/MND. One of the overarching goals of this Project is to maximize local groundwater production and produce as much potable water as possible and concurrently reduce imported MWD water supply while maintaining sustainable yield of the

groundwater basin. The replacement of existing MWD deliveries with local supplies would not directly or indirectly increase demands for potable water or otherwise result in the relocation or construction of new or expanded water facilities beyond those analyzed in this IS/MND.

Wastewater Facilities

Less-Than-Significant Impact. The construction activities associated with the pipeline would not generate wastewater, as workers would be provided portable restrooms that would be disposed through a certified vendor. No connections to existing sewage infrastructure are required.

The operations of the pipeline would not generate sewage, although it would convey groundwater to the Olympic AWTF and Arcadia WTP, which could result in an increase in wastewater discharge due to RO concentrates. As previously discussed, coordination with LA Sanitation with regard to discharges from the existing Arcadia WTP would ensure the proposed Project would continue to comply with the Industrial Wastewater Permit issued by the City of Los Angeles. The proposed Project would not request additional sewer disposal capacity from LA Sanitation; thus, the proposed Olympic Pipeline would not require or result in the relocation or expansion of construction of new or expanded wastewater facilities. Impacts would be less than significant.

Stormwater Drainage Facilities

No Impact. The proposed Olympic Pipeline alignment is located within existing roadways that are currently impervious, and thus, the post-Project condition would not change the amount of stormwater runoff from the site.

Electric Power and Natural Gas Facilities

Less-Than-Significant Impact. As discussed in Section 3.6, Energy, the amount of electricity used during construction would be minimal because typical demand would stem from electrically powered hand tools. No natural gas use is anticipated during construction. The electricity used for construction activities would be temporary and minimal; therefore, short-term Project construction would not require new or expanded electricity or natural gas facilities. Operational activities associated at the Olympic Pipeline would not generate the need for natural gas or electricity. Therefore, the proposed Olympic Pipeline would not require or result in the relocation or expansion of construction of new or expanded electrical or natural gas facilities. Impacts would be less than significant.

Telecommunication Facilities

No Impact. The proposed Project would not generate population growth or construct habitable facilities; therefore, the Olympic Pipeline would not require telecommunications facilities.

Olympic AWTF and Arcadia WTP Expansion

Water Facilities

Less-Than-Significant Impact. The construction of the proposed Olympic AWTF and Arcadia WTP Expansion would require short-term use of water for dust suppression, which would be delivered via water truck and would not require connections to the existing water infrastructure.

The Olympic AWTF would be a new treatment facility specifically designed to treat contaminated waters from the Olympic Well Field and would be located at the existing Arcadia WTP. Additionally, the Arcadia WTP would be expanded to increase capacity to handle the additional flows from the Olympic AWTF as well as additional production of potable water from leveraging new technologies to enhance production efficiency. The operation of the proposed Olympic Pipeline would not result in new or expanded water facilities beyond those analyzed as part of the proposed Project, the impacts of which are addressed in Sections 3.1 through 3.21 of this IS/MND. As addressed in Section 3.14(a), the proposed Project would not generate population or employment growth and thus, would not require additional water supplies. The proposed Olympic AWTF and Arcadia WTP Expansion would assist the City in increasing their local water supply to meet existing water supply demand with an increase in local sources and a reduction in imported sources. One of the overarching goals of this Project is to maximize local groundwater production and produce as much potable water as possible and concurrently reduce imported MWD water supply while maintaining sustainable yield of the groundwater basin. The replacement of existing MWD deliveries with local supplies would not directly or indirectly increase demands for potable water or otherwise result in the relocation or construction of new or expanded water facilities beyond those analyzed in this IS/MND.

Wastewater Facilities

Less-Than-Significant Impact. The construction activities associated with the Olympic AWTF and Arcadia WTP would not generate wastewater, as workers would be provided portable restrooms that would be disposed through a certified vendor. No connections to existing sewage infrastructure are required.

As previously discussed above, coordination with LA Sanitation with regard to discharges from the existing Arcadia WTP would ensure the proposed Project would continue to comply with the Industrial Wastewater Permit issued by the City of Los Angeles. The proposed Project would not request additional sewer disposal capacity from LA Sanitation; thus, the proposed Olympic AWTF and Arcadia WTP Expansion would not require or result in the relocation or expansion of construction of new or expanded wastewater facilities. Impacts would be less than significant.

Stormwater Drainage Facilities

Less-Than-Significant Impact. As described in Section 3.10, Hydrology and Water Quality, the proposed Arcadia WTP would convert currently vegetated areas with grass/trees into impervious paved surfaces. New impervious surfaces could increase the amount and/or rate of surface runoff; however, the additional runoff would not substantially change in the post-Project condition with compliance with existing City regulations and incorporation of appropriate LID BMPs. Runoff would sheetflow into the existing stormwater drainage facilities on the Project site, which is largely paved with impervious surfaces in the current condition. Therefore, the proposed Olympic AWTF and Arcadia WTP expansion would not require or result in the relocation or expansion of construction of new or expanded stormwater facilities and impacts would be less than significant.

Electric Power and Natural Gas Facilities

Operational activities associated with the proposed Project would not generate routine daily equipment operation or additional vehicle trips. As discussed in Section 3.6, Energy, the proposed Project would the amount of electricity used during construction would be minimal because typical demand would stem from electrically powered hand tools. The electricity used for construction activities would be temporary and minimal; therefore, Project construction would not result in new infrastructure requirements. Additionally, the City is in the process of coordination with LADWP with regards to electric power. LADWP had indicated to the City that electric service is available and the estimated power requirement for the proposed Project is part of the total load growth forecast for the City of Los Angeles and had been taken into account (LADWP 2020). When considering avoided electricity associated with replacing imported water with local groundwater, there is a net reduction in electricity demand for the City's water supply.

Natural gas is not anticipated to be required during construction of the Project. Once operational, the Project would consume approximately 190,050 kBtu per year. The Project is subject to statewide mandatory energy requirements as outlined in CCR Title 24, Part 6, California Energy Code. Therefore, the Project would not result in the relocation or expansion of construction of new or expanded electric power and natural gas facilities. Impacts would be less than significant.

Telecommunication Facilities

No Impact. The proposed Project would not generate population growth or construct habitable facilities; therefore, the Olympic Pipeline would not require telecommunications facilities.

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

Short-Term Construction Impacts for All Project Components

Less-Than-Significant Impact. The construction of the proposed Project would require short-term use of water for dust suppression, which would be delivered via water truck and would not require connections to the existing water infrastructure. Short-term water use would be minimal and would not significantly affect water supplies during normal, dry, and multiple dry years.

Olympic Well Field Restoration

Less-Than-Significant Impact. The proposed Project aims to enhance sustainability of the City's water supply through developing alternative water supplies and expanding use of local groundwater supplies to eliminate reliance on purchase of imported water supplies. The proposed Olympic Well Field Restoration component of the proposed Project would involve the equipping two new injection wells (SM-10i and SM-11i) and two domestic groundwater production wells (SM-8 and SM-9), and the construction of a new recycled water line to connect SM-11i to a planned recycled water line. The production wells would allow for groundwater recovery and the injection wells would recharge the Olympic Well Field with purified water from the City's SWIP to maintain sustainable yields. The proposed Project itself does not generate water supply demand. Further, the Olympic Well Field Restoration is proposed to maximize local water supplies to eliminate reliance on imported water supplies. Therefore, the proposed Project would not significantly affect water supplies during normal, dry, and multiple dry years.

Olympic Pipeline

No Impact. The proposed Olympic Pipeline would not require the permanent use of water supplies, but would convey water from the Well Field to the Olympic AWTF at the Arcadia WTP. As addressed in Section 3.14(a), the proposed Project would not generate population or employment growth and thus, would not require additional water supplies.

Olympic AWTF and Arcadia WTP Expansion

Less-Than-Significant Impact. The Olympic AWTF would be a new treatment facility specifically designed to treat contaminated waters from the Olympic Well Field and would be located at the existing Arcadia WTP. Additionally, the Arcadia WTP would be expanded to increase capacity to handle the additional flows from the Olympic AWTF as well as additional production of potable water from leveraging new technologies to enhance production efficiency. As addressed in Section 3.14(a), the proposed Project would not generate population or employment growth, or construct new habitable structures; therefore, the Project would not require additional water supplies. Additionally, water use at the Project site may be reduced due to the elimination of approximately 0.69-acre of landscaping (i.e. turf grass and trees) on the site. Further, the proposed Project would assist the City in increasing their local water supply to meet existing water supply demand with a reduction in imported sources. Therefore, the proposed Project would not significantly affect water supplies during normal, dry, and multiple dry years.

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

Short-Term Construction Impacts for All Project Components

Less-Than-Significant Impact. The construction activities associated with the proposed Project would not generate wastewater, as workers would be provided portable restrooms that would be disposed through a certified vendor. No connections to existing sewage infrastructure are required.

Long-Term Operational Impacts for All Project Components

Less-Than-Significant Impact. The operations of the proposed Project could result in an increase in discharge at the existing Arcadia WTP because an increase in local water supply flow would run through the treatment train from the Well Field to the Olympic AWTF and Arcadia WTP. However, as previously discussed, coordination with LA Sanitation with regard to discharges from the existing Arcadia WTP would ensure the proposed Project would continue to comply with the Industrial Wastewater Permit issued by the City of Los Angeles. Currently, the City has purchased (from City of Los Angeles) discharge capacity of up to 1,200,000 gallons per day and is typically discharges 44,317 gallons per day to the City of Los Angeles sewer system at the northern end of the existing Arcadia WTP (LA Sanitation 2018). The proposed Project would not request additional sewer disposal capacity from LA Sanitation for the greensand filter backwash, which currently goes to LA Sanitation's sewer because the Project proposes to reduce the RO concentrates that will be discharged (Pour pers. comm. 2020). Therefore, the proposed Project can be served by LA Sanitation's existing sewer disposal line without requiring additional capacity. The Project has received a determination by the wastewater treatment provider that it has adequate capacity to serve the Project's projected demand in addition to the provider's existing commitments.

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

and

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

Short-Term Construction Impacts for All Project Components

Less-Than-Significant Impact. The proposed Project would generate minimal construction waste, such as some concrete, wood forms, and soil. Demolition debris from the decommissioning of SM-3 at the Well Field would be required and concrete/asphalt debris would be generated from the Olympic Pipeline. Demolition materials including concrete, metal, pipes, and building debris from the expansion of the Arcadia WTP would also be generated. The proposed Project would be required to comply with SMMC Chapter 8.108, requiring submission of a waste management plan and requiring 70% of all construction and demolition material generated by the proposed Project to be diverted away from a landfill. Construction activities would be conducted in compliance with all applicable federal, state, and local management and reduction statutes and regulations related to solid waste. Compliance with existing regulations regarding construction and demolition debris diversion would ensure that short-term impacts related to construction activities would not 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.

Long-Term Operational Impacts for All Project Components

Less-Than-Significant Impact. No solid waste generation would occur due to long-term operations at the Well Field or Olympic Pipeline. Additionally, no new land uses or habitable structures would be constructed at the Arcadia WTP or Olympic AWTF; therefore, solid waste generation would be limited to disposal of materials associated with packaging for chemical deliveries and use. No new land uses are proposed that would alter the nature of the current waste stream generated at the Arcadia WTP. Operational activities would be conducted in compliance with all applicable federal, state, and local management and reduction statutes and regulations related to solid waste. The Project would divert at least 75% of its Construction and Waste Debris in compliance with SMMC 8.108, Construction and Demolition Material Waste Management Plans. Therefore, quantities of solid waste generation would be minimal and the Project would not 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.

3.20 Wildfire

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XX. WILDFIRE – If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
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?	☐	☐	☐	☒

Existing Setting

Olympic Well Field Restoration

The proposed well locations are within highly urbanized areas that lack wildlands, and are not within state responsibility areas or lands classified as very high fire hazard severity. The proposed locations for SM-8, SM-9, and SM-10i are within an existing median in the public right-of-way in the Bergamot Area Plan within the City of Santa Monica, and the proposed location for SM-11i is within the eastern end of Ishihara Park. The proposed recycled water pipeline would be located within the existing roadways (Exposition Boulevard and Stewart Street). The uses surrounding the Project site are urban and fully developed. The surrounding area is relatively flat and lacks topographical features.

Olympic Pipeline

The Olympic Pipeline is proposed to be constructed within the existing roadway through a fully urbanized and developed portion of the cities of Santa Monica and Los Angeles. The surrounding area is relatively flat and lacks

topographical features. The location for and area surrounding the Olympic Pipeline are not within state responsibility areas or lands classified as very high fire hazard severity.

Olympic AWTF and Arcadia WTP Expansion

The existing Arcadia WTP is surrounded by a mix of commercial and residential land uses within the West Los Angeles Community Plan in the City of Los Angeles. The area is within a highly urbanized portion of the City of Los Angeles and is not within state responsibility areas or lands classified as very high fire hazard severity. The surrounding area is relatively flat and lacks topographical features.

Impact Analysis

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

Short-Term Construction Impacts for All Project Components

No Impact. According to the California Department of Forestry and Fire Protection's Fire Hazard Severity Zones maps, none of the Project components are located within moderately, highly, or very highly susceptible to wildland fire (CAL FIRE 2007). Emergency access along Olympic Boulevard, the alignment of the Olympic Pipeline, and other affected roadways would be maintained at all times during construction. Installation of the Olympic Pipeline would require temporary lane closures within public streets, which could temporarily interfere with evacuation routes. However, because the Project components are not located within a state responsibility areas or lands classified as very high fire hazard severity, the Project would not substantially impair an adopted emergency response plan or emergency evacuation plan in a very high fire hazard severity area.

Long-Term Operational Impacts for All Project Components

No Impact. According to the California Department of Forestry and Fire Protection's Fire Hazard Severity Zones maps, the none of the Project components are within moderately, highly, or very highly susceptible to wildland fire (CAL FIRE 2007). Long-term operations of the proposed Project would have no impact on any roadways or otherwise hinder emergency response or evacuations.

