EVERGREEN WATER PRODUCTION WELL PROJECT

Initial Study / Mitigated Negative Declaration

File No. ER25-094

Prepared for
City of San José

November 2026

ESA

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775 Baywood Drive
Suite 100
Petaluma, CA 94954
707.795.0900
esassoc.com

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MITIGATED NEGATIVE DECLARATION

The Director of Planning, Building and Code Enforcement has reviewed the proposed project described below to determine whether it could have a significant effect on the environment as a result of project completion. "Significant effect on the environment" means a substantial or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance.

PROJECT NAME: Evergreen Water Production Well

PROJECT FILE NUMBER: ER25-094

PROJECT DESCRIPTION: The City proposes to construct a new municipal groundwater production well, along with associated connections to the existing potable water distribution system, to secure an additional source of potable water supplies for its Evergreen Service Area. The Project includes drilling of boreholes up to 800 feet in depth and the installation of steel casings, gravel packs, contamination sealants/screenings, submersible pumps, motors, and power supplies. Pipes and appurtenances would also be installed to connect the groundwater well to the existing distribution system.

PROJECT LOCATION: The project would be located on an approximately 0.48-gross-acre triangular lot along Capital Expressway, just south of the Costco Business Center (2376 South Evergreen Loop, San José, CA 95122). The Project site is located on an existing San José Municipal Water System (SJMWS) property.

ASSESSORS PARCEL NO.: 670-30-026 **COUNCIL DISTRICT:** 8

APPLICANT CONTACT INFORMATION:

City of San José Environmental Services Department
Water Resources Division
3025 Tuers Rd
San José, CA 95121
Contact: Alvina Narayan, Engineer
Phone: (408) 315-2243
Email: Alvina.Narayan@sanjoseca.gov

FINDING

The Director of Planning, Building and Code Enforcement finds the project described above would not have a significant effect on the environment if certain mitigation measures are incorporated into the project. The attached Initial Study identifies one or more potentially significant effects on the environment for which the project applicant, before public release of this Mitigated Negative Declaration (MND), has made or agrees to make project revisions that will clearly mitigate the potentially significant effects to a less than significant level.

MITIGATION MEASURES INCLUDED IN THE PROJECT TO REDUCE POTENTIALLY SIGNIFICANT EFFECTS TO A LESS THAN SIGNIFICANT LEVEL

A. AESTHETICS – The project would not have a significant impact on this resource; therefore, no mitigation is required.

B. AGRICULTURE AND FORESTRY RESOURCES – The project would not have a significant impact on this resource; therefore, no mitigation is required.

C. AIR QUALITY

Impact AIR-1: Development of the Project would expose the maximally exposed individual resident to a cancer risk that exceeds the Bay Area Air District significance thresholds of 10 cases per one million for cancer risk.

Mitigation Measure AIR-1: Construction Air Quality. The Project proponent shall implement the following measures during construction:

- To the extent feasible, electric engines shall be used for all equipment that is commercially available as plug-in or battery-electric equipment during each construction phase and activity. Portable equipment shall be powered by grid electricity if available.

- Idling time for off-road and on-road equipment shall be limited to no more than 2 minutes, except as provided in exceptions to the applicable state regulations regarding idling for off-road and on-road equipment. Legible and visible signs shall be posted in multiple languages (English, Spanish, Chinese) in designated queuing areas and at the construction site to remind operators of the 2-minute idling limit.

- All off-road equipment used for construction that is not electric powered shall have diesel engines that meet the Tier 4 Final off-road emission standards, as certified by the CARB, except as provided for in this section. This requirement shall be verified through submittal of an equipment inventory that includes the following information: (1) Type of Equipment, (2) Engine Year and Age, (3) Number of Years Since Rebuild of Engine (if applicable), (4) Type of Fuel Used, (5) Engine HP, (6) Verified Diesel Emission Control Strategy (VDECS) information if applicable and other related equipment data. A Certification Statement is also required to be made by the Contractor for documentation of compliance and for future review by Air District, as necessary. The Certification Statement shall state that the Contractor agrees to compliance and acknowledges that a violation of this requirement shall constitute a material breach of contract.

D. BIOLOGICAL RESOURCES

Impact BIO-1: Development of the Project could have a substantial adverse effect on Crotch's bumble bee.

Mitigation Measure BIO-1: Avoidance and Minimization Measures for Crotch's Bumble Bee. The Project proponent shall implement the following measures to avoid potential impacts to Crotch's bumble bee:

- Seasonal Avoidance. For Project areas that contain foraging habitat or nesting habitat, initial

ground-disturbing work (e.g., grading, vegetation removal, staging) shall take place between August 15 and March 15, if feasible, to avoid impacts on nesting and foraging Crotch's bumble bees. If seasonal avoidance is not feasible, then focused surveys for Crotch's bumble bee shall be conducted and avoidance measures will be implemented.

- Focused surveys for Crotch's bumble bee shall be conducted following the methods in Survey Considerations for CESA Candidate Bumble Bee Species (CDFW, 2023).

- Survey timing shall be determined by a qualified biologist based on seasonality, when activity or foraging will most likely occur each year, and the bee's life stage for which the survey is being conducted.

- Non-invasive focused surveys shall include the use of cameras to photograph bumble bees. Photographs shall be reviewed and verified by a qualified individual to identify the bumble bees to species.

- If Crotch's bumble bees are not detected during the focused survey, no additional mitigation is required.

E. CULTURAL RESOURCES – The project would not have a significant impact on this resource; therefore, no mitigation is required.

F. ENERGY – The project would not have a significant impact on this resource; therefore, no mitigation is required.

G. GEOLOGY AND SOILS – The project would not have a significant impact on this resource; therefore, no mitigation is required.

H. GREENHOUSE GAS EMISSIONS – The project would not have a significant impact on this resource; therefore, no mitigation is required.

I. HAZARDS AND HAZARDOUS MATERIALS

Mitigation Measure HAZ-1: Soil Management Plan. Prior to the issuance of any demolition, ground disturbance activity, or issuance of grading permit, the City shall contract with a qualified environmental contractor to prepare a Soil Management Plan (SMP) identify protocols for identifying, handling, and characterizing suspect contaminated soils, as summarized below:

- Site description, including the hazardous materials that may be encountered.
- Roles and responsibilities of onsite workers, supervisors.
- Training for site workers focused on the recognition of and response to encountering hazardous materials.
- Protocols for the materials testing, handling, removing, transporting, and disposing of all excavated materials in a safe, appropriate, and lawful manner.
- In the event that hazardous materials are encountered, reporting requirement to the local regulatory agency with jurisdiction, documenting that site activities were conducted in accordance with the SMP.

J. HYDROLOGY AND WATER QUALITY – The project would not have a significant impact on this resource; therefore, no mitigation is required.

K. **LAND USE AND PLANNING** – The project would not have a significant impact on this resource; therefore, no mitigation is required.

L. **MINERAL RESOURCES** – The project would not have a significant impact on this resource; therefore, no mitigation is required.

M. **NOISE** – The project would not have a significant impact on this resource; therefore, no mitigation is required.

N. **POPULATION AND HOUSING** – The project would not have a significant impact on this resource; therefore, no mitigation is required.

O. **PUBLIC SERVICES** – The project would not have a significant impact on this resource; therefore, no mitigation is required.

P. **RECREATION** – The project would not have a significant impact on this resource; therefore, no mitigation is required.

Q. **TRANSPORTATION** – The project would not have a significant impact on this resource; therefore, no mitigation is required.

R. **TRIBAL CULTURAL RESOURCES** – The project would not have a significant impact on this resource; therefore, no mitigation is required.

S. **UTILITIES AND SERVICE SYSTEMS** – The project would not have a significant impact on this resource; therefore, no mitigation is required.

T. **WILDFIRE –** The project would not have a significant impact on this resource; therefore, no mitigation is required.

U. **MANDATORY FINDINGS OF SIGNIFICANCE.**

The Project's contribution to cumulative impacts would be less than significant. With implementation of the identified mitigation measures, the 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, 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. Therefore, the proposed Project would not contribute to any cumulative impact for these resources. The Project would not cause changes in the environment that have any potential to cause substantial adverse direct or indirect effects on human beings.

PUBLIC REVIEW PERIOD

Before 5:00 p.m. on **December 2, 2026** any person may:

1. Review the Draft Mitigated Negative Declaration (MND) as an informational document only; and/or

2. Submit written comments regarding the information and analysis in the Draft MND. Before the MND is adopted, Planning staff will prepare written responses to any comments, and revise the Draft MND, if necessary, to reflect any concerns raised during the public review period. All written comments will be included as part of the Final MND.

CHRISTOPHER BURTON, Director
Planning, Building and Code Enforcement

October 23, 2026 — Cort Hitchens

Date — Deputy

Charlotte Yuen
Planner

Circulation period: November 2, 2026, to December 2, 2026

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CHAPTER 1
Introduction

1.1 Purpose of the Initial Study

The City of San José (City), as the Lead Agency, has prepared this Initial Study (IS) for the Evergreen Water Production Well Project (Project) in compliance with the California Environmental Quality Act (CEQA), the CEQA Guidelines (California Code of Regulations [CCR] §15000 et. seq.) and the regulations and policies of the City of San José, California.

The Project would construct a new municipal groundwater production well, along with associated connections to the existing potable water distribution system, at the existing service area to secure additional sources of potable water supply.

1.1.1 Public Review Period

Publication of this IS marks the beginning of a 20-day public review and comment period. During this period, the IS will be available to local, state, and federal agencies and to interested organizations and individuals for review. Written comments concerning the environmental review contained in this IS during the 20-day public review period should be sent to:

Charlotte Yuen, Planner
City of San José
Department of Planning, Building, and Code Enforcement
200 East Santa Clara Street, Third Floor
San José, California 95113
(408) 535-5658
charlotte.yuen@sanjoseca.gov

1.1.2 Consideration of the Initial Study and Project

Following the conclusion of the public review period, the City will consider the adoption of the IS/Mitigated Negative Declaration (IS/MND) for the Project at a regularly scheduled meeting. The City shall consider the IS/MND together with any comments received during the public review process. Upon adoption of the MND, the City may proceed with Project approval actions.

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CHAPTER 2
Project Information

2.1 Project Title

Evergreen Water Production Well

2.2 Lead Agency Contact

City of San José Environmental Services Department
Water Resources Division
3025 Tuers Rd
San José, CA 95121

Environmental Review

Charlotte Yuen, Planner
City of San José
Planning, Building, and Code Enforcement
200 East Santa Clara Street, Third Floor
San José, CA 95113
(408) 535-5658
charlotte.yuen@sanjoseca.gov

2.3 Project Applicant

City of San José Environmental Services Department
Water Resources Division
3025 Tuers Rd
San José, CA 95121
Contact: Alvina Narayan, Engineer
Phone: (408) 315-2243
Email: Alvina.Narayan@sanjoseca.gov

2.4 Project Location

The new Evergreen well would be installed on an approximately 0.48-acre triangular lot along Capital Expressway, just south of the Costco Business Center (2376 South Evergreen Loop, San José, CA 95122), as shown in **Figure 2-1**. The Project site is located on an existing San José Municipal Water System (SJMWS) property.

2.5 Assessor's Parcel Number

- Assessor's Parcel No.: 670-30-026

2.6 General Plan Designation and Zoning District

The Project site has an Envision San José 2040 General Plan land use designation of Mobile Home Park and is located in the Planned Development (R-1-8[1], Low to Medium Density Residential Based) zoning district.

2.7 Habitat Plan Designation

- Land Cover Designation: Golf Courses/Urban Parks
- Fee Zone: Fee Zone B (Agricultural and Valley Floor Lands)
- Wildlife Survey Area: Western Burrowing Owl

2.8 Project-Related Approvals, Agreements and Permits

The Project would require local and state permits. Based on the current understanding of the Project, the following is a list of the agencies and approvals likely to be required for the Project:

Federal

The Project would not require any discretionary federal permits or approvals.

State

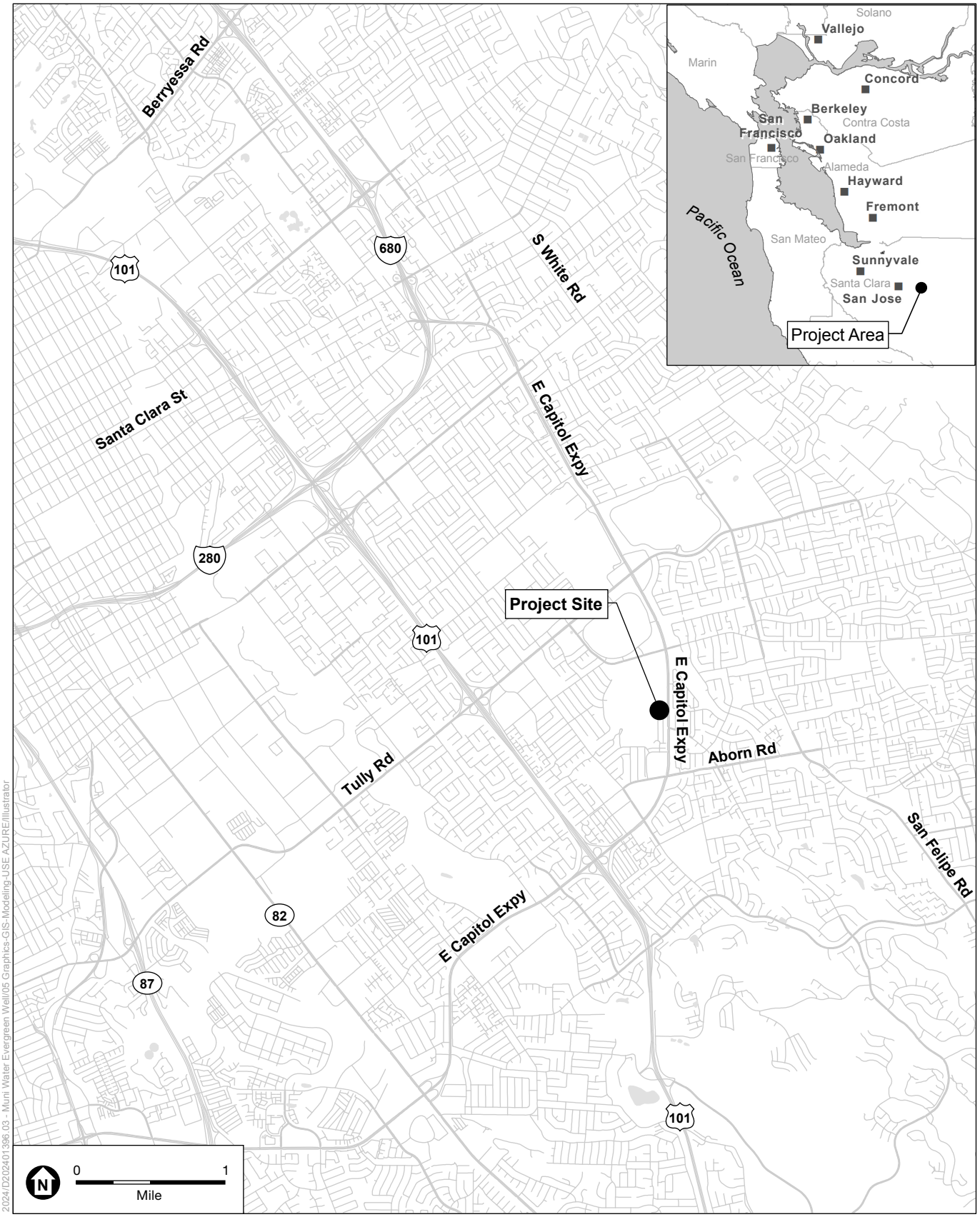
- State Water Resources Control Board (Water Board) Division of Drinking Water – Domestic Water System Permit Amendment

Local/Regional

- Santa Clara Valley Water District (Valley Water) – Well permit
- Bay Area Air District (Air District)[2] – Permit to construct and Permit to operate emergency stationary diesel engine
- City of San José Certification of the Focused Initial Study

[1] Single-Family Residential District with a minimum lot size of 8,000 square feet.

[2] As of January 2025, the Bay Area Air Quality Management District, or BAAQMD, announced "Bay Area Air District" as its new agency name.



2024/D2024013396.03 - Muni Water Evergreen Well/05 Graphics-GIS-Modeling-USE AZURE/Illustrator

SOURCE: ESA, 2026

Evergreen Water Production Well

Figure 2-1
Regional Location Map

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CHAPTER 3
Project Description

3.1 Project Overview

The City proposes to construct a new municipal groundwater production well, along with associated connections to the existing potable water distribution system, to secure an additional source of potable water supplies for its Evergreen Service Area. The Project includes drilling of boreholes up to 800 feet in depth and the installation of steel casings, gravel packs, contamination sealants/screenings, submersible pumps, motors, and power supplies. Pipes and appurtenances would also be installed to connect the groundwater well to the existing distribution system.

The Project is being evaluated in accordance with CEQA to identify the environmental impacts of the Project. The City is the CEQA Lead Agency.

3.2 Existing Setting

The Project site is owned by the City and consists primarily of undeveloped land. The Project site is a triangular parcel along Capitol Expressway, and the proposed well location would be within the southernmost portion of the triangular parcel. The parcel contains bare ground with sparse ruderal vegetation. The Project site is bordered by Capitol Expressway to the east, commercial development to the north, residential development to the west and south, and is situated within an urbanized area.

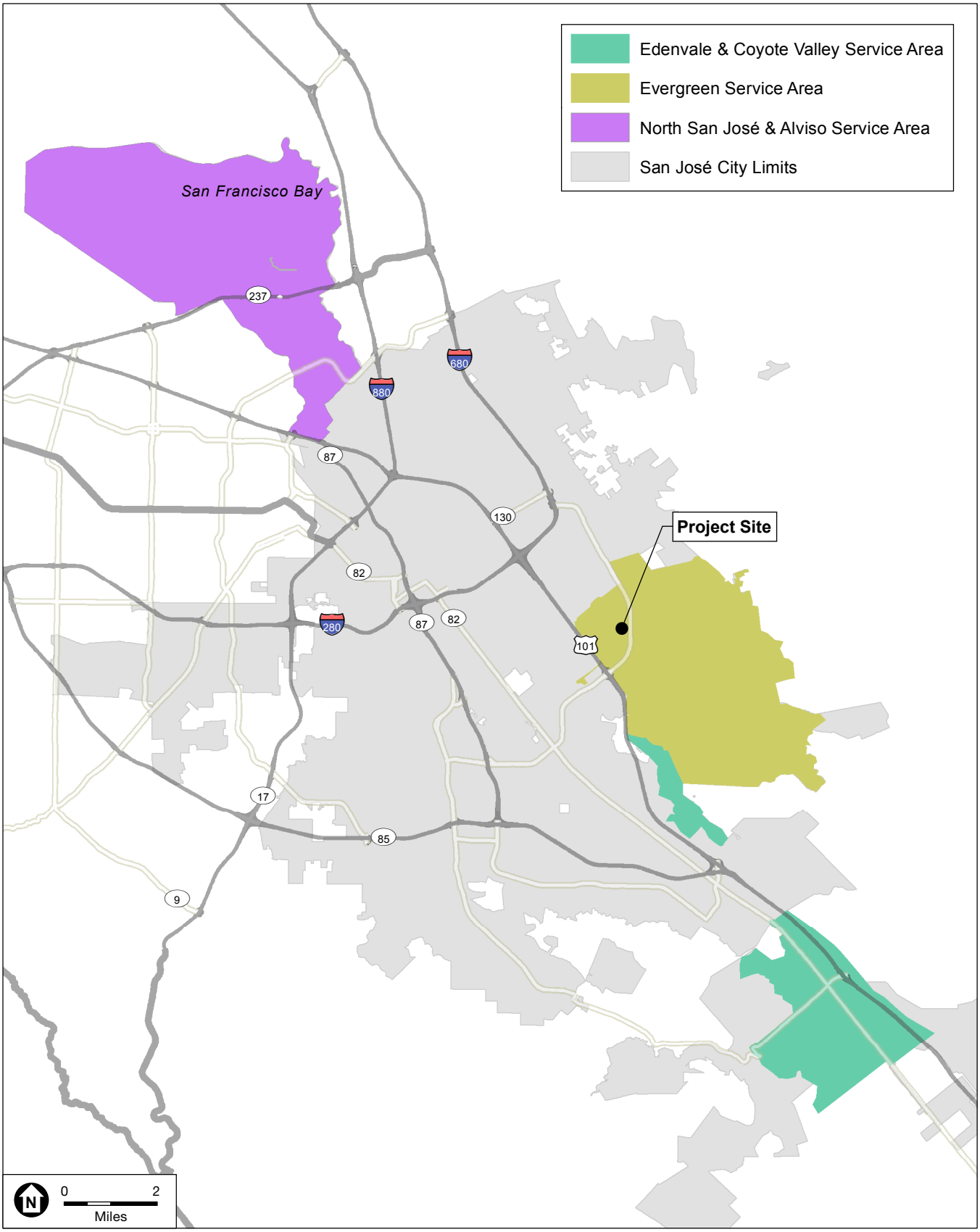
3.3 Background

The City operates the SJMWS, a retail water supplier that provides water service within the City of San José. SJMWS is one of three drinking water suppliers in San José, along with privately-owned San Jose Water[3] and Great Oaks Water Company[4]. The SJMWS supplies potable drinking water to four service areas: North San José (NSJ)/Alviso, Evergreen, Edenvale, and Coyote Valley (**Figure 3-1**).

The SJMWS relies on three sources of potable water supply for its four service areas: surface water from the San Francisco Public Utilities Commission (SFPUC), local and imported surface water from Valley Water, and groundwater from the Santa Clara groundwater basin. As the groundwater sustainability agency for the Santa Clara Valley Subbasin under the Sustainable Groundwater Management Act (SGMA), Valley Water uses available management measures, such as managed recharge and conservation, to ensure sustainable management of groundwater resources within the subbasin. The SJMWS also relies on non-potable recycled water supplies from the South Bay Water Recycling (SBWR) Program.

[3] https://www.sjwater.com/

[4] http://www.greatoakswater.com/



2024/D2024013396.03 - Muni Water Evergreen Well/05 Graphics-GIS-Modeling-USE AZURE/Illustrator

SOURCE: City of San José 2016

Evergreen Water Production Well

Figure 3-1
San José Municipal Water System Service Areas

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For the North San Jose/Alviso Service Area, the City is served by the SFPUC under a Water Sales Contract[5] and is currently allocated for 4.5 million gallons per day (MGD) of potable water through June 2028, making the supply temporary and interruptible.[6] Groundwater is used to supplement this allocation to meet demand for potable water supply, through pumping by retail water agencies or individual well owners. Coyote & Edenvale Service Area are both supplied through groundwater wells.

The Evergreen Service Area's potable water supply is comprised primarily of water from Valley Water's East Pipeline and is supplemented by SJMWS's four groundwater wells with a combined pumping capacity of approximately 6,000 gallons per minute (gpm) (City of San José, 2021). Water supply received by SJMWS from Valley Water for the Evergreen Service Area is generally considered to be consistent, except during times of prolonged drought when supplies are decreased in proportion to wholesale supplies available.

3.3.1 Historical, Existing and Projected Water Demand

The SJMWS currently provides water service to approximately 26,094 metered connections with a population of over 130,000. Population growth in SJMWS service areas is expected to increase by approximately 67 percent by 2045 due to proposed development identified within the Envision San José 2040 General Plan Update (City of San José, 2025). As shown in **Table 3-1**, which summarizes historical, current, and projected water use in the SJMWS Service Area by customer type, projected water demands are expected to grow significantly through 2045.

TABLE 3-1
HISTORICAL AND PROJECTED POTABLE DEMAND (ACRE-FEET PER YEAR)

Use Type	2020	2025	2030	2035	2040	2045
Single Family	7,920	9,107	10,293	10,917	12,338	12,621
Multi-Family	2,694	2,932	3,171	3,463	3,763	3,849
Commercial	1,040	1,642	1,920	2,436	3,376	3,446
Industrial	1,837	2,562	3,197	4,086	5,546	5,665
Institutional/Governmental	176	208	239	286	356	365
Landscape	2,873	3,401	3,930	4,586	5,584	5,712
Losses	1,006	1,228	1,406	1,569	1,852	1,894
Total	**17,546**	**21,080**	**24,156**	**27,343**	**32,815**	**33,552**

Source: City of San José, 2021

[5] https://records.sanjoseca.gov/Contracts/CON6348980.pdf

[6] The Water Sales Contract between the City and County of San Francisco (CCSF) and the City of San Jose (July 2009) is for a Temporary Water Supply subject to provisions in the Amended and Restated Water Supply Agreement (WSA) between the CCSF and Wholesale Customers in Alameda County, San Mateo County, and Santa Clara County (November 2019) which state that the CCSF will supply a combined annual average of 9 MGD to the cities of San Jose and Santa Clara through June 2028. If the CCSF finds that the purchases of the Wholesale Customers, including San Jose and Santa Clara, are projected to exceed 184 MGD before June 30, 2028, the CCSF may issue a conditional ten-year notice of interruption or reduction in supply of water to the cities of San Jose and Santa Clara.

The projected potable water demand for the SJMWS is expected to grow significantly from 2020 to 2045. The increase in demand is attributable to the proposed development, as identified in the Envision San José 2040 General Plan. This projected growth in demand reflects an anticipated recovery from decreased demand between 2005 and 2010 due to the economic downturn, and between 2010 and 2015 due to the drought (City of San José, 2021).

The City's 2020 Urban Water Management Plan (UWMP)[7] describes the appropriate level of water service reliability to meet demand during normal, dry, and multiple dry years (City of San José, 2021). The greatest challenge to water supply reliability is multi-year droughts. As noted in Valley Water's draft 2020 UWMP, supplies, including to the Evergreen Service Area, are sufficient throughout the full five-year drought in all demand years (Valley Water, 2021).

3.4 Project Objective

The specific objective of the Project is to provide backup potable water supplies for existing customers in the Evergreen Service Area, in the event that deliveries from Valley Water are interrupted during an emergency or during a drought.

The City proposes to meet this objective by constructing a municipal groundwater supply well with a pumping capacity of approximately 2,000 gpm to provide supplemental supplies to the Evergreen Service Area. The extent to which the City would be able to utilize groundwater from the proposed well is dependent on factors including variable diurnal demands, water quality, and other operational constraints.

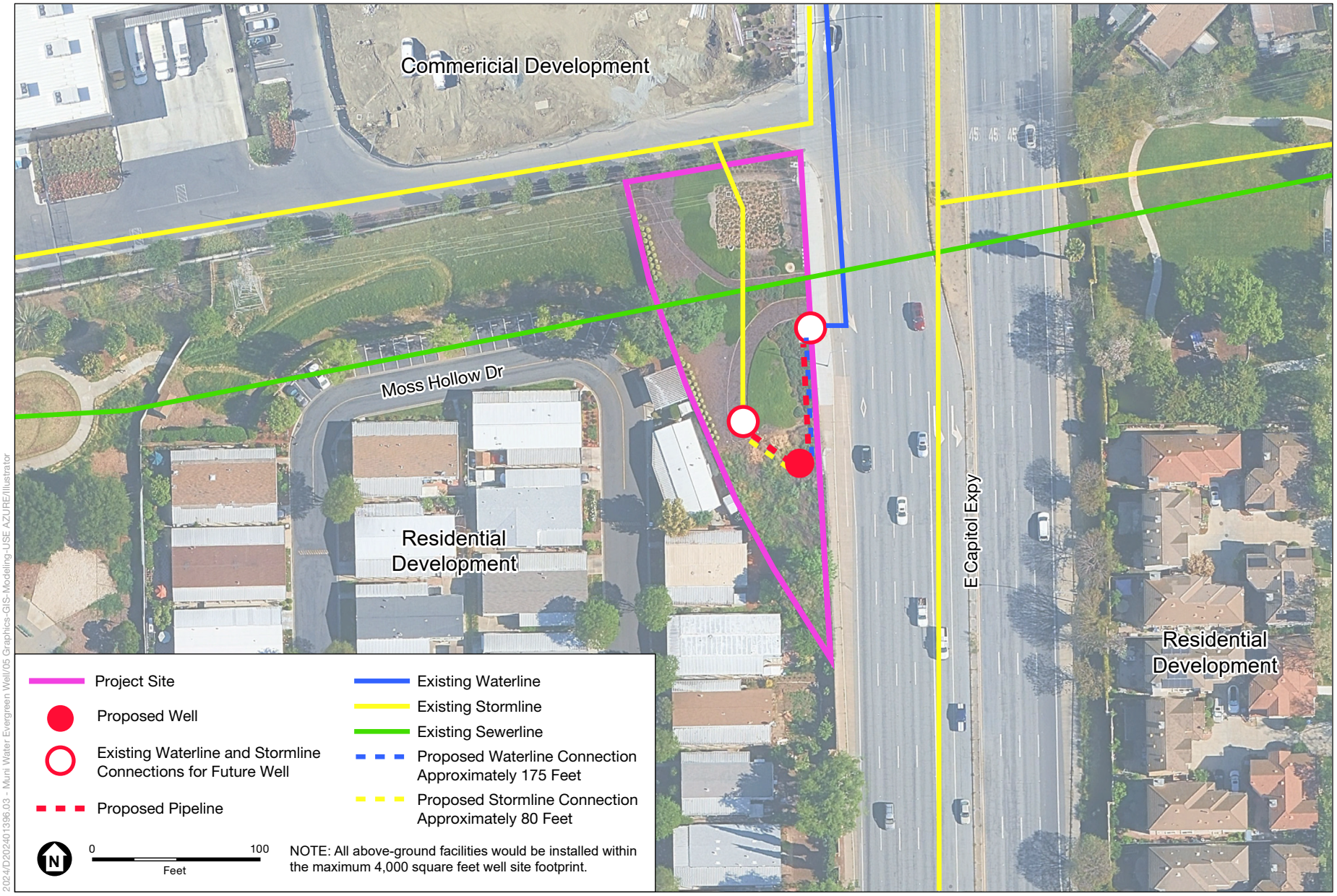
3.5 Project Components

3.5.1 Evergreen Well

One municipal groundwater well (new Evergreen well), is proposed at the Project site (**Figure 3-2**). The proposed well would be used, similar to existing groundwater wells, for the reliability of water deliveries to existing customers. When there are any short-term interruptions in the Valley Water supply, the proposed groundwater well would pump groundwater into the distribution system to supplement and blend with treated water supplies.

The new Evergreen well is projected to have a pumping capacity of approximately 1,800 to 2,000 gpm. The well would be designed to target drawing water from lenses of coarser materials in the deeper confined aquifer at depths of greater than 300 feet below ground surface. The vertical well would be constructed with an approximately 18-inch diameter well casing, have a maximum borehole depth of up to 800 feet, and would be comprised of standard well components including a sump, well screen, gravel pack, casing, pump shaft, grout seal, access tube, gravel feed pipe, pump motor housing, and a maximum 300 horsepower submersible pump **Figure 3-3** depicts a typical groundwater well profile.

[7] The City's 2020 UWMP is the most recently adopted plan at the time of this analysis. The City is in the process of updating its UWMP, with the 2025 UWMP anticipated for City Council adoption in June 2026. Accordingly, information presented herein is based on the 2020 UWMP and may be revised based on the 2025 UWMP.

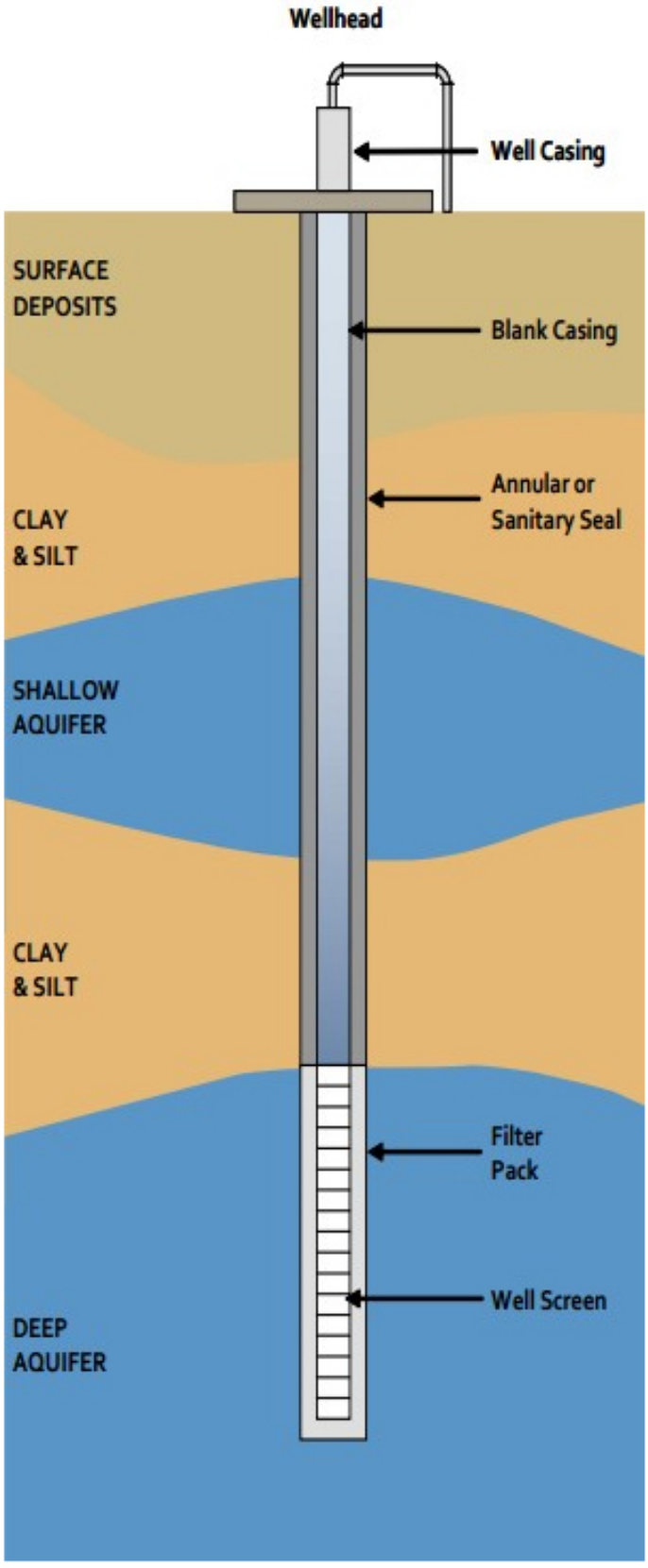


SOURCE: ESA, 2026; Google Earth, 2025

Evergreen Water Production Well

Figure 3-2
Proposed Evergreen Well Site Plan

ESA



SOURCE: Luhdorff & Scalmanini

Evergreen Water Production Well

Figure 3-3
Vertical Well Profile

ESA

Above ground facilities would be installed within the maximum 4,000 square foot future security fenced-in area of the proposed well location. This would include the Motor Control Center, above ground piping, control valves, a catch basin for pump to waste where discharge is collected, and control and communication equipment. **Figure 3-4** provides an illustrative depiction of the above ground components layout for the proposed groundwater well. Transformer appurtenances would be dictated by a Pacific Gas & Electric Company (PG&E) source. The work would also include improvements to site security, such as a well enclosure, a lockable gate, and other measures to protect the well and associated equipment.

The existing Project site is almost entirely undeveloped. The Project would introduce approximately 0.15 acre (about 6,534 square feet) of new impervious surfaces. The well would be located within the boundaries of the future security fenced-in area where all above ground components would be installed and include an approximate 9-feet by 9-feet concrete pad footprint in an area that is currently not paved, between the property fence line and asphalt curb.