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

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

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

Impacts for All Project Components

No Impact. According to the California Department of Forestry and Fire Protection's Fire Hazard Severity Zones maps, none of the Project components are located within moderately, highly, or very highly susceptible to

wildland fire (CAL FIRE 2007). The area surrounding the Project site are fully urbanized and developed, and not subject to landslides, slope instability, or wildfire risks. In addition, the proposed Project would not result in the installation or maintenance of habitable structures, roads, fuel breaks, emergency water sources, or power lines.

3.21 Mandatory Findings of Significance

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XXI. MANDATORY FINDINGS OF SIGNIFICANCE				
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☒	☐	☐
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐	☐

Impact Analysis

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

Impacts for All Project Components

Less-Than-Significant Impact With Mitigation Incorporated. The Project components are located in fully developed and urbanized portions of the cities of Santa Monica and Los Angeles. As described in Section

3.4, Biological Resources, the Project components do not currently support substantial wildlife or fish habitat, fish or wildlife populations, or plant and wildlife communities. Due to the existing surroundings and developed condition of the Project area, the potential to substantially reduce the number or restrict the range of a rare or endangered plant or animal is low. The ornamental vegetation at the Well Field and the Arcadia WTP do not constitute a contiguous plant community and do not provide habitat for native wildlife species. Thus, the proposed Project would not 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 of a rare or endangered plant or animal, or restrict the range of a rare or endangered plant or animal. The proposed SM-11i would require the removal of up to 9 trees within Ishihara Park and the Arcadia WTP Expansion would result in the removal of 8 on-site trees. Therefore, direct impacts to nesting birds could result from removal of potential nesting and foraging habitat. Thus, the proposed Project would implement MM-BIO-1 to ensure potential impacts to nesting birds from construction-related activities would be less than significant.

Additionally, as addressed in Section 3.5, Cultural Resources, the proposed Project would not have the potential to eliminate important examples of the major periods of California history or prehistory. If unanticipated discoveries of archaeological resources were encountered, impacts to encountered resources could be potentially significant. However, with the implementation of a WEAP training under MM-CUL-1, implementation of MM-CUL-2 for the inadvertent discovery of archaeological resources, and archaeological monitoring under MM-CUL-3, potentially significant impacts to archaeological resources would be reduced to less-than-significant levels. Therefore, impacts would be less than significant with MM-CUL-1 through MM-CUL-3 incorporated. The proposed Project would not eliminate important examples of the major periods of California history. Therefore, implementation of the proposed Project would result in less than significant impacts with mitigation incorporated on sensitive species and important examples of California history.

3.21 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)?

Impacts for All Project Components

Less-Than-Significant Impact With Mitigation Incorporated. One project identified by the City's cumulative project list is located adjacent to a portion of the proposed Olympic Pipeline alignment (1342 Berkeley Street), which proposes an 8-unit affordable housing project. In an effort to determine whether or not the proposed Project's potential impacts are cumulatively considerable, a City-wide approach was used to consider anticipated growth in the City, and the proposed 8-unit affordable housing project at 1342 Berkeley Street was used to consider site-specific cumulative impacts.

The proposed Project would result in potentially significant Project-level impacts involving air quality, biological resources, cultural resources, geology and soils, hazards and hazardous materials, noise, and transportation. However, in all cases, mitigation measures have been identified that would reduce these impacts to a less-than-significant level. As addressed throughout this IS/MND, the proposed Project would have no impact, a less than significant impact, or a less than significant impact with mitigation incorporated with respect to all environmental impact areas. Cumulative impacts of several resource areas have already been addressed in several individual resource sections, including Section 3.3, Air Quality; Section 3.8, Greenhouse Gas Emissions; Section 3.13,

Noise; and Section 3.17, Transportation. CalEEMod was used to assess the air quality and GHG emissions impacts resulting from the proposed Project, concluding less than significant impacts.

The proposed Project would incorporate mitigation measures as described in Section 3.13, Noise, to ensure compliance with applicable noise standards. With incorporation of the mitigation measures described in Section 3.13, the proposed Project would not contribute to cumulative exceedances of noise standards, and its incremental effect would not be cumulatively considerable. SMMC Section 4.12.070 does have a vibration threshold with respect to perception without instrument. Therefore, construction vibration impacts resulting from the proposed Project and the nearby 8-unit affordable housing project would not be cumulatively considerable. Traffic assessments conducted as part of this IS/MND considered cumulative increases in traffic and concluded that cumulative impacts would be less than significant. Some of the other resource areas (i.e., Section 3.1, Aesthetics; Section 3.2, Agricultural and Forestry Resources; Section 3.10, Hydrology and Water Quality; Section 3.11, Land Use and Planning; Section 3.12, Mineral Resources; Section 3.14, Population and Housing; Section 3.15, Public Services; Section 3.16, Recreation; and Section 3.19, Utilities and Services Systems) were determined to have a less than significant or no impact when compared to existing conditions, and thus, the proposed Project would not contribute to cumulative impacts related to these environmental topics. Other issues areas (i.e., Section 3.5, Cultural Resources; Section 3.7, Geology and Soils; Section 3.9, Hazards and Hazardous Materials; Section 3.18, Tribal Cultural Resources; and Section 3.20, Wildfire) are by their nature site-specific, and impacts at one location do not add to impacts at other locations or create additive impacts.

Additionally, because the proposed Project would not create new housing opportunities or additions in employment (see Section 3.13, Population and Housing), the proposed Project would not cumulatively contribute to population-driven impacts (such as population and housing, utilities, public recreation facilities, and public services). All reasonably foreseeable future development in the City would be subject to the same land use and environmental regulations that have been described throughout this document.

Furthermore, all development projects are guided by the policies identified in the City's General Plan and by the regulations established in the SMMC. Therefore, compliance with applicable land use and environmental regulations would ensure that environmental effects associated with the proposed Project do not combine with effects from reasonably foreseeable future development in the City to cause cumulatively considerable significant impacts. Cumulative impacts would therefore be less than significant with mitigation incorporated.

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

Impacts for All Project Components

Less-Than-Significant Impact With Mitigation Incorporated. As evaluated throughout this document, with the incorporation of mitigation associated with to air quality, biological resources, cultural resources, geology and soils, hazards and hazardous materials, noise, and transportation, environmental impacts associated with the proposed Project would be reduced to less than significant levels. Specifically, mitigation measures related to air quality would require all 50-horsepower or greater diesel-powered equipment is powered with CARB-certified Tier 4 Interim engines to reduce on-site emissions of PM_{10}. In addition, a hazardous material contingency plan will be developed that addresses the potential contamination associated with installation of the proposed wells (MM-HAZ-1). Further, MM-TRA-1 requires a Project-specific TCP to reduce short-term transportation-related hazards. Therefore, the proposed Project would not directly or indirectly cause substantial adverse effects on human beings.

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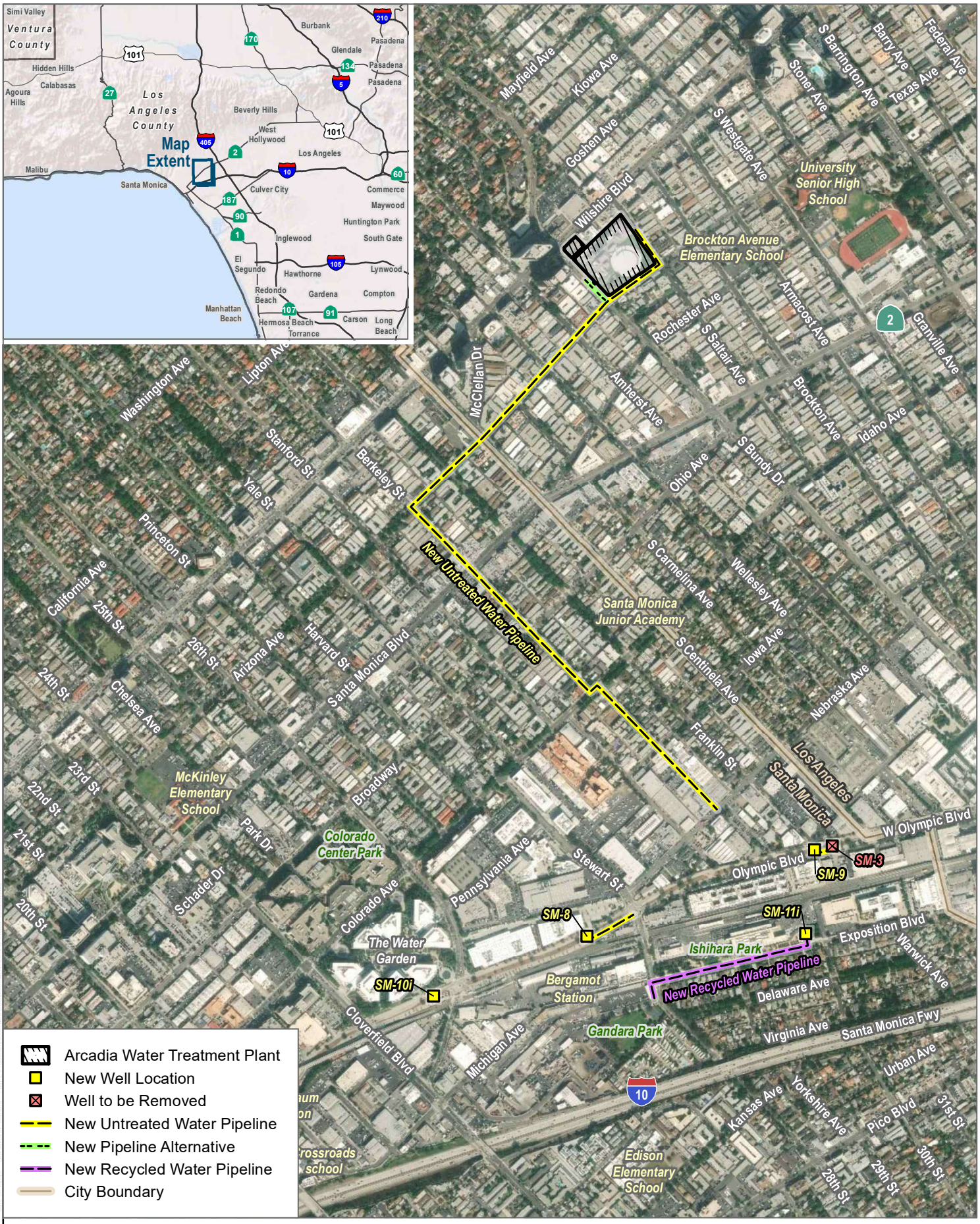
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Audrey Herschberger, Hazards and Hazardous Materials
Susie Smith, Hazards and Hazardous Materials
Mark Storm, Noise
Sabita Tewani, Transportation
Chris Starbird, GIS Technician



SOURCE: Esri and Digital Globe 2019; Open street Map 2019

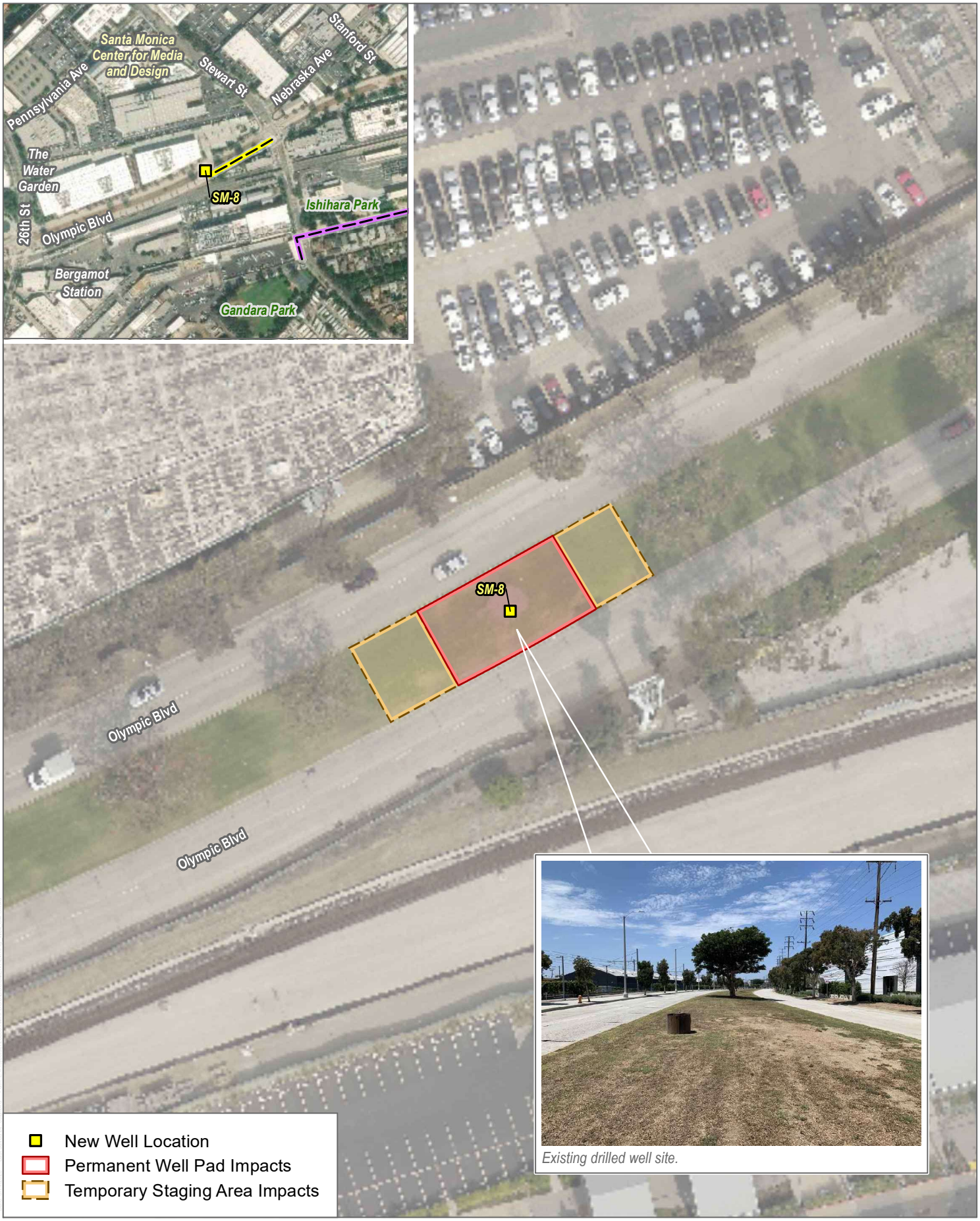
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FIGURE 1

Project Location and Regional Vicinity

Olympic Well Field Restoration and Arcadia Water Treatment Plant Expansion Project

INTENTIONALLY LEFT BLANK



Existing drilled well site.

SOURCE: Esri and Digital Globe 2019; Open street Map 2019

DUDEK

0 25 50 Feet

FIGURE 2A

Well SM-8 Location and Vicinity

Olympic Well Field Restoration and Arcadia Water Treatment Plant Expansion Project

INTENTIONALLY LEFT BLANK



SOURCE: Esri and Digital Globe 2019; Open street Map 2019

DUDEK

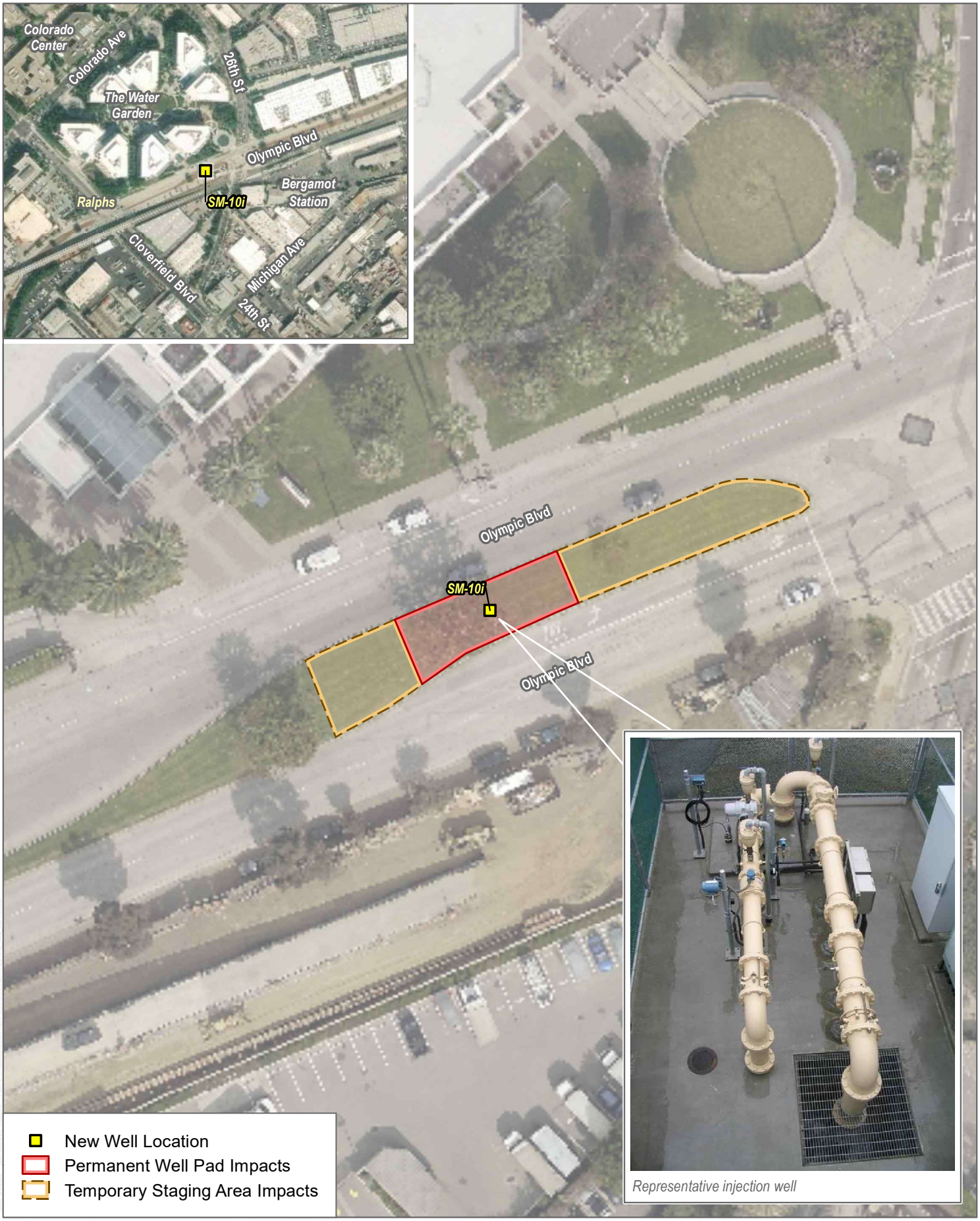
0 25 50 Feet

FIGURE 2B

Wells SM-9 and SM-3, Location and Vicinity

Olympic Well Field Restoration and Arcadia Water Treatment Plant Expansion Project

INTENTIONALLY LEFT BLANK



SOURCE: Esri and Digital Globe 2019; Open street Map 2019

DUDEK

0 25 50 Feet

FIGURE 2C

Well SM-10i Location and Vicinity

Olympic Well Field Restoration and Arcadia Water Treatment Plant Expansion Project

INTENTIONALLY LEFT BLANK



SOURCE: Esri and Digital Globe 2019; Open street Map 2019

DUDEK

0 25 50 Feet

FIGURE 2D

Well SM-11i Location and Vicinity

Olympic Well Field Restoration and Arcadia Water Treatment Plant Expansion Project

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SOURCE: Esri and Digital Globe 2019; Open street Map 2019

DUDEK

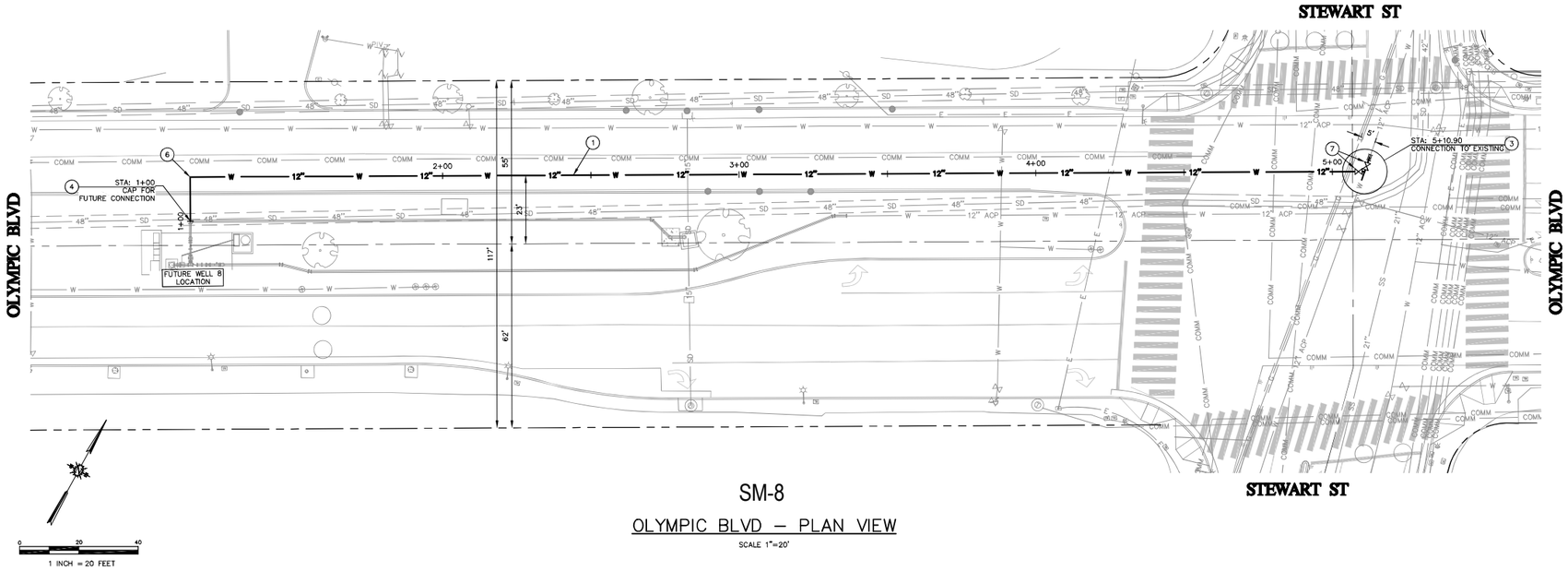
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FIGURE 3

Arcadia Water Treatment Plant Site

Olympic Well Field Restoration and Arcadia Water Treatment Plant Expansion Project

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SM-8

OLYMPIC BLVD – PLAN VIEW

SCALE 1"=20'

GENERAL NOTES:

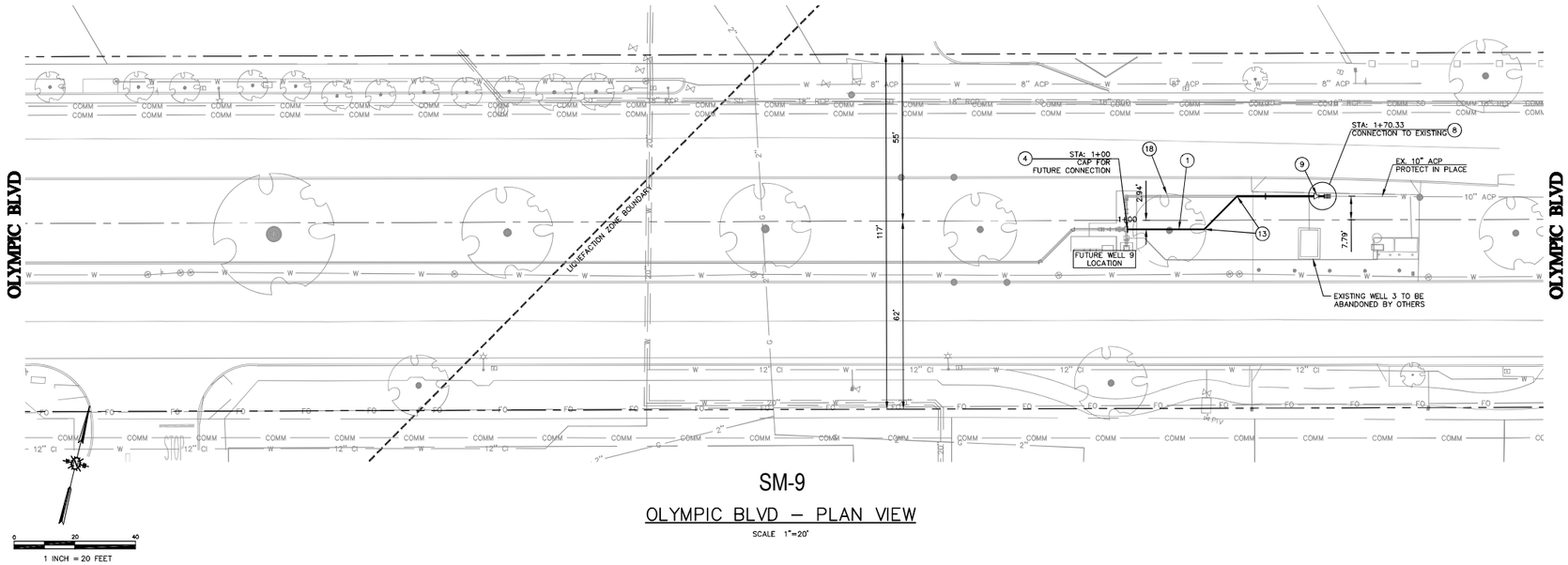
1. ALL EXISTING IMPROVEMENTS INCLUDING, BUT NOT LIMITED TO, LOOP DETECTORS, X-WALKS, STOP BARS, CURB, GUTTER, SIDEWALK, PAVEMENT, BICYCLE LANES, AND LEGENDS DAMAGED AS A RESULT OF CONTRACTOR'S WORK SHALL BE REPLACED IN KIND TO ENGINEER'S SATISFACTION.
2. ALL EXISTING SANITARY SEWER AND STORM DRAIN CROSSINGS WITHIN THE CITIES OF SANTA MONICA AND LOS ANGELES SHALL BE PROTECTED PER THE CITY OF LOS ANGELES STANDARD PLAN S-253-0, SHEET 29.

ASBESTOS CEMENT PIPE:

1. ASBESTOS CEMENT PIPE MAY BE CUT ONLY BY AN APPROVED METHOD AND IN ACCORDANCE WITH OSHA GUIDELINES. SAWING, GRINDING, DRILLING, OR ANY OTHER ACTIVITY WHICH COULD RESULT IN THE RELEASE OF ASBESTOS FIBERS IS PROHIBITED.
2. WHEN WORKING WITH ASBESTOS CEMENT PIPE, THE CONTRACTOR SHALL PROVIDE DOCUMENTATION THAT EMPLOYEES HAVE RECEIVED REQUIRED TRAINING PER OSHA.
3. METHODS OF CONSTRUCTION SHALL ALSO COMPLY WITH OSHA AND OTHER LEGAL -25IDELINES TO PREVENT THE RELEASE OF FIBERS.