3.5.2 Water System Connection

There is an existing potable drinking water and stormwater connection at the project site for the new Evergreen well. The new well would tie directly to the existing water and stormwater connections on the property. Approximately 175 linear feet of 12-inch-diameter ductile iron pipe would be installed within a 48-inch-deep trench from the groundwater well to the existing water distribution system. There will also be a connection of 80 linear feet to an existing 18-inch reinforced concrete storm line on-site.

Stormwater runoff is expected to drain to the existing on-site catch basin or to Capitol Expressway, where existing stormwater infrastructure is present, with possible bio-retention areas. Additionally, a 12-inch-diameter ductile storm lateral pipeline would be installed within a 48-inch-deep trench from the groundwater well to the storm main in Capitol Expressway to allow for atmospheric blow-off [8] during initial startup.

3.6 Project Construction

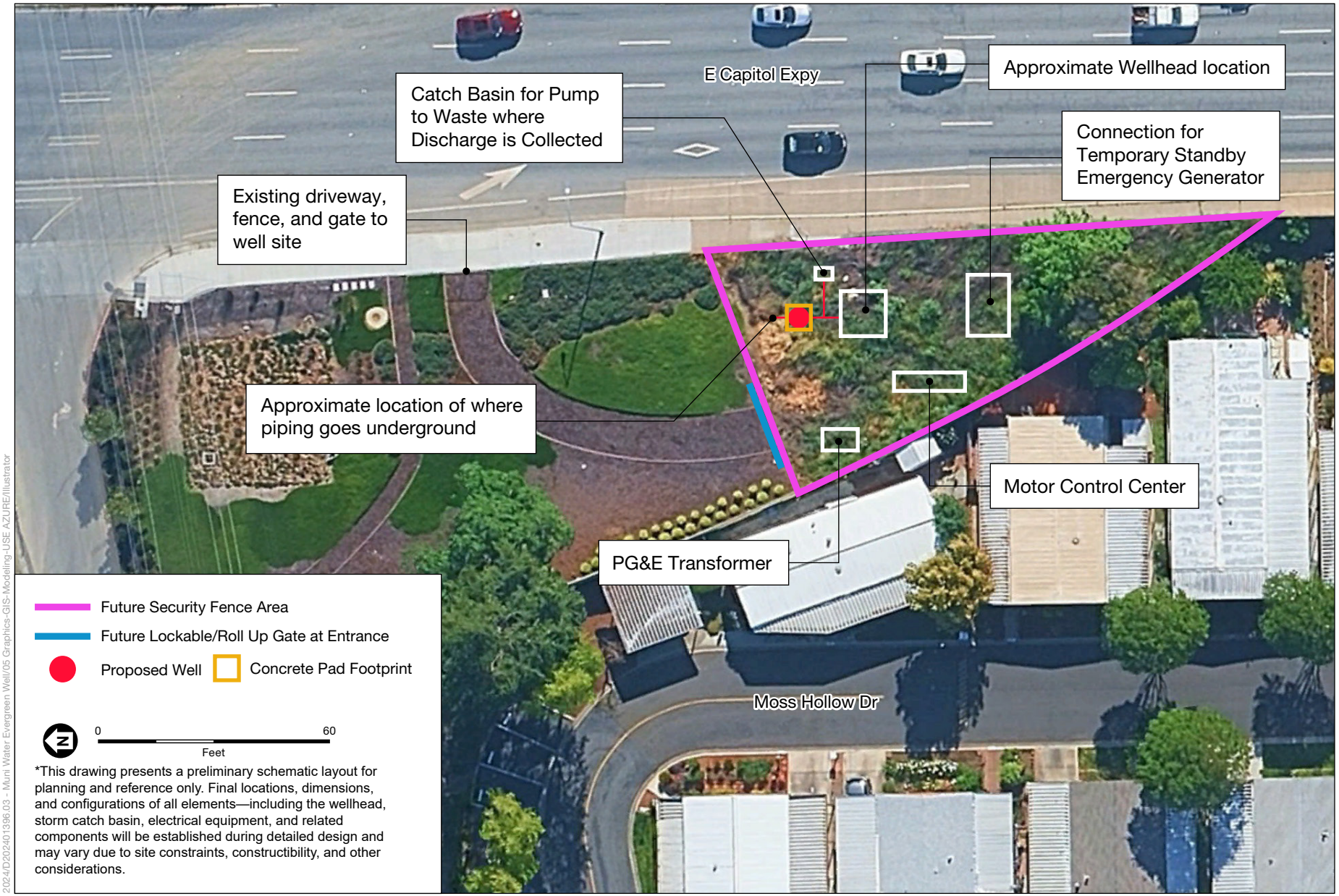
3.6.1 Construction Phasing and Work Hours

Construction work for the Project site would be completed between 7:00am and 7:00pm Monday through Friday, except during well drilling and well installation, which would each require 24-hour construction operations (including weekends) over an approximately 3-week period. Construction of the entire project will take approximately 26 months. Lighting required during nighttime construction periods would include a portable light tower and lights on the drill rig mast. The lights would be directed toward work areas and consist of lights designed with low light spillover, utilizing shields or other light pollution reduction features to ensure that no fugitive light spills out into natural lands.

Evergreen Well

The Evergreen well will be completed in two projects stages: (1) Drilling of the Evergreen Well, and (2) Well Completion and Potable Water System Connection.

[8] Atmospheric blow-off refers to the controlled discharge of water through an open-air outlet equipped with an air gap that prevents backflow into the potable water system.



2024/D2024013960.03 - Muni Water Evergreen Well/05 Graphics-GIS-Modeling-USE AZURE/Illustrator

SOURCE: ESA, 2026; Google Earth, 2025

Evergreen Water Production Well

Figure 3-4
Typical Above Ground Well Components

ESA

Drilling of the Evergreen Well Drilling of the Evergreen well would occur in five phases, as shown in **Table 3-2**, below:

TABLE 3-2
CONSTRUCTION PHASING FOR PROPOSED EVERGREEN WELL

Phase	Components	Timeframe
1	Site Preparation	September 2027 (1 month)
2	Drilling	October – December 2027 (3 months)
3	Installation	January – March 2028 (3 months)
4	Development	April 2028 (1 month)
5	Testing, Startup	May 2028 (1 month)
All	All	September 2027 – May 2028 (9 months)

Potable Water System Connection

Proposed well completion and construction of the Potable Water System Connection would occur in four phases, as shown in **Table 3-3**, below:

TABLE 3-3
CONSTRUCTION PHASING FOR PROPOSED POTABLE WATER SYSTEM CONNECTION

Phase	Components	Timeframe
1	Site Preparation	September 2028 (1 month)
2	Construction of Appurtenant Facilities	October 2028 – April 2029 (7 months)
3	Trenching/Installing Pipelines	May – September 2029 (5 months)
4	Testing, Startup	October 2029 (1 month)
All	All	September 2028 – October 2029 (14 months)

3.6.2 Construction Access and Staging

The Project site is accessible from an existing, fenced area on Capitol Expressway. After the site is cleared, construction laydown, staging, and parking (including parking for construction workers) would be staged on-site. Additional light machinery would be staged north of the Project site within a shopping center parking lot.

3.6.3 Construction Activities

Well

Construction activities for the well would include site preparation; grading and excavation; drilling, installation, and development; and testing and startup. The Project would transport all construction and demolition debris to a City-certified waste diversion facility to reduce construction and demolition debris.

Site Preparation

During site preparation, trucks would deliver construction equipment and miscellaneous materials to the Project area and field offices would be set up. There are two trees on-site that would require removal, as discussed in greater detail in Section 4.2, *Biological Resources*.

Grading, Excavation, and Trenching

Approximately 9 cubic yards of spoils would be generated from the excavation of the Project site. Approximately 40 cubic yards of spoils would be generated from excavation and trenching of the proposed well location, for a total of 49 cubic yards of spoils.

There would be waste management on-site where spoils would be temporarily stored in a bin with a capacity of 20 cubic yards located adjacent to the rig system and subsequently hauled by truck to a Class II[9] or Class III[10] landfill, depending on the chemical composition of the soil. No excavated material would be re-used for backfill. During construction, the contractor would be responsible for finding the location of acceptable landfills to haul off either hazardous or non-hazardous spoils from the sites.

Drilling, Installation, and Development

Well construction would consist of drilling the well borehole, installing the well casing and annular gravel pack material, and hydraulic testing of the well. Approximately 230 cubic yards of spoils would be generated from drilling of the well. Continuous activity would be required during selected phases of construction to: (a) prevent the borehole from collapsing, which could occur if the borehole were left unsupported before the well casings were installed, and; (b) monitor the well during pump testing and well development.

The borehole would be drilled using a truck-mounted reverse-circulation mud-rotary drilling rig. A drilling fluid would be used to cool the drill head and transport the cuttings up from the bottom of the borehole during drilling operations. Water from a water service connection point on the Project site or a fire hydrant nearby would be used for minor dust control and in the drilling process, with an approximate volume of 30,000 gallons. Drilling fluids and initial development water (dirty water that cannot be placed into the storm drain) would be disposed of into the sanitary sewer. Before discharging to the sanitary sewer, fluids would go through a series of two filter tanks to allow solids to settle out. The solids that settle out in the filter tanks would be removed and hauled by truck to a Class II or Class III landfill, depending on the chemical composition of the material.

Following drilling, the well casing and well screens would be installed. A gravel envelope would be placed around the well screen to prevent sediment from entering the water during pumping operations. The well casing would be grouted from the surface to near the top of the uppermost well screen. In addition, a conductor casing would be installed to provide a sanitary seal in accordance with the Water Board Drinking Water Program and Valley Water Well Construction requirements.

[9] Defined as a landfill designed for the disposal of non-hazardous industrial waste and certain designated wastes.

[10] Defined as a landfill commonly referred to as a municipal solid waste landfill, intended for disposal of non-hazardous household and commercial waste.

Testing and Start-up

Upon completion of well construction and prior to finalizing connections to water distribution systems, the newly installed well column and distribution pipelines would be flushed and disinfected. The source of water for flushing would be 100 percent groundwater. This water would then be discharged to the existing storm drain system in accordance with regulatory storm discharge requirements. After disinfection, flushing would take place, and de-chlorinated water would be discharged into an existing storm drain inlet on Capitol Expressway in accordance with regulatory storm discharge requirements. Final development, testing, and clean flow would be directed to the storm drain inlet nearest to the well.

Pipelines

Construction of the pipelines would include: site preparation; clearing and grading; construction of appurtenant facilities; trenching/installing pipelines, and pressure testing and startup.

Site preparation for the pipelines would be completed during the site preparation activities described above for the well. Vegetation clearing and removal of two trees would be required for the site preparation. Construction of the pipelines would involve excavating trenches for the pipelines, placing the pipelines, backfilling the trenches, and restoring the ground surface. All pipelines would be constructed using open trench (i.e., cut and cover) techniques. The approximate maximum depth of trench for the proposed pipeline would be based from City Standard Details and the diameter of the pipe. The pipeline would have a minimum approximate cover of 48-inches from finish grade to the top of the pipe and the trench bottom excavation for pipeline six feet below ground surface (bgs). The width of pipeline trenches would vary based upon pipeline diameter. Approximately 12 feet on either side of the pipeline trenches would be required for equipment use and pipeline storage during construction. Approximately 20 cubic yards of spoils would be generated from construction of the conveyance piping system at the Project site. Pipelines would be installed at a rate of approximately 100 feet per day. Isolation or gate valves would be installed as operationally necessary, including one valve located at the tie-in to the existing water line system.

After construction and backfilling is complete, ground restoration would take place in trench areas and other areas damaged during construction and installation of new pipeline, as needed, based on existing site conditions. No large equipment or materials would be needed during pressure testing and disinfection.

3.6.4 Construction Equipment and Workforce

Most Project components would be constructed individually with a crew of up to four workers at any one time, with a maximum of six workers a day, depending on the work activities. Construction activities would include the use of heavy equipment, such as a drill rig and tractors/loaders/backhoes, and would involve handling of construction-related materials, including fuels, oils, lubricants, antifreeze, hydraulic fluids, drilling fluids, and sediment. The size of the construction workforce would include a maximum of 12 vehicle trips per day (i.e., six workers). **Table 3-4** depicts truck trips required for construction.

TABLE 3-4
TOTAL CONSTRUCTION TRUCK TRIPS

Description	Worker Trips/day	Material Delivery Trips/day	Hauling Trips/day
Evergreen Well			
Site Preparation	8	0	4
Drilling	4	1	2
Installation	4	1	2
Development	4	0	0
Testing, Startup	2	0	0
Potable Water System Connection			
Site Preparation	8	1	1
Construction of Appurtenant Facilities	8	1	0
Trenching/Installing Pipelines	8	1	1
Testing, Startup	4	1	0

Equipment to be used during construction would include:

- Air Compressors
- Cement and Mortar Mixers
- Pumps
- Skid Steer Loaders
- Bore/Drill Rigs
- Paving Equipment
- Rollers
- Tractors/Loaders/Backhoes

3.7 Operations and Maintenance

Groundwater would be drawn from the Santa Clara Subbasin, which is part of the Santa Clara Valley Groundwater Basin. It is anticipated that groundwater production from the new well would supplement supply based on water demands and operational objectives. The main purpose of the well would be for water deliveries during any short term interruptions, for periodic maintenance purposes, and/or to meet demand beyond the available supply from Valley Water. When operational, the well is projected to be able to extract an estimated 2,000 gpm.

Operation of the Evergreen well would require routine weekly visits by facility operators to check pumps and treatment equipment and monitor performance. There would be no permanent generators on site; portable generators would be used during power outages.

Routine maintenance for the well is anticipated to include manual measurement of groundwater levels. These regular maintenance activities would be performed by City staff and would not require any new additional staff for operations and maintenance. Periodic maintenance would require that the well be taken offline to allow for removal of the pump and/or motor for service and physical or chemical well screen rehabilitation. These infrequent maintenance activities would be performed as needed by a

professional well and pump service contractor. It is assumed that the well would not be operated for approximately 10 percent of the year to accommodate such maintenance.

Once constructed, a large volume of water is expected to periodically be needed to flush out of the well from the groundwater basin as part of the City's process when taking samples or when staff perform routine maintenance. Flushing could take place quarterly for sampling or as needed to comply with Division of Drinking Water requirements. This water would then be discharged to the existing storm drain system.

At the maximum pump rate of approximately 2,000 gpm, the total estimated annual power requirements under the maximum production scenario are approximately 70,000 kilowatt hours per year for the Evergreen well. The well facilities would receive power from the nearby PG&E distribution system.

3.8 City of San José Standard Permit Conditions

The following conditions of approval (COA) and the City's Standard Permit Conditions (SPC) are applicable to the Project. If the Project is approved by the City, the Project proponent would be required, as applicable, to implement these during Project construction and operation. These are described in detail under the relevant impact analyses in Chapter 4.

- SPC AIR-1: Bay Area Air District Dust Control Best Management Practices
- SPC BIO-1: Nesting Migratory Birds
- SPC BIO-3: Santa Clara Valley Habitat Plan
- SPC CUL-1: Human Remains
- SPC CUL-2: Subsurface Cultural Resources
- SPC GEO-2: Paleontological Resources
- SPC HYD 1: Construction-related Water Quality
- SPC NOI-1: Construction Noise Reduction Measures
- COA BIO-1: Tree Replacement

3.9 References

City of San José, 2021. *2020 Urban Water Management Plan San Jose Municipal Water System*. Prepared for the San Jose Municipal Water System. Prepared with assistance from Luhdorff & Scalmanini.

City of San José, 2025. *Envision San José 2040 General Plan*. Adopted November 1, 2011. As Amended on August 29, 2025. Available: https://www.sanjoseca.gov/home/showpublisheddocument/121586/638828345723130000. Accessed April 2026.

Santa Clara Valley Water District (Valley Water), 2021. *Valley Water's Draft 2020 Urban Water Management Plan*. Adopted June 9, 2021.

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CHAPTER 4
Evaluation of Environmental Impacts

This section presents the discussion of impacts related to the following environmental subjects in their respective subsections:

4.1 Air Quality
4.2 Biological Resources
4.3 Cultural Resources
4.4 Energy
4.5 Geology and Soils
4.6 Greenhouse Gas Emissions
4.7 Hazards and Hazardous Materials
4.8 Hydrology and Water Quality
4.9 Noise
4.10 Tribal Cultural Resources
4.11 Utilities and Service Systems
4.12 Other Environmental Topics

The discussion for each environmental subject includes the following subsections:

- **Environmental Checklist –** The environmental checklist, as recommended by CEQA, identifies environmental impacts that could occur if the Proposed Project is implemented. The right-hand column of the checklist lists the source(s) for the answer to each question. The sources are identified at the end of this section. The environmental checklist is included in the discussion of Sections 4.1 to 4.11 listed above.
- **Impact Discussion** – This subsection discusses the project's impact as it relates to the environmental checklist questions. Mitigation measures are identified for all significant project impacts. Mitigation Measures are measures that will minimize, avoid, or eliminate a significant impact (CEQA Guideline 15370).
- **Other Environmental Topics** – This subsection discusses the project's impacts on the environment for the following topics: aesthetics, agricultural and forestry resources, land use and planning, mineral resources, population and housing, public services, recreation, transportation, and wildfire. These topics are presented in this subsection because the Project would not result in significant impacts related to these resource areas, and therefore, a more detailed discussion is not warranted.

Important Note to the Reader

The California Supreme Court in a December 2015 opinion [*California Building Industry Association v. Bay Area Air Quality Management District,* 62 Cal. 4th 369 (No. S 213478)] confirmed that CEQA, with several specific exceptions, is concerned with the impacts of a project on the environment, not the effects the existing environment may have on a project. Therefore, the evaluation of the significance of project impacts under CEQA in the following sections focuses on impacts of the project on the environment, including whether a project may exacerbate existing environmental hazards.

The City of San José currently has policies that address existing conditions (e.g., air quality, noise, and hazards) affecting a proposed project, which are also addressed in this section. This is consistent with one of the primary objectives of CEQA and this document, which is to provide objective information to decision-makers and the public regarding a project as a whole. The CEQA Guidelines and the courts are clear that a CEQA document (e.g., Environmental Impact Report (EIR) or IS) can include information of interest even if such information is not an "environmental impact" as defined by CEQA.

Therefore, where applicable, in addition to describing the impacts of the Project on the environment, this section will discuss project effects related to policies pertaining to existing conditions. Such examples include, but are not limited to, locating a project near sources of air emissions that can pose a health risk, in a floodplain, in a geologic hazard zone, in a high noise environment, or on/adjacent to sites involving hazardous substances.

4.1 Air Quality

4.1.1 Environmental Setting

The Project is located in the City of San José, within the San Francisco Bay Area Air Basin (SFBAAB). The Project area's proximity to both the Pacific Ocean and the San Francisco Bay has a moderating influence on the climate. The surrounding terrain greatly influences winds in the Santa Clara Valley, resulting in a prevailing wind that follows along the valley's northwest-southwest axis. The Air District (previously known as the Bay Area Air Quality Management District) is the regional air quality agency for the SFBAAB.

The Federal Clean Air Act and the California Clean Air Act both require the establishment of standards for ambient concentrations for criteria air pollutants, called Ambient Air Quality Standards (AAQS). National AAQS have been established for seven criteria air pollutants: ozone, carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter less than 10 microns and 2.5 microns (PM_{10} and $PM_{2.5}$), and lead. In addition, California has established state standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. The SFBAAB experiences occasional violations of ozone and particulate matter (PM_{10} and $PM_{2.5}$) standards. Therefore, as detailed in **Table 4.1-1**, the Project area currently is designated as a non-attainment area for violation of the state 1-hour and 8-hour ozone standards, the federal ozone 8-hour standard, the state respirable particulate matter (PM_{10}) 24-hour and annual average standards, and the federal $PM_{2.5}$ 24-hour standard. The Project area is designated as attainment for all other state and federal standards (Air District, 2025).

TABLE 4.1-1
SFBAAB ATTAINMENT STATUS

Pollutant and Averaging Time	Designation/Classification	
	State Standards	**Federal Standards**
Ozone (1-hour)	Non-attainment	No Federal Standard
Ozone (8-hour)		Non-attainment
Carbon Monoxide (CO)	Attainment	Unclassified/Attainment
Nitrogen Dioxide (NO_2)	Attainment	Unclassified/Attainment
Sulfur Dioxide (SO_2)	Attainment	Unclassified/Attainment
Respirable Particulate Matter (PM_{10})	Non-attainment	Unclassified
Fine Particulate Matter ($PM_{2.5}$)	Attainment	Non-attainment

Notes: CO = carbon monoxide; NO_2 = nitrogen dioxide; PM_{10} = particulate matter with an aerodynamic diameter equal to or less than 10.0 microns; $PM_{2.5}$ = particulate matter with an aerodynamic diameter equal to or less than 2.5 microns; SFBAAB = San Francisco Bay Area Air Basin; SO_2 = sulfur dioxide.

Source: Bay Area Air District, 2025.

Toxic air contaminants (TACs) are airborne substances that can cause short-term (acute) or long-term (chronic or carcinogenic, i.e., cancer-causing) adverse human health effects, even when present in relatively low concentrations. The potential human health effects of TACs include birth defects, neurological damage, cancer, and death. TACs include both organic and inorganic chemical substances. They may be emitted by common sources such as gasoline stations, automobiles, dry cleaners, industrial operations, and painting operations. California's current list of TACs includes approximately 200 compounds, including

diesel particulate matter (DPM) emissions from diesel-fueled engines, which the California Air Resources Board (CARB) identified as a TAC in 1998 (CARB, 2026). Under the California Environmental Protection Agency (EPA) guidelines, DPM is used as a surrogate measure of carcinogen exposure for the mix of chemicals that make up diesel exhaust as a whole.

TACs do not have ambient air quality standards but are regulated by local air districts using a risk-based approach. This approach uses a health risk assessment to determine what sources and pollutants to control and the degree of control.

Sensitive Receptors

The Air District defines sensitive receptors as facilities where sensitive receptor population groups (children, the elderly, the acutely ill and the chronically ill) are likely to be located. These land uses include residences, school playgrounds, child-care centers, retirement homes, convalescent homes, hospitals and medical clinics.

The Project site is a triangular parcel bordered by Capitol Expressway to the east, residential uses to the west and south and commercial uses (Costco Business Center) to the north. The nearest sensitive receptors to the Project site are single family residences located adjacent to the Project site to the west, approximately 50 feet from the Project site. In addition, the George V. LeyVa Middle School buildings are located approximately 880 feet southwest of the Project site.

Odors

Odors are generally regarded as an annoyance rather than a health hazard. The ability to detect odors varies considerably among the population and people may have different reactions to the same odor. The Project site is not in the vicinity of any odor-generating facilities such as a wastewater treatment plant, composting facility, food processing facility, or a metal smelting facility.

4.1.2 Regulatory Setting

Bay Area Air District CEQA Guidelines

The Air District's CEQA Air Quality Guidelines (Air District, 2023) is an advisory document that provides lead agencies, consultants, and project proponents with procedures for assessing air quality impacts and preparing environmental review documents. The document describes the criteria that the Air District uses when reviewing and commenting on the adequacy of environmental documents. It recommends thresholds for use in determining whether projects would have significant adverse environmental impacts, identifies methods for predicting project emissions and impacts, and identifies measures that can be used to avoid or reduce air quality impacts.

The Air District most recently updated its CEQA Air Quality Guidelines in April 2023 (2022 CEQA Guidelines). The Air District states that the quantitative significance thresholds are advisory and should be followed by local governments at their own discretion, and that lead agencies are fully within their authority to develop their own thresholds of significance. However, the Air District offers these thresholds for lead agencies to use in order to inform environmental review for development projects in the SFBAAB.

According to the 2022 CEQA Guidelines, a project would be considered to have a significant impact on existing air quality conditions within the SFBAAB if construction and operation of a project were to exceed the significance thresholds shown in **Table 4.1-2**.

TABLE 4.1-2
BAY AREA AIR DISTRICT THRESHOLDS OF SIGNIFICANCE

Emissions	ROG	NOx	PM_{10}	$PM_{2.5}$
Construction	54 ppd	54 ppd	82 ppd (exhaust only)	54 ppd (exhaust only)
Operation	54 ppd/10 tpy	54 ppd/10 tpy	82 ppd/15 tpy	54 ppd/10 tpy

Notes: NO_x = oxides of nitrogen, PM = particulate matter; ppd = pounds per day; ROG = reactive organic gases; tpy = tons per year
Source: Air District, 2023.

To determine the significance of fugitive dust emissions, the Air District recommends taking a qualitative approach. According to the 2022 CEQA Guidelines, a project would have a less-than-significant impact with regards to emissions of fugitive dust if it were to implement the Air District's Basic Construction Mitigation Measures Recommended for All Proposed Projects.

Bay Area 2017 Clean Air Plan

In April 2017, the Air District adopted the *2017 Clean Air Plan (2017 CAP)*, whose primary goals are to protect public health and to protect the climate (Air District, 2017). The *2017 CAP* updates the *Bay Area 2010 CAP* and complies with state air quality planning requirements, as codified in the California Health and Safety Code. State law requires the CAP to include all feasible measures to reduce emissions of ozone precursors and to reduce the transport of ozone precursors to neighboring air basins.

The 2017 CAP contains 85 measures to address reduction of several pollutants: ozone precursors, PM, air toxics, and greenhouse gases (GHGs). Other measures focus on a single type of pollutant: super GHGs such as methane and black carbon that consist of harmful fine particles that affect public health. These control strategies are grouped into the following categories: Stationary Source Measures; Transportation Control Measures; Energy Control Measures; Building Control Measures; Agricultural Control Measures; Natural and Working Lands Control Measures; Waste Management Control Measures; Water Control Measures; and Super GHG Control Measures.

In addition to the Air District's CEQA Guidelines, the Air District regulates air quality within the region through various district rules and regulations. The Project would not include any new operational sources of emissions that would require a permit from the Air District. Construction activities associated with the Project would be subject to Air District rules and regulations governing criteria pollutants, TACs, and odorous compounds, even though permits may not be required. Rules and regulations applicable to the Project may include, but are not limited to (Air District, 2026):

- **Regulation 6, Rule 1.** Establishes that no person shall discharge quantities of air contaminants or other materials which cause injury, detriment, nuisance or annoyance to any considerable number or person or the public; or which endangers the comfort, repose, health or safety of any such person or the public.

- **Regulation 6, Rule 6.** Controls the track-out of solid materials onto paved, public roads from three types of sites: large bulk material sites, large construction sites, and large disturbed area sites.
- **Regulation 8, Rule 3.** Regulates the quantity of (volatile organic compounds) VOCs in architectural coatings supplied, sold, offered for sale, applied, solicited for application, or manufactured.

Envision San José 2040 General Plan

The Envision San José 2040 General Plan (City of San José, 2025) adopted in November 2011 and amended in 2020, includes policies to minimize impacts on environmental resources, including air quality. To achieve goals related to reduction of air pollutant emissions, TACs, objectionable odors, and construction air pollutant emissions, the General Plan has outlined various goals, policies, and actions to be implemented by the City and project proponents. General Plan policies applicable to the Project include:

- **MS-10.1:** Assess projected air emissions from new development in conformance with the Air District CEQA Guidelines and relative to state and federal standards. Identify and implement feasible air emission reduction measures.
- **MS-11.2:** For projects that emit TACs, require project proponents to prepare health risk assessments in accordance with Air District-recommended procedures as part of environmental review and employ effective mitigation to reduce possible health risks to a less-than-significant level. Alternatively, require new projects (such as, but not limited to, industrial, manufacturing, and processing facilities) that are sources of TACs to be located an adequate distance from residential areas and other sensitive receptors.
- **MS-13.1:** Include dust, particulate matter, and construction equipment exhaust control measures as conditions of approval for subdivision maps, site development and planned development permits, grading permits, and demolition permits. At minimum, conditions shall conform to construction mitigation measures recommended in the current Air District CEQA Guidelines for the relevant project size and type.
- **MS-13.6:** Revise the grading ordinance and condition grading permits to require that graded areas be stabilized from the completion of grading to commencement of construction.

4.1.3 Environmental Checklist and Discussion of Impacts

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
AIR QUALITY — Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	☐	☐	☒	☐
c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☒	☐	☐
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☒	☐

4.1.4 Impact Discussion

a) Conflict with or obstruct implementation of the applicable air quality plan? (*Less Than Significant Impact*)

Construction and Operation Impacts

The 2017 CAP is the applicable air quality plan for the Project area. The Air District's CEQA Guidelines recommend that a project's consistency with the current air quality plan be evaluated using the following three criteria:

a. The project supports the goals of the air quality plan,

b. The project includes applicable control measures from the air quality plan, and

c. The project does not disrupt or hinder implementation of any control measures from the air quality plan.

If it can be concluded with substantial evidence that a project would be consistent with the above three criteria, the Air District considers it to be consistent with air quality plans prepared for the SFBAAB (Air District, 2023).

The primary goals of the 2017 CAP are to attain air quality standards, reduce population exposure and protect public health in the SFBAAB, and reduce GHG emissions and protect the climate. The Air District-recommended guidance for determining if a project supports the goals in the current air quality plan is to compare estimated project emissions with the Air District's thresholds of significance.

As indicated in the following discussion with regard to air quality item b), the Project would result in a less-than-significant impact related to construction emissions. Fugitive dust emissions during construction would be less than significant with the implementation of the Air District's applicable recommended fugitive dust control measures, which are included in the City's **SPC AIR-1: Bay Area Air District Dust Control Best Management Practices**. As detailed under air quality item b), the Project would also result in a less-than-significant impact with respect to operational emissions as emissions associated with the operation and maintenance truck trips to the site would not generate emissions that exceed the Air District's operational significance thresholds. Therefore, the Project would be considered to support the primary goals of the 2017 CAP.

The 2017 CAP contains 85 control measures aimed at reducing air pollution in the SFBAAB (Air District, 2017). Projects that incorporate all feasible air quality plan control measures are considered consistent with the CAP. There are no control measures that directly apply to the Project. The Project will benefit from other measures such as TR22 – Construction, Freight and Farming Equipment and EN1 – Decarbonize Electricity Production that are implemented at the regional level. For these reasons, the Project would not be conflict with or hinder implementation of the 2017 CAP control measures.

In summary, the Project would be consistent with all three criteria listed above to evaluate consistency with the 2017 CAP and, therefore, would not conflict with or obstruct implementation of the 2017 CAP. With the implementation of the City's SPC AIR-1, detailed under air quality item b), this impact would be **less than significant**.

b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard? (*Less Than Significant Impact*)

According to the Air District, no single project will, by itself, result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. In addition, according to the Air District's 2022 CEQA Guidelines, if a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions (Air District, 2023). Alternatively, if a project does not exceed the identified significance thresholds, then the project would not be considered cumulatively considerable and would result in less-than-significant air quality impacts.

The Project's individual contribution to the cumulative air quality of the area has to be evaluated below by comparing its construction and operational emissions to the applicable Air District thresholds.

Construction Impacts

Construction activities associated with the Project would involve use of equipment that would emit exhaust containing ozone precursors (reactive organic gases or ROG, and nitrogen oxides, or NO_x). Vehicle activity associated with on site and off site material transport and construction worker commutes would also generate emissions. Emission levels for these activities would vary depending on the number and types of equipment used, duration of use, operation schedules, and the number of construction workers. Criteria pollutant emissions of ROG and NO_x from these emission sources would incrementally add to the regional atmospheric loading of ozone precursors during Project construction.

Criteria pollutant emissions of ROG, NO_X, PM_{10}, and $PM_{2.5}$ that would be generated by off-road construction equipment (e.g., excavators, graders, loaders) and on-road construction vehicles (worker commute trips, equipment and material transport trucks) were estimated using the most recent version of CalEEMod (version 2022.1.1) using Project-specific construction schedule and equipment needs. All assumptions and calculations used to estimate the Project-related construction emissions are included in **Appendix A**.

Construction of the Project would take place between September 2027 and October 2029 over a period of 26 months. Average daily construction emissions were estimated by dividing the total emissions generated in each construction year by the number of workdays in each year. Estimated average daily emissions by construction year are shown in **Table 4.1-3** and compared to the Air District's thresholds.

TABLE 4.1-3
AVERAGE DAILY CONSTRUCTION-RELATED POLLUTANT EMISSIONS (POUNDS/DAY)

Emissions	ROG	NOx	Exhaust PM_{10}[a]	Exhaust $PM_{2.5}$[a]
2027	1.6	14.0	0.4	0.4
2028	0.3	2.6	0.1	0.1
2029	0.5	4.9	0.1	0.1
Air District Construction Thresholds	54	54	82	54
Significant?	No	No	No	No

Note:
a. The Air District's construction-related significance thresholds for PM_{10} and $PM_{2.5}$ apply to exhaust emissions only and not to fugitive dust.
Source: Appendix A.

As indicated in Table 4.1-3, the average daily construction exhaust emissions would not exceed the Air District's significance thresholds during any of the construction years. Therefore, impacts associated with the potential for construction related exhaust emissions to result in or contribute to a violation of an air quality standard would be less than significant.

In addition to exhaust emissions, emissions of fugitive dust would also be generated by construction activities associated with grading and earth disturbance, travel on paved and unpaved roads, etc. Such emissions could result in localized increase in particulate matter concentrations resulting in a potential significant impact. With regard to fugitive dust emissions, the Air District's Guidelines focus on implementation of recommended dust control measures rather than a quantitative comparison of estimated emissions to a significance threshold. For all projects, the Air District recommends the implementation of its *Basic Best Management Practices for Fugitive Dust Control Measures* (Air District, 2023). Without implementation of these measures, the impact from fugitive dust emissions during construction would be considered significant. The Project would be required to implement these mandatory measures as part the City's **SPC AIR-1: Bay Area Air District Dust Control Best Management Practices**, and therefore would not lead to violations of the air quality standards due to construction fugitive dust.

SPC AIR-1: Bay Area Air District Dust Control Best Management Practices.

The permittee shall include the following measures on approved construction plans and implement the following Bay Area Air District (Air District) dust control requirements during construction of the project:

a) All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times a day.

b) All haul trucks transporting soil, sand, or other loose material off-site shall be covered.

c) All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.

d) All vehicle speeds on unpaved roads shall be limited to 15 miles-per-hour.

e) All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.

f) All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 miles-per-hour.

g) All trucks and equipment, including their tires, shall be washed off prior to leaving the site.

h) Unpaved roads providing access to sites located 100 feet or further from a paved road shall be treated with a six to 12-inch compacted layer of wood chips, mulch, or gravel.

i) Minimize idling time either by shutting equipment off when not in use or reducing the time of idling to no more than two minutes (a five-minute limit is required by the State airborne toxics control measure [Title 13, Sections 2449(d)(3) and 2485 of the California Code of Regulations]). Provide clear signage that posts this requirement for workers at all access points to the site.

j) Low volatile organic compounds (i.e., reactive organic gases) coatings that are used shall comply with the Air District's Regulation 8, Rule 3: Architectural Coatings.

k) Maintain and properly tune all construction equipment in accordance with the manufacturer's specifications. Check all equipment by a certified mechanic and record a determination of running in proper condition prior to operation.

l) Post a publicly visible sign with the telephone number and contact information for the City of San José Code Enforcement Division regarding dust complaints. If Code Enforcement determines a violation exists, the contractor shall take corrective action within 48 hours. The Air District's phone number shall also be included to ensure compliance with applicable regulations.