CONSTRUCTION NOTES

(1) INSTALL 12"ø PC350 DUCTILE IRON WATER MAIN IN OPEN TRENCH PER SMW-1, SHEET 27.
(3) CONNECT TO EXISTING ACP PER CITY OF SANTA MONICA STANDARD DETAIL SMW-3, SHEET 27.
(4) INSTALL BLIND FLANGE FOR FUTURE CONNECTION
(5) INSTALL RESTRAINED MECHANICAL JOINT CAP AND CONCRETE AND ABANDON EXISTING WATER MAIN, OR SERVICE, IN PLACE PER SMW-10, SHEET 28. REPAIR TRENCH PER SMW-1, SHEET 27.
(6) INSTALL 90° DUCTILE IRON ELBOW (MJxMJ) WITH THRUST BLOCK AND RESTRAINING GLANDS PER SMW-6 AND SMW-7, SHEETS 27
(7) INSTALL 12"ø RESILIENT WEDGE GATE VALVE PER SMW-4, SHEET 27.



SM-9

OLYMPIC BLVD – PLAN VIEW

SCALE 1"=20'

GENERAL NOTES:

1. ALL EXISTING IMPROVEMENTS INCLUDING, BUT NOT LIMITED TO, LOOP DETECTORS, X-WALKS, STOP BARS, CURB, GUTTER, SIDEWALK, PAVEMENT, BICYCLE LANES, AND LEGENDS DAMAGED AS A RESULT OF CONTRACTOR'S WORK SHALL BE REPLACED IN KIND TO ENGINEER'S SATISFACTION.
2. ALL EXISTING SANITARY SEWER AND STORM DRAIN CROSSINGS WITHIN THE CITIES OF SANTA MONICA AND LOS ANGELES SHALL BE PROTECTED PER THE CITY OF LOS ANGELES STANDARD PLAN S-253-0, SHEET 29.

ASBESTOS CEMENT PIPE:

1. ASBESTOS CEMENT PIPE MAY BE CUT ONLY BY AN APPROVED METHOD AND IN ACCORDANCE WITH OSHA GUIDELINES. SAWING, GRINDING, DRILLING, OR ANY OTHER ACTIVITY WHICH COULD RESULT IN THE RELEASE OF ASBESTOS FIBERS IS PROHIBITED.
2. WHEN WORKING WITH ASBESTOS CEMENT PIPE, THE CONTRACTOR SHALL PROVIDE DOCUMENTATION THAT EMPLOYEES HAVE RECEIVED REQUIRED TRAINING PER OSHA.
3. METHODS OF CONSTRUCTION SHALL ALSO COMPLY WITH OSHA AND OTHER LEGAL -25IDELINES TO PREVENT THE RELEASE OF FIBERS.

CONSTRUCTION NOTES

(1) INSTALL 12"ø PC350 DUCTILE IRON WATER MAIN IN OPEN TRENCH PER SMW-1, SHEET 27.
(4) INSTALL BLIND FLANGE FOR FUTURE CONNECTION
(8) CONNECT TO EXISTING ACP PER DETAIL 3, SHEET 28.
(9) INSTALL 12"x10" DUCTILE IRON REDUCER (MJxMJ) WITH RESTRAINING GLANDS.
(13) INSTALL 45° DUCTILE IRON ELBOW (MJxMJ) WITH THRUST BLOCK AND RESTRAINING GLANDS PER SMW-6 AND SMW-7, SHEETS 27
(18) EXISTING TREE (TO BE REMOVED).

Path: Z:\Projects\12051B1\MAP\DOCS\DOCUMENT.ERS

SOURCE: Cannon 2020

FIGURE 4A

Engineering Plans Production Wells SM-8 and SM-9

Olympic Well Field Restoration and Arcadia Water Treatment Plant Expansion Project

DUDEK

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EXIST 12" PVC WATER (CITY OF SANTA MONICA)

PROTECT IN PLACE EXIST TREE

PROTECT IN PLACE EXIST 48" RCP SD (LACFCD)

CONSTRUCT AIR GAP TO CATCH BASIN

CONSTRUCT WELL SM-10i PER SHT M-101

PROP CATCH BASIN STRUCTURE

1 M-103

OLYMPIC BLVD

PROP ELECTRICAL EQUIPMENT

6'±

2 M-103

CONSTRUCT 6" WELL SM-10i INJECTION LINE

CONSTRUCT SODIUM BI-SULFITE STORAGE VAULT

EXIST 6" DIP SMURF LINE (CITY OF SANTA MONICA)

CONNECT TO EXIST 6" DIP SMURF LINE

EXIST 12" CIP WATER (CITY OF SANTA MONICA)

26TH ST

EXIST BIKE LANE

SCALE: 1" = 10'

REGISTERED PROFESSIONAL ENGINEER KENNETH R. BERARDI No. C45499 CIVIL STATE OF CALIFORNIA

60% SUBMITTAL

SOURCE: Tetra Tech 2020

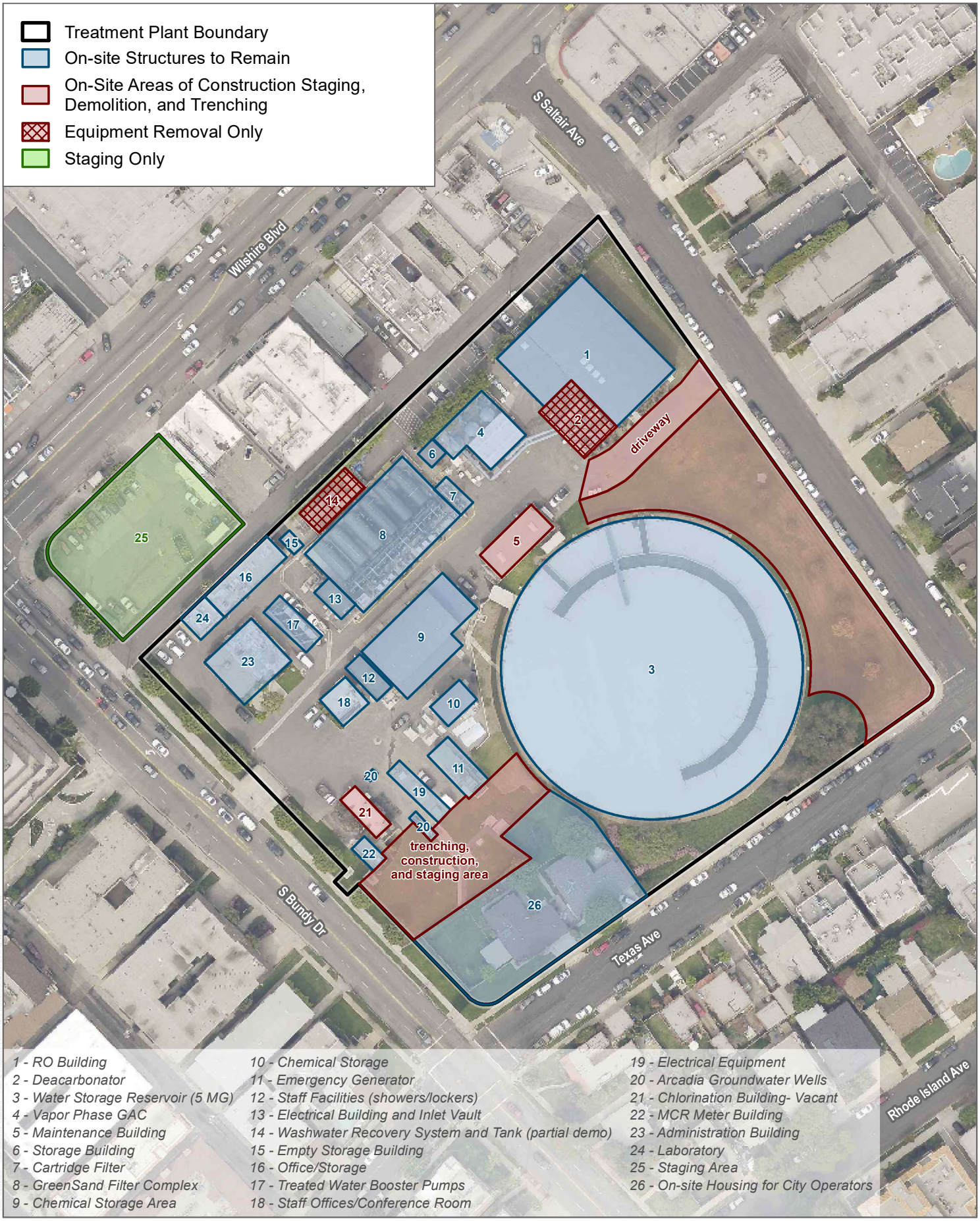
FIGURE 4B

Engineering Plans Injection Well SM-10i

Olympic Well Field Restoration and Arcadia Water Treatment Plant Expansion Project

DUDEK

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1 - RO Building
2 - Deacarbonator
3 - Water Storage Reservoir (5 MG)
4 - Vapor Phase GAC
5 - Maintenance Building
6 - Storage Building
7 - Cartridge Filter
8 - GreenSand Filter Complex
9 - Chemical Storage Area
10 - Chemical Storage
11 - Emergency Generator
12 - Staff Facilities (showers/lockers)
13 - Electrical Building and Inlet Vault
14 - Washwater Recovery System and Tank (partial demo)
15 - Empty Storage Building
16 - Office/Storage
17 - Treated Water Booster Pumps
18 - Staff Offices/Conference Room
19 - Electrical Equipment
20 - Arcadia Groundwater Wells
21 - Chlorination Building- Vacant
22 - MCR Meter Building
23 - Administration Building
24 - Laboratory
25 - Staging Area
26 - On-site Housing for City Operators

SOURCE: Esri and Digital Globe 2019; Open street Map 2019

DUDEK

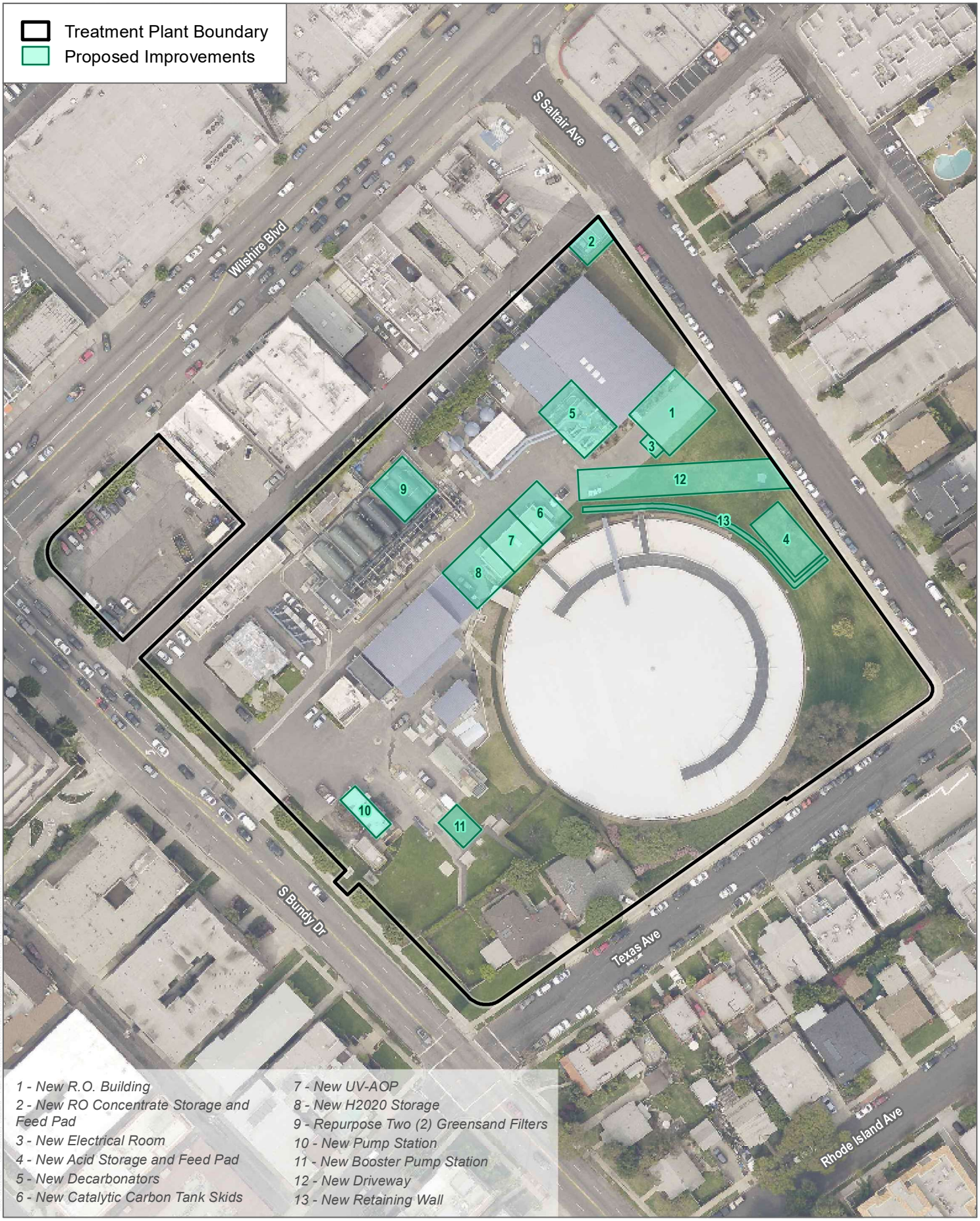
0 50 100 Feet

FIGURE 5

Arcadia Water Treatment Plant Demolition and Staging Plan

Olympic Well Field Restoration and Arcadia Water Treatment Plant Expansion Project

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SOURCE: Esri and Digital Globe 2019; Open street Map 2019

DUDEK

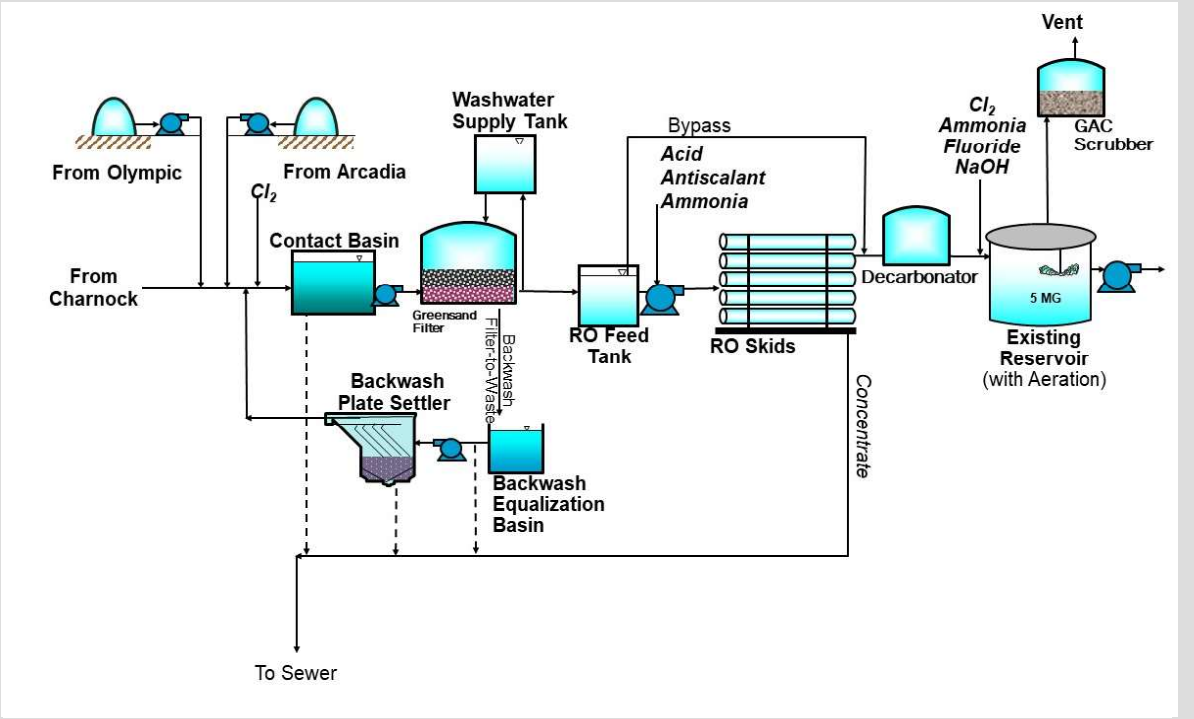
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FIGURE 6

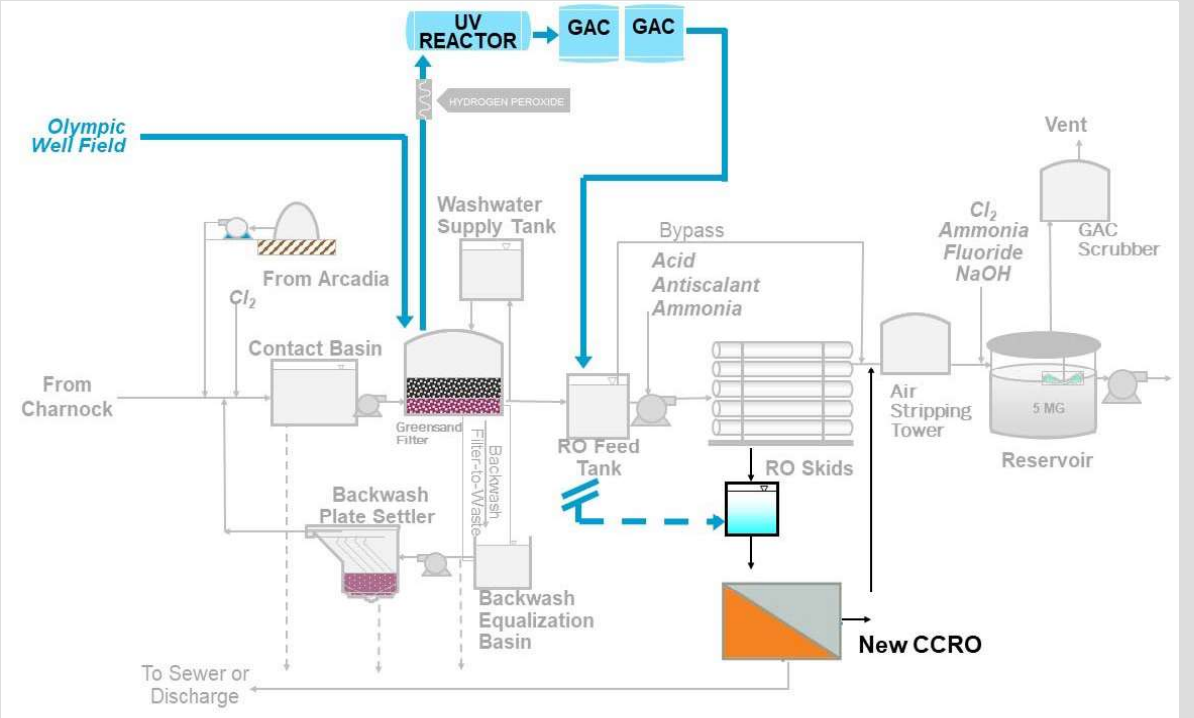
Arcadia Water Treatment Plant Conceptual Plan Improvements

Olympic Well Field Restoration and Arcadia Water Treatment Plant Expansion Project

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Existing Process Schematic



Proposed Process Schematic

SOURCE: City of Santa Monica 2019

FIGURE 7

Existing and Proposed Process Schematic of the Arcadia WTP

Olympic Well Field Restoration and Arcadia Water Treatment Plant Expansion Project

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SOURCE: CGS 2020

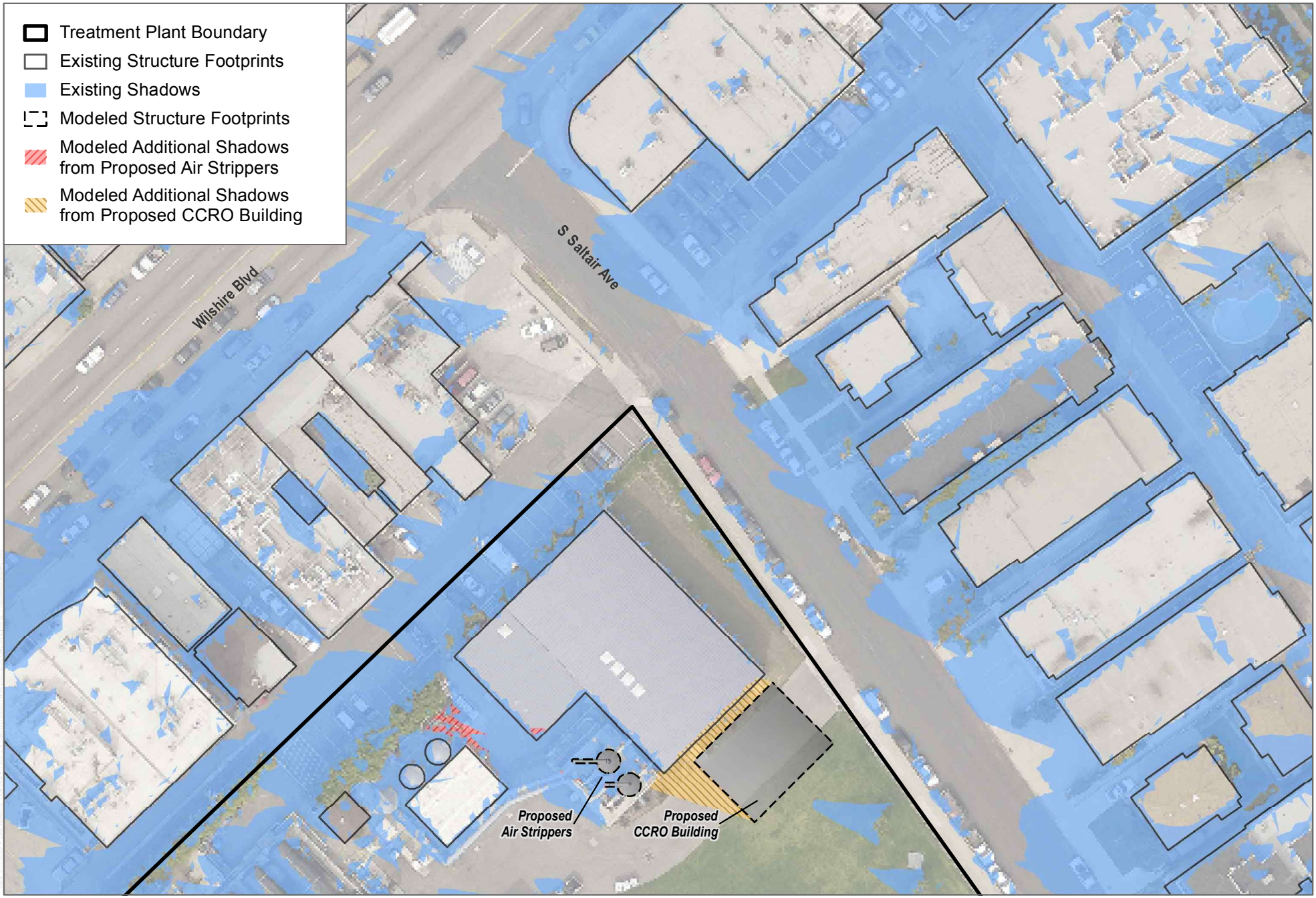
FIGURE 8

Representative Production Well Site

Olympic Well Field Restoration and Arcadia Water Treatment Plant Expansion Project

DUDEK

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SOURCE: LARIAC Imagery 2014; Open street Map 2019

DUDEK

0 30 60 Feet

FIGURE 9A

Existing and Proposed Shadows - Spring Equinox at 9:00 a.m.

Olympic Well Field Restoration and Arcadia Water Treatment Plant Expansion Project

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SOURCE: LARIAC Imagery 2014; Open street Map 2019

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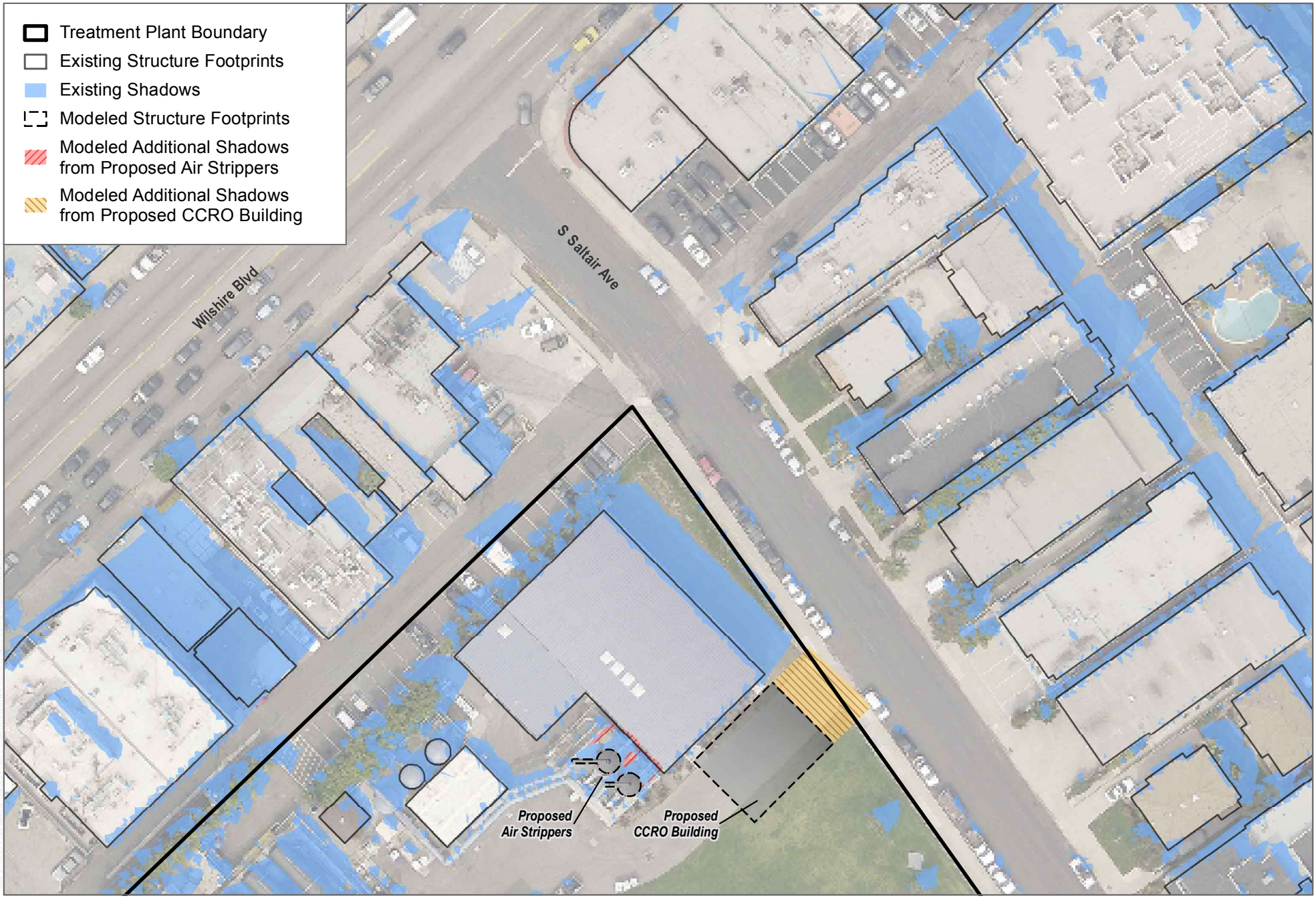
0 30 60 Feet

FIGURE 9B

Existing and Proposed Shadows - Spring Equinox at 12:00 p.m.