Therefore, impacts associated with the potential for construction-related exhaust emissions would not generate criteria air pollutant emissions, for which the project region is non-attainment under an applicable federal or state ambient air quality standard, thus resulting in a **less-than-significant** impact.

Operation Impacts

Once operational, the Evergreen well would require routine weekly visits by facility operators to check pumps and treatment equipment and monitor performance. These regular maintenance activities would be performed by City staff and would not require any new additional staff. These trips would generate very minimal criteria pollutant emissions and have therefore not been quantified. No emergency generators or other emissions generating equipment would be required for operation of the Evergreen well.

Average daily emissions associated with the Project's operational vehicle trips are expected to be well below the Air District's operational significance thresholds. Therefore, the Project's contribution to the cumulative air quality impact during operations would be **less than significant**.

c) Expose sensitive receptors to substantial pollutant concentrations? (*Less Than Significant Impact with Mitigation*)

Construction Impacts

Construction activities associated with the Project would result in the generation of exhaust emissions that contain air pollutants, including PM_{10} and $PM_{2.5}$, the majority of which would be DPM. DPM is considered as a TAC by CARB with cancer and chronic non-cancer risks from exposure. $PM_{2.5}$ from exhaust and fugitive dust is also regulated by the Air District as a TAC due to its health impacts. Exposure of sensitive receptors to DPM and $PM_{2.5}$ emissions from Project construction could result in an elevated health risk.

The Air District has identified a distance of 1,000 feet from the source to the closest sensitive receptor locations within which community health risk impacts are likely (Air District, 2023). The Project site is located in a residential area surrounded by single family residences on all sides except to the north.

A construction health risk assessment (HRA) was prepared for the Project to evaluate the health risk impacts of TAC emissions generated by the Project. The construction HRA estimated the excess lifetime cancer risk and chronic hazard index from DPM exposure, and annual average $PM_{2.5}$ concentrations from Project construction. The TACs included in the HRA were limited DPM and $PM_{2.5}$ exhaust emissions

from heavy construction equipment and trucks. Emissions of PM_{10} exhaust are used as a surrogate for DPM emissions.[11]

The HRA was conducted using the U.S. EPA AERMOD dispersion model and meteorological data from Norman Y. Mineta San José International Airport to predict conservative concentrations at specific locations defined by a discrete 20-meter by 20-meter Cartesian grid.[12] A conservative representation of the on-site construction equipment and fugitive dust emissions at the Project site were modeled as overlapping polygon area sources. The truck route to the Project site along Capitol Expressway was modeled as a line-volume source. The sources were modeled with an emission rate of one gram per second to obtain a dispersion factor (unit concentration) at each receptor location. The DPM and $PM_{2.5}$ concentrations were calculated using the dispersion factors and the DPM and $PM_{2.5}$ emissions from CalEEMod emission outputs.

The HRA was based on recommended methodology of the Office of Environmental of Health Hazard Assessment (OEHHA) and adopted by the Air District (OEHHA, 2015). Lifetime excess cancer risk and non-cancer chronic hazard index were calculated using the resulting DPM concentrations along with equations and factors from OEHHA's 2015 Risk Assessment Guidelines and Appendix E of the Air District's 2022 CEQA Guidelines (OEHHA, 2015; Air District, 2023). Modeling inputs, outputs, and risk calculations are included in Appendix A.

Table 4.1-4 summarizes the unmitigated maximum cancer risks, $PM_{2.5}$ concentrations, and chronic health hazard index from Project construction at the maximum exposed individual (MEI) receptors. As shown in Table 4.1-4, the maximum incremental cancer risk would exceed the Air District significance threshold of 10 in one million at the residential MEI resulting in a significant impact. The incremental cancer risk at the worker and school MEIs would be below the Air District's threshold. The chronic hazard index and the maximum annual $PM_{2.5}$ concentrations would not exceed the respective Air District thresholds at any of the receptors.

The Project would implement **Mitigation Measure AIR-1: Clean Construction Equipment**, which would require the use of Tier 4 Final engines for all diesel-fueled construction equipment.

[11] OEHHA guidance indicates that the cancer potency factor to be used to evaluate cancer risks were developed based on whole (gas and particulate matter) diesel exhaust, and that the surrogate for whole diesel exhaust is DPM, with PM_{10} serving as the basis for the potential risk calculations.

[12] Refined modeling commonly uses Cartesian receptor grid, which is defined by an origin with receptor points evenly (uniform) or unevenly (nonuniform) spaced around the origin. A Cartesian grid is designed with a receptor spacing of 20 meters out to a minimum distance of 305 meters (~1,000 feet) from the property boundary.

TABLE 4.1-4
HEALTH RISK IMPACTS AT THE MAXIMUM EXPOSED SENSITIVE RECEPTORS

Receptor Type/Risk Scenario	Maximum Cancer Risk (per million)	Hazard Index	$PM_{2.5}$ concentration ($\mu g/m^3$)
Unmitigated Construction			
Resident MEI	**10.3**	0.012	0.055
Worker MEI	0.3	0.005	0.022
School MEI	0.03	<0.001	0.001
Air District *Threshold of Significance*	*10.0*	*1.0*	*0.3*
Exceeds Significance Threshold?	**Yes**	No	No
Mitigated Construction			
Resident MEI	1.7	0.002	0.01
Worker MEI	0.06	0.001	0.004
School MEI	0.01	<0.001	<0.001
Air District *Threshold of Significance*	*10.0*	*1.0*	*0.3*
Exceeds Significance Threshold?	No	No	No

Source: ESA (Appendix A)

Impact AIR-1: Development of the Project would expose the maximally exposed individual resident to a cancer risk that exceeds the Bay Area Air District significance thresholds of 10 cases per one million for cancer risk.

Mitigation Measure AIR-1: Clean Construction Equipment.

The Project proponent shall implement the following measures during construction.

- To the extent feasible, electric engines shall be used for all equipment that is commercially available as plug-in or battery-electric equipment during each construction phase and activity. Portable equipment shall be powered by grid electricity if available.
- Idling time for off-road and on-road equipment shall be limited to no more than 2 minutes, except as provided in exceptions to the applicable state regulations regarding idling for off-road and on-road equipment. Legible and visible signs shall be posted in multiple languages (English, Spanish, Chinese) in designated queuing areas and at the construction site to remind operators of the 2-minute idling limit.
- All off-road equipment used for construction that is not electric powered shall have diesel engines that meet the Tier 4 Final off-road emission standards, as certified by the CARB, except as provided for in this section. This requirement shall be verified through submittal of an equipment inventory that includes the following information: (1) Type of Equipment, (2) Engine Year and Age, (3) Number of Years Since Rebuild of Engine (if applicable), (4) Type of Fuel Used, (5) Engine HP, (6) Verified Diesel Emission Control Strategy (VDECS) information if applicable and other related equipment data. A Certification Statement is also required to be made by the Contractor for documentation of compliance and for future review by Air District, as necessary. The Certification Statement shall state that the Contractor agrees to compliance and acknowledges that a violation of this requirement shall constitute a material breach of contract.

The City may waive the requirement for Tier 4 Final equipment only under the following unusual circumstances: if a particular piece of off-road equipment with Tier 4 Final standards is technically not feasible or not commercially available; the equipment would not produce desired emissions reduction due to expected operating modes; installation of the equipment would create a safety hazard or impaired visibility for the operator; or there is a compelling emergency need to use other alternate off-road equipment. For purposes of this mitigation measure, "commercially available" shall mean the availability of Tier 4 Final engines taking into consideration factors such as (i) potential significant delays to critical-path timing of construction for the Project and (ii) geographic proximity to the Project site of Tier 4 Final equipment. Sufficient documentation must be provided when seeking any waiver described above. If the waiver is granted, the contractor must use the next cleanest piece of off-road equipment that is commercially available, or another alternative that results in comparable reductions of DPM and $PM_{2.5}$ emissions. Table 4.1-4 also shows the health risks from Project construction with the implementation of this mitigation measure. As shown in Table 4.1-4, the mitigated maximum incremental lifetime residential cancer risk would be less than 2 in one million, well below the Air District's threshold of 10 in one million. As a result, with implementation of Mitigation Measure AIR-1, health risk impacts from Project construction would be reduced to **less than significant with mitigation**.

Operation Impacts

The Project would not include any operational sources of TACs. There would be no permanent generators on site; portable generators would be used during power outages. Operation and maintenance activities associated with the Project would involve light-duty vehicle trips by City staff which would not generate TACs. Operation of the portable generators during power outages would generate minimal DPM emissions and would not lead to significant risks at the nearest receptors. This impact would be **less than significant**.

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

Construction Impacts

Diesel exhaust from on-site construction equipment would result in temporary and localized odors. However, these odors are generally localized and would not be expected to carry over to any receptors beyond the Project sites. Given the temporary nature of construction activities, odor impacts from Project construction would be **less than significant**.

Operation Impacts

Once operational, the Project would not include any sources of odor. The wells would be operated by pumps, located underground and powered by electricity and would not generate odors. Therefore, the Project's odor impact during operations would be **less than significant**.

4.1.5 References

Bay Area Air Quality Management District (Air District), 2017. *Clean Air Plan, Spare the Air, Cool the Climate*. April 19, 2017. Available: https://www.baaqmd.gov/~/media/files/planning-and-research/plans/2017-clean-air-plan/attachment-a_-proposed-final-cap-vol-1-pdf.pdf?la=en. Accessed April 2026.

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City of San José, 2025. *Envision San José 2040 General Plan*. Adopted November 1, 2011. As Amended on August 29, 2025. Available: https://www.sanjoseca.gov/home/showpublisheddocument/121586/638828345723130000. Accessed April 2026.

Office of Environmental Health Hazard Assessment (OEHHA), 2015. Air Toxics Hot Spots Program Risk Assessment Guidelines – Guidance Manual for Preparation of Health Risk Assessments, February 2015. Available: https://oehha.ca.gov/sites/default/files/media/downloads/crnr/2015guidancemanual.pdf. Accessed April 2026.

4.2 Biological Resources

4.2.1 Environmental Setting

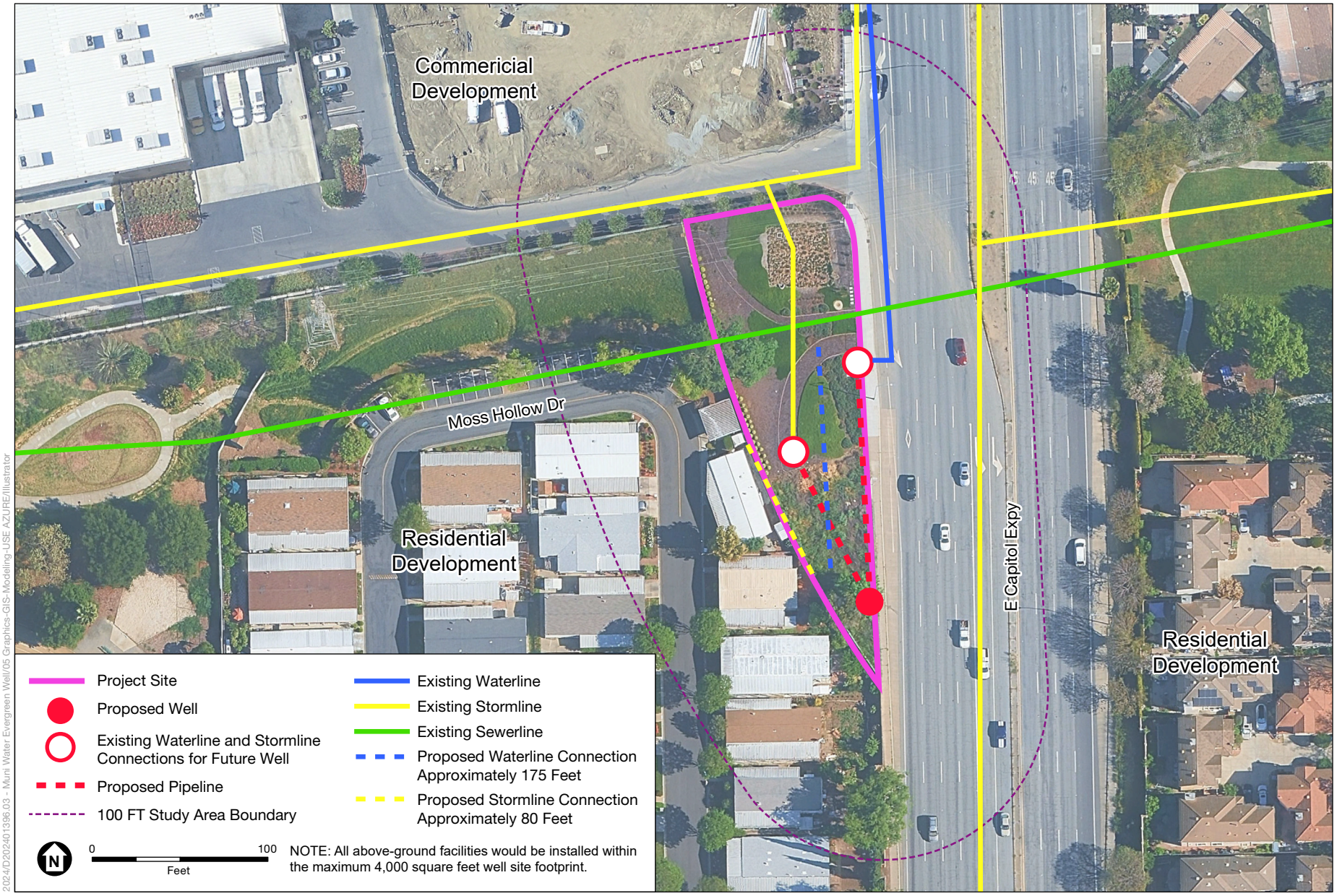
This section describes the existing conditions for biological resources present within the Project site and surrounding areas. The term "study area" is used to refer the Project site and areas adjacent to the Project site that could be indirectly impacted by Project activities. The study area includes the Project footprint plus a 100-foot buffer (**Figure 4.2-1**).

The information on biological resources is based on a review of pertinent literature and database queries as well as a site visit conducted by ESA biologists on April 16, 2026. The sources of reference data reviewed for this evaluation include the following:

- U.S. Fish and Wildlife Service (USFWS) list of Federal Endangered and Threatened Species that may occur in the proposed project area, and/or may be affected by the proposed project (USFWS, 2026a);
- USFWS Critical Habitat for Threatened and Endangered Species (USFWS, 2026b);
- The California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB) list of special-status species occurrences within the proposed Project site and within the San Jose East USGS 7.5-minute topographic quadrangle (CDFW, 2026a);
- California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants (v8-03) known to occur within the San Jose East USGS 7.5-minute topographic quadrangle (CNPS, 2026);
- Special Vascular Plants, Bryophytes, and Lichens List (CDFW, 2026b); and
- Special Animals List (CDFW, 2026c).

The Project site is situated within an urbanized area and is bordered by Capital Expressway to the east, commercial development to the north, and residential development to the west and south. The southern portion of the Project site where the proposed well would be constructed contains two species of trees, Northern California black walnut (*Juglans hindsii*) and glossy privet (*Ligustrum lucidum*), as well as ruderal vegetation, including slender wild oat (*Avena barbata*), milk thistle (*Silybum marianum*), prickly lettuce (*Lactuca serriola*), wild radish (*Raphanus raphanistrum*), black mustard (*Brassica nigra*), great brome (*Bromus diandrus*), wild barley (*Hordeum marinum*), and rough cocklebur (*Xanthium strumarium*). Trees within the study area but outside of the Project site include deodar cedar (*Cedrus deodara*), Fremont cottonwood (*Populus fremontii*), and fig trees (*Ficus carica*).

The northern portion of the Project site includes a mix of ornamentals, introduced, and native vegetation around a stormwater catch basin, which drains into the existing storm line as shown on Figure 4.2-1. Plant species observed in this area include Harding grass (*Phalaris aquatica*), blue wildrye (*Elymus glaucus*), beaked hawksbeard (*Crepis vesicaria*), rock rose (*Pavonia lasiopetala*), California joint fir (*Ephedra californica*), common rush (*Juncus effusus*), creeping myoporum (*Myoporum parvifolium*), pokeweed (*Phytolacca americana*), and purple vetch (*Vicia benghalensis*). Brush box trees (*Lophostemon confertus*) line the northern border of the site.



2024/D2024013396.03 - Muni Water Evergreen Well/05 Graphics-GIS-Modeling-USE AZURE/Illustrator

SOURCE: ESA, 2026; Google Earth, 2025

Evergreen Water Production Well

Figure 4.2-1
Study Area

ESA

Special-Status Species

Special-status species are regulated under the State and Federal Endangered Species Acts or other regulations, or are species that are considered sufficiently rare by the scientific community to qualify for such listing. These species are in the following categories:

1. Species listed or proposed for listing as threatened or endangered under the Federal Endangered Species Act (FESA) (Code of Federal regulations Title 50, Section 17.12 [listed plants], Section 17.11 [listed animals] and various notices in the Federal Register [FR] [proposed species]);
2. Species that are candidates for possible future listing as threatened or endangered under FESA (61 FR 40, February 28, 1996);
3. Species listed or proposed for listing by the State of California as threatened or endangered under the California Endangered Species Act (CESA) (California Code of Regulations Title 14, Section 670.5);
4. Plants listed as rare or endangered under the California Native Plant Protection Act (NPPA) (California Fish and Game Code [CFGC], Section 1900 et seq.);
5. Animal species of special concern to CDFW;
6. Species designated by CDFW as "special animals",[13]
7. Animals fully protected under the CFGC (Sections 3511 [birds], 4700 [mammals], and 5050 [reptiles and amphibians]);
8. Species that meet the definitions of rare and endangered under CEQA. CEQA Guidelines Section 15380 provides that a plant or animal species may be treated as "rare or endangered" even if not on one of the official lists; and
9. Raptors (birds of prey), which are specifically protected by CFGC Section 3503.5, thus prohibiting the take, possession, or killing of raptors, including owls, their nests, and their eggs;[14]
10. Plants considered under the CDFW and CNPS to be "rare, threatened or endangered in California" (California Rare Plant Rank [CRPR] 1A, 1B, and 2) as well as CRPR Rank 3 and 4 plant species.[15]
11. Anadromous[16] species managed and regulated under the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act).

[13] Species listed on the current CDFW Special Animals List (August 2019). This list includes species that CDFW considers "species at risk."

[14] The inclusion of birds protected by CFGC Section 3503.5 is in recognition of the fact that these birds are substantially less common in California than most other birds, having lost much of their habitat to development, and that the populations of these species are therefore substantially more vulnerable to further loss of habitat and to interference with nesting and breeding than most other birds. It is noted that a number of raptors are already specifically listed by federal and state wildlife authorities as threatened or endangered.

[15] CRPR 3 and 4 plants may be analyzed under CEQA, pursuant to Section 15380 of the CEQA Guidelines, if sufficient information is available to assess potential impacts to such plants. Factors such as regional rarity vs. statewide rarity should be considered in determining whether cumulative impacts to a CRPR 3 or 4 plant are significant even if individual project impacts are not. CRPR 3 and 4 plants may be considered regionally significant if, for example, the occurrence is located at the periphery of the species' range, or exhibits unusual morphology, or occurs in an unusual habitat/substrate. For these reasons, CRPR 3 and 4 plants should be included in the special-status species analysis. CRPR 3 and 4 plants are also included in the CNDDB Special Plants, Bryophytes, and Lichens List. [Refer to the current online published list available at: http://www.dfg.ca.gov/biogeodata.].

[16] Anadromous fish species are born in freshwater, spend most of their lives in the sea, and return to freshwater to spawn.

The results of database searches from USFWS, CNDDB, and CNPS (**Appendix B**), combined with knowledge of the habitat present in the study area and the habitat requirements of special-status species, were used to analyze the potential for special-status species to occur in the study area. The complete list of special-status species with the potential to occur in the study area is included in the **Appendix B** (Special-Status Species with Potential to Occur [PTO] Table). Due to a lack of suitable habitat in the study area, no special-status plant species were determined to have a potential to occur. Wildlife species with a moderate or high potential to occur in the study area are discussed below.

Crotch's Bumble Bee

Crotch's bumble bees (*Bombus crotchii*) are generalist foragers that utilize a wide variety of flowering plants. They can be found in most native habitat types as well as more urbanized areas, although they prefer grassland and scrub habitats. They primarily nest underground, often in abandoned mammal burrows. However, as noted in the CDFW Survey Considerations for CESA Candidate Bumble Bee Species document (CDFW, 2023), bumble bees in the *Bombus* genus may utilize different substrates for nesting, including thatched grasses, abandoned rodent burrows or bird nests, brush piles, rock piles, and fallen logs (CDFW, 2023). They have also been found nesting in man-made structures such as walls, rubble or abandoned furniture (CDFW, 2023). Overwintering habitat may include soft, disturbed soils, leaf litter and other debris (CDFW, 2023).

The nearest observation of Crotch's bumble bee was reported to CNDDB (CDFW, 2026) in 2021 and is located approximately 2.2 miles southeast of the study area. Floral resources were observed within the study area during the April 16, 2026, biological reconnaissance survey. Other unidentified bumble bee species were observed at blooming floral resources during the survey. No mammal burrows were observed during the survey. However, due to the presence of suitable foraging habitat, Crotch's bumble bee has at least a moderate potential to occur within the study area.

Other Breeding and Migratory Birds

Trees, and other vegetated areas within and adjacent to the study area offer foraging and nesting opportunities for a variety of resident and migratory birds. Species that could nest in the area include, but are not limited to, Anna's hummingbird (*Calypte anna*), black phoebe (*Sayornis nigricans*), house finch (*Haemorhous mexicanus*), and American crow (*Corvus brachyrhynchos*), among many others. The Federal Migratory Bird Treaty Act (MBTA) and California Fish and Game Code protect raptors, most native migratory birds, and breeding birds that could occur within the study area and surrounding vicinity.

4.2.2 Regulatory Setting

Federal Laws and Regulations

Endangered Species Act

The FESA (U.S. Code Title 16, Sections 1531–1544 [16 USC 1531–1544]) protects listed plant, fish, and wildlife species from harm or *take*, which is broadly defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in any such conduct. Take can also include habitat modification or degradation that directly results in the death or injury of a listed fish and wildlife species. An activity can be defined as take, even if it is unintentional or accidental. Recognizing that take cannot always be avoided, Section 10(a) of the FESA includes provisions for takings that are incidental to, but not

the purpose of, otherwise lawful activities. Specifically, under Section 10(a)(1)(A) authorized take permits may be issued for scientific purposes (e.g., universities). Under Section 10(a)(1)(B) incidental take permits may be issued if taking is incidental and does not lead to jeopardy of the species.

Section 7(a)(2) of the FESA requires all federal agencies, including the USFWS, to evaluate the proposed Project with respect to any species proposed for listing or already listed as endangered or threatened and their critical habitat, if any is proposed or designated. Federal agencies must undertake programs for the conservation of endangered and threatened species and are prohibited from authorizing, funding, or carrying out any action that would jeopardize a listed species or destroy or modify its "critical habitat."

As defined in the FESA, "individuals, organizations, states, local governments, and other non-federal entities are affected by the designation of critical habitat only if their actions occur on federal lands, require a federal permit, license, or other authorization, or involve federal funding."

Migratory Bird Treaty Act

The MBTA (16 USC 703 et seq.) is the domestic law that affirms and implements a commitment by the United States to four international conventions (with Canada, Mexico, Japan, and Russia) for the protection of a shared migratory bird resource. Unless and except as permitted by regulations, the MBTA states that without a permit issued by the U.S. Department of the Interior, it is unlawful to pursue, hunt, take, capture, or kill any migratory bird. The law also applies to the intentional disturbance and removal of nests occupied (i.e., active nests) by migratory birds or their eggs during the breeding season. The removal of inactive nests that are not protected by other federal regulations (e.g., the FESA, the Bald and Golden Eagle Protection Act) does not constitute "take" under the MBTA and would not conflict with regulation. All native bird species including raptors, most native migratory birds, and breeding birds that could occur within the study area are protected by the MBTA.

State Laws and Regulations

California Fish and Game Code Sections 3503, 3503.5, and 3513

Under Section 3503 of the California Fish and Game Code, it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by the code or any regulation made pursuant thereto. Section 3503.5 of the code prohibits take, possession, or destruction of any birds in the orders Falconiformes (hawks) or Strigiformes (owls), or of their nests (active and inactive) and eggs. Migratory non-game birds and their nests (active and inactive) are protected under Sections 3513, 3800, and other specified birds are protected under Section 3505. California Fish and Game Code Section 3513 adopts the federal definition of migratory bird take, defined by the Secretary of the Interior under provisions of the MBTA. Section 3513 does not prohibit the incidental take of birds if the underlying purpose of the activity is not to take birds.

Local Policies and Regulations

Santa Clara Valley Habitat Plan

The Project is located within the boundaries of the Santa Clara Valley Habitat Plan (Habitat Plan) (SCVHA, 2012). The Habitat Plan is intended to promote the recovery of endangered species and enhance ecological diversity and function, while accommodating planned growth in approximately 519,000 acres of Santa Clara County. Rather than separately permitting and mitigating individual projects, the Habitat Plan evaluates

natural-resource impacts and mitigation requirements comprehensively in a way that is more efficient and effective for at-risk species and their essential habitats. The Project is located on land mapped by the Habitat Plan as Golf Courses/Urban Parks and is currently in Fee Zone B (Agricultural and Valley Floor Lands).

The Habitat Plan includes Conditions on Covered Activities, including conservation measures to avoid and minimize take of covered species, and avoidance and minimization measures to protect biological resources, such as riparian and aquatic habitat. It also includes Habitat Plan Development Fees used to fund mitigation that will offset losses of land cover types, covered species habitat, and other biological values. This includes the Nitrogen Deposition Fee, which addresses indirect impacts of covered activities and is based on the Habitat Plan costs related to mitigating the impacts of airborne nitrogen deposition. Conditions relevant to the Project include Condition 1 *Avoid Direct Impacts on Legally Protected Plant and Wildlife Species* and Condition 15 *Western Burrowing Owl*. This Condition, along with the Nitrogen Deposition Fee, are described in Section 4.1.3, Impact Discussion, below.

City of San José Tree Ordinance

The City of San José maintains the urban landscape and promotes the health, safety, and welfare of the City, in part, by controlling the removal of ordinance trees (San José Municipal Code Section 13.32). Ordinance trees are defined as trees over 38 inches in circumference (diameter of about 12 inches) at a height of 54 inches (approximately 4½ feet) above natural grade. Removal of ordinance-size trees located on City-owned property requires the posting of a courtesy notice to the public and review by the City Arborist's Office (City of San José, 2013). Two trees are proposed for removal at the Project site.

In addition, any tree found by the City Council to have special significance based on factors including, but not limited to, its history, girth, height, species, or unique quality, can be designated as a "Heritage tree" (San José Municipal Code Section 13.32). It is unlawful to vandalize, mutilate, remove, or destroy such heritage trees. There are no heritage trees on the Project site.

Envision San José 2040 General Plan

Policies in the Envision San José 2040 General Plan have been adopted for the purpose of avoiding or mitigating biological resource impacts from development projects (City of San José, 2025). The following policies are applicable to the Project.

- **CD-1.24:** Within new development projects, include preservation of ordinance-sized and other significant trees, particularly natives. Avoid any adverse effect on the health and longevity of such trees through design measures, construction, and best maintenance practices. When tree preservation is not feasible, include replacements or alternative mitigation measures in the project to maintain and enhance our Community Forest.
- **ER-5.1:** Avoid implementing activities that result in the loss of active native birds' nests, including both direct loss and indirect loss through abandonment, of native birds. Avoidance of activities that could result in impacts to nests during the breeding season or maintenance of buffers between such activities and active nests would avoid such impacts.
- **ER-5.2:** Require that development projects incorporate measures to avoid impacts to nesting migratory birds.
- **ER-6.5:** Prohibit use of invasive species, citywide, in required landscaping as part of the discretionary review of proposed development.

- **MS-21.4:** Encourage the maintenance of mature trees, especially natives, on public and private property as an integral part of the community forest. Prior to allowing the removal of any mature tree, pursue all reasonable measures to preserve it.
- **MS-21.5:** As part of the development review process, preserve protected trees (as defined by the Municipal Code), and other significant trees. Avoid any adverse effect on the health and longevity of protected or other significant trees through appropriate design measures and construction practices. Special priority should be given to the preservation of native oaks and native sycamores. When tree preservation is not feasible, include appropriate tree replacement, both in number and spread of canopy.
- **MS-21.8:** For Capital Improvement Plan or other public development projects, or through the entitlement process for private development projects, require landscaping including the selection and planting of new trees to achieve the following goals:
  - Avoid conflicts with nearby power lines.
  - Avoid potential conflicts between tree roots and developed areas.
  - Avoid use of invasive, non-native trees.
  - Remove existing invasive, non-native trees.
  - Incorporate native trees into urban plantings in order to provide food and cover for native wildlife species.
  - Plant native oak trees and native sycamores on sites which have adequately sized landscape areas and which historically supported these species

4.2.3 Environmental Checklist and Discussion of Impacts

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
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?	☐	☐	☒	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☒	☐
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☒	☐

4.2.4 Impact Discussion

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? (*Less Than Significant Impact with Mitigation*)

Construction Impacts

Nesting Birds

Trees located in the study area could provide nesting habitat for native migratory birds and raptors. In addition, the Project site is located within a Western Burrowing Owl Survey Area, as defined by the Habitat Plan. While western burrowing owl could incidentally occur, it is unlikely to nest or overwinter on or near the Project site due to the highly developed and urbanized areas surrounding the relatively small parcel, and lack of otherwise suitable nesting (i.e., burrows) and foraging habitat within the study area as determined by ESA's biologists during the April 16, 2026, site survey. The nearest recorded occurrence of this species is a breeding site within 0.25 miles of the study area (Occurrence No. 429) (CDFW, 2026a). However, this area has since been developed into residential housing.

Tree removal could directly impact any birds nesting in this tree and result in nest failure and mortality. Operation of equipment, and increased human presence could result in noise, vibration, and visual disturbance. These conditions could indirectly result in nest failure (disturbance, avoidance, or abandonment that leads to unsuccessful reproduction) or could cause flight behavior that would expose an adult or its young to predators. These activities could cause birds that have established a nest before the start of construction to change their behavior or even abandon an active nest, putting their eggs and nestlings at risk for mortality. These impacts would be considered significant.

Lighting required during nighttime construction periods would include a portable light tower and lights on the drill rig mast. The lights would be directed toward work areas and consist of lights designed to minimize light spillover by utilizing shields or other light pollution reduction features, to ensure that no fugitive light spills out into natural lands and interferes with typical avian behavior. No lights would be required for well operations.

Mandatory implementation of the City's **SPC BIO-1: Nesting Migratory Birds** would avoid or substantially reduce impacts to nesting birds by requiring seasonal avoidance (February 1st through August 31st, inclusive) where feasible and pre-construction surveys and protective buffers around active nests when construction occurs during the nesting season, thereby avoiding direct and indirect impacts to nesting birds. Implementation of SPC BIO-1 would reduce potential impacts to nesting birds to a **less-than-significant** level.

> **SPC BIO-1: Nesting Migratory Birds**
>
> Demolition, removal of vegetation (including trees), grading, and construction shall be scheduled to avoid the nesting season to the extent feasible. The nesting season for most birds, including most raptors, in the San Francisco Bay area extends from February 1st through August 31st, inclusive.
>
> If demolition, vegetation removal, and/or construction cannot be scheduled to start outside of nesting season, a qualified biologist shall complete pre-construction surveys to identify any active

nests (i.e., nests containing eggs or young) of protected bird species that may be disturbed during project implementation. This survey shall be completed no more than seven days prior to the initiation of demolition/vegetation removal/construction activities. During this survey, the qualified biologist shall inspect all vegetation, structures, and other possible nesting substrate (including the ground) in the construction areas, and within 300 feet (for raptors) and 100 feet (for non-raptors) of construction areas to the extent access permits, for active nests (i.e., nests with eggs or young). If an active nest is found during the pre-construction surveys, the biologist shall designate a construction-free buffer zone to be established around the nest. The buffer zone is typically 300 feet for raptors and 100 feet for non-raptors, though the buffer zone may be modified by the biologist depending on the species and project site conditions. The buffer would ensure that active nests of raptors and other protected birds shall not be disturbed directly or indirectly during project construction.

Prior to any vegetation removal, or issuance of any demolition or grading permits (whichever occurs first), the permittee shall submit the biologist's report indicating the results of the survey and any designated buffer zones to the satisfaction of the Director of Planning, Building and Code Enforcement or Director's designee.

During the nesting season, if demolition/construction activities, including vegetation removal, are delayed or paused and the time period between the pre-construction survey and start or restart of demolition/construction activities exceeds seven days, a new pre-construction survey shall be performed prior to resuming any work on the site. New pre-construction surveys would not be required for projects outside of the nesting season or sites that are completely cleared. The results of this survey shall be provided to the Director of Planning, Building and Code Enforcement or Director's designee for review and approval prior to the restarting of demolition/construction activities.

Crotch's Bumble Bee

Ruderal and otherwise vegetated areas within the study area provide potentially suitable habitat for Crotch's bumble bee. Ground disturbance and vegetation removal within habitats that contain potential foraging (i.e., flowering plants) and nesting resources could result in direct loss of bumble bees. Bumble bees foraging above ground could be killed by vehicles, heavy machinery, or other equipment used to remove vegetation if these activities are conducted where foraging habitat is present. Underground bumble bee nests could be crushed or accidentally uncovered and exposed to the elements and predators during vegetation removal, grading, or digging activities if these activities are conducted where nesting habitat is present.

Mitigation Measure BIO-1: Avoidance and Minimizations Measures for Crotch's Bumble Bee would implement seasonal restrictions, as feasible, and require pre-construction surveys and implementation of avoidance measures if potential bumble bee nests are found.

Impact BIO-1: Development of the Project could have a substantial adverse effect on Crotch's bumble bee.

Mitigation Measure BIO-1: Avoidance and Minimization Measures for Crotch's Bumble Bee.

The Project proponent shall implement the following measures to avoid potential impacts to Crotch's bumble bee:

- Seasonal Avoidance. For Project areas that contain foraging habitat or nesting habitat, initial ground-disturbing work (e.g., grading, vegetation removal, staging) shall take place between August 15 and March 15, if feasible, to avoid impacts on nesting and foraging Crotch's bumble bees. If seasonal avoidance is not feasible, then focused surveys for Crotch's bumble bee shall be conducted and avoidance measures will be implemented.
- Focused surveys for Crotch's bumble bee shall be conducted following the methods in Survey Considerations for CESA Candidate Bumble Bee Species (CDFW, 2023).
- Survey timing shall be determined by a qualified biologist based on seasonality, when activity or foraging will most likely occur each year, and the bee's life stage for which the survey is being conducted.
- Non-invasive focused surveys shall include the use of cameras to photograph bumble bees. Photographs shall be reviewed and verified by a qualified individual to identify the bumble bees to species.
- If Crotch's bumble bees are not detected during the focused survey, no additional mitigation is required.

If Crotch's bumble bees are detected during the focused survey, protective buffers shall be established around active nesting colonies until these sites are no longer active as determined by a qualified biologist. A qualified biologist, in consultation with CDFW, shall determine the appropriate buffer size to protect nesting colonies; however, buffers will typically be at least 50 feet. Implementation of these measures would reduce potential impacts to Crotch's bumble bee to a **less-than-significant** level.

Operation Impacts

Operations of the Project's proposed well, as discussed in Section 3.7, *Operations and Maintenance*, are not expected to result in impacts to special status wildlife species. The Project site is located in a developed, urbanized area that experiences regular foot and vehicle traffic. Routine maintenance activities associated with Project operations, including weekly site visits and periodic maintenance, are not expected to significantly increase the current level of disturbance experienced at Project site. No nighttime work is proposed for operations and maintenance of the site. Therefore, operation impacts are considered **less than significant**.

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? (*No Impact*)

Construction and Operation Impacts

There are no riparian habitats or other sensitive natural communities on or adjacent to the Project site. Therefore, no potential impacts to riparian or sensitive natural communities are anticipated from construction or operation of the Project. There would be **no impact**.

c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means? (*No Impact*)

Construction and Operation Impacts

The Project site is outside of areas of known or suspected surface water/groundwater interaction (refer to Section 4.8, *Hydrology and Water Quality*). A stormwater catch basin is located in the northern portion of the study area; however, this feature is an artificial drainage structure that does not meet the definition of waters of the United States or waters of the State because it is not a naturally occurring aquatic feature and lacks a significant nexus to downstream jurisdictional waters. As such, there would be **no impact** to these waters, riparian areas, or any other federal protected wetland are anticipated from construction or operation of the Project.

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites? (*Less Than Significant Impact*)

Construction Impacts

The study area is not part of major or local wildlife corridor/travel routes according to the CDFW's Essential Habitat Connectivity natural landscape blocks (CDFW, 2025). The Project is situated in a highly urbanized area and is bordered by development. Therefore, the Project would not impede wildlife movement in wildlife corridors. While two trees that may support stopover and nesting habitat for birds would be removed by the Project, none of the other surrounding trees would be directly impacted. Implementation of **SPC BIO-1: Nesting Migratory Birds,** as described in impact a), would reduce potential Project-related impacts to nesting birds to **less than significant**.

Operation Impacts

Routine maintenance activities associated with operations of the Project are not expected to significantly increase the current level of disturbance experienced at the Project site. As such, impacts from Project operation and maintenance activities would be **less than significant**.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? (*Less Than Significant Impact*)

Construction Impacts

Per Section 13.28.201 of the San José Municipal Code, the City director shall direct and superintend all planting, removal, and maintenance, including cutting, pruning, trimming or topping of any trees, shrubs,

and hedges in public places or on any streets, and any activities that may affect the critical root zone or aerial portions of a tree canopy, except those trees, shrubs, and hedges located in city parklands and in city-owned or controlled public buildings. During the City's permitting process, the Planning Division would determine whether trees on the Project site would require replacement.

Two non-heritage mature trees on the Project site, Northern California black walnut and glossy privet, would be removed as part of the Project. Implementation of **COA BIO-1: Tree Replacement**, would ensure that the Project complies with the San José Municipal Code and reduces potential impacts of tree removal to **less than significant** by requiring tree replacement, as determined by the City.

COA BIO-1: Tree Replacement. Trees removed for the Project shall be replaced at ratios required by the City.

- 2 trees on-site would be removed. One (1) non-native glossy privet and one (1) native California black walnut tree. Trees removed for the Project shall be replaced at ratios required by the City, as stated in **Table 4.2-1**, depending on the circumference of the tree, which would be measured prior to tree removal to confirm replacement ratio.
- If there is insufficient area within the Project site to accommodate the required replacement trees, one or more of the following measures shall be implemented, to the satisfaction of the Director of Planning, Building, and Code Enforcement or Director's designee. Changes to an approved landscape plan requires the issuance of a Permit Adjustment or Permit Amendment.
  - The size of a 15-gallon replacement tree may be increased to 24-inch box and count as two replacement trees to be planted on the Project site.
  - Pay Off-Site Tree Replacement Fee(s) to the City, prior to the issuance of building permit(s), in accordance with the City Council approved Fee Resolution in effect at the time of payment. The City will use the off-site tree replacement fee(s) to plant trees at alternative sites.

TABLE 4.2-1
TREE REPLACEMENT RATIOS

Circumference of Tree to be Removed	Replacement Ratios Based on Type of Tree to be Removed			Minimum Size of Each Replacement Tree[a]
	Native	Non-Native	Orchard	
38 inches[b] or more	5:1[c]	4:1	3:1	15-gallon
19 up to 38 inches	3:1	2:1	none	15-gallon
Less than 19 inches	1:1	1:1	none	15-gallon

Notes:

Single-Family and Two-dwelling properties may replace trees at a ratio of 1:1. For Multi-Family residential, Commercial, and Industrial properties, a permit is required for removal of trees of any size.

a. A 24-inch box replacement tree = two 15-gallon replacement trees

b. A 38-inch tree equals 12.1 inches in diameter.

Trees greater than or equal to 38-inch circumference measured at 54 inches above natural grade shall not be removed unless a Tree Removal Permit, or equivalent, has been approved for the removal of such trees.

c. x:x = tree replacement to tree loss ratio

In addition to tree removal, use of excavation or trenching equipment could cause inadvertent limb removal or damage to the critical root zone; long-term storage of equipment could also cause compaction damage to the critical root zone. All of these impacts could lead to the decline or potential mortality of the

affected tree. However, the Project would comply with Municipal Code Section 13.32.130, Safeguarding Trees During Construction, which provides for protective measures such as installation of fencing outside the canopy of the tree to the dripline to prevent injury to trees, which can make them susceptible to disease-causing organisms; taking appropriate measures to prevent exposed soil from drying out and causing damage to tree roots; and prohibiting storage, parking, or staging by construction equipment, vehicles or materials within the tree dripline. In the event of tree mortality affecting a tree not anticipated for removal, due to disturbance or damage during construction, the Project proponent would be responsible for tree replacement according to the ratios outlined in COA BIO-1: Tree Replacement.

Operation Impacts

No operational activities beyond routine instrument monitoring and maintenance inspections are associated with the Project. Therefore, operation of the Project would not conflict with any local policies, tree ordinances, preservation policies, or standard conditions. As such, there would be **no impact** from Project operations on local policies or ordinances protecting biological resources are expected.

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? (*Less Than Significant Impact*)

Construction and Operation Impacts

The Project is located on land mapped by the Habitat Plan as Golf Courses/Urban Parks and is currently in Fee Zone B (Agricultural and Valley Floor Lands). The Habitat Plan includes Conditions on Covered Activities, including conservation measures to avoid and minimize take[17] of covered species, and avoidance and minimization measures to protect biological resources.

The Project site is located within the Habitat Plan Western Burrowing Owl Survey Area. Condition 15, *Western Burrowing Owl*, provides measures to avoid or minimize direct impacts of covered activities on western burrowing owls. Per Condition 15, following a habitat survey, additional surveys for western burrowing owls are only required in areas of suitable habitat. During the April 16, 2026, site survey, ESA confirmed that no evidence of burrowing owls, mammal burrows, or otherwise suitable burrowing owl habitat is present within the Project site and surrounding study area.

The Project is subject to applicable Habitat Plan conditions and fees. The Habitat Plan analyzed impacts to bay checkerspot butterfly (*Euphydryas editha bayensis*) and found that increased emissions of nitrogen from vehicles trips associated with new development in the Santa Clara Valley pose a threat to bay checkerspot butterfly habitat. The Habitat Plan identifies a one-time mitigation payment of $5.31 for each new vehicle trip generated by new development to mitigate for indirect impacts resulting in increases in airborne nitrogen deposition. While the Project is not expected generate new vehicle trips, mandatory compliance with **SPC BIO-3: Santa Clara Valley Habitat Plan** would ensure any impacts, including those resulting from an increase in vehicle trips, would be reduced to **less than significant** by payment of Habitat Plan fees.

[17] **Take** is defined by the ESA as harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect any threatened or endangered **species**. Harm may include significant habitat modification where it actually kills or injures a listed **species** through impairment of essential behavior (e.g., nesting or reproduction).

SPC BIO-3: Santa Clara Valley Habitat Plan.

The project may be subject to applicable Santa Clara Valley Habitat Plan (SCVHP) conditions and fees (including the nitrogen deposition fee) prior to issuance of any ground disturbance permits. The permittee shall submit the SCVHP Coverage Screening Form to the Director of Planning, Building and Code Enforcement or the Director's designee for approval and payment of all applicable fees prior to the issuance of any demolition, grading, or building permits. The SCVHP and supporting materials can be viewed at https://scv habitatagency.org.

4.2.5 References

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SCVHA, 2026b. Critical Habitat for Threatened & Endangered Species [USFWS]. Web Map. Available: https://fws.maps.arcgis.com/home/webmap/viewer.html?webmap=9d8de5e265ad4fe09893cf75b8dbfb77. Accessed April 6, 2026.

U.S. Fish and Wildlife Service (USFWS), 2026a. list of Federal Endangered and Threatened Species that may occur in the proposed project area, and/or may be affected by the proposed project. Project Code: 2026-0079099. Accessed April 21, 2026.

4.3 Cultural Resources

4.3.1 Environmental Setting

The setting discussion and analysis is based on a cultural resources study completed for the Project (ESA, 2026).

Natural Environment

The Project site is in the Santa Clara Valley, on the southern end of the San Francisco Bay. The surrounding Santa Cruz Mountains and Diablo Range foothills of the Santa Clara Valley are the source of many historic perennial streams and creeks, which transverse the valley and flow into the San Francisco Bay. Prior to the channeling of these waterways, Thompson Creek, once known as Dry Creek, was located approximately 0.2-mile to the east of the Project site, Silver Creek approximately 0.3-mile to the west of the Project site, and a marsh 0.5-mile to the north of the Project site. The Project site is within the flood plains of the Coyote Creek watershed.

The San Francisco Bay Area (Bay Area) has undergone dramatic landscape changes since humans began to inhabit the region more than 13,000 years ago. Sea levels began rising about 15,000 years ago, at which time the coastline was located west of the Farallon Islands, and reached the present level of the bay about 5,000 years ago (Helley et al., 1979). This dramatic change in stream base-level has resulted in increased deposition of sediment along the lower reaches of Bay Area streams, including the Coyote and Guadalupe rivers (Helley et al., 1979). Active alluvial fan[18] deposits are generally less than 5,000 years old and overlie older land surfaces (including stabilized/abandoned Pleistocene-age alluvial fans). In many places, the interface between older land surfaces and active alluvial fans is marked by a well-developed buried soil profile, or a paleosol[19]. Paleosols preserve the composition and character of the earth's surface prior to subsequent sediment deposition; thus, paleosols have the potential to preserve archaeological resources, if the area was occupied or settled by humans (Meyer and Rosenthal, 2007). Because human populations have grown since the arrival of the area's first inhabitants, younger paleosols (late Holocene) are more likely to yield archaeological resources than older paleosols (early Holocene or Pleistocene).

The Project is located on the San José Alluvial Plain, the flat lying floor of the Santa Clara Valley, and has a slope of 0 to 2 percent. The Santa Clara Valley sediments were deposited as a series of overlapping alluvial fans, by streams that drain the adjacent mountains. The Project site is comprised of Pleistocene and Holocene-age Urbanland-Campbell complex soils, which include silt loam, silty claim loam, and silty clay (DOC, 2015; NRCS, 2026). These soils have a high potential to contain buried paleosols. Numerous deeply buried sites have been uncovered in the Santa Clara Valley, at depths varying between 1 foot and more than 10 feet below the ground surface. In fact, more than 60 percent of recorded archaeological sites in this region have been found in a buried context (Meyer and Rosenthal, 2007).

[18] Alluvial fans are fan-shaped deposits of water-transported material (alluvium). They typically form at the base of topographic features where there is a marked break in slope, and contain both active and abandoned stream channels, terraces, natural levees and other fluvial morphologies.

[19] A paleosol is a buried soil that forms when sediment is deposited over a surface with a developed soil profile without it being eroded away first.

The Bay Area and the surrounding region contain an abundance of natural resources, which would have been taken advantage of by its indigenous and early historic populations. The area hosts a wide variety of natural communities, including salt marshes, scrub brushes, grassland, and foothill woodlands. Deer, elk, and waterfowl were plentiful in prehistory, as were marine and San Francisco Bay resources such as seals, otters, abalone, mussels, oysters, clams and numerous fish species. Franciscan chert was an easily obtainable local raw material for stone tools. Obsidian could be obtained from the Anadel and Napa Glass Mountain quarries north of the Bay Area (Moratto, 1984).

Background Research

Archaeologists developed individual cultural chronological sequences tailored to the archaeology and material culture of each sub-region of California. Each of these sequences is based principally on the presence of distinctive cultural traits and stratigraphic separation of deposits. Milliken et al. (2007) provide a framework for the interpretation of the Bay Area. The authors divided human history in California into three periods: the *Early Period* (8000–3500 B.C.), the *Middle Period* (500 B.C.–A.D. 1050), and the *Late Period* (A.D. 1050–1550). Economic patterns, stylistic aspects, and regional phases further subdivide cultural periods into shorter phases. This scheme uses economic and technological types, socio-politics, trade networks, population density, and variations of artifact types to differentiate between cultural periods.

Based on a compilation of ethnographic, historic, and archaeological data, Milliken (1995) describes a group known as the Ohlone, who once occupied the general vicinity of the Project site. The Ohlone once occupied a large territory from San Francisco Bay in the north to the Big Sur and Salinas Rivers in the south. The Project site is between the *Socostac* and *Matalan* tribal areas of the Santa Clara vicinity (Milliken et al., 2009). Archaeological investigations at nearby indigenous sites indicate that while Native Americans mainly utilized the marshland for resource procurement, including the collection of fish, shellfish, plants, and sea mammals, habitation and burial sites were not uncommon along the historic bay margins. After European contact, Ohlone society was severely disrupted by missionization, disease, and displacement. Today, the Ohlone still have a strong presence in the Bay Area and are highly interested in their historic and indigenous past.

During the Spanish and Mexican periods, lands in the Project vicinity were used for cattle pasturage as part of Rancho Yerba Buena o Socayre. After California became part of the United States in 1848, San José was initially (and temporarily) designated as the state capital. Early historic mapping reflects a predominantly rural setting characterized by natural landforms, seasonal creeks and drainages, and agricultural features, with the Project site consistently shown as cattle pasturage or cultivated land. In the decades that followed, Rancho Yerba Buena o Socayre was subdivided into increasingly smaller parcels. By the time of the original land-grant holder Antonio Chaboya's death, the land grant had been drastically reduced. From the late-19th to the mid-20th century, the surrounding vicinity developed as rural agricultural communities distinct from the City, with limited infrastructure and low building density.

Mid- to late-20th century maps and aerial photographs document the gradual then punctuated urban expansion, annexation, and infrastructure development in the surrounding area, including roadway construction, radio towers, substations, water storage, and the introduction of residential, commercial, and civic uses. Although development intensified in the vicinity over time, the Project site remained as agricultural land for decades until ultimately falling into disuse in the late 20th century. Presently, the Project site is undeveloped; however, it has been modified with underground utility infrastructure and

landscaping. No buildings or features that could indicate the presence of buried historic-era archaeological resources such as artifact filled wells or privy pits were depicted on historic maps or aerial images.

Records Search and Survey

ESA completed a records search at the Northwest Information Center (NWIC) of the California Historical Resources Information System on April 22, ESA (File No. 25-1574). The NWIC, an affiliate of the State of California Office of Historic Preservation, is the official state repository of cultural resources records and reports for Santa Clara County. The NWIC records search indicated that no previously recorded cultural resources are within the Project site. Three pre-contact archaeological resources (sites CA-SCL-215, CA-SCL-327, and CA-SCL-778) and one historic-era built resource (PG&E Lattice Tower) are in the records search radius of 0.5 mile. None of these resources would be impacted by the Project.

A Secretary of the Interior-qualified archaeologist completed a five to ten meter-wide transect pedestrian surface survey of the Project site on April 23, 2026. The survey included approximately 0.4-acre. The Project site was unpaved and covered in predominately dense vegetation, including landscaped plants, scrubs, woodchip ground cover, and dense weeds and grass. Visibility of the ground surface was approximately 10 percent. The portion of the Project site that provided limited ground-visibility was within the northwest portion of the parcel. Where visible, the soil, a light brown silty loam and urban fill, was inspected closely for cultural materials, including shell, lithics, bone, and midden soil.

No cultural materials or other evidence of past human use or occupation was identified during the surface survey at the Project site. The Project site has been previously disturbed from decades-long land use associated with orchard operations beginning in the late 1800s through the 1970s, excavation for the installation of underground storm drain and sewer infrastructure during the late 20th and early 21st centuries, and modern landscaping efforts.

4.3.2 Environmental Checklist and Discussion of Impacts

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
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?	☐	☐	☒	☐

4.3.3 Impact Discussion

a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5? (*No Impact*)

Construction and Operation Impacts

This section discusses historical resources according to CEQA Guidelines Section 15064.5. A significant impact would occur if the Project would cause a substantial adverse change to a historical resource, herein

referring to historic-age architectural resources or the built environment, including buildings, structures, and objects. A substantial adverse change includes the physical demolition, destruction, relocation, or alteration of the resource.

There are no historic-age buildings or structures in the Project site, and therefore there is no potential that the Project could directly affect historic architectural resources. The Project would not cause a substantial adverse change in the significance of a historical resource. **No impact** would occur and no mitigation is necessary.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5? (*Less Than Significant Impact*)

Construction Impacts

This section discusses archaeological resources, both as historical resources according to CEQA Guidelines Section 15064.5, as well as unique archaeological resources as defined in Public Resources Code (PRC) Section 21083.2(g). A significant impact would occur if the Project would cause a substantial adverse change to an archaeological resource through physical demolition, destruction, relocation, or alteration of the resource.

The cultural resources assessment completed for the Project indicates there are no known archaeological resources within the Project site. The Project site has been moderately disturbed; however, given the environmental context, the proximity to nearby perineal water sources, and distance to previously recorded indigenous archaeological resources, the Project site has moderate sensitivity for buried archaeological resources. In addition, the Project site is in an area identified as having archaeological sensitivity in the City GIS viewer (City of San José, n.d.). However, given the minimal ground disturbance associated with the construction of the Project, there is a lessened potential for encountering indigenous cultural materials during construction activities.

Although unlikely, the inadvertent discovery of archaeological resources cannot be entirely discounted. Inadvertent damage to archaeological resources during construction would be a potentially significant impact. Mandatory implementation of **SPC CUL-2: Subsurface Cultural Resources** would reduce potentially significant impacts to previously unrecorded archaeological resources to a **less-than-significant** level.

> **SPC CUL-2: Subsurface Cultural Resources.**
>
> If prehistoric or historic resources are encountered during excavation and/or grading of the site, all activity within a 50-foot radius of the find shall be stopped, the Director of Planning, Building and Code Enforcement (PBCE) or the Director's designee and the City's Historic Preservation Officer shall be notified, and a qualified archaeologist in consultation with a Native American Tribal representative registered with the Native American Heritage Commission for the City of San José and that is traditionally and culturally affiliated with the geographic area as described in Public Resources Code Section 21080.3 shall examine the find. The archaeologist in consultation with the Tribal representative shall 1) evaluate the find(s) to determine if they meet the definition of a historical or archaeological resource; and (2) make appropriate recommendations regarding the disposition of such finds prior to issuance of building permits. Recommendations could include collection, recordation, and analysis of any significant cultural materials. A report of findings documenting any data recovery shall be submitted to the Director of PBCE or the

Director's designee, the City's Historic Preservation Officer and the Northwest Information Center (if applicable). Project personnel shall not collect or move any cultural materials.

Operation Impacts

There would be no ground disturbance associated with operation of the Project, and therefore, **no impact** to archaeological resources during operation of the Project.

c) Disturb any human remains, including those interred outside of dedicated cemeteries? (*Less Than Significant Impact*)

Construction Impacts

Based on the records search and survey results, no human remains are known to exist within the Project site. The Project would involve ground-disturbing activities; therefore, it is possible that such actions could inadvertently unearth, expose, or disturb buried human remains, which would be a potentially significant impact. Mandatory implementation of **SPC CUL-1: Human Remains**, would reduce potentially significant impacts to human remains to a **less-than-significant** level.

SPC CUL-1: Human Remains.

If any human remains are found during any field investigations, grading, or other construction activities, all provisions of California Health and Safety Code Sections 7054 and 7050.5 and Public Resources Code Sections 5097.9 through 5097.99, as amended per Assembly Bill 2641, shall be followed. If human remains are discovered during construction, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains. The project applicant shall immediately notify the Director of Planning, Building and Code Enforcement (PBCE) or the Director's designee and the qualified archaeologist, who shall then notify the Santa Clara County Coroner. The Coroner will make a determination as to whether the remains are Native American. If the remains are believed to be Native American, the Coroner will contact the Native American Heritage Commission (NAHC) within 24 hours. The NAHC will then designate a Most Likely Descendant (MLD). The MLD will inspect the remains and make a recommendation on the treatment of the remains and associated artifacts. If one of the following conditions occurs, the landowner or his authorized representative shall work with the Coroner to reinter the Native American human remains and associated grave goods with appropriate dignity in a location not subject to further subsurface disturbance:

a) The NAHC is unable to identify a MLD or the MLD failed to make a recommendation within 48 hours after being given access to the site.

b) The MLD identified fails to make a recommendation; or

c) The landowner or his authorized representative rejects the recommendation of the MLD, and mediation by the NAHC fails to provide measures acceptable to the landowner.

Operation Impacts

There would be no ground disturbance associated with operation of the Project, and therefore, **no impact** to human remains during operation of the Project.

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4.4 Energy

4.4.1 Environmental Setting

Electricity, as a consumptive utility, is a man-made resource. The production of electricity requires the consumption or conversion of resources—including water, wind, oil, gas, coal, solar, geothermal, and nuclear resources—into useable energy. The delivery of electricity involves several system components for distribution and use. Electricity is distributed through a network of transmission and distribution lines commonly called a power grid. PG&E provides electricity to the Project site. According to the California Energy Commission (CEC), electricity consumption in Santa Clara County, which includes San José, was approximately 17,794 gigawatt-hours (GWh) in 2024 (CEC, 2026a).

Natural gas is a combustible mixture of simple hydrocarbon compounds (primarily methane) that is used as a fuel source. Natural gas forms about a third of energy commodities consumed in California and consumers fall into four sectors: residential, commercial, industrial, and electric power generation. Total natural gas consumption in Santa Clara County in 2024 was 386.9 million therms with approximately 55 percent consumed by the residential sector (CEC, 2026b).

Gasoline is the most used transportation fuel in California, with 97 percent of all gasoline being consumed by light-duty cars, pickup trucks, and sport utility vehicles. Diesel is the second most used fuel in California and is used primarily by heavy duty-trucks, delivery vehicles, buses, trains, ships, boats and barges, farm equipment, and heavy-duty construction and military vehicles. Retail sales of transportation fuels in Santa Clara County for the year 2024 were estimated at 547 million gallons for gasoline and 54 million gallons for diesel (CEC, 2025).

4.4.2 Regulatory Setting

Many federal, state, and local statutes and policies address energy conservation. At the federal level, energy standards set by the U.S. EPA apply to numerous consumer and commercial products.

Renewables Portfolio Standards Program

The State of California adopted standards to increase the percentage of electricity that retail sellers, including investor-owned utilities and community choice aggregators, must provide from renewable resources. The standards are referred to as the Renewables Portfolio Standard (RPS). The standards reduce use of non-renewable energy sources, thereby reducing GHG emissions and other negative impacts that are associated with use of non-renewable, finite energy sources. California's RPS program was established in 2002 by Senate Bill (SB) 1078, with the initial requirement that 20 percent of electricity retail sales be served by renewable resources by 2017. The program was accelerated in 2015 with SB 350, which mandated a 50 percent RPS by 2030. SB 350 includes interim annual RPS targets with three-year compliance periods and requires that 65 percent of RPS procurement be derived from long-term contracts of 10 or more years.

On September 10, 2018, Governor Brown signed SB 100, which further increased the California RPS and requires retail sellers and local publicly owned electric utilities to procure eligible renewable electricity for 44 percent of retail sales by December 31, 2024; 52 percent by December 31, 2027; and 60 percent by December 31, 2030. SB 100 also specifies that CARB should plan for 100 percent eligible renewable

energy resources and zero-carbon resources by December 31, 2045. The California Public Utilities Commission (CPUC) and the CEC jointly implement the RPS program.

Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling

In 2004, the CARB adopted the Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling to reduce public exposure to emissions of diesel particulate matter (California Code of Regulations [CCR] Title 13, section 2485 [13 CCR § 2485]). The measure applies to diesel-fueled commercial vehicles with gross vehicle weight ratings greater than 10,000 pounds that are licensed to operate on highways, regardless of where they are registered. This measure prohibits diesel-fueled commercial vehicles from idling for more than five minutes at any given location. The primary goal of this regulation is to reduce public health impacts from diesel emissions, but compliance with the measure also results in energy savings in the form of reduced fuel consumption from unnecessary idling.

In-Use Off-Road Diesel-Fueled Fleets Regulation

CARB also promulgated emissions standards for off-road diesel construction equipment of greater than 25 horse power such as bulldozers, loaders, backhoes, and forklifts, as well as many other self-propelled off-road diesel vehicles. The In-Use Off-Road Diesel-Fueled Fleets regulation, adopted by CARB on July 26, 2007, aims to reduce emissions by restricting the addition of older engines to fleets, and by requiring fleets to reduce their emissions by retiring, replacing, or repowering older engines, or installing Verified Diesel Emission Control Strategies such as diesel soot filters and other exhaust retrofits (13 CCR § 2449). The compliance schedule requires full implementation by 2023 in all equipment for large and medium fleets and by 2028 for small fleets. The regulation also imposes idling restrictions limiting unnecessary idling to five minutes unless vehicles need to idle to perform work (such as a crane providing hydraulic power to the boom), vehicles being serviced, or in a queue waiting for work.

Envision San José 2040 General Plan

The Envision San José 2040 General Plan (City of San José, 2025) adopted in November 2011 and amended in 2020, includes goals and policies related to the City's commitment to sustainability. The City's sustainability goals include improvements to energy efficiency, renewable energy generation, and building design aimed at overall energy reduction. The Envision San José 2040 General Plan has outlined various goals, policies, and actions to be implemented by the City and project proponents. Envision San José 2040 General Plan policies applicable to the Project include:

- **MS-1.1:** Demonstrate leadership in the development and implementation of green building policies and practices. Ensure that all projects are consistent with or exceed the City's Green Building Ordinance and City Council Policies as well as state and/or regional policies which require that projects incorporate various green building principles into their design and construction.
- **MS-2.3:** Utilize solar orientation, (i.e., building placement), landscaping, design, and construction techniques for new construction to minimize energy consumption.
- **MS-3.1:** Require water-efficient landscaping, which conforms to the state's Model Water Efficient Landscape Ordinance, for all new commercial, institutional, industrial, and developer-installed residential development unless for recreation or other area functions.

4.4.3 Environmental Checklist and Discussion of Impacts

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
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?	☐	☐	☒	☐

4.4.4 Impact Discussion

a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation? (*Less Than Significant Impact*)

Construction Impacts

Energy use during construction activities would primarily occur in association with fossil fuel use in construction equipment and vehicles. Energy use would vary throughout the construction period based on the construction activities being performed and would cease upon the completion of construction. Fuels used for construction would typically include diesel and gasoline; use of natural gas and electricity would be minimal.

Heavy-duty equipment associated with construction of the Project would most likely rely on diesel fuel, as would vendor trucks involved in delivery of equipment and materials to the Project site and haul trucks exporting demolition material or other materials off site. Construction worker trips to and from the Project site would primarily be powered by gasoline. In accordance with 13 CCR Sections 2485 and 2449, idling of commercial vehicles over 10,000 pounds and off-road equipment over 25 horsepower would be limited to a maximum of five minutes. Though the intent of these regulations is to reduce construction emissions, compliance with the anti-idling and emission reduction regulations discussed above would also result in fuel savings from the more efficient use of equipment.

Over the duration of Project construction, it is estimated that approximately 16,517 gallons of diesel and 1,924 gallons of gasoline would be used, assuming all off-road construction equipment and haul and vendor trucks are diesel-fueled and all worker trips are gasoline-fueled. The diesel and gasoline use for construction activities would be temporary and constitute a small fraction of the regional usage; therefore, the construction energy demand of the Project would be within the infrastructure service capabilities of regional suppliers and would not require additional local or regional capacity.

Overall, construction activities associated with the Project would not be unusual compared to overall local and regional demand for energy resources and Project construction would not involve characteristics that require equipment that would be less energy-efficient than at comparable construction sites in the region or state. Given the required compliance with rules and regulations in place, the Project would not result in the inefficient, wasteful, or unnecessary consumption of energy during construction. Therefore, impacts would be **less than significant**.

Operation Impacts

Once operational, the Project's energy use would be primarily in the form of electricity used by the pump. Some gasoline and diesel fuel would also be consumed for trips made by City staff for routine operation and maintenance activities.

Vehicle trips generated by the Project would incrementally increase the use of transportation fuels, primarily gasoline and diesel. However, enhanced fuel economies realized pursuant to Federal and State regulatory actions such as increasingly stringent Corporate Average Fuel Economy/Pavley standards for vehicle fuel efficiency, and transition of vehicles to alternative energy sources (e.g., electricity, natural gas, biofuels, hydrogen cells) would decrease future fossil fuel demands.

Overall, the Project's construction and operational-related energy consumption would not be considered inefficient, wasteful, or unnecessary use of energy. Therefore, this impact would be **less than significant**.

b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency? (*Less Than Significant Impact*)

Construction Impacts

In accordance with 13 CCR Sections 2485 and 2449, idling by commercial vehicles over 10,000 pounds and off-road equipment over 25 horsepower would be limited to a maximum of five minutes. Though the intent of these regulations is to reduce construction emissions, compliance with the anti-idling and emission reduction requirements would also result in fuel savings from the more efficient use of equipment. Vehicles during construction activities would be consistent with Federal and State regulations, such as fuel efficiency regulations in CARB's Pavley Phase II standards. Therefore, energy use during Project construction would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. This impact would be **less than significant**.

Operation Impacts

As discussed above, the Project's operational energy use would be primarily in the form of electricity to operate the pump. At the maximum pump rate of approximately 2,000 gallons per minute, the total estimated annual power requirement under the maximum production scenario is estimated to be approximately 70,000 kilowatt hours per year. The well facilities would receive power from the nearby PG&E distribution system.

As part of the RPS program detailed earlier, electric utilities including investor-owned utilities and community choice aggregators are required to increase the percentage of electricity provided from renewable resources. Though the RPS program does not necessarily increase energy efficiency, implementation of this program reduces use of non-renewable energy sources. The legislation (SB 100) requires utilities to increase the percentage of electricity obtained from renewable sources to 44 percent of retail sales by 2024, 52 percent by 2027, and 60 percent by December 2030. SB 100 also specifies that CARB should plan for 100 percent eligible renewable energy resources and zero-carbon resources by December 31, 2045. CPUC and the CEC jointly implement the RPS program and PG&E, the electric utility provider to the Project site is required to adhere to these standards and deadlines. PG&E is currently compliant with California RPS requirements, has met all recent interim targets, and has an approved procurement plan supporting compliance through the next compliance periods and toward the

60 percent renewable energy requirement by 2030 under SB 100 (CPUC, 2026). As such, the Project would be consistent with these regulations, and this impact would be less than significant.

Overall, the Project's energy use during construction and operation would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency, and this impact would be **less than significant**.

4.4.5 References

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4.5 Geology and Soils

4.5.1 Environmental Setting

The Project is located in the southern portion of the Bay Area in the California Coast Ranges, a naturally defined geologic region encompassing the Central and Northern California coast (DOC, 2002). The distinguishing geologic feature of this region is the northwest-trending mountain ranges and valleys subparallel to the San Andreas Fault. Two local mountain ranges bound San Francisco Bay and the Project area: the Santa Cruz Mountains to the west and southwest, and the Diablo Range to the east. These ranges are composed of thick Cenozoic and Mesozoic sedimentary strata (DOC, 2002). At the southern end of San Francisco Bay, the Santa Clara Valley extends approximately 20 miles southeast. The Santa Clara Valley formed as tectonic forces between the San Andreas Fault Zone (west) and Hayward Fault Zone (east) created a structural depression between the two mountain ranges.

A study by the U.S. Geological Survey 2014 Working Group on California Earthquake Probabilities concludes that there is a 72 percent probability of a strong earthquake (maximum moment magnitude ≥ 6.7) occurring in the SF Bay region over the next 30 years, starting from 2014 (USGS, 2015a). The probability of a strong earthquake (maximum moment magnitude ≥ 6.7) occurring during that time period is 33 percent for the North San Andreas Fault Zone, 32 percent for the Hayward-Rodgers Creek Fault Zone, and 25 percent for the Calaveras Fault Zone (USGS, 2015b). The Project site is located approximately 2.7 miles west of the Hayward fault and is not within any identified Alquist-Priolo Earthquake Fault Zone.

The Project site is located in the San José Alluvial Plain, which is located on the flat lying floor of the Santa Clara Valley. The Santa Clara Valley sediments were deposited as a series of overlapping alluvial fans,[20] by streams that drain the adjacent mountains. These alluvial sediments make up the groundwater aquifers of the area. Soil in the Santa Clara Valley includes clay in the low-lying central areas, loam[21] and gravelly loam in the upper portions of the Santa Clara Valley, and eroded rocky clay loam in the foothills. The Project is not located within an established liquefaction and lateral spread zone (CGS, 2026).

The Project site is in the Santa Clara Plain groundwater recharge area. Groundwater is reportedly first encountered at a depth of 20 to 30 feet below ground surface in the vicinity of the Project site (Valley Water, 2026). For a more detailed discussion of regional and local groundwater conditions, refer to Section 4.8, *Hydrology and Water Quality*.

According to the Landside Inventory Map of the San José East Quadrangle (Wiegers, 2011), the Project site is not in an area that is mapped as having historic landslide movement or where conditions indicate potential for landslides. According to available data from the Natural Resources Conservation Service (NRCS) Web Soil Survey, the Project site is located on soils not rated for expansion; however, soil in the area is classified into hydrologic soil group D, which includes soils that could have high shrink-swell potential (NRCS, 2026).

[20] Alluvial fans are sediment deposits that are created by the transport of upland sediments by surface water drainages and overland flow.

[21] Loam is soil type with roughly equal proportions of sand, silt, and clay, although often with less clay than silt or sand.

4.5.2 Regulatory Setting

California Building Standards Code

The California Building Standards Code is published every three years by order of the California Legislature. Title 24, Part 2 of the California Code of Regulations is referred to as the California Building Code (CBC). The CBC specifies building standards, including geologic, soils, and seismic hazards loads and specifications. These codes are administered and updated by the California Building Standards Commission. This code specifies criteria for open excavation, seismic design, and load-bearing capacity directly related to construction in California. This code is applicable to the Project because the Project includes new structures (water production well and the associated water system connection).

California Public Resources Code Section 5097.5

California Public Resources Code Section 5097.5 states the following:

> [N]o person shall knowingly and willfully excavate upon, or remove, destroy, injure or deface any historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological site, including fossilized footprints, inscriptions made by human agency, or any other archaeological, paleontological or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over such lands. Violation of this section is a misdemeanor.

Section 5097.5 defines *public lands* as lands owned by, or under the jurisdiction of, the state, or any city, county, district, authority, public corporation, or any agency thereof. This would be applicable to paleontological resources present at the Project site.