Olympic Well Field Restoration and Arcadia Water Treatment Plant Expansion Project

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SOURCE: LARIAC Imagery 2014; Open street Map 2019

DUDEK

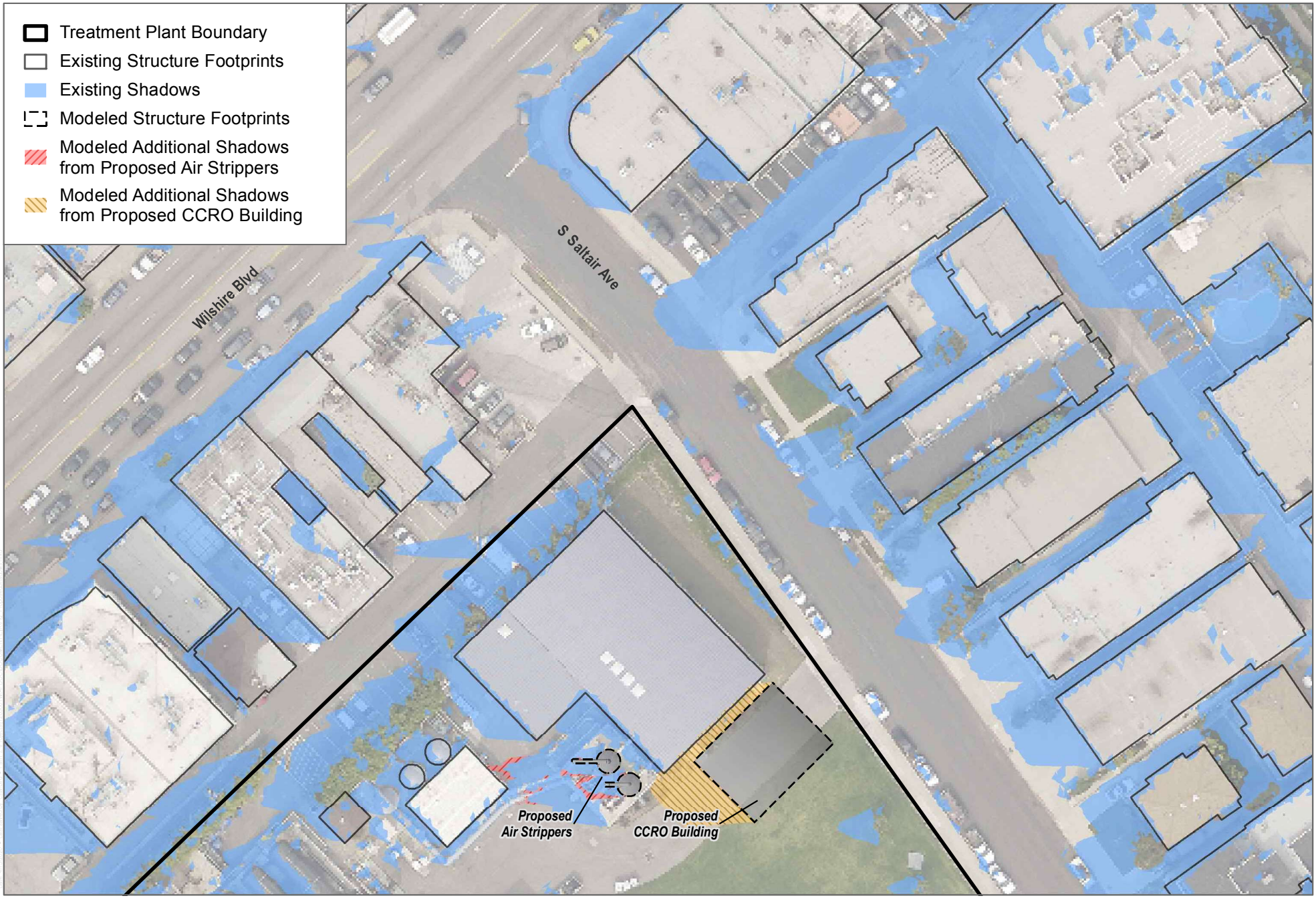
0 30 60 Feet

FIGURE 9C

Existing and Proposed Shadows - Spring Equinox at 3:00 p.m.

Olympic Well Field Restoration and Arcadia Water Treatment Plant Expansion Project

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SOURCE: LARIAC Imagery 2014; Open street Map 2019

DUDEK

0 30 60 Feet

FIGURE 10A

Existing and Proposed Shadows - Summer Solstice at 9:00 a.m.

Olympic Well Field Restoration and Arcadia Water Treatment Plant Expansion Project

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SOURCE: LARIAC Imagery 2014; Open street Map 2019

DUDEK

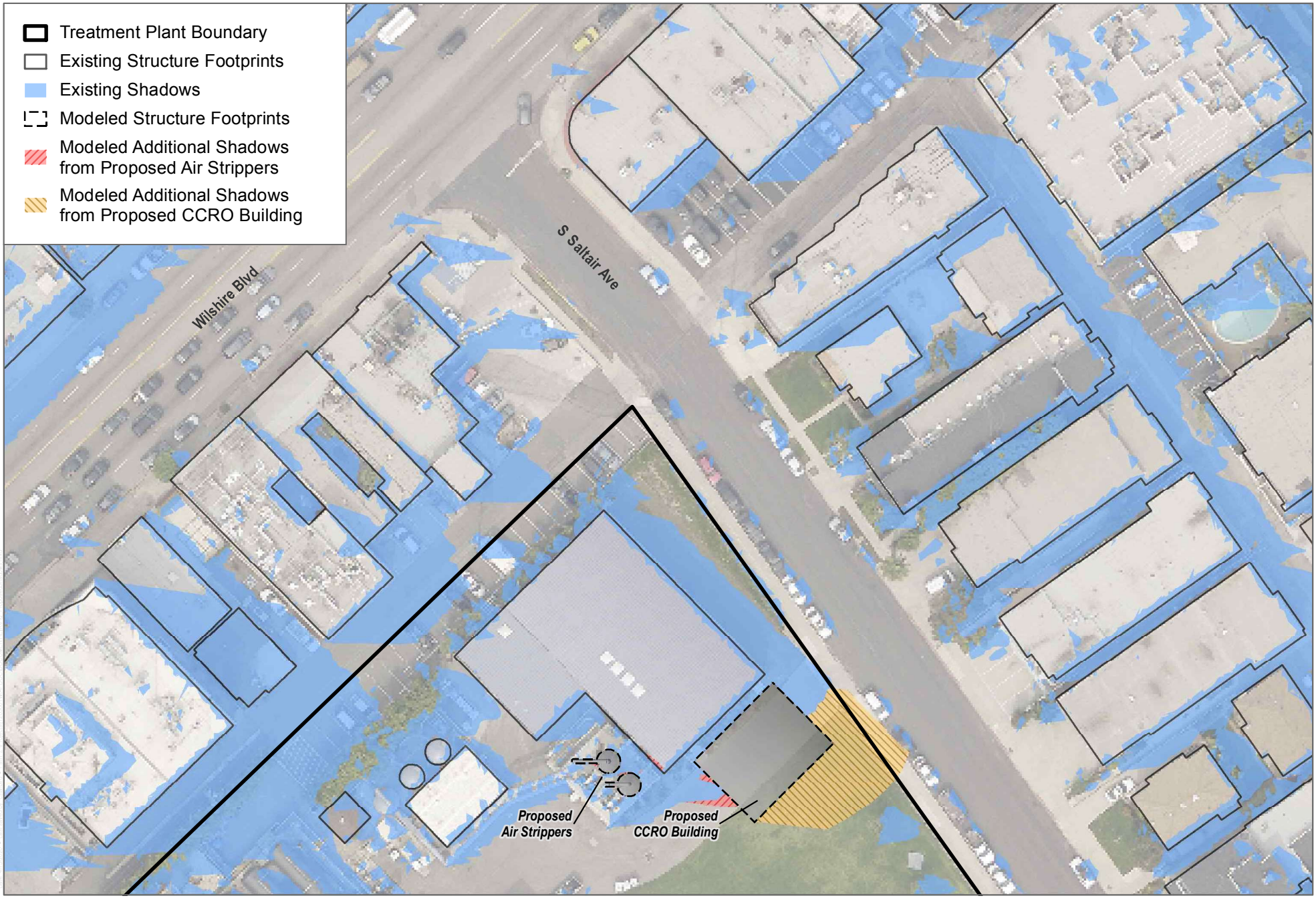
0 30 60 Feet

FIGURE 10B

Existing and Proposed Shadows - Summer Solstice at 1:00 p.m.

Olympic Well Field Restoration and Arcadia Water Treatment Plant Expansion Project

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SOURCE: LARIAC Imagery 2014; Open street Map 2019

DUDEK

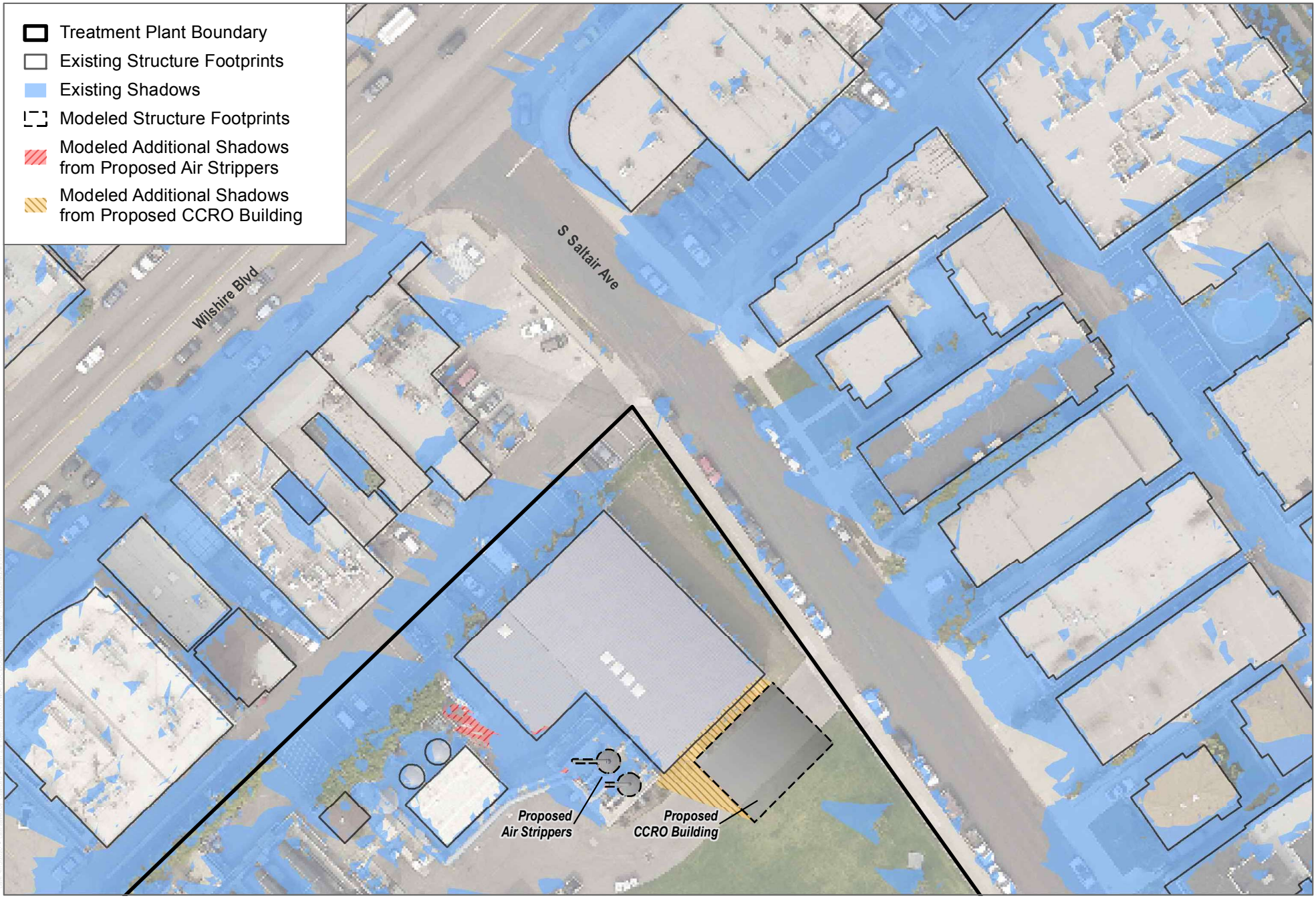
0 30 60 Feet

FIGURE 10C

Existing and Proposed Shadows - Summer Solstice at 5:00 p.m.