Envision San José 2040 General Plan

The Envision San José 2040 General Plan includes the following goals, policies, and actions related to geology, soils, and seismicity that may be applicable to the Project (City of San José, 2025):

- **EC-3: Seismic Hazards.** Minimize the risk of injury, property damage, and community disruption from seismic shaking, fault rupture, ground failure (liquefaction and lateral spreading), earthquake-induced landslides, and other earthquake-induced ground deformation.
- **EC-4: Geologic and Soil Hazards.** Minimize the risk of injury, loss of life, and property damage from soil and slope instability including landslides, differential settlement, and accelerated erosion.
- **EC-4.3:** Locate new public improvements and utilities outside of areas with identified soils and/or geologic hazards (e.g., deep seated landslides in the Special Geologic Hazard Study Area and former landfills) to avoid extraordinary maintenance and operating expenses. Where the location of public improvements and utilities in such areas cannot be avoided, effective mitigation measures will be implemented.
- **EC-4.4:** Require all new development to conform to the City of San José's Geologic Hazard Ordinance.
- **EC-4.5:** Ensure that any development activity that requires grading does not impact adjacent properties, local creeks and storm drainage systems by designing and building the site to drain properly and minimize erosion. An Erosion Control Plan is required for all private development

projects that have a soil disturbance of one acre or more, are adjacent to a creek/river, and/or are located in hillside areas. Erosion Control Plans are also required for any grading occurring between October 1 and April 15.

- **EC-4.12:** Require review and approval of grading plans and erosion control plans (if applicable) prior to issuance of a grading permit by the Director of Public Works.

4.5.3 Environmental Checklist and Discussion of Impacts

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
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[22] 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?	☐	☐	☒	☐

4.5.4 Impact Discussion

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

a.i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42. (*No Impact*)

Construction and Operation Impacts

The state Alquist-Priolo Earthquake Fault Zoning Act (Alquist-Priolo Act) prohibits the development of structures for human occupancy across active fault traces. Under this act, the California Geological

[22] The CBC, based on the International Building Code and the now defunct Uniform Building Code, no longer includes a Table 18-1-B. Instead, Section 1803.5.3 of the CBC describes the criteria for analyzing expansive soils.

Survey (CGS) has established "Zones of Required Investigation" on either side of an active fault that delimits areas susceptible to surface fault rupture. The zones are referred to as Earthquake Fault Zones (EFZs) and are shown on official maps published by the CGS (CGS, 2026). Surface rupture occurs when the ground surface is broken due to a fault movement during an earthquake; typically, these types of hazards occur within 50 feet of an active fault.

The Project site does not lie within any mapped EFZs according to the available data (CGS, 2026). Although the area could be affected by earthquakes or seismic ground shaking, there is no current data available indicating the presence of active faults within the Project site. The nearest EFZ is the Hayward fault zone, approximately 2.7 miles to the west of the Project site. The Project does not include any habitable structures and would not expose people or structures to potential substantial adverse effects associated with rupture of a known earthquake fault. Additionally, the Project would be designed and developed in accordance with the CBC guidelines to avoid or minimize potential direct or indirect damage from seismic shaking on the Project site. There would be **no impact** related to fault rupture.

a.ii) Strong seismic ground shaking? (*Less than Significant Impact*)

Construction and Operation Impacts

The Project site is in a historically seismically active region of California. The Project site may be subject to potentially violent to severe seismic ground shaking due to the Project site's proximity to the Hayward fault zone. Strong seismic ground shaking could result in potential damage to the Project site and potential adverse effects to the surrounding residences.

However, the Project's structures would be subject to the seismic design criteria of the CBC, which requires that all buildings and structures be constructed to withstand anticipated ground shaking from regional fault sources. Implementing the regulatory requirements in the CBC and applicable local ordinances and ensuring that all buildings and structures are constructed in compliance with the law is the responsibility of the Project engineers and building officials. Prior to the issuance of grading permits, the City would be required to retain a licensed geotechnical engineer to design the Project components to withstand probable seismically induced ground shaking. All construction on-site would adhere to the specifications and procedures contained in the final design-level geotechnical report, which is required to be fully compliant with the seismic recommendations of a California-registered, professional geotechnical engineer in accordance with the CBC. Adherence to the applicable CBC requirements would reduce potential impacts of the Project associated with directly or indirectly causing substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking. Therefore, the Project's construction and operation impacts would be **less than significant**.

a.iii) Seismic-related ground failure, including liquefaction? (*Less than Significant Impact*)

Construction Impacts

As noted above, the City is required to design the Project's structures in accordance with applicable CBC seismic design standards as recommended by a California-registered professional geotechnical engineer in the site-specific geotechnical review. As part of the final design-level geotechnical report identified in Impact a.ii, consistent with building code seismic design standards, the licensed geotechnical engineer would be required to consider potential liquefaction in the final design plans. While liquefaction hazards

have not been mapped at the Project site, if identified by the geotechnical engineer, liquefaction hazards can generally be addressed through site preparation measures or foundation design measures, such as removal and replacement of liquefiable soils, densification of these soils, or specific foundation design recommendations. Implementation of these measures in accordance with building code requirements can effectively reduce the hazard and thereby minimize potential for substantial damage.

Compliance with CBC requirements, including implementation of recommendations provided in the final design-level geotechnical report, and local agency enforcement would reduce or avoid impacts related to ground failure, including liquefaction. Project construction would not directly or indirectly result in adverse effects related to ground failure, including liquefaction, and impacts would be **less than significant**.

Operation Impacts

Once operational, the Project would not include ongoing ground-disturbing activities such as excavation or grading that could trigger or worsen seismic-related ground failure, including liquefaction. Therefore, operation of the Project would result in **no impact**.

a.iv) Landslides? (*No Impact*)

Construction and Operation Impacts

The topography at the Project site is relatively flat with limited topographic relief. The Project site is also not located in an area with the potential for landslides. Because the Project would not alter the topography, the potential for the Project to cause or exacerbate landslides on the site, including seismically induced landslides, is considered remote, and there would be **no impact**.

b) Result in substantial soil erosion or the loss of topsoil? (*Less Than Significant Impact*)

Construction Impacts

Project construction would involve ground disturbance during on site drilling, grading and trenching. In the event of a rainstorm, erosion on site could occur, with sediment from the Project area becoming entrained in stormwater runoff from the site. However, potential for erosion and loss of sediment from the Project site during construction would be reduced via construction period Best Management Practices (BMPs) and adherence to the City's construction standards for storm water pollution control, as discussed in greater detail in Section 4.8, *Hydrology and Water Quality*. Additionally, soils onsite would be stabilized at the end of the construction process once the proposed facilities are constructed and covered by impervious surfaces with drainage directed to existing stormwater infrastructure. As a result, the Project construction is not expected to cause or be subject to substantial erosion or topsoil loss, and the impact would be **less than significant**.

Operation Impacts

Once operational, the Project would include mostly paved surfaces, which would not be subject to substantial erosion or topsoil loss, and there would be no excavation or grading associated with Project operations. Therefore, operation impacts are considered **less than significant**.

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? (*Less Than Significant Impact*)

Construction and Operation Impacts

The potential for seismic-related ground failure, including liquefaction, and landslides at the Project site is discussed above under a.iii) and a.iv). Soils at the Project site are not considered collapsible due to the depositional environment of the sediments (collapsible soils are usually deposited in arid climates). Ground subsidence in response to groundwater withdrawal has occurred in the Santa Clara Valley historically; however, Valley Water now actively manages groundwater levels in the area such that subsidence can be prevented (Valley Water, 2021). As discussed more fully in Section 4.8, *Hydrology and Water Quality*, the Project, even at its highest extraction rate (2,000 gallons per minute), would represent a relatively small volume of groundwater storage and would not contribute to subsidence. The Project is not within an established liquefaction and lateral spreading zone (CGS, 2026). Additionally, lateral spreading is more commonly experienced in areas of an exposed slope, and the Project site is relatively flat. Graded areas would be required to comply with California Occupational Safety and Health (Cal/OSHA) Excavation and Trenching standards regulations, which would further limit the potential for lateral spreading by sloping and shoring excavated areas. Compliance with local building standards, in addition to measures identified in the CBC and the geotechnical investigation required by the Special Publication 117A, would reduce the potential hazard from unstable soils, including lateral spreading, subsidence, or liquefaction, which would reduce impacts to **less than significant**.

d) Be located on expansive soil[23] creating substantial direct or indirect risks to life or property? (*Less than Significant Impact*)

Construction and Operation Impacts

The soil in the Project area could be expansive. However, all proposed improvements would be subject to state and local building codes, which include building requirements that mitigate the hazard posed by expansive soils. Impacts associated with the Project being located on expansive soil creating substantial direct or indirect risks to life or property would therefore be **less than significant**.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water? (*No Impact*)

Construction and Operation Impacts

The Project would not include the use of septic tanks or alternative wastewater disposal systems, and therefore would not require the use of soils that are adequate for supporting such systems. There would be **no impact** associated with the Project having adequate soil for septic tanks or alternative wastewater disposal systems.

[23] The CBC, based on the International Building Code and the now defunct Uniform Building Code, no longer includes a Table 18-1-B. Instead, Section 1803.5.3 of the CBC describes the criteria for analyzing expansive soils.

f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? (*Less Than Significant Impact*)

Construction and Operation Impacts

A significant impact would occur if a project destroyed a unique paleontological resource or site, or a unique geologic feature. Paleontological resources are the fossilized evidence of past life found in the geologic record. Despite the tremendous volume of sedimentary rock deposits preserved worldwide, and the enormous number of organisms that have lived through time, preservation of plant or animal remains as fossils is an extremely rare occurrence. Because of the infrequency of fossil preservation, fossils—particularly vertebrate fossils—are considered to be nonrenewable resources. Because of their rarity, and the scientific information they can provide, fossils are highly significant records of ancient life.

The Project area overlies Holocene-age and Pleistocene-age geologic units (Wagner et al., 1991). While early Holocene-age geologic units have a low potential to contain paleontological resources, buried older Holocene-age or Pleistocene-age sedimentary geologic units have high potential to contain paleontological resources (SVP, 2010). Therefore, excavation associated with the Project could result in inadvertent damage to paleontological resources during construction, a potentially significant impact. Mandatory compliance with **SPC GEO-2: Paleontological Resources** would reduce the potential for significant impacts on paleontological resources by implementing a treatment plan to ensure preservation of any paleontological resources encountered during construction; and salvaging and preparing significant fossil finds for curation. With adherence to SPC GEO-2, impacts would be **less than significant**.

> **SPC GEO-2: Paleontological Resources.**
>
> If vertebrate fossils are discovered during construction, all work on the site shall stop immediately, Director of Planning, Building and Code Enforcement (PBCE) or the Director's designee shall be notified, and a qualified professional paleontologist shall assess the nature and importance of the find and recommend appropriate treatment. Treatment may include, but is not limited to, preparation and recovery of fossil materials so that they can be housed in an appropriate museum or university collection and may also include preparation of a report for publication describing the finds. The project applicant shall be responsible for implementing the recommendations of the qualified paleontologist. A report of all findings shall be submitted to the Director of PBCE, or the Director's designee.

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4.6 Greenhouse Gas Emissions

4.6.1 Environmental Setting

GHGs trap heat in the atmosphere by preventing some of the solar radiation that hits the earth from being reflected back into space. Some GHGs occur naturally and are needed to keep the earth's surface habitable. However, over the past 100 years, human activities have substantially increased the concentration of GHGs in our atmosphere. This has intensified the natural greenhouse effect, increasing average global temperatures.

Carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6) are the principal GHGs. When concentrations of these gases exceed historical concentrations of GHGs in the atmosphere, the greenhouse effect is intensified. CO_2, CH_4, and N_2O occur naturally but are also generated through human activity. Emissions of CO_2 are largely by-products of fossil fuel combustion, whereas CH_4 primarily results from off-gassing, natural gas leaks from pipelines and industrial processes, and incomplete combustion; it is associated with agricultural practices, landfills, energy providers, and other industrial facilities.[24] HFCs, PFCs, and SF_6 are specialty industrial gases that have been emitted only very recently in human history.

CO_2 is the reference gas for climate change because it is the predominant GHG emitted. The effect that each of the aforementioned gases can have on global warming is a combination of the mass of their emissions and their global warming potential (GWP). GWP indicates, on a volume basis, how much a gas contributes to global warming relative to how much warming would be predicted to be caused by the same mass of CO_2. CH_4 and N_2O are substantially more potent GHGs than CO_2, with 100-year GWPs of 25 and 298 times that of CO_2, respectively (CARB, 2026).

In emissions inventories, GHG emissions are typically reported in metric tons of CO_2 equivalents ($MTCO_2e$). CO_2e is calculated as the product of the mass emitted of a given GHG and its specific GWP. While CH_4 and N_2O have much higher GWPs than CO_2, CO_2 is emitted in such vastly higher quantities that it accounts for the majority of GHG emissions in absolute terms.

4.6.2 Regulatory Setting

State Laws and Regulations

Executive Order S-3-05

In June 2006, Governor Arnold Schwarzenegger signed Executive Order S-3-05, which established the following statewide emission-reduction targets through the year 2050:

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

[24] Off-gassing is defined as the release of chemicals under normal conditions of temperature and pressure.

This executive order does not contain any requirements that directly pertain to the Project; however, future actions taken by the State of California and the Air District to implement these goals may affect the Project, depending on the specific measures that are developed and their timeline of implementation.

Executive Order B-55-18

In September 2018, Governor Brown signed Executive Order B-55-18, committing California to total, economy-wide carbon neutrality[25] by 2045. Executive Order B-55-18 directs CARB to work with relevant state agencies to develop a framework to implement accounting to track progress toward this goal. The goal will be incorporated into future Scoping Plans, as policies and actions which affect major sectors of California's economy, including transportation, agriculture, development, industrial, and others. This executive order does not contain any requirements that would need to be implemented at the Project level. The carbon neutrality requirements would be implemented on a regional and local level through regional electricity providers and vehicle and equipment standards.

Assembly Bill 32 and the Climate Change Scoping Plan (AB 32 Scoping Plan)

The California Global Warming Solutions Act of 2006 (Assembly Bill [AB] 32) required that statewide GHG emissions be reduced to 1990 levels by 2020. This reduction was to be accomplished by enforcing a statewide cap on GHG emissions that would be phased in starting in 2012.

In December 2008, CARB approved the AB 32 Scoping Plan (CARB, 2008), outlining the State of California's strategy to achieve the 2020 GHG emissions limit. The Scoping Plan estimated a reduction of 174 million metric tons of carbon dioxide equivalent ($MTCO_2e$) (about 191 million tons) from the transportation, energy, agriculture, forestry, and high-climate-change-potential sectors, and proposed a comprehensive set of actions designed to reduce overall GHG emissions in California, improve the environment, reduce dependence on oil, diversify California's energy sources, save energy, create new jobs, and enhance public health. California surpassed the AB 32 target in 2014, six years ahead of schedule. The Scoping Plan must be updated every five years to evaluate the mix of AB 32 policies to ensure that California is on track to achieve the 2020 GHG reduction goal. CARB released its first Scoping Plan Update in 2014 and subsequent updates in 2017 and 2022, as described below.

Executive Order B-30-15, SB 32 and the 2014 Scoping Plan Update

In April 2015, Governor Brown issued an Executive Order B-30-15 to establish a California GHG reduction target of 40 percent below 1990 levels by 2030. Reaching this emission reduction target will facilitate California in reaching its ultimate goal of reducing emissions 80 percent under 1990 levels by 2050, as identified in Executive Order S-3-05.

Subsequently, SB 32, which codifies the Executive Order's 2030 emissions reduction target, was approved by the Governor on September 8, 2016. SB 32 requires CARB to adopt rules and regulations to achieve the maximum technologically feasible and cost-effective GHG emissions to ensure that statewide GHG emissions are reduced to at least 40 percent below the 1990 statewide GHG emissions limit no later than December 31, 2030.

[25] Having a net zero carbon footprint, refers to achieving net zero carbon dioxide emissions by balancing carbon emissions with carbon removal (often through carbon offsetting) or simply eliminating carbon emissions altogether (the transition to the "post-carbon economy").

On December 14, 2017, CARB adopted the 2017 Scoping Plan Update (CARB, 2017), which provided a framework for achieving the 2030 target. The 2017 Scoping Plan Update relied on the continuation and expansion of existing policies and regulations, such as the Cap-and-Trade Program, and implementation of recently adopted policies and legislation, such as SB 1383 and SB 100. The 2017 Scoping Plan also put an increased emphasis on innovation, adoption of existing technology, and strategic investment to support its strategies.

Executive Order B-55-18, AB 1279 and the 2022 Scoping Plan for Achieving Carbon Neutrality

Signed by Governor Edmund G. Brown Jr. in September 2018, Executive Order B-55-18 established the goal for California to achieve carbon neutrality by 2045 and maintain net negative emissions thereafter. It directed state agencies to implement policies and programs to achieve this target, emphasizing the need for deep decarbonization across all sectors.

AB 1279 (California Climate Crisis Act) passed in September 2022 codified the goals set forth in Executive Order B-55-18 into State law requiring the state to achieve a GHG reduction goal of net zero GHG emissions (i.e., reach a balance between the GHGs emitted and removed from the atmosphere) no later than 2045. It also mandates an 85 percent reduction in statewide anthropogenic GHG emissions from 1990 levels by 2045, requires state agencies aim to achieve net-zero GHG emissions resulting from their operations no later than 2035, or as soon as feasible thereafter.

CARB adopted the 2022 Scoping Plan for Achieving Carbon Neutrality (2022 Scoping Plan) in November 2022 as a framework for achieving AB 1279 targets. The 2022 Scoping Plan Update identifies ways to achieve targets for carbon neutrality by 2045 and to reduce anthropogenic GHG emissions to at least 85 percent below 1990 levels, while also assessing the progress California is making toward reducing its GHG emissions by at least 40 percent below 1990 levels by 2030, as called for in SB 32 and laid out in the 2017 Scoping Plan (CARB, 2022).

The 2022 Scoping Plan also discusses the role of local governments in meeting the State's GHG emissions reduction goals because local governments have jurisdiction and land use authority related to community-scale planning and permitting processes, local codes and actions, outreach and education programs, and municipal operations. The efforts of local governments to reduce GHG emissions within their jurisdictions are critical to achieving the State's long-term climate goals. Furthermore, local governments make critical decisions on how and when to deploy transportation infrastructure and can choose to support transit, walking, bicycling, and neighborhoods that allow people to transition away from cars; they can adopt building ordinances that exceed statewide building code requirements; and they play a critical role in facilitating the rollout of zero emission vehicle infrastructure (CARB, 2022).

The 2022 Scoping Plan identifies one construction equipment sector action for the Scoping Plan Scenario that commits to 25 percent of energy demand to be electrified by 2030, and 75 percent electrified by 2045 (CARB, 2022).

California Renewables Portfolio Standard

In 2002, California initially established its RPS, with the goal of increasing the percentage of renewable energy in the state's electricity mix to 20 percent by 2017. State energy agencies recommended accelerating

that goal, and California Executive Order S-14-08 (November 2008) required California utilities to reach the 33 percent renewable electricity goal by 2020, consistent with the AB 32 Scoping Plan. In April 2011, SB 2 of the First Extraordinary Session (SB X1-2) was signed into law. SB X1-2 expressly applied the new 33 percent RPS by December 31, 2020, to all retail sellers of electricity and established renewable energy standards for interim years prior to 2020. In 2018, SB 100, the California Clean Energy Act of 2017, was signed into law. This bill established a target to supply the state with 100 percent renewable and zero-carbon energy resources by 2045.

SB 1020, signed on September 16, 2022, revised SB 100 to require that renewable energy resources and zero-carbon resources supply 90 percent of all retail sales of electricity to end-use customers by December 31, 2035; 95 percent of all retail sales to end users by December 31, 2040; 100 percent of electricity procured to serve all state agencies by December 31, 2035; and 100 percent of all retail sales to end users by December 31, 2045.

Local Policies and Regulations

Bay Area Air District CEQA Air Quality Guidelines

The Air District's *California Environmental Quality Act Air Quality Guidelines* were prepared to assist in the evaluation of air quality impacts of projects and plans proposed in the Bay Area. In April 2022, in response to SB 32 and 2017 Scoping Plan targets for 2030 and Executive Order B-15 target for carbon neutrality no later than 2045, the Air District's adopted updated CEQA significance thresholds for GHGs and included them in the 2022 update to the Air District's CEQA Guidelines (2022 CEQA Guidelines; Air District, 2023).

For land use development projects, the Air District recommends using the approach endorsed by the *California Supreme Court in Center for Biological Diversity v. Department of Fish & Wildlife*, which evaluates a project based on its effect on California's efforts to meet the state's long-term climate goals. As the Supreme Court held in that case, a project that would be consistent with meeting those goals can be found to have a less-than-significant impact on climate change under CEQA. If a project would contribute its "fair share" of what will be required to achieve those long-term climate goals, then a reviewing agency can find that the impact will not be significant because the project will help to solve the problem of global climate change. Applying this approach, the Air District recommends that new land use development projects incorporate the Air District-identified design elements to do their "fair share" of implementing the goal of carbon neutrality by 2045. The design elements address the two most important sources of operational GHGs from land use development projects – building energy use and transportation. The Air District does not recommend any quantitative mass emissions thresholds for construction or operation.

Envision San José 2040 General Plan and Greenhouse Gas Reduction Strategy

In 2011, the City adopted the Envision San José 2040 General Plan (City of San José, 2025). The Envision San José 2040 General Plan identifies policies and measures to reduce GHG generation within the City. Policies relevant to the Project include:

- **MS-5.6:** Enhance the construction and demolition debris recycling program to increase diversion from the building sector.
- **MS-6.3:** Encourage the use of locally extracted, manufactured or recycled and reused materials including construction materials and compost.

As part of the Envision San José 2040 General Plan, the City adopted a Greenhouse Gas Reduction Strategy (GHGRS; City of San José, 2015) in accordance with the BAAQMD CEQA Guidelines and CEQA Guidelines Section 15183.5. The City's GHG Reduction Strategy was approved as part of the Envision San José 2040 General Plan and analyzed in the Envision San José 2040 General Plan Integrated Final Program EIR (certified in November 2011) and updated in the Supplemental Program EIR (certified in December 2015). The City prepared a Supplemental Program EIR to supplement the information included in the Envision San José 2040 General Plan Integrated Final Program EIR regarding GHG emissions and global climate change.

In response to SB 32's 2030 goal, the City updated its GHGRS (2030 GHGRS; City of San José, 2020) in alignment with SB 32, which establishes an interim statewide GHG reduction goal for 2030 to meet the long-term target of carbon neutrality by 2045 (Executive Order B-55-18). SB 32 expands upon AB 32, and requires a reduction in GHG emissions of at least 40 percent below 1990 levels by 2030. The 2030 GHGRS adopted on November 11, 2020, serves as a comprehensive update to the city's original GHGRS and reflects the plans, policies, and codes as approved by the City Council. The strategy builds on the Envision San José 2040 General Plan and Climate Smart San José to expand the City's Green Vision to advance urban sustainability. Leveraging these existing plans and supporting policy and program frameworks, the 2030 GHGRS provides a set of strategies and additional actions to achieve the 2030 target. The 2030 GHGRS identifies seven strategies to reduce GHG emissions to achieve the 2030 target. These strategies include GHG reductions in energy, building, land use and transportation, water, and waste sectors.

The 2030 GHGRS also serves as a Qualified Climate Action Plan for purposes of tiering and streamlining in accordance with the Air District CEQA Guidelines and CEQA Guidelines Section 15183.5. The City has developed a Compliance Checklist that serves to apply the relevant Envision San José 2040 General Plan and 2030 GHGRS policies through a streamlined review process for proposed new development projects that are subject to discretionary review and that trigger environmental review under CEQA.

4.6.3 Environmental Checklist and Discussion of Impacts

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
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?	☐	☐	☒	☐

4.6.4 Impact Discussion

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? (*Less Than Significant Impact*)

GHG emissions worldwide cumulatively contribute to the significant adverse environmental impacts of global climate change. No single project could generate sufficient GHG emissions on its own to noticeably change the global average temperature. The combination of GHG emissions from past, present, and future

projects in San José, the state of California, across the nation, and around the world contribute cumulatively to the phenomenon of global climate change and its associated environmental impacts.

Construction Impacts

The Project proposes to install a municipal groundwater well and above ground facilities.

The combustion of diesel fuel in equipment used for construction activities would generate GHGs. GHG emissions would also be generated from construction vehicle trips including worker commute, material and equipment delivery and haul truck trips. Construction GHG emissions associated with the Project were estimated using CalEEMod and Project-specific information such as the construction schedule and phasing; types, number, and horsepower rating of construction equipment used; their daily usage in terms of hours per day, and the number of construction vehicle trips over the construction period. **Appendix A** contains the data and assumptions used to estimate the construction-phase GHG emissions that would be associated with the Project.

Table 4.6-1 shows the GHG emissions estimated to be generated by construction activities associated with the Project. As shown in the table, Project construction would generate a total of approximately 187 $MTCO_2e$ over the 26-month construction period from September 2027 to October 2029. The Air District has neither adopted nor recommended GHG thresholds for construction emissions in their CEQA Air Quality Guidelines. Instead, it recommends that a determination of the significance of a project's construction emission impacts be made in relation to meeting the State's GHG reduction goals, as described below under checklist discussion b). Appendix A contains CalEEMod outputs that provide construction GHG estimates.

TABLE 4.6-1
TOTAL ESTIMATED GHG EMISSIONS FROM CONSTRUCTION

Emissions	GHG Emissions ($MTCO_2e$)
2027	29.8
2028	38.3
2029	118.8
Project Total	**187**

Source: Appendix A.

Operation Impacts

Operation of the Evergreen well would require routine weekly visits by facility operators to check pumps and treatment equipment and monitor performance. These regular maintenance activities would be performed by City staff and would not require any new additional staff for operations and maintenance. These maintenance trips would generate very minimal GHG emissions and have not been quantified. There would be no permanent generators on site; portable generators would be used during power outages.

GHG emissions would be generated indirectly from the use of electricity to pump water from the wells. The total annual power requirement to operate the well 70,000 kilowatt hours per year. Indirect GHG emissions generated by the Project's use of electricity from PG&E electrical grid were estimated using an

emission factor of 16 pounds of CO_2e per MWh of delivered electricity based on data from the 2024 PG&E power content label for the base plan (PG&E, 2026). It is estimated that electricity use associated with operation of the Project would generate less than 1 $MTCO_2e$ per year.

For all projects that are not stationary sources, the Air District no longer recommends a mass emissions significance threshold for operational GHG emissions. However, given the minimal operational emissions generated by the Project, it would not be considered significant. This would be a **less-than-significant** impact.

b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases? (*Less Than Significant Impact*)

Construction and Operation Impacts

The Project would generate GHG emissions primarily from construction equipment and construction-related vehicle trips. Neither CARB nor the Air District considers construction emissions to be substantial contributors to long-term GHG emissions or significant impediments to achieving State GHG reduction goals. Instead, State and regional climate action planning focuses on reducing emissions from operational sources, particularly building energy use and transportation, where the greatest and most durable reductions can be achieved.

CARB's 2022 Scoping Plan identifies transportation electrification, vehicle miles traveled (VMT) reduction, and building decarbonization as priority strategies for local government climate action. The Project does not include the construction of new buildings and would not generate a substantial number of vehicle trips; therefore, it would not be subject to or in conflict with these strategies.

The 2022 Scoping Plan includes one strategy applicable to construction activities—progressive electrification of construction equipment, with a target that 25 percent of construction energy use be powered by electricity by 2030, increasing to 75 percent by 2045. However, the feasibility of meeting this strategy depends on the availability of compliant electric construction equipment resulting from statewide regulatory actions targeting equipment manufacturers and fleet owners. As such, this strategy cannot be directly implemented at the individual project level. Additionally, Project construction would be completed prior to the interim 2030 electrification target.

Based on the limited and temporary nature of construction emissions, the absence of long-term operational GHG sources, and consistency with the intent of State climate planning frameworks, the Project would not conflict with applicable plans, policies, or regulations adopted for the purpose of reducing GHG emissions and would not impede progress toward the State's long-term climate goals.

The City's 2030 GHGRS meets the recommended considerations outlined in CEQA Guidelines Section 15064.4 and the recent standards for "qualified plans" as set forth by the Air District. The GHGRS provides environmental clearance for GHG impacts of proposed development as per the Air District CEQA Guidelines and CEQA Guidelines Section 15183.5.

The 2030 GHGRS presents the City's comprehensive path to reduce GHG emissions to achieve the California's 2030 reduction target, based on SB 32 and serves as the City's qualified climate action plan in compliance with CEQA. The 2030 GHGRS leverages other important City plans and policies; including

the Envision San José 2040 General Plan, Climate Smart San José, and the City Municipal Code in identifying reductions strategies that achieve the City's target. As described in the 2030 GHGRS, these GHG reductions will occur through a combination of City initiatives in various plans and policies and will provide reductions from both existing and new developments. The City has developed a Compliance Checklist (checklist) specifically applicable to proposed discretionary projects that require environmental review pursuant to CEQA. The checklist forms a critical implementation tool in the City's overall strategy to reduce GHG emissions. Implementation of applicable reduction actions in new development projects will help the City achieve incremental reductions toward its target. Per the 2030 GHGRS, the City will monitor strategy implementation and make updates, as necessary, to maintain an appropriate trajectory to the 2030 GHG target. Pursuant to CEQA Guidelines Sections 15064(h)(3), 15130(d), and 15183(b), a project's incremental contribution to a cumulative GHG emissions effect may be determined not to be cumulatively considerable if it complies with the requirements of the GHGRS.

As part of the checklist, projects are required to establish consistency with the Envision San José 2040 General Plan policies and GHG reduction strategies. Relevant policies from the Envision San José 2040 General Plan included in the checklist relate to land use & design, transportation, green building, and water conservation. The Project would be consistent with the Land Use/Transportation assumptions in the Envision San José 2040 General Plan and would not require a change in land use designation. Other policies in the checklist address transportation, green building and water conservation in buildings. These policies would not apply to the Project as it would generate very few operational trips and would not construct buildings or structures that would consume energy or water. Therefore, the Project would be consistent with the Envision San José 2040 General Plan. Of the GHG reduction strategies in the checklist, only the measure to exceed the City's construction & demolition waste diversion requirement would apply to the Project in support of GHG reduction strategy 5. As required by the City's Construction and Demolition Waste Diversion Program (further described in Section 4.11, *Utilities and Service Systems*), consistent with Envision San José 2040 General Plan Policy MS-5.6, the Project would transport all construction and demolition debris to a City-certified waste diversion facility to reduce construction and demolition debris. All processing facilities are mandated to divert 75 percent of incoming materials, consistent with the City's requirement and exceeding CALGreen's diversion requirement. Therefore, the Project would support the City's GHG reduction strategy 5 to achieve its zero-waste goal. As the Project would be consistent with both the Envision San José 2040 General Plan policies and GHG reduction strategies, it would not be considered to conflict with applicable plans, policies or regulations adopted for the purpose of reducing the emissions of GHG emissions. This impact would be **less than significant**.

4.6.5 References

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4.7 Hazards and Hazardous Materials

4.7.1 Environmental Setting

A hazardous material is defined as any material that, because of quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment (Health and Safety Code §25501(o)). The term "hazardous materials" refers to both hazardous substances and hazardous wastes. Under federal and state laws, any material, including wastes, may be considered hazardous if it is specifically listed by statute as such or if it is toxic (causes adverse human health effects), ignitable (has the ability to burn), corrosive (causes severe burns or damage to materials), or reactive (causes explosions or generates toxic gases).

Hazardous wastes are hazardous materials that no longer have practical use, such as materials that have been spent, discarded, discharged, spilled, contaminated, or are being stored until they can be disposed of properly (22 Cal. Code Regs. §66261.10). Soil that is excavated from a site containing hazardous materials is a hazardous waste if it exceeds specific regulatory criteria (22 Cal. Code Regs. §§66261.20-66261.24). While hazardous substances are regulated by multiple agencies, as described below, cleanup requirements of hazardous wastes are determined on a case-by-case basis according to the agency with lead jurisdiction over the release.

Potential Receptors/Exposure

The sensitivity of potential receptors in areas of known or potential hazardous materials contamination depends on several factors. The primary factor is the potential pathway for human exposure. Exposure pathways include dermal exposure, inhalation, and ingestion of contaminated soil, air, water, or food. The magnitude, frequency, and duration of human exposure can cause a variety of health effects, from short-term acute symptoms to long-term chronic effects, depending on the specific material.

Hazardous Materials Sites List

In California, pursuant to Government Code Section 65962.5, information from numerous federal, state, and local agencies' regulatory databases that list hazardous materials sites is consolidated in the "Cortese List." The Cortese List is available on the California Environmental Protection Agency website[26] and compiles data from the following sources:

- Hazardous waste and substances sites, from the California Department of Toxic Substances Control (DTSC) EnviroStor database;[27]
- Leaking underground storage tank sites by county and fiscal year, from the Water Board GeoTracker database;[28]

[26] The Cortese List is located on the California Environmental Protection Agency's website at www.calepa.ca.gov/sitecleanup/corteselist.

[27] EnviroStor is DTSC's data management system for tracking cleanup, permitting, enforcement, and investigation efforts at hazardous waste facilities and sites with known contamination or sites where there may be reasons to investigate further (DTSC, 2026).

[28] GeoTracker is the Water Board's data management system for sites that affect, or have the potential to affect, water quality in California, with emphasis on groundwater. GeoTracker contains records for sites that require cleanup, and for various unregulated projects and permitted facilities: irrigated lands, oil and gas production, operating permitted underground storage tanks, and land disposal sites (Water Board, 2026).

- Solid waste disposal sites with waste constituents above hazardous waste levels outside the waste management unit, as identified by the Water Board;
- "Active" cease and desist orders and cleanup and abatement orders from the Water Board; and
- Hazardous waste facilities subject to corrective action under Health and Safety Code Section 25187.5, as identified by DTSC and listed on its EnviroStor database.

These databases identify sites with suspected and confirmed releases of hazardous materials to soil or groundwater. Closed, inactive, and "no further action" sites are not considered because their status means that they have been cleaned up to the satisfaction of regulatory agencies and are unlikely to affect surrounding areas.

An independent review of the EnviroStor and GeoTracker hazardous materials databases indicates the Project site is not identified on any of these lists (Water Board, 2026; DTSC, 2026; CalEPA, 2026). The review identified a former nursery at 3027 Calais de los Flores at Nieman Boulevard, about 600 feet east southeast of the Project site, where residual DDT-related[29] pesticide compounds were identified in soil, and the case was referred to the Regional Water Quality Control Board (RWQCB) in 1994 for further evaluation. The site's evaluation-level status remains unchanged, with no active oversight or documentation of ongoing releases (Water Board, 2026; DTSC, 2026). Note that the former nursery operations did not extend to or adjacent to the Project site.

Onsite Sources of Contamination

As noted above, the Project site is not identified on the Cortese List. However, a search of aerial photographs indicates that the Project site was an orchard from as early as 1948 to at least 1968. Persistent organochlorine pesticides such as DDT, chlordane, and dieldrin were used during this period of time until the U.S. EPA ban on their use in the late 1970s.

Proximity to Schools

George V. LeyVa Middle School is located about 880 feet west southwest of the Project site.

Proximity to Airports

The Project site is located approximately one mile south southeast of the Reid-Hillview County Airport.

Emergency Plans

Santa Clara County has developed an Emergency Operations Plan that establishes emergency organization, assigns tasks, specifies policies and general procedures, and provides for coordination of response in the event of an emergency (County of Santa Clara, 2025).

Wildfire

Based on fire hazard mapping by the California Department of Forestry and Fire Protection's Forest Resources Assessment Program, the Fire Hazard Severity Zones (FHSZs) map in the Local Responsibility Areas (LRAs) for Santa Clara County shows no Very High Fire Hazard Severity Zones (VHFHSZs) on or

[29] DDT (dichlorodiphenyltrichloroethane) is a synthetic organochlorine pesticide historically used in agriculture and vector control. The U.S. EPA banned the use of DDT in the late 1970s.

adjacent to the Project site. (CAL FIRE, 2025).[30] Additionally, the Project site is not located in or adjacent to a State Responsibility Area (SRA) (CAL FIRE, 2024).

4.7.2 Regulatory Setting

Federal Laws and Regulations

The federal agencies with primary responsibility for hazardous materials management are the EPA, the U.S. OSHA, and the U.S. Department of Transportation. Major federal laws and regulations include the following:

- **Resource Conservation and Recovery Act (RCRA).** The RCRA (U.S. Code [USC] Title 42, Section 6901 et seq. [42 USC 6901]) is the principal law governing the management and disposal of hazardous materials. RCRA is considered a "cradle-to-grave" statute for hazardous wastes because it addresses all aspects of hazardous materials from creation to disposal. Federal regulations for Underground Storage Tanks (USTs) derive from the RCRA. The RCRA would be applicable to the Project because it is used to define hazardous materials.
- **Emergency Planning and Community Right-to-Know Act (EPCRA).** Authorized by Title III of the Superfund Amendments Reauthorization Act, EPCRA improved community access to information regarding chemical hazards and facilitated the development of business chemical inventories and emergency response plans. EPCRA also established reporting obligations for facilities that store or manage specified chemicals. EPCRA would be applicable to the Project because contractors would be required to prepare and implement written emergency response plans to properly manage hazardous materials during construction and respond to accidental spills.
- **Hazardous Materials Transportation Act.** The U.S. Department of Transportation, in conjunction with the EPA, is responsible for enforcing and implementing federal laws and regulations pertaining to the safe storage and transportation of hazardous materials. Regulations in Code of Federal Regulations Title 49, Sections 171–180 govern the transportation of hazardous materials, the types of materials defined as hazardous, and the marking of vehicles transporting hazardous materials. The Hazardous Materials Transportation Act (49 USC 5101) would be applicable to the Project because contractors would be required to comply with storage and transportation requirements to reduce the potential for spills.
- **Federal Motor Carrier Safety Administration regulations.** The Federal Motor Carrier Safety Administration, a part of the U.S. Department of Transportation, issues regulations (Code of Federal Regulations Title 49, Section 382) concerning highway routing of hazardous materials, hazardous materials endorsements for commercial driver's licenses, highway hazardous-material safety permits, and financial responsibility requirements for motor carriers transporting hazardous materials. These regulations would be applicable to the Project because contractors would be required to comply with storage and transportation requirements to reduce the potential for spills.
- **OSHA regulations.** OSHA is responsible for helping to ensure worker safety. OSHA regulations (29 USC 15) provide standards for safe workplaces and work practices, including those related to

[30] Wildland fire protection in California is the responsibility of either the federal, state, or local government. LRAs include incorporated cities, cultivated agricultural lands, and portions of the desert. In LRAs, fire protection is typically provided by city fire departments, fire protection districts, counties, and the California Department of Forestry and Fire Protection, which operates under contract with local governments.

the handling of hazardous materials. OSHA standards would be applicable to the Project because contractors would be required to comply with hazardous materials management and handling requirements to reduce the potential for spills.

State Laws and Regulations

The primary state agencies with jurisdiction over materials management of hazardous chemicals are the DTSC and the RWQCB. Other state agencies involved in the management of hazardous materials are the California Department of Industrial Relations, through the Cal/OSHA; the California Governor's Office of Emergency Services, which implements the California Accidental Release Prevention Program; the California Air Resources Board; Caltrans; the California Office of Environmental Health Hazard Assessment, which implements Proposition 65; and the California Department of Resources Recycling and Recovery.

Hazardous materials management laws and regulations in California include the following:

- **Hazardous Waste Control Act.** This law (California Health and Safety Code, Section 25100 et seq.), the state equivalent to the RCRA, regulates the generation, treatment, storage, and disposal of hazardous waste. This law implements the RCRA's "cradle-to-grave" waste management system in California but is more stringent in its regulation of non-RCRA wastes, spent lubricating oil, and small-quantity generators. Additionally, it includes transportation and permitting requirements and penalties for violations. The Hazardous Waste Control Act would be applicable to the Project because contractors would be required to comply with its hazardous waste requirements to reduce the potential for spills.
- **California Hazardous Materials Release Response Plans and Inventory Law of 1985 (Business Plan Act).** The Business Plan Act (California Health and Safety Code Division 20, Chapter 6.95, Article 1) requires the preparation of Hazardous Materials Business Plans (HMBPs) and the disclosure of hazardous materials inventories. The Health and Safety Code requires business and area plans related to the handling and release (or threatened release) of hazardous materials be developed to protect the public health, safety, and the environment. Local agencies are responsible for administering these regulations.

  The Business Plan Act would be applicable to the Project because contractors would be required to comply with its handling, storage, and transportation requirements for reducing the potential for spills, and to prepare an emergency response plan for accidental spills.

- **Cal/OSHA regulations.** Cal/OSHA develops and enforces workplace safety standards, helping to ensure worker safety in handling and using hazardous materials. Cal/OSHA requires many entities to prepare injury and illness prevention plans and chemical hygiene plans, among other requirements, and provides regulations to limit construction workers' exposure to hazardous materials. Cal/OSHA regulations would be applicable to the Project because contractors would be required to comply with its handling and use requirements for reducing the potential for spills and to prepare an emergency response plan for accidental spills.

Certified Unified Program Agencies Program

In 1993, the California Legislature enacted Senate Bill 1082 to streamline the permitting process for businesses that use, store, or manufacture hazardous materials. This legislation established the designation of a Certified Unified Program Agencies Program (CUPA) to oversee the permitting process and collection

of fees. The CUPA is responsible for the local implementation of the Unified Program, which serves to consolidate, coordinate, and standardized administrative requirements, permits, inspections, and enforcement activities for the following environmental and emergency management programs:

- HMBPs and Inventories;
- California Accidental Release Prevention Program;
- Underground Storage Tank Program;
- Aboveground Petroleum Storage Act Requirements for Spill Prevention, Control, and Countermeasure Plans;
- Hazardous Waste Generator and Onsite Hazardous Waste Treatment (tiered permitting) Programs; and
- California Uniform Fire Code: Hazardous Material Management Plans and Hazardous Material Inventory Statements.

The CUPA would be applicable to the Project because it helps ensure compliance with safety and environmental regulations for handling, storage, and disposal of hazardous materials.

Local Policies and Regulations

Comprehensive Land Use Plan Santa Clara County

Based on the Santa Clara County Comprehensive Land Use Plan for the Reid-Hillview County Airport (Santa Clara County ALUC, 2020), the Project site is located approximately 1 mile southeast of the Reid-Hillview County Airport. Federal Aviation Regulations, Part 77, requires that the Federal Aviation Administration (FAA) be notified of certain proposed structures located within an extended zone defined by an imaginary slope radiating outward from an airport's runways, or which would otherwise stand at least 200 feet above ground. If such notification is required, the FAA would conduct an airspace safety review and issue a determination as to whether the Project would constitute an airspace hazard.

Envision San José 2040 General Plan

The Envision San José 2040 General Plan includes the following policies related to hazards and hazardous materials that may be applicable to the Project (City of San José, 2025):

- **EC-6.1:** Require all users and producers of hazardous materials and wastes to clearly identify and inventory the hazardous materials that they store, use or transport in conformance with local, state and federal laws, regulations and guidelines.
- **EC-6.2:** Require proper storage and use of hazardous materials and wastes to prevent leakage, potential explosions, fires, or the escape of harmful gases, and to prevent individually innocuous materials from combining to form hazardous substances, especially at the time of disposal by businesses and residences. Require proper disposal of hazardous materials and wastes at licensed facilities.
- **EC-6.10:** Promote source reduction and recycling as alternatives to hazardous materials land disposal whenever feasible.
- **EC-7.9:** Ensure coordination with the County of Santa Clara Department of Environmental Health, Regional Water Quality Control Board, Department of Toxic Substances Control or other applicable

regulatory agencies, as appropriate, on projects with contaminated soil and/or groundwater or where historical or active regulatory oversight exists.

- **EC-7.10:** Require review and approval of grading, erosion control and dust control plans prior to issuance of a grading permit by the Director of Public Works on sites with known soil contamination. Construction operations shall be conducted to limit the creation and dispersion of dust and sediment runoff.

4.7.3 Environmental Checklist and Discussion of Impacts

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

4.7.4 Impact Discussion

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? (*Less Than Significant Impact*)

Construction Impacts

Project construction could involve the routine use of small quantities of hazardous materials commonly used during drilling and construction activities, such as fuels, lubricants, paints, thinners, and degreasers. Storage and use of hazardous materials at the construction site could result in exposure risks to workers, the public, and the environment. However, the quantities involved would likely represent low exposure risks. All hazardous materials would be stored in consumer packaging and handled in accordance with the manufacturer's recommendations and disposed of in accordance with existing regulatory requirements. Therefore, considering the limited amount of hazardous material that would be used during construction activities, practices, and procedures that require adherence to existing regulatory requirements for hazardous

materials, the potential for the Project to create a significant hazard to the public or the environment from the routine use, transport, and disposal of hazardous materials during construction would be **less than significant**.

Operation Impacts

Project operation would not involve routine use of hazardous materials, only very minor use that could be associated with relatively infrequent maintenance activities. No hazardous materials would be stored at the Project site. There would be a **less-than-significant** impact related to the regular transport or use of hazardous materials during Project operation.

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment? (*Less Than Significant Impact with Mitigation*)

Construction Impacts

As noted above, the Project would use only small quantities of hazardous materials during construction. The types of hazardous materials required during construction would primarily be in consumer quantities that would not have the potential for substantial exposure risks. However, the Project site has a history of use as an orchard during the time period when persistent and toxic organochlorine pesticides such as DDT, chlordane, and dieldrin were in use. Consequently, soil at the Project site may contain residual levels of pesticides. If not handled appropriately during construction, these soils could represent potential exposure risks. However, implementation of **Mitigation Measure HAZ-1: Soil Management Plan** would be required to reduce or eliminate exposure risks to human health and the environment, specifically potential risks associated with the presence of contaminated soils and construction worker health.

Impact HAZ-1: Development of the Project could create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials or through reasonably foreseeable upset and accidental conditions involving the release of hazardous materials into the environment.

Mitigation Measure HAZ-1: Soil Management Plan.

Prior to the issuance of any demolition or grading permit, or any ground disturbing activities, the City shall contract with a qualified environmental contractor to prepare a Soil Management Plan (SMP) identify protocols for identifying, handling, and characterizing suspect contaminated soils, as summarized below:

- Site description, including the hazardous materials that may be encountered.
- Roles and responsibilities of onsite workers, supervisors.
- Training for site workers focused on the recognition of and response to encountering hazardous materials.
- Protocols for the materials testing, handling, removing, transporting, and disposing of all excavated materials in a safe, appropriate, and lawful manner.
- In the event that hazardous materials are encountered, reporting requirement to the local regulatory agency with jurisdiction, documenting that site activities were conducted in accordance with the SMP.

Given the historical use of the Project site as an orchard, excavated soils shall be tested for the presence of organochlorine pesticides, along with any other chemical parameters required by the landfill proposed for accepting the soil. The SMP shall be provided to the Director of Planning, Building, and Code Enforcement or the Director's Designee, and the Environmental Compliance Officer in the City of San José's Environmental Services Department, and implemented accordingly. With implementation of Mitigation Measure HAZ-1, the potential impact from construction and operation at the Project site would be reduced to **less than significant**.

Operation Impacts

There would be no hazardous materials stored at the Project site during operation, and therefore, there would be **no impact**.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? (*Less Than Significant Impact*)

Construction Impacts

George V. LeyVa Middle School is located within a quarter mile (about 500 feet) west of the Project site. However, as discussed in criteria a) and b) above, the Project would use only small quantities of hazardous materials during construction. The types of hazardous materials required during construction would primarily be in consumer quantities that would not have the potential for substantial exposure risks. In addition, the school is not located on Capitol Expressway, which would be the route construction vehicles would take from the Project site. Therefore, the potential for adverse effects related to accidental release during construction would be **less than significant**.

Operation Impacts

There would be no hazardous materials stored at the Project site during operation, and therefore, there would be **no impact**.

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment? (*No Impact*)

Construction and Operation Impacts

The Project site is not located on or adjacent to any site listed on Government Code Section 65962.5. Therefore, there would be **no impact**.

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? (*Less than Significant Impact*)

Construction and Operation Impacts

The Project site is located about one mile south southeast of the Reid-Hillview County Airport. However, due to the above ground heights of the proposed structures, the Project does not require notification to the FAA for airspace safety review, and therefore would not conflict with any height or safety policies of the

Santa Clara County Airport Land Use Commission (ALUC). Therefore, potential safety hazard impacts related to proximity of a public airport, would be **less than significant**.

f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? (*No Impact*)

Construction and Operation Impacts

Santa Clara County does not have an adopted emergency response plan or emergency evacuation plan that designates specific emergency response or evacuation routes within the Project area. In addition, all work would be conducted on the Project site and would not interfere with traffic on Capitol Expressway. Therefore, **no impact** would occur.

g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires? (*Less than Significant Impact*)

Construction and Operation Impacts

The Project site is not within a high fire hazard area and, in the unlikely event of a fire, the potential to expose people or structures to a significant risk involving fires is low. The use of construction equipment and the possible temporary on site storage of fuels and/or other flammable construction chemicals could pose an increased fire risk resulting in injury to workers or the public during construction. However, contractors would be required to comply with hazardous materials storage and fire protection regulations, which would reduce the potential for fire creation. Compliance with existing safety regulations and widely-accepted industry standards would reduce the hazard to the public and the environment. The local fire agency would be responsible for enforcing the provisions of the fire code. Therefore, this impact would be **less than significant**.

4.7.5 References

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4.8 Hydrology and Water Quality

4.8.1 Environmental Setting

The Project area is located in the southern San Francisco Bay Area, which experiences a Mediterranean climate characterized by mild, wet winters and dry, warm summers. Precipitation averages approximately 13 inches per year and falls mostly between January and February (U.S. Climate, 2026).

The nearest surface water to the Project area is Thompson Creek to the east and Lower Silver Creek to the west, with the Project site located approximately equidistant (approximately 0.3 mile) from both drainages. Both Thompson Creek and Lower Silver Creek flow northward through eastern San José. Thompson Creek flows north and joins Lower Silver Creek, and Lower Silver Creek continues northwest until it discharges into Coyote Creek. From this confluence, Coyote Creek flows north to the San Francisco Bay. According to the 2021 Valley Water Groundwater Management Plan (GWMP), the Project site is outside of areas of known or suspected surface water/groundwater interaction (Valley Water, 2021).

The Project overlies the Santa Clara Groundwater Subbasin (Department of Water Resources [DWR] Basin 2-9.02) and specifically within the Santa Clara Plain groundwater management area. Groundwater in this area is characterized as confined, meaning there is an overlying layer of relatively impermeable deposits that make vertical movement of water across the confining layer negligible. Groundwater in the subbasin is generally recharged in upland areas and flows toward the Bay. Water supplies in the groundwater basin are provided by a combination of groundwater, treated water, imported water from the SFPUC, surface water supplies, and recycled water (Valley Water, 2021).

Groundwater is reportedly first encountered at a depth of 20 to 30 feet below ground surface in the vicinity of the Project site (Valley Water, 2026).

Valley Water is the Groundwater Sustainability Agency[31] for the entire Santa Clara Groundwater Subbasin and prepared the 2021 GWMP that describes basin conditions, sustainability goals, strategies, programs, and outcome measures for the subbasin. The GWMP was adopted by Valley Water's Board of Directors in November 2021. The GWMP recognizes Valley Water's extensive water management infrastructure, including groundwater pumping and recharge facilities, reviews historic groundwater levels and land subsidence, identifies subbasins, and outlines a series of sustainability goals and strategies, basin management programs and activities, and targeted outcome measures relevant to groundwater management as a resource in the Valley Water's service area. One of the targeted outcome measures of the GWMP is to ensure that, on an annual basis, the projected end of year total groundwater storage is greater than 278,000 acre-feet (AF) for the Santa Clara Plain (Valley Water, 2021). This outcome measure was met in 2025, with an end of water year groundwater storage of 365,600 AF (Valley Water, 2026). Countywide groundwater storage increased by 6,500 AF in calendar year 2025 because groundwater inflows (151,800 AF) exceeded groundwater outflows (145,300 AF) (Valley Water, 2026).

[31] In accordance with the Sustainable Groundwater Management Act (SGMA), groundwater basins that have been identified as medium to high priority must form a Sustainable Groundwater Agency that is responsible for preparing a Sustainable Groundwater Management Plan to meet the requirements of SGMA.

Demand for water in the Evergreen service area is currently met by water from Valley Water and supplemented by groundwater; however, the current wells are used relatively sparingly and for reliability. Projected Santa Clara County water demands are expected to increase from 330,000 AF in 2025 to 345,000 AF in 2045 (Valley Water, 2021).

The Project site is currently served by existing stormwater drainage infrastructure. The Project site is located outside both the 100-year and the 500-year flood zone area, defined by the Federal Emergency Management Agency (FEMA) (FEMA, 2009).

4.8.2 Regulatory Setting

Federal Laws and Regulations

Clean Water Act

In 1972, the federal Clean Water Act (CWA) established the basic structure for regulating discharges of pollutants into waters of the United States and gave the U.S. EPA the authority to implement pollution control programs. The CWA sets water quality standards for contaminants in surface waters. The statute incorporates a variety of regulatory and non-regulatory tools to reduce direct pollutant discharges into waterways, to finance municipal wastewater treatment facilities, and to manage polluted runoff.

The federal CWA and subsequent amendments, under the enforcement authority of the EPA, were enacted "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." The purpose of the CWA is to protect and maintain the quality and integrity of the nation's waters by requiring states to develop and implement state water plans and policies. The CWA gave the EPA the authority to implement pollution control programs, such as setting wastewater standards for industry. The CWA also sets water quality standards for surface waters through various sections of the CWA, including Sections 401, 404, and 303(d), that are implemented and regulated by the Water Board and the nine RWQCBs. This is applicable to the Project because construction activities and onsite storage and use of chemicals could pollute surface water and/or groundwater due to spills or inundation at the site if excessive runoff off of contaminated water occurs.

Clean Water Act Section 402

The 1972 amendments to the Federal Water Pollution Control Act established the National Pollutant Discharge Elimination System (NPDES) program to control discharges of pollutants from point-sources (Section 402). The 1987 amendments to the CWA created a new section of the law devoted to stormwater permitting (Section 402[p]). In California, the Water Board and the nine RWQCBs implement and enforce the NPDES program (Water Board, 2025). The NPDES is the primary federal program that regulates point-source and non-point-source discharges to waters of the United States. The Water Board issues both general and individual NPDES permits for discharges to surface waters, for both point-source and non-point-source discharges related to construction and operation activities. These controls apply to sanitary wastewater, industrial wastewater, and stormwater generated during construction activities and operations. This regulation is applicable to the Project because construction activities and onsite storage and use of chemicals could pollute surface water or groundwater due to spills or inundation at the site if a flood occurs.

State Laws and Regulations

Porter-Cologne Water Quality Control Act

The State of California's Porter-Cologne Water Quality Control Act (Porter-Cologne Act) provides the basis for water quality regulation within California and assigns primary responsibility for the protection and enhancement of water quality to the Water Board and the nine RWQCBs. Under the Porter-Cologne Act, the SWRCB and RWQCBs also have the responsibility for granting NPDES permits and Waste Discharge Requirements (WDRs) for certain point-source and non-point discharges to waters.

The Porter-Cologne Act allows the California SWRCB to adopt statewide Water Quality Control Plans and basin-specific water quality control plans, which serve as the legal, technical, and programmatic basis of water quality regulation statewide or for a particular region. The water quality control plans limit impacts on water quality from a variety of sources. The Project would be required to comply with water quality standards and discharge requirements under the Porter-Cologne Act.

Water Quality Control Plan for the San Francisco Bay Basin

The San Francisco Bay RWQCB regulates water quality in accordance with the Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) (San Francisco Bay RWQCB, 2023). The Basin Plan lists the beneficial uses that the San Francisco Bay RWQCB has identified for local aquifers, streams, marshes, rivers, and the San Francisco Bay, as well as the water quality objectives and criteria that must be met to protect these uses. The San Francisco Bay RWQCB implements the Basin Plan by issuing and enforcing waste discharge requirements, including permits for non-point-sources, such as the urban runoff discharged by a city's stormwater drainage system. The Basin Plan also describes watershed management programs and water quality attainment strategies. The Project would be required to adhere to the waste discharge requirements enforced under the Basin Plan.

Municipal Regional Stormwater NPDES Permit

In 2022, the San Francisco Bay RWQCB re-issued the Municipal Regional Stormwater NPDES Permit (MRP), Order No. R2-2022-0018, to regulate stormwater discharges from municipal separate storm sewer systems from municipalities and local agencies in Alameda, Contra Costa, San Mateo, and Santa Clara counties, plus the cities of Fairfield, Suisun City, and Vallejo. The MRP requires these permittees to enact pollution prevention and control actions and pollutant impact assessments to comply with applicable total maximum daily loads (TMDLs) and other water quality objectives identified in the Basin Plan (San Francisco Bay RWQCB, 2022).

Permittees are required to implement best management practices to the standard defined as the maximum extent practicable to minimize the extent of pollutants entrained in stormwater. The San Francisco Bay RWQCB also requires actions to protect the water quality of receiving waters. Annual reports must be submitted by co-permittees, documenting compliance with applicable elements of the MRP.

Section C.6 of the MRP requires construction site inspection and control programs at all construction sites to prevent construction site discharges of pollutants into storm drains. Permittees have the legal authority to oversee, inspect, and require compliance at construction sites with regard to effective erosion control, run-on and runoff control, sediment control, active treatment systems, good site management, and non-

stormwater management. This regulation is applicable to the Project because construction activities would generate stormwater runoff with potential pollutants that could discharge to the municipal storm drain system.

Sustainable Groundwater Management Act

SGMA empowers local agencies to manage groundwater sustainably and permits limited state intervention when necessary to protect groundwater resources. SGMA defines sustainable groundwater management, establishes a framework for local agencies to develop plans and implement strategies for sustainable groundwater resources, prioritizes groundwater basins with major sustainability challenges (ranked as high and medium priority), and sets a 20-year timeline for implementation. The initial basin prioritization under SGMA was based on the prioritization conducted by DWR in 2014 under the California Statewide Groundwater Elevation Monitoring program. SGMA requires the establishment of a groundwater sustainability agency to develop and implement a groundwater sustainability plan. Each groundwater sustainability plan aims to manage and use groundwater during the planning and implementation horizon without causing "undesirable results," which are defined as follows:

- Chronic lowering of groundwater levels indicating a significant and unreasonable depletion of supply.
- Significant and unreasonable reduction of groundwater storage.
- Significant and unreasonable seawater intrusion.
- Significant and unreasonable degraded water quality, including the migration of contaminant plumes that impair water supplies.
- Significant and unreasonable land subsidence that substantially interferes with surface land uses.
- Depletions of interconnected surface water that have significant and unreasonable adverse impacts on beneficial uses of the surface water.

In basins designated by DWR as medium or high priority, local public agencies and groundwater sustainability agencies are required to develop and implement a groundwater sustainability plan or an alternative plan. DWR identified the Santa Clara and Llagas subbasins as high priority, but not critically over-drafted basins (Valley Water, 2021). Valley Water is the groundwater sustainability agency for the Santa Clara Groundwater Basin, including the Santa Clara Subbasin where the Project would be located. The GWMP for the Santa Clara and Llagas subbasins is the groundwater management plan applicable to the Project area, as described in "Local Policies and Regulations."

Local Policies and Regulations

Santa Clara Valley Urban Runoff Pollution Prevention Program

The Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP) is a regional program implemented by Santa Clara County, local municipalities, and Valley Water to reduce pollutants in stormwater runoff and protect receiving water quality. The program supports compliance with the MRP by requiring participating agencies to implement measures such as construction site controls, stormwater inspections, and source control BMPs. These measures are designed to minimize pollutant discharges from construction activities, municipal operations, and developed areas. This regulation is applicable to the Project because construction activities could generate stormwater runoff containing pollutants, requiring implementation of BMPs and erosion control measures to protect water quality.

Valley Water 2021 Groundwater Management Plan for the Santa Clara and Llagas Subbasins

Valley Water published the 2021 GWMP for the Santa Clara and Llagas Subbasins. This plan describes Valley Water's comprehensive groundwater management framework. It includes existing and potential actions to achieve the basins' sustainability goals and to help ensure continued sustainable groundwater management. The 2021 GWMP also satisfies the SGMA's objectives (Valley Water, 2021).

Valley Water's proactive groundwater management activities have resulted in sustainable groundwater conditions in the Santa Clara and Llagas subbasins, although continued planning, investments, and coordination will be needed to address future water supply challenges. Groundwater demands are projected to increase in the future with projected growth in the county. To maintain the long-term sustainability of groundwater resources, the 2021 GWMP recommends the following actions:

1. Maintain existing conjunctive water management programs and evaluate opportunities for enhancement or increased efficiency.
2. Continue to aggressively protect groundwater quality through Valley Water's programs and collaboration with land use agencies, regulatory agencies, and basin stakeholders.
3. Continue to incorporate groundwater sustainability in Valley Water's planning efforts.
4. Maintain adequate monitoring programs and modeling tools.
5. Continue and enhance groundwater management partnerships with water retailers and land use agencies.

This regulation is applicable to the Project because construction and operation activities could affect groundwater quality and basin conditions, and therefore must be consistent with Valley Water's groundwater management objectives.

Valley Water Well Regulations

The Well Ordinance Program is responsible for issuing permits and inspecting all well construction and destruction activities in Santa Clara County. The program was initiated to help keep wells from endangering the public and to help ensure that wells do not threaten the groundwater resources of Santa Clara County. To protect groundwater resources, Valley Water Ordinance 90-1 requires permitting for any person digging, boring, drilling, deepening, refurbishing, or destroying a water well that intersects the groundwater aquifers of Santa Clara County. Valley Water regulates the construction and destruction of wells based on Valley Water's "Standards for the Construction and Destruction of Wells and Other Deep Excavations in Santa Clara County" and the "California Well Standards." This regulation is applicable to the Project because construction and operation activities could result in groundwater contamination, requiring compliance with Valley Water's permitting and well construction standards.

City of San José

Envision San José 2040 General Plan

The Envision San José 2040 General Plan includes the following goals and policies related to hydrology and water quality that may be applicable to the Project (City of San José, 2025):

- **MS-20.4:** Work with local, regional and state agencies to protect and enhance the watershed, including the protection of surface water and ground water supplies from pollution and degradation.
- **ER-8.1:** Manage stormwater runoff in compliance with the City's Post-Construction Urban Runoff (6-29) and Hydromodification Management (8-14) Policies.
- **ER-8.10:** Participate in the Santa Clara Valley Urban Runoff Pollution Prevention Program (SVURPPP) and take other necessary actions to formulate and meet regional water quality standards which are implemented through the NPDES permits and other measures.
- **ER-9: Water Resources.** Protect water resources because they are vital to the ecological and economic health of the region and its residents.
- **ER-9.1:** In consultation with Valley Water, other public agencies, and the Valley Water's Water Resources Protection Guidelines and Standards (2006 or as amended), restrict or carefully regulate public and private development in streamside areas so as to protect and preserve the health, function and stability of streams and stream corridors.
- **ER-9.3:** Utilize water resources in a manner that does not deplete the supply of surface or groundwater or cause overdrafting of the underground water basin.
- **EC-5.2:** Allow development only when adequate mitigation measures are incorporated into the project design to prevent or minimize siltation of streams, flood protection ponds, and reservoirs.
- **EC-5.16:** Implement the Post-Construction Urban Runoff Management requirements of the City's Municipal NPDES Permit to reduce urban runoff from project sites.
- **IN-3.10:** Incorporate appropriate stormwater treatment measures in development projects to achieve stormwater quality and quantity standards and objectives in compliance with the City's NPDES permit.

City of San José Post-Construction Urban Runoff Management Policy

The purpose of the City's Post-Construction Urban Runoff Management Policy (6-29) is to establish requirements to minimize and treat stormwater runoff from new development and re-development projects, pursuant to the Municipal Regional Permit. *Re-development* is development on previously developed properties. Policy 6-29 requires projects to manage stormwater based on the proposed land use and amount of impervious surface area being created and/or replaced by a project. Provisions vary in accordance with Municipal Regional Permit project types and incorporate requirements for certain Land Uses of Concern that involve outdoor handling and/or storage of material with the potential to contaminate stormwater runoff (City of San José, 2011). Policy 6-29 regulates the following that may be applicable to the Project:

> **All Development Projects:** Site Design and Source Control Measures are encouraged. All new and redevelopment projects regardless of size and land use are encouraged to incorporate site design and pollutant source control practices in a manner consistent with the strategies set forth in this Policy. Pollution prevention measures shall be incorporated into development plans and maintained in perpetuity once constructed.
>
> Policy 6-29 establishes the following three primary strategies to manage stormwater runoff:
>
> (1) Minimize Runoff through Site Design (Quantity Control);
>
> (2) Prevent Polluted Runoff with Source Control; and
>
> (3) Treat Stormwater with Low Impact Development.

City of San José Grading Ordinance

The City's Grading Ordinance requires implementation of erosion and sediment control measures to prevent soil erosion and the discharge of pollutants during construction activities. The ordinance requires preparation and approval of an erosion control plan for grading activities, particularly during the rainy season, to ensure that best management practices are implemented to protect water quality. This regulation is applicable to the Project because construction activities would involve ground disturbance that could result in erosion and sediment runoff, requiring implementation of erosion and sediment control measures to minimize water quality impacts.

4.8.3 Environmental Checklist and Discussion of Impacts

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
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 offsite;	☐	☐	☒	☐
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?	☐	☐	☒	☐

4.8.4 Impact Discussion

a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality? (*Less Than Significant Impact*)

Construction Impacts

Project construction activities would include the use of heavy equipment, such as a drill rig and tractors/loaders/backhoes. The use of these types of machinery within the Project site would disturb surface sediments and could result in the release of sediment and other water quality pollutants to natural waters. Potential pollutants associated with the use of construction equipment could include, but would not be limited to, spilled fuels, oil, lubricants, antifreeze, drilling fluids or hydraulic fluid. During storm events, these potential pollutants, including sediment, could become entrained in stormwater runoff, and

be transported into nearby drainage systems or in some cases, directly into natural waterways located near the Project site.

Project construction would also include production of drilling fluids and initial development water (water initially extracted from the well to clear excess fine grained sediments) that would be disposed of to the sanitary sewer. Prior to discharging to the sanitary sewer, fluids would be directed through a series of two filter tanks to allow solids to settle out. Upon completion of well construction and prior to finalizing connections to water distribution systems, the newly installed distribution pipelines would be flushed and disinfected. This water would then be discharged to the existing storm drain system in accordance with regulatory storm discharge requirements.

Drainage from the Project site eventually discharges into the San Francisco Bay. Therefore, discharges from construction activities could result in the degradation of water quality within the San Francisco Bay, as well as other tributaries that receive storm water from the Project site – namely, Thompson Creek and Lower Silver Creek. Degradation of water quality along these waterways could in turn affect beneficial use, and could result in exceedance of San Francisco Bay RWQCB standards.

The maximum ground disturbance for the Project site would be less than one acre and would therefore not be required to comply with the NPDES General Construction Permit. The Project would be required to comply with the City of San José's standard conditions including mandatory compliance with **SPC HYD-1: Construction-related Water Quality**, which would help to reduce track-out upon City streets that could otherwise contribute silt, mud, or sediment into the storm drains and receiving waters. SPC HYD-1 also contains provisions for revegetating the site, which supports similar water quality objectives. The City would be bound to comply with applicable BMPs consistent with the MRP and the City's requirements including City Council Policy 6-29.

SPC HYD-1 Construction-related Water Quality.

Construction-related water quality measures shall include the following:

- Burlap bags filled with drain rock shall be installed around storm drains to route sediment and other debris away from the drains.
- Earthmoving or other dust-producing activities shall be suspended during periods of high winds.
- All exposed or disturbed soil surfaces shall be watered at least twice daily to control dust as necessary.
- Stockpiles of soil or other materials that can be blown by the wind shall be watered or covered.
- All trucks hauling soil, sand, and other loose materials shall be covered and all trucks shall maintain at least two feet of freeboard.
- All paved access roads, parking areas, staging areas and residential streets adjacent to the construction sites shall be swept daily (with water sweepers).
- Vegetation in disturbed areas shall be replanted as quickly as possible.
- All unpaved entrances to the site shall be filled with rock to remove mud from tires prior to entering City streets. A tire wash system shall be installed if requested by the City.

- The permittee shall comply with the City of San José Grading Ordinance, including implementing erosion and dust control during site preparation and with the City of San José Zoning Ordinance requirements for keeping adjacent streets free of dirt and mud during construction.

The City's Grading Ordinance requires the use of erosion and sediment controls to protect water quality while the site is under construction. Prior to the issuance of a permit for grading activity occurring during the rainy season (October 1st to April 30), the Project would submit to the Director of Public Works an Erosion Control Plan detailing BMPs that would prevent the discharge of stormwater pollutants.

Due to the size of new impervious surfaces created by the Project (0.15 acre or approximately 6,534 square feet) and the project type, the Project would be considered a "regulated project" under Section C.3 of the MRP. Regulated projects are required to implement source control, site design, and stormwater treatment requirements, including treatment of 100 percent of the amount of runoff calculated pursuant to MRP Section C. 3. d, with low-impact development treatment measures onsite (such as encouraging infiltration). Given the area of the new impervious surface that would be created by the Project, the Project would be required to comply with MRP Section C.3.d, and the Project would include bio-retention areas, which are one method of site design used to comply with Section C.3.d of the MRP.

With the implementation of SPC HYD-1, City Council Policy 6-29, and grading ordinance requirements, which require implementation of construction BMPs, the Project's impacts related to the degradation of surface water quality during construction would be **less than significant**.

Operation Impacts

During operation of the Project, there would be no substantive change to the water quality of stormwater runoff because the Project would not result in land use changes that could represent a source of stormwater pollutants. The Project would be required to meet the water supply well standards of Valley Water, which include minimum annular seal depths, required methods for well sealing, and minimum horizontal separation distances between the well and potential contaminant sources (such as sewer lines, septic tanks, or concentrated animal enclosures). To comply with Valley Water standards, water supply wells must be at least 50 feet away from any sewer line and 100 feet from septic tanks or leach fields. Compliance with Valley Water standards would avoid the creatin of hydraulic connections between potential contaminant sources and groundwater used for water supply. Therefore, operation of the proposed well would not adversely affect groundwater quality, and impacts would be **less than significant**.