Olympic Well Field Restoration and Arcadia Water Treatment Plant Expansion Project

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SOURCE: LARIAC Imagery 2014; Open street Map 2019

DUDEK

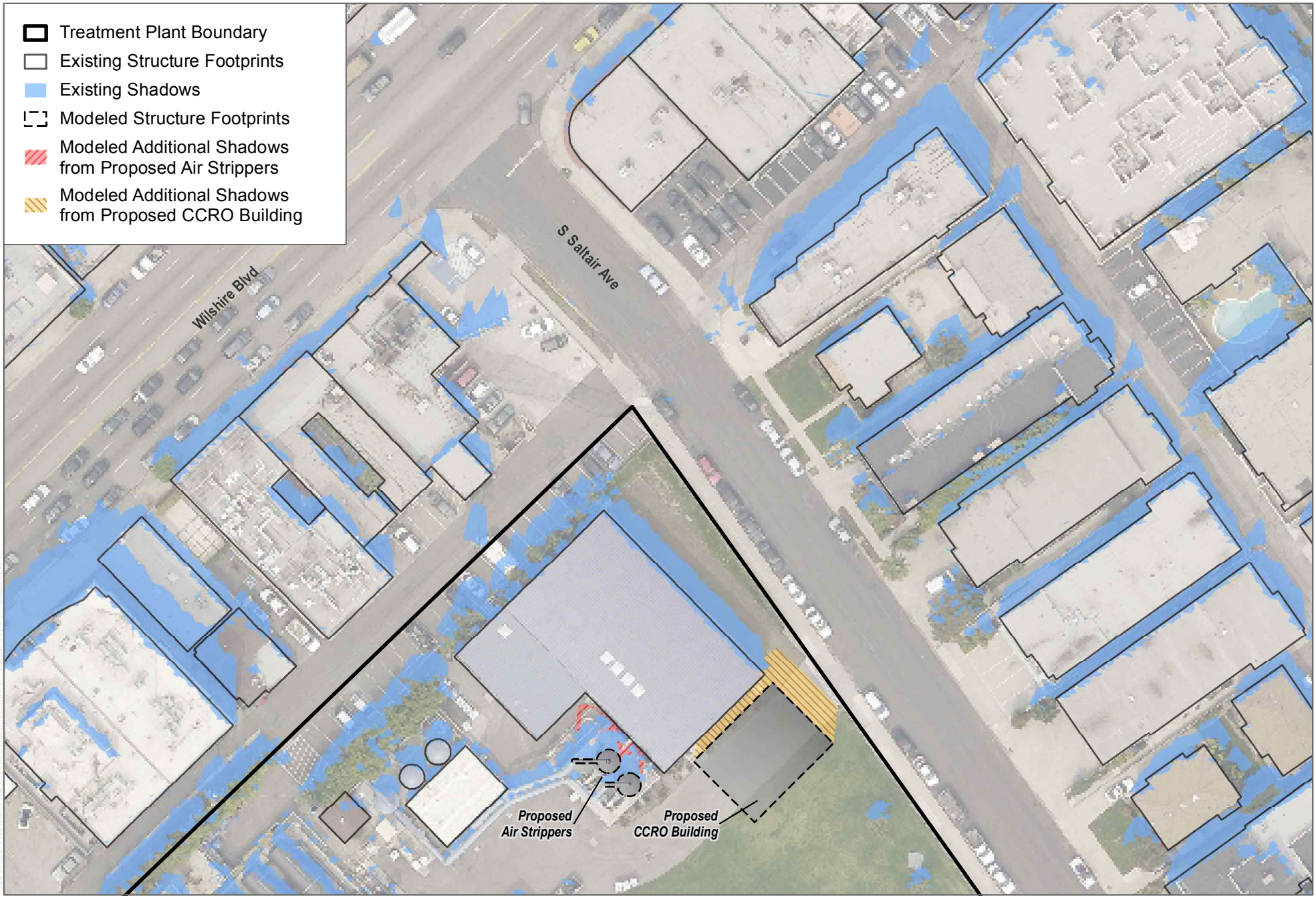
0 30 60 Feet

FIGURE 11A

Existing and Proposed Shadows - Fall Equinox at 9:00 a.m.

Olympic Well Field Restoration and Arcadia Water Treatment Plant Expansion Project

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SOURCE: LARIAC Imagery 2014; Open street Map 2019

DUDEK

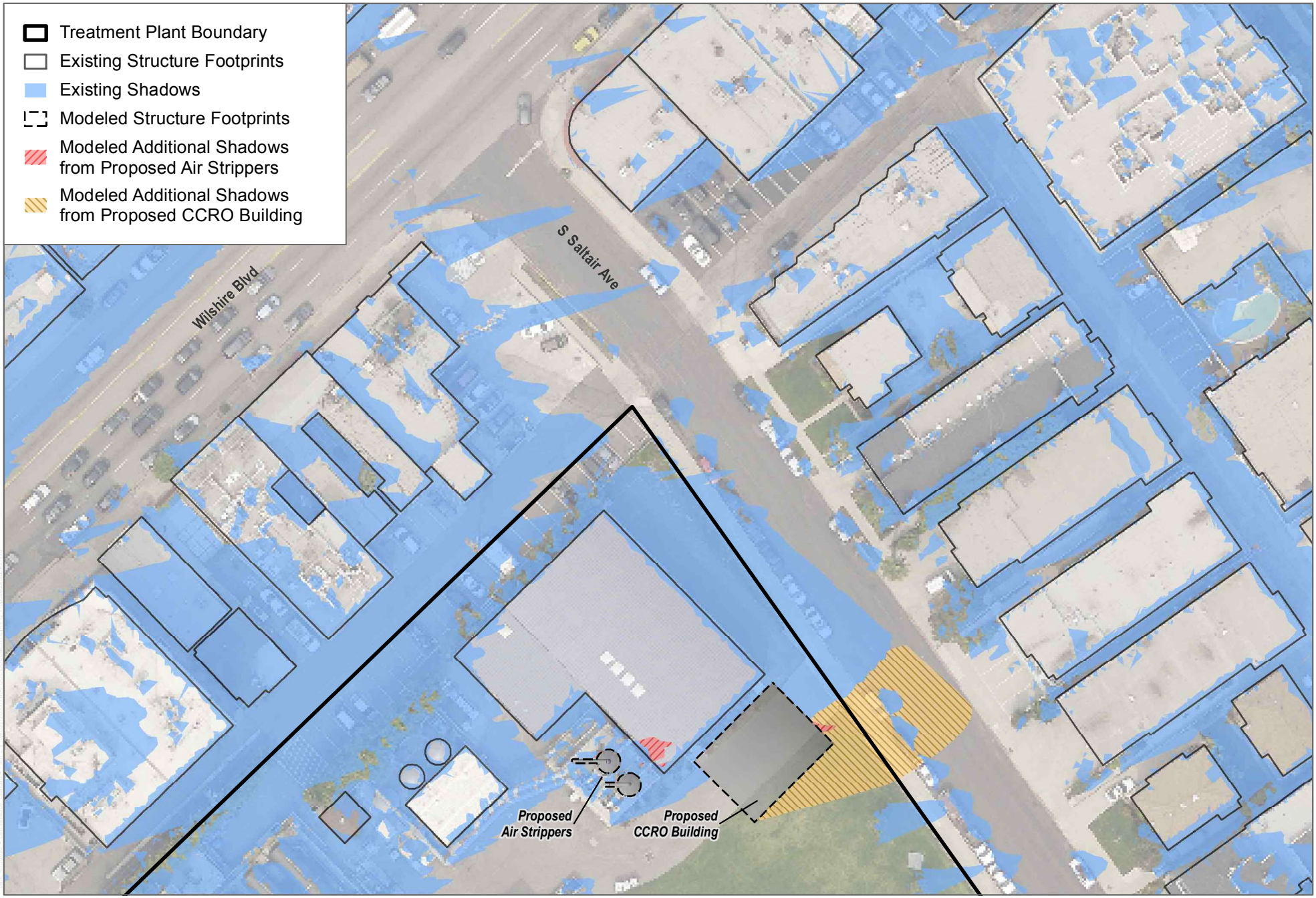
0 30 60 Feet

FIGURE 11B

Existing and Proposed Shadows - Fall Equinox at 1:00 p.m.

Olympic Well Field Restoration and Arcadia Water Treatment Plant Expansion Project

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SOURCE: LARIAC Imagery 2014; Open street Map 2019

DUDEK

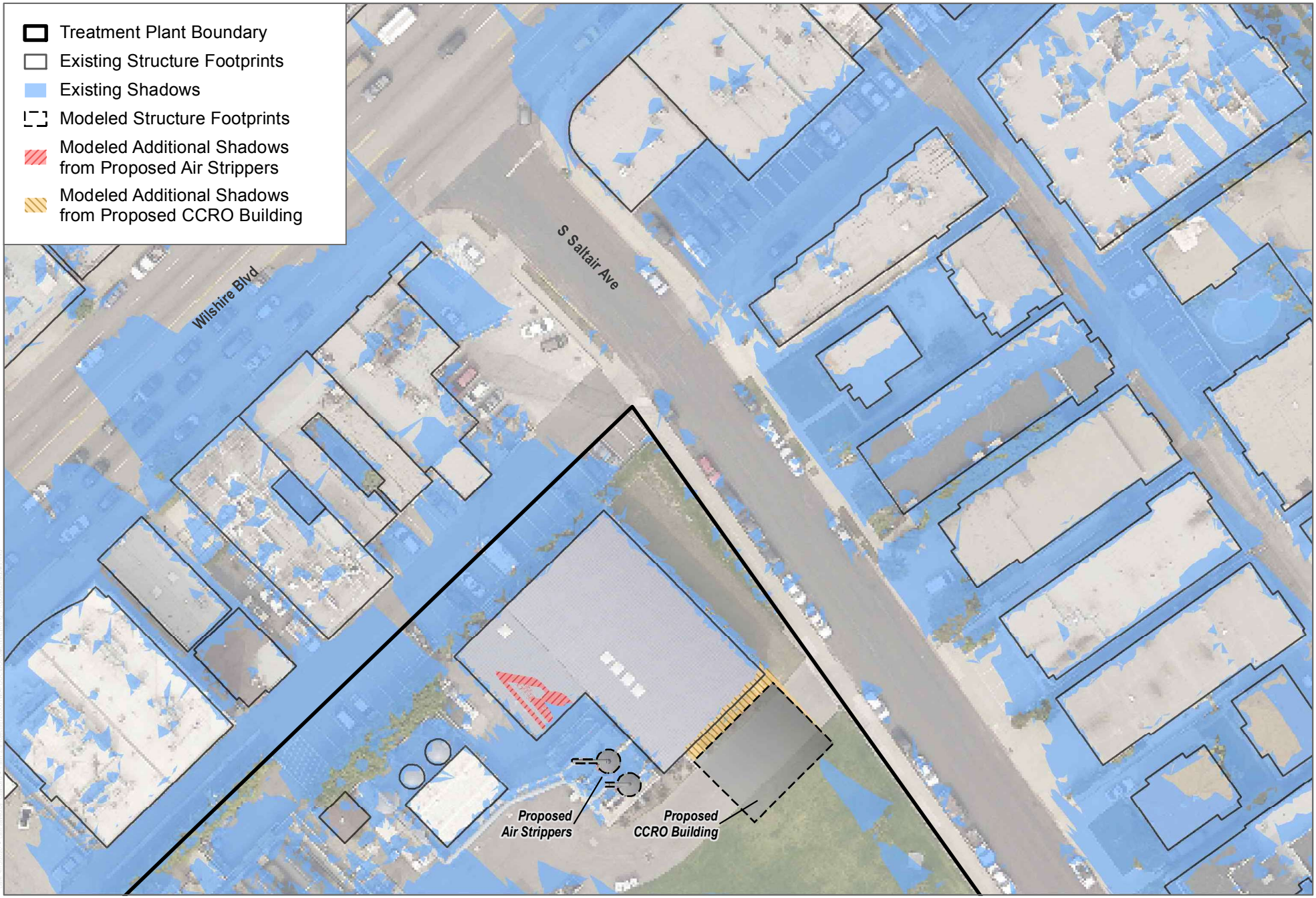
0 30 60 Feet

FIGURE 11C

Existing and Proposed Shadows - Fall Equinox at 5:00 p.m.

Olympic Well Field Restoration and Arcadia Water Treatment Plant Expansion Project

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SOURCE: LARIAC Imagery 2014; Open street Map 2019

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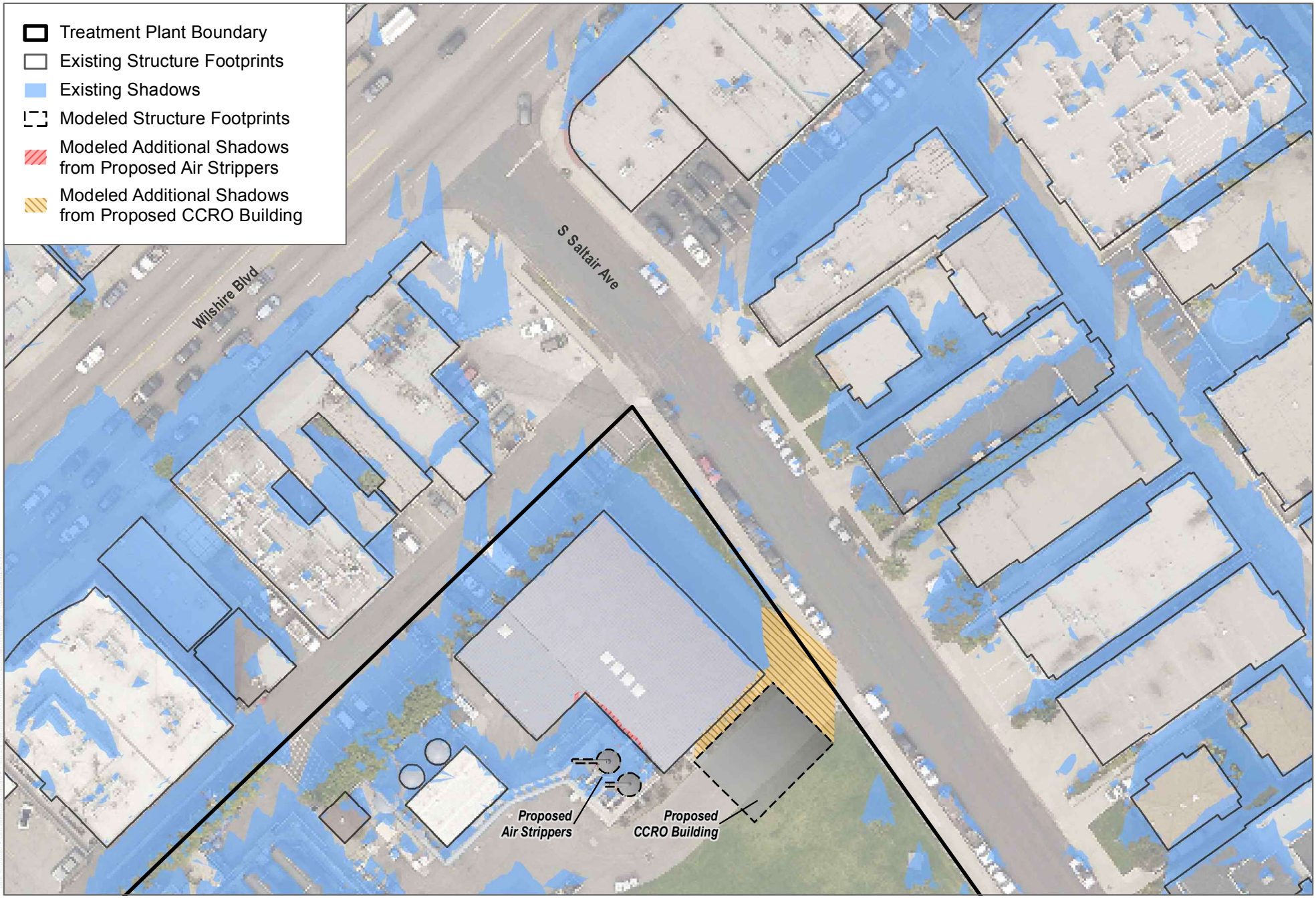
0 30 60 Feet

FIGURE 12A

Existing and Proposed Shadows - Winter Solstice at 9:00 a.m.

Olympic Well Field Restoration and Arcadia Water Treatment Plant Expansion Project

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SOURCE: LARIAC Imagery 2014; Open street Map 2019

DUDEK

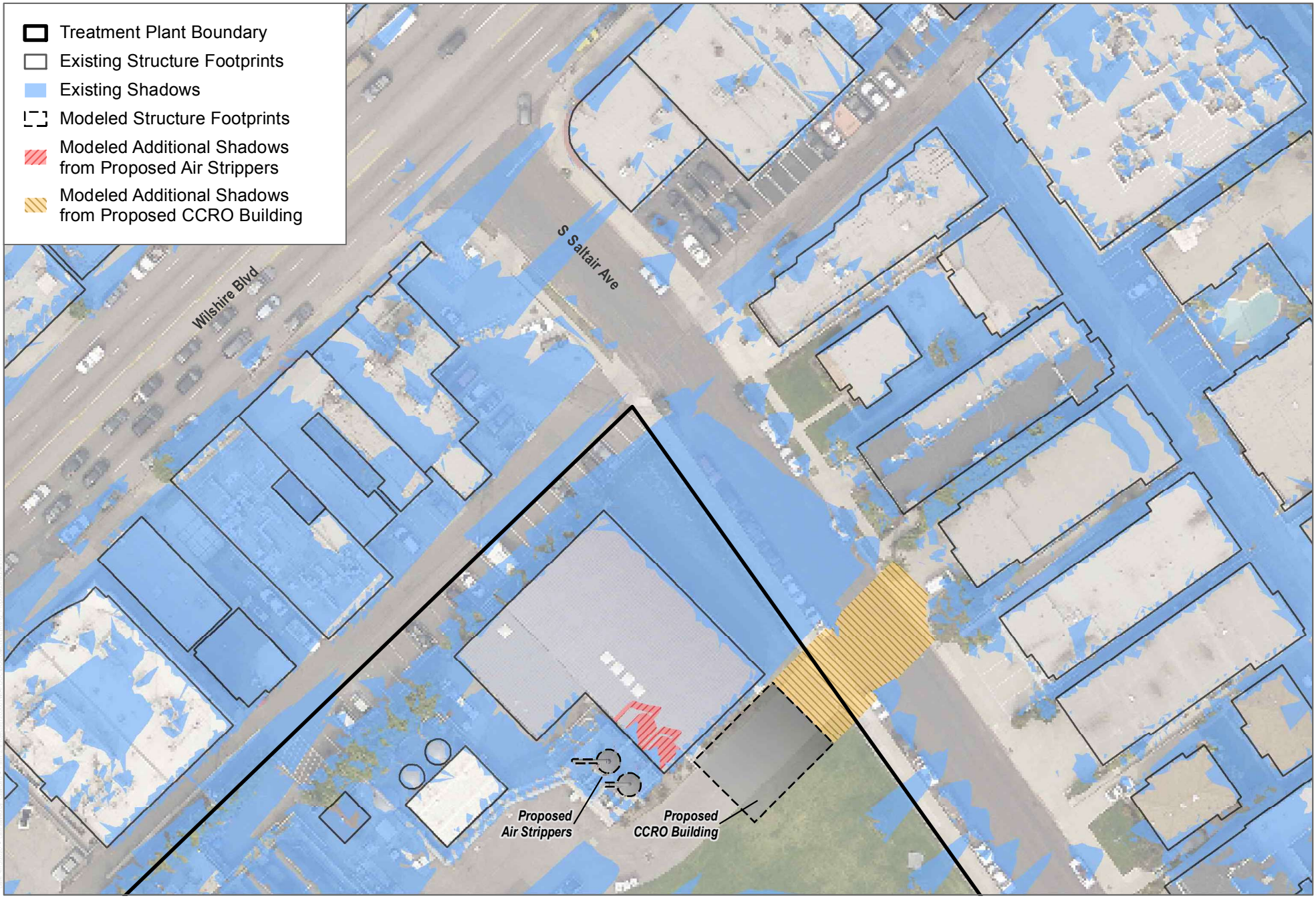
0 30 60 Feet

FIGURE 12B

Existing and Proposed Shadows - Winter Solstice at 12:00 p.m.

Olympic Well Field Restoration and Arcadia Water Treatment Plant Expansion Project

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SOURCE: LARIAC Imagery 2014; Open street Map 2019

DUDEK

0 30 60 Feet

FIGURE 12C

Existing and Proposed Shadows - Winter Solstice at 3:00 p.m.

Olympic Well Field Restoration and Arcadia Water Treatment Plant Expansion Project

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SOURCE: Esri and Digital Globe 2019; Open street Map 2019

DUDEK

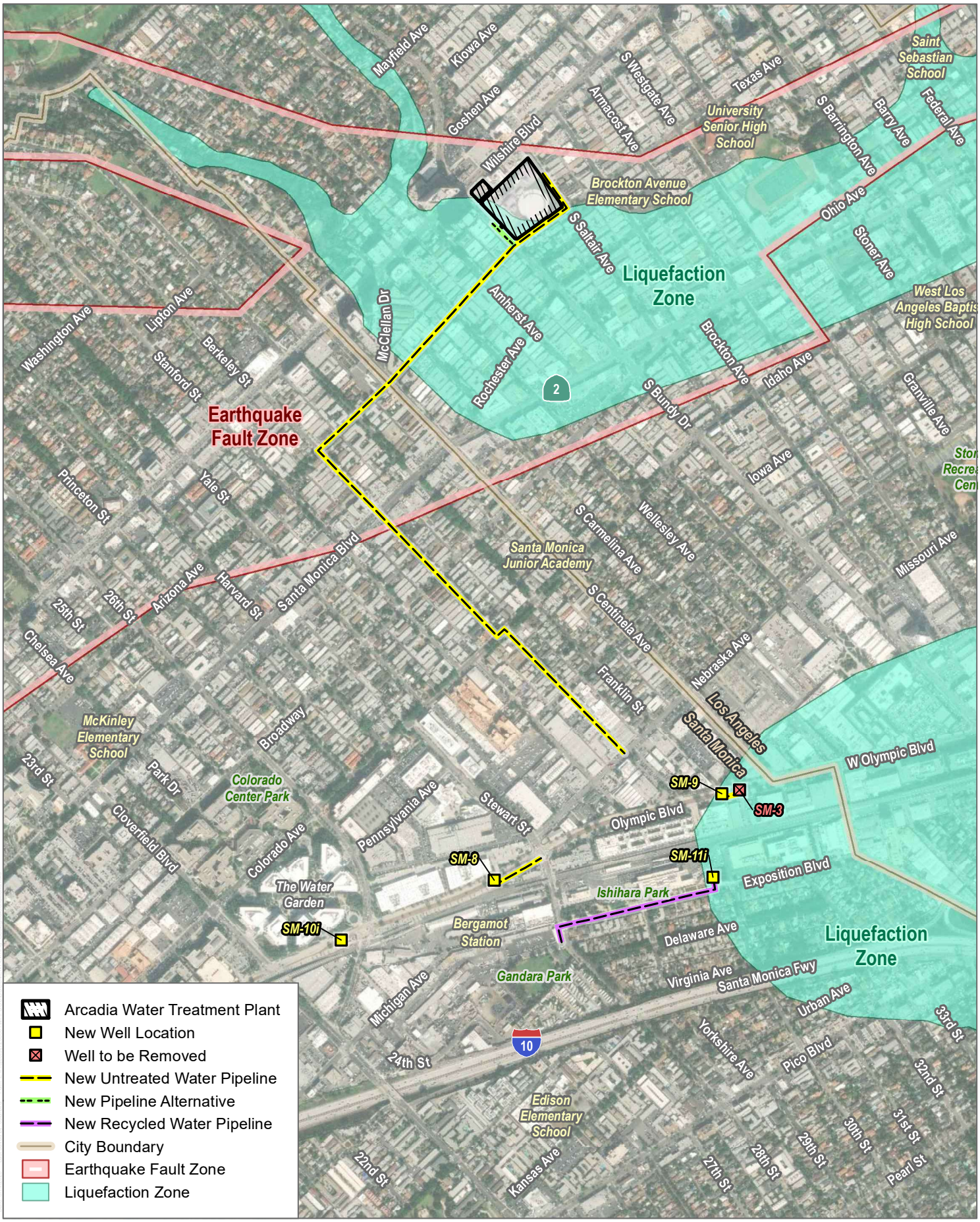
0 75 150 Feet

FIGURE 13

Air Quality Sensitive Receptors – Olympic AWTF and Arcadia WTP

Olympic Well Field Restoration and Arcadia Water Treatment Plant Expansion Project

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SOURCE: Esri and Digital Globe 2019; CA Dept. of Conservation; Open street Map 2019

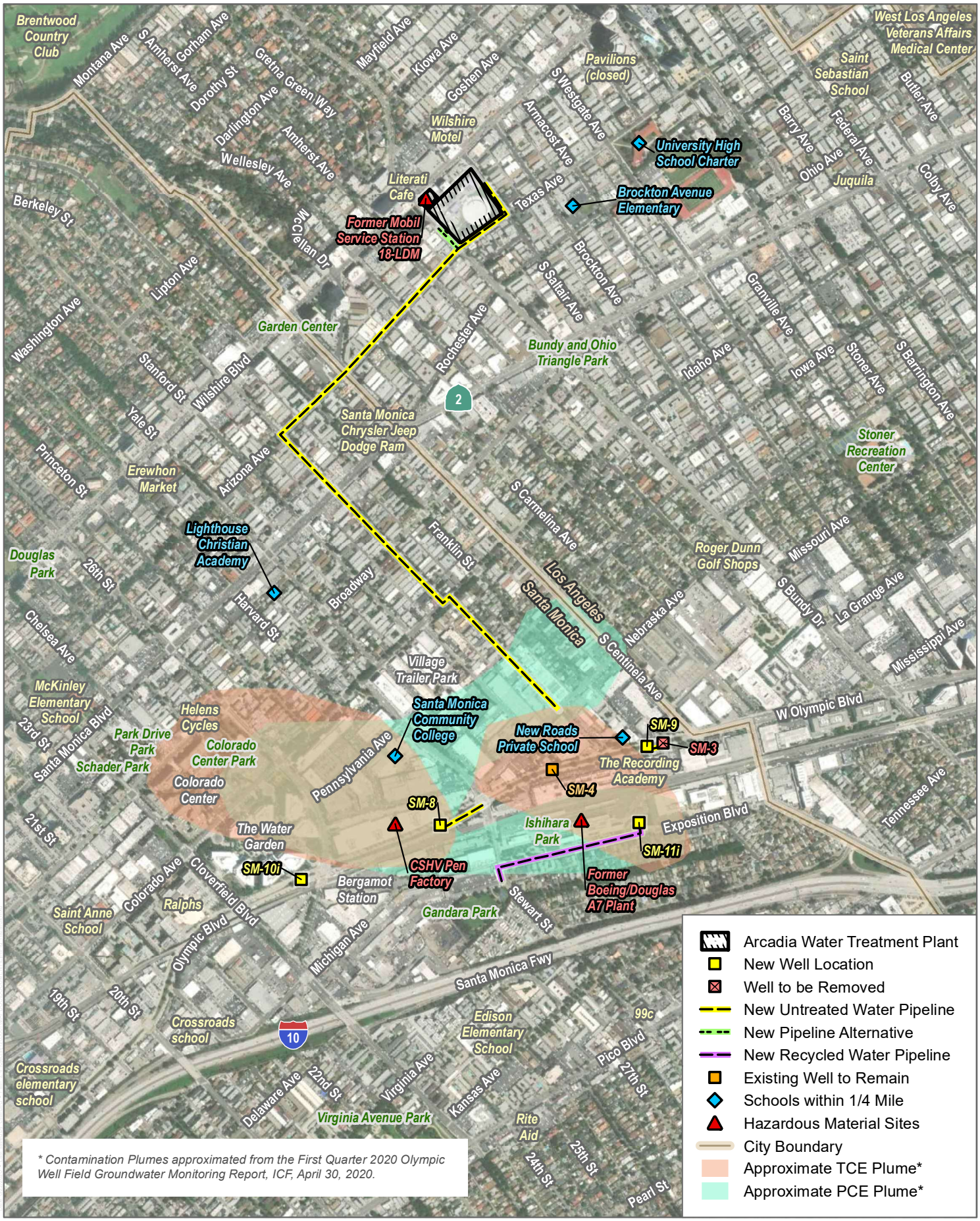
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FIGURE 14

Existing Geological Conditions

Olympic Well Field Restoration and Arcadia Water Treatment Plant Expansion Project

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SOURCE: Esri and Digital Globe 2019; Open street Map 2019

DUDEK

0 550 1,100 Feet

FIGURE 15

Project Site Hazards

Olympic Well Field Restoration and Arcadia Water Treatment Plant Expansion Project

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