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

e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan? (*Less Than Significant Impact*)

Construction and Operation Impacts

The proposed groundwater production well would be operated to extract groundwater from the Santa Clara Subbasin on an as-needed basis to supplement potable water supply reliability within the Evergreen service area. Currently, Valley Water supplies are meeting demand; however, projected growth within the SJMWS service area and variability in imported water availability create conditions where supplemental

groundwater production is expected to be needed to maintain system reliability in future years. Therefore, the Project would provide an additional groundwater source that can be utilized when demand exceeds available imported supplies or when surface water deliveries are temporarily limited due to operational constraints, maintenance activities, or drought conditions. The well would be designed to target drawing water from lenses of coarser materials in the deeper confined aquifer at depths of greater than 300 feet below ground surface. As noted above, the Santa Clara Subbasin is currently showing stable groundwater conditions, with recent end of water year groundwater storage in the Santa Clara Plain totaling approximately 365,600 AF—well above the GWMP sustainability outcome measure of 278,000 AF. However, multi-year drought periods can reduce groundwater recharge and temporarily lower groundwater storage volumes. The combined effects of reduced recharge during drought years and intermittent pumping associated with the Project could potentially contribute to increased reliance on groundwater; however, such effects would be managed within Valley Water's existing groundwater management framework. In addition, as a groundwater management agency in accordance with SGMA, Valley Water would use available oversight measures such as managed recharge and conservation to ensure the sustainable management of the subbasin. It should also be noted that currently, Valley Water does not manage to any particular value for sustainable yield, but instead manages groundwater to maintain sustainable conditions through annual operations and long-term water supply planning. Annual operations planning considers available water supplies and projected demands in determining the source and volume of water to be delivered for managed recharge, drinking water treatment, or other use. Each year, Valley Water evaluates the projected end of year groundwater storage to determine if short-term water use reduction is needed in accordance with the Water Shortage Contingency Plan. Valley Water's long-term water supply planning efforts account for maintaining adequate groundwater supplies and reserves in related water system modeling and analysis that considers projected growth such as what the Project is designed to serve.

The Santa Clara Subbasin is not in a condition of chronic overdraft, and is currently dynamically managed by Valley Water to ensure that the subbasin remains sustainable in accordance with long standing practices as well as SGMA requirements. Valley Water has regulatory authority to implement investments, programs, and other modifications to water supply operations as needed to maintain sustainable conditions as well as management measures that can accommodate future growth. The Project would eventually result in extracting as much as approximately 2,000 gallons per minute (a maximum of approximately 3,228 AF per year if operated constantly) during operation, though the well would operate intermittently and primarily for reliability purposes rather than continuous production. The maximum amount of groundwater production would be similar to the increase in groundwater pumping in 2025 that was managed by Valley Water without adverse consequences (Valley Water, 2026). Therefore, considering the proposed volume by the Project and the regulatory oversight and management of the subbasin by Valley Water, the Project would have a **less-than-significant** impact related to groundwater supplies and sustainable management of the subbasin

As discussed above in item a), the City or its contractor would be required to comply with the San José Municipal code requirements. By implementing these requirements pollutant releases during construction would be reduced, while also ensuring compliance with the Basin Plan and Valley Water's GWMP. The proposed pumping from the Project is part of Valley Water's long-term water supply planning efforts and would be consistent with the GWMP.

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:

c.i) result in substantial erosion or siltation on- or off-site; (*Less Than Significant Impact*)

c.ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite; (*Less Than Significant Impact*)

c.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; (*Less Than Significant Impact*)

Construction Impacts

During the construction of the Project, drilling, grading, and excavation activities could result in exposure of soil to runoff, potentially causing erosion and entrainment of sediment in the runoff. If exposed soils are not managed properly and protected against stormwater flows, high sediment loads in stormwater runoff could clog drainage pipes, cause water pumps to malfunction, or otherwise decrease the carrying capacity of existing stormwater facilities or drainage channels, potentially resulting in increases in localized ponding or flooding. However, as discussed above in item a), the City or its contractor would be required to implement SPC HYD-1, City Council Policy 6-29 requirements, and the grading ordinance which requires the use of erosion and sediment controls to protect water quality while the site is under construction. Therefore, with implementation of these regulatory controls, construction impacts would be **less than significant**.

Operation Impacts

The Project would result in approximately 0.15 acre of new impervious surface. The rest of the Project site is almost entirely undeveloped. Stormwater runoff is expected to drain to the existing onsite catch basin or to Capitol Expressway, where existing stormwater infrastructure is present. Additionally, a 12-inch-diameter ductile storm lateral pipeline would be installed within a 48-inch-deep trench from the groundwater well to the storm main in Capitol Expressway. The Project would also include bio-retention areas to capture runoff from the Project site. The addition these small areas of new impervious surface would not be expected provide additional sources of runoff that could result in flooding or exceed the capacity of the existing stormwater system. Consequently, impacts associated Project operations would be **less than significant**.

c.iv) impede or redirect flood flows? (*Less Than Significant Impact*)

Construction and Operation Impacts

The Project site would be located outside both the 100-year and the 500-year flood zone areas defined by FEMA. Construction activities would be temporary and would not be anticipated to impede or redirect flood flows. Once the Project is complete, most of the proposed improvements would be located at the subsurface level. The above-ground facilities installed would be limited to a maximum 4,000-square-foot footprint of the Project site and would not likely impede or redirect flood flows. In addition, the Project would be required to comply with Section C.3.d and would include bio-retention areas to capture runoff from the Project site. Therefore, the potential impact related to flooding would be **less than significant**.

d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation? (*Less Than Significant Impact*)

Construction and Operation Impacts

As noted above, the Project site is located outside both the 100-year and the 500-year flood zone areas. The Project site is not located immediately adjacent to an enclosed water body, such that it could be affected by a seiche.[32] Additionally, the Project site is also located inland and would not be subject to tsunami[33]-related hazards. Therefore, the potential impact related to releasing pollutants from a flood, seiche or tsunami event would be **less than significant**.

4.8.5 References

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[32] Seiches are oscillations of enclosed or semi-enclosed bodies of water that result from seismic events, wind stress, volcanic eruptions, underwater landslides, and local basin reflections of tsunamis.

[33] A tsunami is a series of traveling ocean waves generated by an abrupt disturbance of the ocean surface, usually by large earthquakes.

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4.9 Noise

4.9.1 Environmental Setting

Sound is mechanical energy transmitted by pressure waves through a medium such as air. Noise can be defined as unwanted sound. Sound is characterized by various parameters that include the rate of oscillation of sound waves (frequency), the speed of propagation, and the pressure level or energy content (amplitude). In particular, the sound pressure level has become the most common descriptor used to characterize the loudness of an ambient sound level. Sound pressure level is measured in decibels (dB), with 0 dB corresponding roughly to the threshold of human hearing, and 120 to 140 dB corresponding to the threshold of pain.

Sound pressure fluctuations can be measured in units of hertz (Hz), which correspond to the frequency of a particular sound. Typically, sound does not consist of a single frequency, but rather a broad band of frequencies varying in levels of magnitude (sound power). The typical human ear is not equally sensitive to all frequencies of the audible sound spectrum. The method of frequency weighting to account for the human ear's decreased sensitivity to low and extremely high frequencies is referred to as A-weighting and is expressed in units of A-weighted decibels (dBA). All sound pressure levels and sound power levels reported below are A-weighted.

Noise Exposure and Ambient Noise

An individual's noise exposure is a measure of the noise experienced by the individual over a period of time. A noise level is a measure of noise at a given instant in time. However, noise levels rarely persist consistently over a long period of time. In fact, noise varies continuously with time with respect to the contributing sound sources of the noise environment. Noise is primarily the product of many distant noise sources, which constitute a relatively stable background noise exposure, with the individual contributors unidentifiable. Noise descriptors used to characterize environmental noise are summarized below:

L_{eq}: The equivalent sound level is used to describe noise over a specified period of time, in terms of a single numerical value.

L_{dn}: The energy average of the A-weighted sound levels occurring during a 24-hour period, and which accounts for the greater sensitivity of most people to nighttime noise by weighting noise levels at night ("penalizing" nighttime noises). Noise between 10 p.m. and seven a.m. is weighted (penalized) by adding 10 dBA to take into account the greater annoyance of nighttime noises. It is also referred to as day-night noise level (DNL).

CNEL: The Community Noise Equivalent Level (CNEL) is a 24-hour L_{eq} that adds a five dBA penalty to noise occurring during evening hours from 7:00 p.m. to 10:00 p.m., and a 10 dBA penalty to sounds occurring between the hours of 10:00 p.m. to 7:00 a.m. to account for the increased sensitivity to noise events that occur during the quiet late evening and nighttime periods.

L_{max}: The instantaneous maximum noise level measured during the measurement period of interest.

Effects of Noise on People

The effects of noise on people can be placed into three categories:

- subjective effects of annoyance, nuisance, dissatisfaction;
- interference with activities such as speech, sleep, learning; and
- physiological effects such as hearing loss or sudden startling.

Environmental noise typically produces effects in the first two categories. Workers at industrial plants often experience noise in the last category. There is no completely satisfactory way to measure the subjective effects of noise, or the corresponding reactions of annoyance and dissatisfaction. With regard to increases in A-weighted noise level, the following relationships occur (Caltrans, 2013):

- Except in carefully controlled laboratory experiments, a change of 1 dBA cannot be perceived;
- Outside of the laboratory, a 3-dBA change is considered a just-perceivable difference when the change in noise is perceived but does not cause a human response;
- A change in level of at least 5 dBA is required before any noticeable change in human response would be expected; and
- A 10-dBA change is subjectively heard as approximately a doubling in loudness and can cause an adverse response.

These relationships occur in part because of the logarithmic nature of sound and the decibel system. The human ear perceives sound in a non-linear fashion; hence, the decibel scale was developed. Because the decibel scale is based on logarithms, two noise sources do not combine in a simple additive fashion, rather they combine logarithmically. For example, if two identical noise sources produce noise levels of 50 dBA, the combined sound level would be 53 dBA, not 100 dBA.

Noise Attenuation

Sound level naturally decreases with more distance from the source. Point sources of noise, including stationary mobile sources such as idling vehicles or on-site construction equipment, attenuate (lessen) at a rate of 6.0 dBA per doubling of distance from the source. In many cases, noise attenuation from a point source increases to 7.5 dBA for each doubling of distance due to ground absorption and reflective wave canceling.

Widely distributed noises such as a street with moving vehicles (a “line” source) would typically attenuate at a lower rate of approximately 3.0 dBA for each doubling of distance between the source and the receiver. If the ground surface between source and receiver is absorptive rather than reflective, the nominal rate increases to 4.5 dBA for each doubling of distance.

Trees and vegetation, buildings, and barriers reduce the noise level that would otherwise occur at a given receptor distance. Vegetation strips, noise barriers, which include natural topography and soundwalls, reduce noise by blocking the line of sight between the source and receiver. Generally, a simple noise barrier that breaks the line of sight between source and receiver will provide at least a 5-dBA reduction in noise.

Vibration

Vibration is an oscillatory motion through a solid medium in which the motion's amplitude can be described in terms of displacement, velocity, or acceleration. There are several different methods that are used to quantify vibration. The peak particle velocity (PPV) is defined as the maximum instantaneous peak of the vibration signal and is typically expressed in units of inches per second (in/sec). The PPV is most frequently used to describe vibration impacts to buildings. The root mean square (RMS) amplitude is most frequently used to describe the effect of vibration on the human body. The RMS amplitude is defined as the average of the squared amplitude of the signal. Decibel notation (VdB) is commonly used to measure RMS. The decibel notation acts to compress the range of numbers required to describe vibration (FTA, 2018). Typically, ground-borne vibration generated by man-made activities attenuates rapidly with distance from the source of the vibration.

Some common sources of ground-borne vibration are trains, heavy trucks traveling on rough roads, and construction activities such as blasting, pile driving, and operation of heavy earth-moving equipment. The effects of ground-borne vibration include movement of the building floors, rattling of windows, shaking of items on shelves or hanging on walls, and rumbling sounds. In extreme cases, vibration can cause damage to buildings. Building damage is not a factor for most projects, with the occasional exception of blasting and pile-driving during construction. In residential areas, the background vibration velocity level is usually around 50 VdB (approximately 0.0013 in/sec PPV).

Sensitive Receptors

Noise-sensitive receptors are generally defined as locations where people reside or where the presence of unwanted sound may adversely affect people and activities at the location. Noise-sensitive receptors typically include residences, hospitals, schools, guest lodging, libraries, and certain types of passive recreational uses.

The Project site is a triangular parcel bordered by Capitol Expressway to the east, residential neighborhoods to the west and south and commercial uses (Costco Business Center) to the north. The George V Levya Middle School is located further to the west, with the nearest school buildings located approximately 880 feet from the Project site. A residential neighborhood is located to the east of Capitol Expressway. The nearest sensitive receptors to this site are the residences along Moss Hollow Drive which are located to the west and adjacent to the Project site, approximately 50 feet from the Project site.

Existing Conditions

The existing noise environment in the vicinity of the Project site is primarily influenced by vehicular traffic on Capitol Expressway. To characterize existing ambient noise conditions and establish a baseline for evaluating potential Project-related noise impacts to nearby noise-sensitive receptors, long-term and short-term noise monitoring was conducted during typical weekday conditions. Noise measurements were conducted from Thursday, April 23, 2026, through Friday, April 24, 2026, and included two 15-minute short-term (ST) measurements and one 24-hour long-term (LT) measurement. The short-term measurements were conducted during representative daytime peak hour to capture maximum traffic-related noise levels.

The measured daytime L_{eq} for the short-term measurements are shown in **Table 4.9-1**. **Table 4.9-2** presents the DNL as well as the L_{eq} over the daytime, nighttime and 24-hour periods. The noise monitoring locations are shown on **Figure 4.9-1**.

TABLE 4.9-1
SHORT-TERM AMBIENT NOISE LEVELS IN THE PROJECT SITE VICINITY

Measurement Location		Daytime Noise Level (dBA, L_{eq})	Primary Noise Sources
ST-1	Southern edge of Project site, approximately 35 feet east of the centerline of Southbound Capitol Expressway	79.5	Traffic on Capitol Expressway
ST-2	Approximately 20 feet west of Project boundary, adjacent to the sound wall of residential properties along Moss Hollow Drive.	55.4	Traffic on Capitol Expressway

Note: See Figure 4.9-1 for noise measurement locations. dBA = A-weighted decibels; L_{eq} = equivalent-continuous sound level
Source: ESA, 2026

TABLE 4.9-2
LONG-TERM AMBIENT NOISE LEVELS IN THE PROJECT SITE VICINITY

Measurement Location[a]		24-Hour L_{eq}	Day-Night Noise level (Ldn)	Noise Levels in dBA		Primary Noise Sources
				Daytime[b] hourly average, L_{eq}	Nighttime[c] hourly average, L_{eq}	
LT-1	Western edge of Project site, approximately 110 feet east of the centerline of Southbound Capitol Expressway	62.6	72.6	63.2	60.6	Traffic on Capitol Expressway

Notes: dBA = A-weighted decibels; L_{eq} = equivalent-continuous sound level
a. See Figure 4.9-1 for noise measurement locations.
a. Daytime hours are considered to be 7 a.m. to 10 p.m.
b. Nighttime hours are considered to be 10 p.m. to 7 a.m.
Source: ESA, 2026

4.9.2 Regulatory Setting

Various aspects of noise are regulated at the federal, state and local levels. Regulations and standards applicable to the Project are discussed below.

Envision San José 2040 General Plan

The Envision San José 2040 General Plan includes policies applicable to all development projects in San José (City of San José, 2025). The Envision San José 2040 General Plan's Noise Element includes land use compatibility guidelines which state that the City's normally acceptable exterior noise level is 60 dBA, DNL or less for residential and most institutional land uses. The City's standard for interior noise levels for residences, hotels, motels, and residential care facilities is 45 dBA, DNL. The exterior noise standard for outdoor recreation areas is 65 dBA, DNL (City of San José, 2025).



2024/D202401396.03 - Muni Water Evergreen Well/05 Graphics-GIS-Modeling-USE AZURE/Illustrator

SOURCE: ESA, 2026; Google Earth, 2025

Evergreen Water Production Well

Figure 4.9-1
Noise Monitoring Locations

ESA

In addition, the following Envision San José 2040 General Plan policies establish the thresholds to be used in the determination of the significance of environmental impacts related to noise and vibration.

- **EC-1.2:** Minimize the noise impacts of new development on land uses sensitive to increased noise levels [Categories 1, 2, 3 and 6] by limiting noise generation and by requiring use of noise attenuation measures such as acoustical enclosures and sound barriers, where feasible. The City considers significant noise impacts to occur if a project would:
  a. Cause the DNL at noise sensitive receptors to increase by 5 dBA DNL or more where the noise levels would remain "Normally Acceptable"; or
  b. Cause the DNL at noise sensitive receptors to increase by 3 dBA DNL or more where noise levels would equal or exceed the "Normally Acceptable" level.
- **EC-1.3:** Mitigate noise generation of new nonresidential land uses to 55 dBA DNL at the property line when located adjacent to existing or planned noise sensitive residential and public/quasi-public land uses.
- **EC-1.7:** Require construction operations within San José to use best available noise suppression devices and techniques and limit construction hours near residential uses per the City's Municipal Code. The City considers significant construction noise impacts to occur if a project located within 500 feet of residential uses or 200 feet of commercial or office uses would:
  – Involve substantial noise generating activities (such as building demolition, grading, excavation, pile driving, use of impact equipment, or building framing) continuing for more than 12 months.
- **EC-2.3:** Require new development to minimize vibration impacts to adjacent uses during demolition and construction. A vibration limit of 0.20 in/sec PPV would be used to minimize the potential for cosmetic damage at buildings of normal conventional construction.

City of San José Municipal Code

The Project would be subject to the following sections of the City Municipal Code:

- **Section 20.100.450:** Limits construction hours within 500 feet of residences to 7 AM - 7 PM weekdays, with no construction on weekends or holidays.
- **Sections 20.20.300, 20.30.700, 20.40,600, and 20.50.300:** These sections of the City's Municipal Code establish performance standards for noise exposure associated with stationary/non-transportation sources at the property line of noise-sensitive uses. Specifically, noise exposure is limited to 55 dB, 60 dB, and 70 dB at the property line of residential, commercial, and industrial receivers. Although the Code is not explicit with respect to the acoustical descriptor assigned to these noise levels, it is a reasonable interpretation that these levels may be applied to an hourly average noise level (Hourly Leq). This assumption is consistent with other jurisdictions in the Bay Area and northern California.

4.9.3 Environmental Checklist and Discussion of Impacts

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
NOISE — Would the project:				
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?	☐	☐	☒	☐

4.9.4 Impact Discussion

a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? (*Less Than Significant Impact*)

Construction Impacts

Construction is a temporary source of noise that can impact residences and businesses located near construction sites. Construction would involve use of equipment that would generate substantial noise at and adjacent to construction areas. Noise impacts from construction would depend on the type of activity being undertaken and the distance to the receptor location. Construction typically generates the highest noise levels during ground disturbance phases such as grading, excavation, drilling, and pile driving. Construction noise impacts are most severe if construction activities take place during noise-sensitive hours (early morning, evening, or nighttime hours), in areas immediately adjoining noise-sensitive land uses, and/or when construction duration lasts over extended periods of time.

Construction work for the Project would occur between 7:00am and 7:00pm Monday through Friday, except during well drilling and well installation, which would each require 24-hour construction (including weekends) over an approximately 3-week period. Impact activities such as pile driving would not be required as part of Project construction. **Table 4.9-3** shows maximum noise levels at a reference distance of 50 feet generated by construction equipment likely to be used as part of the Project. The table also includes the estimated hourly L_{eq} for each equipment based on the acoustical usage factor which accounts for the fraction of time in an hour the equipment is actually used. Use of the metric L_{eq} to assess construction noise is appropriate because L_{eq} can be used to describe noise level from the operation of each piece of equipment separately, and levels can be combined to represent the noise level from all equipment operating during a given period; noise level during an entire phase; and average noise level over all phases of the construction.

TABLE 4.9-3
NOISE FROM CONSTRUCTION EQUIPMENT

Construction Equipment	L_{max} at 50 feet (dBA)	Usage Factor (%)	L_{eq} at 50 feet (dBA)
Air Compressor	80	40	76
Auger Drill Rig	**85**	**100**	**85**
Backhoe	80	40	76
Compactor	80	20	73
Drum Mixer	80	50	77
Dump Truck	**84**	**40**	**80**
Front End Loader	80	40	76
Generator	82	50	79
Paver	85	50	82
Pump	77	100	77
Roller	85	20	78

Note: Equipment shown in **bold** are the two highest noise generating equipment likely to be used simultaneously.
Source: Federal Highway Administration (FHWA), 2017.

Consistent with the methodology recommended by the FTA (FTA, 2018), the analysis below considers simultaneous operation of the two noisiest construction equipment at the Project's construction area. Based on noise levels shown in Table 4.9-3 for construction equipment likely to be used for the Project, operation of the drill rig and the dump truck would generate the highest L_{eq} levels and are the two noisiest equipment considered in this analysis.

Drill rigs can generate maximum noise levels noise levels of up to 85 dBA at 50 feet and would be operated 24 hours a day during the well drilling phase of the Project, which is expected to last about 3 weeks. When operated simultaneously with dump trucks, using the Roadway Construction Noise Model (RCNM), the combined noise level would be 79 dBA, L_{eq} at the residential property line nearest to the Project site. Other residential receptors farther away and the school receptors would be exposed to lower construction noise levels.

Neither the General Plan nor the Municipal Code provide quantitative limits for construction noise, but construction operations are required to use best available noise suppression devices and techniques and limit construction hours near residential uses. Under Policy EC-1.7 the City considers significant construction noise impacts to occur if a Project located within 500 feet of residential uses or 200 feet of commercial or office uses would involve substantial noise generating activities (such as building demolition, grading, excavation, pile driving, use of impact equipment, or building framing) continuing for more than 12 months.

Project construction for the well would take place over a period of 26 months between September 2027 and October 2029. As residences are located as close as 50 feet from the Project site, these and other residential receptors within 500 feet of the Project site would be exposed to elevated noise levels which would be considered significant per Policy EC-1.7. Most construction activities, including truck trips, would be restricted to daytime hours when ambient noise levels at the receptors are at their highest and

potential for impact is lower. However, well drilling would require round-the-clock operation of the drill rig for a period of 3 weeks. Residential uses would also be affected by nighttime noise from drilling. As construction activities would take place within 200 feet of residential uses and construction activities would extend beyond the hours allowed in the City's Municipal Code, this impact would be considered significant. With mandatory implementation of **SPC NOI-1**: **Construction Noise Reduction Measures**, this impact would be reduced to a **less-than-significant** level, consistent with the General Plan and Municipal Code standards.

SPC NOI-1: Construction Noise Reduction Measures.

Noise minimization measures include, but are not limited to, the following:

a) Pile driving is prohibited.

b) Limit construction to the hours of 7:00 A.M. and 7:00 P.M., Monday through Friday for any on-site or off-site work within 500 feet of any residential unit (San José Municipal Code Section 20.100.450). Construction outside of these hours may be approved through a development permit based on a site-specific "Construction Noise Mitigation Plan" and a finding by the Director of Planning, Building and Code Enforcement or Director's designee that the Construction Noise Mitigation Plan is adequate to prevent noise disturbance of affected residential uses.

c) Construct solid plywood fences around ground level construction sites adjacent to operational businesses, residences, or other noise-sensitive land uses.

d) Equip all internal combustion engine driven equipment with intake and exhaust mufflers that are in good condition and appropriate for the equipment.

e) Prohibit unnecessary idling of internal combustion engines (no more than two minutes).

f) Locate stationary noise-generating equipment such as air compressors or portable power generators as far as possible from sensitive receptors. Construct temporary noise barriers to screen stationary noise-generating equipment when located near adjoining sensitive land uses.

g) Control noise from construction workers' radios to a point where they are not audible at existing residences bordering the project site.

h) Utilize "quiet" air compressors and other stationary noise sources where technology exists.

i) Notify all adjacent business, residences, and other noise-sensitive land uses of the construction schedule, in writing, and provide a written schedule of "noisy" construction activities to the adjacent land uses and nearby residences.

j) If complaints are received or excessive noise levels cannot be reduced using the measures above, erect a temporary noise control blanket barrier along surrounding building facades that face the construction sites.

k) Designate a "disturbance coordinator" who shall be responsible for responding to any complaints about construction noise. The disturbance coordinator shall determine the cause of the noise complaint (e.g., beginning work too early, bad muffler, etc.) and shall require that reasonable measures be implemented to correct the problem. Conspicuously post a telephone number for the noise disturbance coordinator at the construction site and include it in the notice sent to neighbors regarding the construction schedule.

Trucks transporting construction materials and equipment to and from the Project site would also generate noise as they travel along construction traffic routes. Well construction is expected to generate 6 to 8 one-

way truck trips per day during the various construction phases. During construction of above-ground connections to the existing water system, approximately 2 to 4 one-way truck trips per day would be generated. These trips would be distributed over the 12-hour construction period. Worker trips would range from 4 to 8 one-way trips during the different construction phases. Generally, it takes a doubling of traffic to increase associated traffic noise by 3 dBA. Outside of the laboratory, a 3-dBA change is considered a just-perceivable difference when the change in noise is perceived but does not cause a human response; a change in level of at least 5 dBA is required before any noticeable change in human response would be expected. Therefore, the addition of Project construction traffic of less than 2 trips per hour would not result in perceivable noise impacts. Noise impacts from Project construction truck trips would be **less than significant**.

Operation Impacts

For the operational phase of the Project, the Project would include a pump system that would not exceed 300 horsepower (hp). No other noise-generating operational equipment is proposed to be installed at the Project site.

The pump would be submersible (belowground), which would reduce the noise generated. Based on measurements collected at the Norwood Pump Station (ESA, 2019) which includes similar submersible pumps located approximately 20 to 30 feet below grade, the one-minute average noise level over the measurement period with two pumps operating was 51 dBA at 30 feet from the pump house. Long term measurements indicated that hourly exterior noise levels at 30 feet were 42 to 48 dBA, which would also be below the residential performance standard of 55 dBA established by the City Municipal Code. As the nearest residential property line is located farther away at 50 feet from the Project site, noise from the operation of the pump would be below the City's 55 dBA standard in the Municipal Code. Commercial uses to the north are located more than 400 feet away from the pump station and would experience pump noise levels well below the performance standard of 60 dBA established by the City Municipal Code for commercial uses. The Project would not involve any other noise-generating equipment as part of the operational phase. There would be no permanent generators on site requiring routine maintenance and testing; portable generators would be used during power outages. Operation of portable generators during emergencies such as power outages would be exempt from Municipal Code standards. Therefore, the Project would not cause a substantial permanent noise level increase at the nearby noise-sensitive receptors and Project operations would have a **less-than-significant** impact with respect to exposure of persons to, or generation of, noise levels in excess of standards established in the applicable noise ordinance.

b) Generation of excessive groundborne vibration or groundborne noise levels? (*Less Than Significant Impact*)

Construction Impacts

Construction activities can result in varying degrees of groundborne vibration, depending on the type of soil, equipment, and construction methods employed. Operation of construction equipment can cause ground vibrations that spread through the ground and diminish in strength with distance. Buildings near the construction site respond to these vibrations with varying results, ranging from no perceptible effects at the lowest levels, low rumbling sounds and perceptible vibrations at moderate levels, and slight damage at the highest levels. While ground vibrations from construction activities do not often reach the levels that can damage structures, fragile buildings must receive special consideration.

Policy EC-2.3 of the General Plan requires new development to minimize vibration impacts to adjacent uses during demolition and construction. For sensitive historic structures that are documented to be structurally weakened, the policy specifies that a vibration limit of 0.08 in/sec PPV be used to minimize the potential for cosmetic damage to a building. A vibration limit of 0.20 in/sec PPV is used to evaluate the potential for cosmetic damage to structures of normal conventional construction. Equipment or activities typical of generating vibration include but are not limited to excavation equipment, static compaction equipment, pile drivers, pile-extraction equipment, and vibratory compaction equipment. The policy discourages use of impact pile drivers within 125 feet of any buildings, and within 300 feet of historical buildings, or buildings in poor condition unless a project-specific technical study is conducted by a qualified professional.

There are no historic-age buildings or structures in the Project Area that could be affected by vibration from Project construction (refer to Section 4.3, *Cultural Resources* for additional discussion on historic resources). Project construction would not involve the use of impact pile drivers. However, construction would involve excavation activities as well as the operation of a drill rig which would generate vibration. Drill rigs would need to be operated 24 hours a day for a period of approximately 3 weeks. The boreholes would be drilled using truck-mounted reverse-circulation mud-rotary drilling rigs. According to the FTA, drill rigs can result in vibration levels of 0.089 in/sec PPV at a distance of 25 feet (FTA, 2018). This is less than the vibration limit of 0.20 in/sec PPV established by the General Plan. There are no structures located within 25 feet of the proposed well location. Therefore, all off-site structures in the vicinity of the Project site would experience construction vibration levels less than the limit of 0.2 in/sec PPV and the impact of construction vibration would be **less than significant**.

Operation Impacts

Operation of the pump would not generate significant vibration. The pump would be located underground and would be operated as needed, for water deliveries during any short-term interruptions, for periodic maintenance purposes, and/or to meet demand beyond the available supply. Any vibration generated would attenuate to below the 0.2 in/sec PPV limit at structures near the Project site. Therefore, the impact from Project operation would be **less than significant**.

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? (*Less Than Significant Impact*)

Construction and Operation Impacts

The Project would not introduce any sensitive receptors to the site, but construction workers at the site could be temporarily exposed to noise from aircraft operations from the Reid-Hillview County Airport and Norman Y Mineta San José International Airport. The Project site is located approximately 0.9 miles from the southern boundary of the Reid-Hillview Airport and approximately 6.3 miles southeast of the San José International Airport.

Policy EC-1.11 of the General Plan requires safe and compatible land uses within the Airport noise zone (defined by the 65 CNEL contour as set forth in State law) and encourages aircraft operating procedures that minimize noise. Based on the land use compatibility plans for the two airports (Santa Clara County

Airport Land Use Commission, 2016 and 2024), the Project site is not located within the 65 dBA CNEL contours of either airport. Therefore, the Project would not expose workers at the Project sites to excessive noise levels from aircraft operations. This impact would be **less than significant**.

4.9.5 References

California Department of Transportation (Caltrans), 2013. *Technical Noise Supplement to the Traffic Noise Analysis Protocol*, September 2013. Available: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/tens-sep2013-a11y.pdf. Accessed April 2026.

City of San José, 2025. *Envision San José 2040 General Plan*. Adopted November 1, 2011. As Amended on August 29, 2025. Available: https://www.sanjoseca.gov/home/showpublisheddocument/121586/638828345723130000. Accessed April 12026.

Federal Highway Administration (FHWA), 2017. *Default Noise Emission Reference Levels and Usage Factors*, last updated August 24, 2017. Available: https://https://www.fhwa.dot.gov/environment/noise/construction_noise/handbook/handbook09.cfm. Accessed April 2026.

Federal Transit Administration (FTA), 2018. *Transit Noise and Vibration Impact Assessment Manual*, September 2018. Available: https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf. Accessed April 2026.

Santa Clara County Airport Land Use Commission (Santa Clara County ALUC), 2016. *Comprehensive Land Use Plan Santa Clara County - Reid-Hillview Airport*, Adopted October 24, 2007, amended November 16, 2016. Available: https://files.santaclaracounty.gov/migrated/ALUC_RHV_CLUP.pdf. Accessed April 2026.

Santa Clara County ALUC, 2024. *Airport Land Use Compatibility Plan Santa Clara County – San José Norman Y Mineta International Airport*, Adopted March 27, 2024. Available: https://stgenpln.blob.core.windows.net/document/ALUC_SJC_CLUP.pdf. Accessed April 2026.

4.10 Tribal Cultural Resources

4.10.1 Environmental Setting

ESA contacted the California NAHC on April 17, 2026, to request a search of the NAHC's Sacred Lands File and a list of Native American representatives who may have knowledge of tribal cultural resources in the Project site or vicinity. The NAHC replied to ESA by email on April 20, 2026, with the statement that the Sacred Lands File has no record of any sacred sites within the Project site. The NAHC response included a list of Native American representatives who may have knowledge of tribal cultural resources in the Project site or vicinity.

Pursuant to the requirements of PRC Section 21080.3(b), the City of San José sent AB 52 notifications inviting consultation on the Project to the Tamien Nation and Indian Canyon Band of Costanoan Ohlone People on July 22, 2025, and to the Muwekma Ohlone Tribe of the San Francisco Bay on July 17, 2026. The Tamien Nation and Muwekma Ohlone Tribe requested consultation on the Project. Consultation with Tamien Nation took place on July 22, 2025. Consultation with Muwekma Ohlone Tribe took place on July 21, 2026. Both Tamien Nation and Muwekma Ohlone Tribe identified the Project site as culturally sensitive during consultation. No tribal cultural resources have been identified in the Project sites as part of the identification process.

4.10.2 Environmental Checklist and Discussion of Impacts

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
TRIBAL CULTURAL RESOURCES — Would the project:				
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), or ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☐	☒	☐

4.10.3 Impact Discussion

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

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

a.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 Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe. (*Less Than Significant Impact*)

Construction and Operation Impacts

CEQA requires the lead agency to consider the effects of a project on tribal cultural resources. As defined in PRC Section 21074, tribal cultural resources are sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are listed, or determined to be eligible for listing, on the national, state, or local register of historical resources.

Based on the NWIC records search (described in Section 4.3 Cultural Resources; NWIC, 2026) and the NAHC negative search results, there are no known tribal cultural resources listed or determined eligible for listing in the California Register of Historical Resources, or included in a local register of historical resources as defined in PRC Section 5020.1(k), pursuant to PRC Section 21074(a)(1), that would be affected by the Project. To date, no new tribal cultural resources have been identified by Native American representatives, and surface survey of the Project site identified no archaeological resources. In addition, the City of San José did not determine any resource that could potentially be affected by the Project to be a significant tribal cultural resource pursuant to criteria set forth in PRC Section 5024.1(c).

As described above, the City conducted consultation with the Tamien Nationand the Muwekma Ohlone Tribe. During the consultation, both Tamien Nation and Muwekma Ohlone Tribe identified the Project site as culturally sensitive during consultation and requested that tribal monitoring and tribal cultural resources awareness training be incorporated into the Project:

If any previously unrecorded archaeological resource were identified during Project construction and were found to qualify as a tribal cultural resource pursuant to PRC Section 21074(a)(2) (determined by the lead agency to be significant pursuant to criteria set forth in PRC Section 5024.1[c]), any impacts to the resource resulting from the Project could be potentially significant. Mandatory implementation of **SPC CUL-1: Human Remains** and **SPC CUL-2: Subsurface Cultural Resources**, (described above in Section 4.3, *Cultural Resources*), and **SPC TCR-2: Tribal Cultural Resources Awareness Training and Monitoring** would reduce potentially significant impacts to a **less-than-significant** level.

> **SPC TCR-2: Tribal Cultural Resources Awareness Training and Monitoring.**
>
> Prior to issuance of any tree removal, demolition or grading permits, whichever occurs first, the permittee shall be required to submit evidence that a Cultural Awareness Training has been

provided to construction personnel prior to ground disturbance, such as copies of worker sign-in sheets to confirm attendance. The training shall be facilitated by a qualified project archaeologist in collaboration with a Native American representative registered with the Native American Heritage Commission for the City of San José and that is traditionally and culturally affiliated with the geographic area as described in Public Resources Code Section 21080.3. Documentation verifying that Cultural Awareness Training has been conducted including training attendance logs and training materials shall be submitted to the Director of Planning, Building and Code Enforcement or the Director's designee. Cultural Awareness Training shall be provided to any construction personnel who join the project after the original training session in accordance with the requirements of this condition. In addition, a qualified archaeologist in collaboration with a Native American monitor registered with the NAHC for the City of San José and that is traditionally and culturally affiliated with the geographic area as described in Public Resources Code Section 21080.3, shall be present during applicable earthmoving activities (e.g., trenching, initial or full grading, lifting of foundation, boring on site, or major landscaping, etc.). If the consulting tribe or Native American representative registered with the NAHC for the City of San José and that is traditionally and culturally affiliated with the geographic area as described in PRC Section 21080.3 does not respond to a request for monitoring within 30 days, then earthmoving activities can proceed.

4.10.4 References

Native American Heritage Commission (NAHC). Letter from Mathew Lin to Melissa Grijalva-Foreman, regarding Sacred Lands File Search. April 20, 2026.

Northwest Information Center (NWIC) of the California Historical Resources Information System, Records Search File No. 25-1574, April 22, 2026.

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4.11 Utilities and Service Systems

4.11.1 Environmental Setting

The SJMWS supplies potable drinking water to the Project site. Water service is provided to the Project site via a potable water distribution transmission main in Capitol Expressway. The Project site is not located in the vicinity of recycled water pipelines.

Wastewater from the Project area is treated at the San José-Santa Clara Regional Wastewater Facility (RWF). The RWF treats domestic, industrial, and commercial wastewater from San José, Santa Clara, Campbell, Los Gatos, Monte Sereno, Cupertino, Milpitas, and Saratoga; and parts of unincorporated Santa Clara County. In total, the existing service area covers roughly 300 square miles and serves approximately 1.5 million residents and over 17,000 businesses. The RWF provides a tertiary level of treatment in accordance with state and local regulations. The RWF treats an average of 110 million gallons per day (mgd) of wastewater, with an existing maximum treatment capacity of 167 mgd (City of San José, 2026a).

The City's sanitary sewer system includes approximately 2,200 miles of sewer pipelines ranging from six to 90 inches in diameter, which route to the RWF. Sanitary sewer lines in the Project area are inspected and maintained by the City Department of Transportation, and rehabilitated and replaced as needed by the Department of Public Works. An existing 30-inch sewer line in Moss Hollow Drive serves the Project site (City of San José, 2026b).

Stormwater runoff is expected to drain to the existing onsite catch basin or to Capitol Expressway, where existing stormwater infrastructure is present, with possible bio-retention areas.

Solid waste generated at the Project site is collected by a private hauler and is disposed of at any of four privately owned landfills in San José or at other landfills outside Santa Clara County. Landfills serving the Project site include Kirby Canyon and Newby Island[34]. Closure dates for these facilities range from 2041 to 2059, and these facilities have approximately 10,400,000 to 16,400,000 cubic yards of remaining capacity (CalRecycle, 2026a, 2026b). The hazardous waste facility serving the Project site is the Kettleman Hills Hazardous Waste Facility. This facility has approximately 15,600,000 cubic yards of remaining capacity (CalRecycle, 2026c). The California Integrated Waste Management Act of 1989, or AB 939, established the California Integrated Waste Management Board (CalRecycle), which required all California counties to prepare Integrated Waste Management Plans and mandated that local jurisdictions divert from the landfill at least 50 percent of solid waste generated beginning January 1, 2000. Chapter 9.10 of the San José Municipal Code outlines solid waste management regulations in the City. Chapter 9.10, Part 15, establishes the City's Construction and Demolition Diversion Deposit Program, which uses financial incentives to encourage the recycling of construction material and requires projects to divert 50 percent of the total projected waste. In addition, the City adopted a zero waste resolution (No. 74077) in 2007, which established goals for the city of 75 percent waste diversion by 2013 and zero waste by 2022 (City of San José, 2007). In 2013, approximately 73 percent of the waste generated was diverted from

[34] The Zanker Material Processing Facility has been identified as having a ceased operation date of November 1, 2025; however, available information suggests it may still be operational. Accordingly, it is not listed as a primary facility but may continue to serve the Project site if active.

landfill disposal through various programs that include residential curbside recycling and yard trimmings collection programs, city facilities recycling, and the Construction and Demolition Diversion Deposit Program (City of San José, undated). As of 2024, San José disposed of approximately 836,993 tons of waste (or 4.7 pounds per person per day), below the California Integrated Waste Management Act target rate for San José of 5.2 pounds per person per day (CalRecycle, 2024).

PG&E provides electricity and natural gas to the Project site.

4.11.2 Regulatory Setting

Federal Laws and Regulations

No federal laws or regulations related to utilities and service systems are applicable to the Project.

State Laws and Regulations

California Integrated Waste Management Act of 1989

The California Integrated Waste Management Act of 1989 (Public Resources Code Division 30)—enacted through AB 939, commonly known as the California Universal Waste Law and modified by subsequent legislation—required all California cities and counties to implement programs to reduce, recycle, and compost at least 50 percent of wastes by the year 2000 (Public Resources Code Section 41780). In 2011, AB 341 amended AB 939 to establish the policy goal for the state of at least 75 percent of solid waste generated to be source reduced, recycled, or composted by the year 2020 and annually thereafter. A jurisdiction's diversion rate is the percentage of its total waste diverted from disposal through reduction, reuse, and recycling programs. This regulation is applicable to the Project because Project activities would generate solid waste that must be managed in accordance with state diversion goals.

Utility Notification Requirements

California Code of Regulations Title 8, Section 1541 requires excavators to determine the approximate locations of subsurface installations, such as sewer, telephone, fuel, electricity, and water lines (or any other subsurface installations that may reasonably be encountered during excavation work) before opening an excavation. California law (Government Code Section 4216 et seq.) requires owners and operators of underground utilities to become members of and participate in a regional notification center, such as Underground Service Alert North, who receives reports of planned excavations from public and private excavators and transmits the information to all participating members that may have underground facilities at the excavation site. Underground Service Alert North members mark or stake their facilities, provide information, or give clearance to dig (Underground Service Alert, 2025). This regulation is applicable to the Project because excavation activities would require coordination with utility operators to prevent damage to subsurface infrastructure.

California Green Building Standards Code Compliance for Construction, Waste Reduction, Disposal, and Recycling

In January 2010, California adopted the California Green Building Standards Code, establishing mandatory green building standards for all buildings in California (2022 California Green Building Standards Code, Title 24, Part 11, Chapter 5.408.1, Construction Waste Management). The code covers five categories: planning and design, energy efficiency, water efficiency and conservation, material conservation and

resources efficiency, and indoor environmental quality. These standards include the following mandatory set of measures, as well as more rigorous voluntary guidelines, for new construction projects to achieve specific green building performance levels:

- Reducing indoor water use by 20 percent;
- Reducing wastewater by 20 percent;
- Recycling and/or salvaging 65 percent of non-hazardous construction and demolition debris or meeting the local construction and demolition waste management ordinance, whichever is more stringent; and
- Providing readily accessible areas for recycling by occupants.

This regulation is applicable to the Project because new construction must comply with mandatory green building standards, including waste reduction and recycling measures.

Local Policies and Regulations

Envision San José 2040 General Plan

The Envision San José 2040 General Plan includes the following policies related to utilities and service systems that may be applicable to the Project (City of San José, 2025):

- **IN 5.3:** Use solid waste reduction techniques, including source reduction, reuse, recycling, source separation, composting, energy recovery and transformation of solid wastes to extend the life span of existing landfills and to reduce the need for future landfill facilities and to achieve the City's Zero Waste goals.
- **IN 5.13:** Designate no new candidate landfill sites until the need for additional landfill capacity has been established. Source reduction, recycling/composting alternatives, and waste conversion should be taken into account when evaluating the need for a landfill.
- **LOS-20:** For solid waste management, the City should seek to exceed 50% diversion of waste from disposal, maintain 20 years of landfill capacity, and provide for storage and collection of recyclables from every location where solid waste is generated.

City of San José Construction and Demolition Diversion Deposit Program

San José Municipal Code Chapter 9.10 outlines solid waste management regulations in the city. Chapter 9.10, Part 15 of the Municipal Code establishes the City's Construction and Demolition Diversion Deposit Program, which uses financial incentives to encourage the recycling of construction and demolition material and requires projects to divert 50 percent of the total projected waste. This regulation is applicable to the Project because construction activities would generate construction and demolition debris subject to the City's diversion and recycling requirements.

City of San José Zero Waste Resolution (No. 74077)

In 2007, the City adopted a zero waste resolution (No. 74077), which established goals for the city of 75 percent waste diversion by 2013 and zero waste by 2022 (City of San José, 2007). In San José, "zero waste" is defined as landfilling no more than 10 percent of waste or recycling 90 percent of waste. To achieve these waste reduction goals, the City developed the Zero Waste Strategic Plan, which identifies

policies, programs, and facilities to be implemented in a phased approach in the short and long term. In 2013, approximately 73 percent of the waste generated was diverted from landfill disposal through various programs that include residential curbside recycling and yard trimmings collection programs, city facilities recycling, and the Construction and Demolition Diversion Deposit Program (City of San José, undated). This regulation is applicable to the Project because construction activities would generate solid waste that must be managed in accordance with the City's zero waste goals and diversion programs.

4.11.3 Environmental Checklist and Discussion of Impacts

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
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?	☐	☐	☒	☐

4.11.4 Impact Discussion

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? (*Less Than Significant Impact*)

The Project would not include the expansion of wastewater treatment, natural gas, or telecommunications facilities, and would therefore, not require construction or relocation of such facilities.

The Project evaluated in this document includes the construction of a municipal groundwater supply well, along with associated connections to the existing potable water distribution system, to provide supplemental supplies to the Evergreen service area. The well would tie directly into the potable water transmission main in Capitol Expressway. Approximately 175 linear feet of 12-inch-diameter ductile iron pipe would be installed within a 48-inch-deep trench from the groundwater well to the existing water main in Capitol Expressway. The Project site also includes existing potable drinking water and stormwater connections for the well, which the new well would tie into.

No new stormwater facilities would be needed for the Project site. Stormwater runoff is expected to drain to the existing onsite catch basin or to Capitol Expressway, where existing stormwater infrastructure is present, with possible bio-retention areas. There will also be a connection of 80 linear feet to an existing 18-inch reinforced concrete storm drain line on-site. Additionally, a 12-inch-diameter ductile storm lateral pipeline would be installed within a 48-inch-deep trench from the groundwater well to the storm main in Capitol Expressway to allow for atmospheric blow-off during initial startup.

Potential environmental impacts due to the excavation and trenching associated with construction is analyzed in Section 4.5, *Geology and Soils*, Section 4.7, *Hazards and Hazardous Materials*, and Section 4.8, *Hydrology and Water Quality,* which reference BMPs designed to reduce construction related stormwater pollution and discharge. These measures would generally consist of silt fences, fiber rolls, and gravel bags. In addition, the proposed structures would be designed in accordance with applicable requirements of the CBC. Compliance with these regulatory requirements would ensure construction-related effects associated with utility improvements would be reduced to **less than significant**.

Once operational, the Project would not require any additional workers. Therefore, no new water or wastewater treatment facilities, or telecommunications facilities would be needed to support the Project operations, or would need to be relocated to accommodate the Project operations. Once operational, the well facility would receive power from the nearby PG&E distribution system, with the addition of an electrical transformer; however, no new substantial infrastructure would be required to serve the Project. Therefore, impacts would be **less than significant**.

b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years? (*Less Than Significant Impact*)

During construction, non-potable water would be required for drilling the well, sourced from the closest fire hydrant to the Project site. Approximately 30,000 gallons of water would be needed during the drilling of the well. The drilling process would occur over a 24-hour period for approximately 3 weeks, resulting in a water demand of approximately 1,429 gallons per day. Potable water for construction workers would be provided by the construction contractors. Upon completion of well construction and prior to finalizing connections to the water distribution systems, the newly installed water mains would be flushed and disinfected. Groundwater would be used for the flushing process and then discharged to the existing storm drain system in accordance with regulatory stormwater discharge requirements. The small increase in potable water demand during construction would not be substantial, and this water use would be temporary, terminating with the completion of construction. Water supplies for the Project site would be provided by the SJMWS and would be planned such that short-term spikes in water use can be accommodated. Therefore, water supply during construction would be sufficient, and impacts would be **less than significant**.

The purpose of the Project is to secure additional sources of potable water supplies for the Evergreen service area. The main purpose of the well would be to allow for water deliveries during any short-term interruptions of supply, for periodic maintenance purposes, and/or to meet demand beyond the available supply from Valley Water. When operational, the well would be able to extract an estimated 1,800 to 2,000 gallons per minute (gpm). As described in Section 3.7 of the *Project Description*, it is anticipated that groundwater production from the new well would supplement potable water supplies based on water demands and operational objectives. Therefore, the Project would allow SJMWS to produce sufficient

water supplies to meet future development during normal, dry, and multiple dry years, and impacts would be **less than significant**.

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? (*No Impact*)

The Project would not include the construction of facilities that generate wastewater or require the use of wastewater treatment services. Therefore, there would be **no impact** related to this criterion of the Project.

d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals? (*Less Than Significant Impact*)

Solid waste generated through implementation of the Project would be short-term construction-related solid waste. There would be waste management on-site where spoils from well drilling would be temporarily stored in a 20-yard bin located adjacent to the drill rig system and subsequently hauled by truck to a Class II or Class III landfill, depending on the chemical composition of the soil. No excavated material will be re-used for backfill. This material would be managed in compliance with the City's mandatory Construction and Demolition Diversion Deposit Program and any applicable recommendations of the Zero Waste Strategic Plan's Construction and Demolition Program[35] in effect at the time of construction. Non-hazardous waste generated during Project construction could be off-hauled to either Kirby Canyon Landfill or Newby Island Landfill (both Class III, non-hazardous waste facilities). Hazardous waste generated during Project construction could be off-hauled to Kettleman Hills Hazardous Waste Facility (a Class I - hazardous and nonhazardous and Class II – hazardous waste facility).[36] As indicated in **Table 4.11-1**, each of the landfills has sufficient capacity to accept the approximately 20 cubic yards of waste that the Project would generate.

TABLE 4.11-1
LANDFILL CLASSIFICATION AND CAPACITY

Landfill[a]	Classification	Daily Capacity (tons/day)	Total Capacity (cubic yards)	Remaining Capacity (cubic yards)
Kirby Canyon Landfill	III	2,600	36,400,000	10,400,000
Newby Island Landfill	III	4,000	57,500,000	16,400,000
Kettleman Hills Hazardous Waste Facility	I, II	9,000	15,600,000	10,700,000
	Totals	15,600	109,500,000	37,500,000

Sources:
California Department of Resources and Recycling (CalRecycle), 2026a; CalRecycle, 2026b; CalRecycle, 2026c.

[35] https://www.sanjoseca.gov/home/showdocument?id=32051

[36] If the excavated soil from construction is considered non-hazardous material, then it would be taken to the Newby Island Construction and Demolition Recycling Facility as stated in the current agreement between the City and International Disposal Corporation.

Additionally, the Project would not generate solid waste in excess of State or local standards, or impair the attainment of solid waste reduction goals. Once operational, the Project would not generate any solid waste. Impacts would be **less than significant**.

e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste? (*Less Than Significant Impact*)

All disposal facilities identified by the City for disposal and recycling of construction and demolition debris are permitted for the types of waste generated by Project construction. The Project would comply with applicable federal, State, and local management and reduction statues and regulations related to solid waste, including AB 939, the California Universal Waste Law, San José's Zero Waste Resolution, and policies IN-5.1 and IN-5.3 of the Envision San José 2040 General Plan.[37]

Specifications for construction of the Project would contain requirements for the handling, storage, cleanup, and disposal of hazardous materials; including petroleum-based products, cement, or other construction pollutants. Refer to Section 4.7, *Hazards and Hazardous Materials*, for additional information on hazardous materials associated with construction of the Project and how hazardous materials would be handled if encountered during construction. Once operational, the Project would not generate any solid waste. Impacts would be **less than significant**.

4.11.5 References

California Department of Resources Recycling and Recovery (CalRecycle), 2024. Disposal Rate Calculator; San José (2024). [Online tool.] www2.calrecycle.ca.gov/LGCentral/AnnualReporting/DisposalRateCalculator. Accessed January 23, 2026.

CalRecycle, 2026a. SWIS Facility Detail, Kirby Canyon Recycl. &Disp. Facility (43-AN-0008). Available: https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/1370?siteID=3393. Accessed January 23, 2026.

CalRecycle, 2026b. SWIS Facility Detail, Newby Island Sanitary Landfill (43-AN-0003). Available: https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/1362?siteID=3388. Accessed January 23, 2026.

CalRecycle, 2026c. Kettleman Hills – B18 Nonhaz Codisposal (16-AA-0023). Available: https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/3771?siteID=914. Accessed January 23, 2026.

City of San José, undated. *City of San José Green Vision 2014 Annual Report.* Available: www.sanjoseca.gov/home/showdocument?id=21999. Accessed January 23, 2026.

[37] *Policy IN 5.1*: Monitor the continued availability of long-term collection, transfer, recycling and disposal capacity to ensure adequate solid waste capacity. Periodically assess infrastructure needs to support the City's waste diversion goals. Work with private Material Recovery Facilities (MRF) and Landfill operators to provide facility capacity to implement new City programs to expand recycling, composting and other waste processing.

Policy IN 5.3: Use solid waste reduction techniques, including source reduction, reuse, recycling, source separation, composting, energy recovery and transformation of solid wastes to extend the life span of existing landfills and to reduce the need for future landfill facilities and to achieve the City's Zero Waste goals.

City of San José, 2007. *Resolution No. 74077*. October 30, 2007. Available: sanjose.granicus.com/MetaViewer.php?meta_id=619659. Accessed January 23, 2026.

City of San José, 2025. *Envision San José 2040 General Plan*. Adopted November 1, 2011. As Amended on May 7, 2025. Available: https://www.sanjoseca.gov/home/showpublisheddocument/121586/638828345723130000. Accessed April 17, 2026.

City of San José, 2026a. San José-Santa Clara Regional Wastewater Facility information page. Available: https://www.sanjoseca.gov/your-government/departments-offices/environmental-services/water-utilities/regional-wastewater-facility. Accessed January 23, 2026.

City of San José, 2026b. Utility Viewer Map. Available: https://gis.sanjoseca.gov/maps/utilityviewer/. Accessed January 23, 2026.

County of Santa Clara, 1994. *Santa Clara County General Plan 1995–2010*. Adopted December 20, 1994. Available: plandev.santaclaracounty.gov/codes-and-policies/general-plan. Accessed April 17, 2026.

Underground Service Alert, 2025. *California Excavation Handbook*. Revised January 2025. Available: https://usanorth811.org/assets/PDF/California-Handbook-2025.pdf. Accessed April 17, 2026.

4.12 Other Environmental Topics

Other resource areas/topics are discussed below. These resource topics include aesthetics, agricultural and forestry resources, energy, land use and planning, mineral resources, population and housing, public services, recreation, transportation, and wildfire. These topics are presented in this subsection because the Project would not result in significant impacts related to these resource areas, and therefore, a more detailed discussion is not warranted.

4.12.1 Aesthetics

The predominant visual character of San José is that of a gently sloping to flat valley bounded by mountains and the Bay. The foothills of the Santa Cruz Mountains are located to the to the west, the Santa Teresa Hills to the south and the Diablo Mountain Range to the east. Diked ponds, saltmarsh, the waters of San Francisco Bay and the adjacent cities of Milpitas and Santa Clara border the City to the north. The built environment dominates throughout San José with a mix of urban and suburban development. The Envision San José 2040 General Plan contains designated scenic resources and a Scenic Corridor Diagram designating Gateways, Urban Throughways, and Rural Scenic Corridors, including broad views of Santa Clara Valley, the hills and mountains surrounding the valley, the urban skyline, and the Baylands (City of San José, 2016). A portion of State Route (SR) 237 west of Interstate 880, and North 1st Street from Vista Montaña to Tony P. Santos Street are designated as Gateways in the Envision San José 2040 General Plan (City of San José, 2025). The nearest state-designated scenic highway is SR 9, located approximately 11.4 miles southwest of the Project site. No designated scenic vistas are identified in the Santa Clara County or City General Plans, and no scenic routes designated by these plans are within the vicinity of the Project (City of San José, 2025; County of Santa Clara, 1994).

The Project site consists primarily of undeveloped land, containing bare ground with sparse ruderal vegetation. The site is bordered by Capital Expressway to the east, commercial development to the north, residential development to the west and south, and is situated within an urbanized area. Existing development and roadside landscaping provide limited and intermittent screening of views of the site for motorists, bicyclists, and pedestrians traveling along Capital Expressway. Due to the short duration of these views and visibility from surrounding land uses, the Project site has moderate viewer exposure and would generally be seen only briefly as viewers pass by.

Aesthetic Impacts

a) Have a substantial adverse effect on a scenic vista? (*No Impact*)

No designated scenic vistas occur in the vicinity of the Project site. The Project site is relatively flat and allows for views of the foothills and mountains. These views are seen by pedestrians, motorists, and bicyclists from roadways adjacent to the Project site, but such views are temporary and fleeting. With the absence of designated scenic vistas in the area, construction and operation of the Project would therefore not result in a substantial adverse effect on a scenic vista, and there would be **no impact**.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway? (*Less Than Significant Impact*)

The Project site is not visible from any state scenic highways. Additionally, no rock outcroppings or historic buildings are located on the Project site or in the immediate vicinity of the Project area, such that views of such resources could be affected. No scenic resources are located on the Project site or in the immediate vicinity of the Project area. The Project site is too distant to be seen from either the SR 237 Gateway or the North 1st Street Gateway, which are designated scenic resources. The Project would result in the removal of two trees. The trees would be replaced in accordance with the City's tree replacement ratios. For these reasons, the Project would not have a substantial adverse effect on scenic resources, and the impact would be **less than significant**.

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

The City is considered an urbanized area, as defined in CEQA Guidelines Section 15387, considering impacts associated with degradation of existing visual character or quality may be considered in the context of potential to conflict with applicable zoning and other regulations governing scenic quality. The Project site is located within a Low to Medium Density Residential Based zoning district. Utility facilities are allowed uses in the residential zoning district designation. Because the Project would continue to support water supply utilities, and it would be consistent with the zoning. The Envision San José 2040 General Plan contains general goals regarding visual resources; primarily concerning access to scenic resources (Goal CD-9) and maintaining attractive gateways within the City (Goal CD-10), particularly along loosely-defined "Grand Boulevards" and "Rural Scenic Corridors". As discussed in criterion b) above, no scenic resources are located at the Project site or in the immediate vicinity of the Project area, and the Project site is too far away to be seen from the closest Gateways. Therefore, the Project would not conflict with the Envision San José 2040 General Plan policies regarding scenic quality and the impact would be **less than significant**.

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area? (*Less Than Significant Impact*)

The Project does not propose to use highly reflective construction materials; therefore, the Project would not create substantial glare. Well drilling and well installation would require 24-hour construction operations over an approximately 3-week period. Lighting required during nighttime construction periods would include a portable light tower and lights on drill rig mast. The lights would be directed toward work areas and consist of lights designed with low light spillover utilizing shields or other light pollution reduction features. No lights would be required for well operations. Therefore, construction and on-going Project operations would not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area, and the impact would be **less than significant**.

4.12.2 Agricultural and Forestry Resources

The Project site is located upon land classified by the California Department of Conservation as Urban and Built-Up Land (CDC, 2022a). Urban and Built-Up Land is defined as developed land with a density of at least 1 unit per 1.5-acre parcel or 6 structures to a 10-acre parcel, as well as land used for residential, industrial, and commercial purposes, golf courses, landfills, airports, sewage treatment, and water control structures. No Prime Farmland, Farmland of Statewide Importance, Unique Farmland, or Farmland of Local Importance are in the vicinity of the Project site. In addition, no lands in the vicinity of the Project site are enrolled in the Williamson Act Program (CDC, 2022b). The Project site is located within an urban area of San José, and there is no property used for agricultural purposes adjacent to the Project site. The Project site does not contain any forest land, and no forest or timberland is located in the vicinity of the Project site.

Agricultural and Forestry Resource Impacts

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use? (*No Impact*)

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract? (*No Impact*)

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))? (*No Impact*)

d) Result in the loss of forest land or conversion of forest land to non-forest use? (*No Impact*)

e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use? (*No Impact*)

The Project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to a non-agricultural use. The Project would not conflict with agricultural operations or a Williamson Act contract; nor would the Project result in a loss of forestland. Therefore, there would be **no impact**.

4.12.3 Land Use and Planning

The Project site is located in a commercial and residential developed areas of San José. The site is bordered by Capital Expressway to the east, commercial development to the north, residential development to the west and south, and is situated within an urbanized area.

The Project site has an Envision San José 2040 General Plan land use designation of Mobile Home Park. This category is typically used to designate lands in the provision of public services such as water. With respect to City zoning districts described in the Envision San José 2040 General Plan, the Project site is located in the Low to Medium Density Residential Based zoning district. Utility facilities are allowed uses in the residential zoning district designation.

Land Use and Planning Impacts

a) Physically divide an established community? (*No Impact*)

Construction-related and operational activities would be limited to the Project's footprint and would not alter access to a residential area. None of the proposed components or uses would physically intrude into or divide an established community. Therefore, there would be **no impact**.

b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect? (*Less Than Significant Impact*)

Because the Project would continue to support water supply utilities, implementation would be consistent with the land use designations in the Envision San José 2040 General Plan and the zoning districts. Therefore, the impact would be **less than significant**.

4.12.4 Mineral Resources

The Project area is not within an aggregate resource area and is mapped by the California Division of Mines and Geology as being within Mineral Resource Zone 1 (CGS, 1987). Mineral Resource Zone 1 identifies areas where adequate information exists to determine that significant aggregate resources are not present. Additionally, according to the United States Geological Survey Mineral Resources Data System, there are no known mineral occurrences, prospects, or past or present mineral producers within or immediately adjacent to the Project area (MRDS, 2026).

Mineral Resource Impacts

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state? (*No Impact*)

b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan? (*No Impact*)

No known mineral resources of importance to the state or region are located on the Project site. Additionally, no locally important mineral resource recovery sites are delineated for the Project area, including in a general plan or other land use plan. Therefore, the Project would not result in the loss of availability of mineral resources or otherwise interfere with the extraction of existing mineral resources. Therefore, there would be **no impact**.

4.12.5 Population and Housing

According to federal and state data, the population of the City has increased over the last 25 years by less than 1 percent per year, from 895,131 in 2000 to an estimated 979,415 in 2025 (California Department of Finance, 2012; 2025). The Envision San José 2040 General Plan predicts a total population of 1,313,811 by 2040 (City of San José, 2025). The SJMWS currently provides water service to approximately 26,094 metered connections with a population of over 130,000 (Valley Water, 2021). Population growth in SJMWS service areas is expected to increase by approximately 67 percent by 2045 due to proposed development identified within the Envision San José 2040 General Plan (City of San José, 2025).

Between 2000 and 2025, the number of housing units in San José grew by 66,736, from 281,937 to 348,673 (California Department of Finance, 2012; 2025). The Envision San José 2040 General Plan plans for an additional 80,677 units over the 2025 level, for a total of 429,350 units by 2040 (City of San José, 2018).

The Project would be located on land managed by Municipal Water as part of their continued water supply operations. The Project would provide backup potable water supplies for existing customers in the Evergreen Service Area, and secure supplemental water supplies to provide sufficient supplies to support future growth and economic development in the Evergreen Service Area.

Population and Housing Impacts

a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)? (*Less Than Significant Impact*)

The Project would generate temporary employment opportunities during its construction phases. Construction jobs generated by the Project would likely be filled by employees in the construction industry in San José and the greater Santa Clara County area. Construction industry jobs generally have no regular place of business, and many construction workers are highly specialized (e.g., crane operators, steel workers, masons). Thus, construction workers commute to job sites throughout the region, which may change several times a year in response to demand for their specific skills. It is highly unlikely that construction workers would relocate to the vicinity for construction of the Project, and therefore, construction of the Project would not result in unplanned population growth. Therefore, construction impacts would be **less than significant**.

The Project would not involve or result in major new housing, business, or industrial developments that could drive population growth. As described in the Project Description, the proposed pumping from the Project is part of the City's long-term water supply planning efforts. This water generation was accounted for in the population growth assumptions for SJMWS service areas as identified within the Envision San José 2040 General Plan Update. The Project would be constructed to meet water supply requirements for existing and projected future customer demands. Therefore, there would be **no impact** on population and housing associated with inducing population growth from the operation of the Project.

b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere? (*No Impact*)

The Project would not result in the demolition of existing housing or otherwise cause a reduction in housing units on site or elsewhere. Therefore, there would be **no impact**.

4.12.6 Public Services

Fire protection services for the City are provided by the San José Fire Department (SJFD). The SJFD currently consists of 34 active stations.[38] The closest fire station to the Project site is Station 24, located at 1924 Yerba Buena Road, approximately 1.3 miles southeast of the Project site. The SJFD responds to all fires, hazardous materials spills, and medical emergencies in the City, including the Project area (City of

[38] https://www.sanjoseca.gov/your-government/departments-offices/fire-department/fire-stations

San José, 2026a). Police services for the City are provided by the San José Police Department (SJPD), which has approximately 1,700 employees, including both sworn and non-sworn (San José Police Department, 2026). The SJPD provides public safety and law enforcement services, including 24/7 patrol response, criminal investigations, and specialized tactical and emergency operations.

Santa Clara County has developed an Emergency Operations Plan that establishes Santa Clara County's incident management organization that supports first responders, facilitates public information and interagency communication, and maintains continuity of government (County of Santa Clara, 2025).

The nearest school to the Project site is George V. LeyVa Middle School, located approximately a quarter mile southwest. The closest City park to the Project site is Meadowfair Park, located approximately 0.3 mile west of the Project site. The Thompson Creek Trail is 0.3 mile to the east of the Project site.

Public Services Impacts

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? (*Less Than Significant Impact*)

Construction of the Project would involve the use of equipment and ground disturbing activities that could spark fires temporarily increasing risks of emergency situations on site. Similarly, accidents or theft could occur during construction potentially impacting local demand for police or fire response. However, the Project would not alter routes of ingress and egress, nor would any road closures be required during construction. Impacts associated with construction would not lead to a need for new public service police or fire facilities. The construction components and activities would not require additional police protection or response, or need for other public facilities, such that new or physically altered public facilities would be needed. Therefore, construction-related impacts would be temporary and **less than significant**.

Operation of the Project would not result in new activities on site that would increase demand for fire protection. In the unlikely event of a fire within the Project area, including a fuel fire, fire response would be provided by the SJFD. SJFD maintains a hazardous incident team, a rescue medic, and a foam unit, as well as other standard facilities and equipment. These existing resources are anticipated to be sufficient to manage potential fire incidents on site during construction and operation. Therefore, the Project would not deleteriously affect fire department response times and would not require additional facilities or equipment. No operational activities beyond routine instrument monitoring and maintenance inspections are associated with the Project. Additionally, the Project would not create demand for police services such that response times would be altered. This water generation was accounted for in the population growth assumptions for SJMWS service areas, and therefore would not change the public service demands expectations or the need for new public service facilities included within the Envision San José 2040 General Plan Update. Therefore, operation impacts would be **less than significant**.

4.12.7 Recreation

The City has over 200 parks and approximately 60 miles of scenic trails.[39] The Thompson Creek Trail is 0.3 mile to the east of the Project site. The closest City park to the Project site is Meadowfair Park, located approximately 0.3 mile west of the Project site.

Recreation Impacts

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated? (*No Impact*)

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment? (*No Impact*)

The Project would involve temporary construction activities. The Project would not permanently affect any existing recreational uses of nearby features. The Project would not result in new housing development or other activities that would increase use, alter usage patterns, or increase demand for existing recreational facilities, thereby causing increased or accelerated physical deterioration of recreation related facilities. The Project does not propose to construct recreational facilities and would not result in the need for new or expanded recreational facilities. Therefore, there would be **no impact**.

4.12.8 Transportation

Project Site

Regional access to the Project site is provided by US 101, which is a north-south freeway in San José. This route is entirely a freeway through Santa Clara County. The freeway includes four travel lanes per direction including HOV lanes. Through the City, northbound US 101 is generally the peak morning commute direction on US 101, and southbound is the peak evening commute direction. US 101 extends through San José from the southern City limits near Morgan Hill to the City's boundary with Santa Clara, northwest of Capitol Expressway. Data published by Caltrans indicate that at the San José junction with US 101, annual average daily traffic (AADT) is approximately 143,000 vehicles on the segment south/west of the count location and approximately 167,000 vehicles on the segment north/east of the location (California Department of Transportation, 2023).

Local access to the Project site is provided by Capitol Expressway, which borders the site to the east. Capitol Expressway is one of seven Grand Boulevards in the City that stand out as having great potential to connect City neighborhoods (City of San José, 2025). It begins at I-680 in East San José and terminates at SR 87.

The most likely intersection that could be affected by an increase in traffic trips would be Capitol Expressway and Tully Road. This intersection is part of the Santa Clara Valley Transportation Authority

[39] https://www.sanjoseca.gov/your-government/departments-offices/parks-recreation-neighborhood-services/parks-trails

(VTA) Congestion Management Program (CMP).[40] According to the VTA's 2018 Annual Monitoring and Conformance Report, this intersection operates at Level of Service (LOS) D. The acceptable service levels for this intersection are LOS E or better (Santa Clara Valley Transportation Authority, 2019).

The nearest transit facilities are located on Capitol Expressway, which includes VTA bus routes (VTA, 2024). The nearest bicycle lanes are located along Capitol Expressway. Pedestrian facilities near the Project site include sidewalks along Capitol Expressway. The Project site includes a fenced driveway on Capitol Expressway. The Project site is not accessible to the public.

Regulatory Setting

As established in City Council Policy 5-1 "Transportation Analysis Policy" (City of San José, 2018), the City uses VMT as the metric to assess transportation impacts from new development. According to the policy, an employment (e.g. office) or residential project's transportation impact would be less than significant if the project VMT is 15 percent or more below the existing average regional per capita VMT. For industrial projects (e.g., warehouse, manufacturing, distribution), the impact would be less than significant if the project VMT is equal to or less than existing average regional per capita VMT. The threshold for a retail project is whether it generates net new regional VMT, as new retail typically redistributes existing trips and miles traveled as opposed to inducing new travel. If a project's VMT does not meet the established thresholds, mitigation measures would be required, where feasible. The policy also requires preparation of a Local Transportation Analysis (LTA) to analyze non-CEQA transportation issues, including local transportation operations, intersection level of service, site access and circulation, and neighborhood transportation issues such as pedestrian and bicycle access, and recommend needed transportation improvements.

Transportation Impacts

a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities? (*Less Than Significant Impact*)

Once operational, the Project would not require any additional workers, so no additional trips would be anticipated associated with operation of the Project. Therefore, the discussion below is focused on Project construction.

The Project would not change the existing or future roadways or other circulation system in any way. There would be a limited amount of construction equipment associated with Project implementation (e.g., excavator, compactor, drill rig, etc.) that would be delivered to the Project site at the commencement of construction and removed at completion. There would be several haul trucks for material deliveries and off-haul of construction waste and excavation spoils. Construction activities would at the most generate 12 one-way worker commute trips. The Project would not require any road closures or lane closures. Anticipated construction related trips would thus be dispersed in time across the construction period. As noted above, the most likely intersection that could be affected by an increase in traffic trips would be

[40] As the Congestion Management Agency (CMA) for Santa Clara County and through its Congestion Management Program (CMP), the Santa Clara Valley Transportation Authority (VTA) has a statutory role to work with its Member Agencies (the 15 cities and towns in Santa Clara County, as well as the County of Santa Clara) on issues related to land use and transportation. As part of this role, VTA is working with its Member Agencies on the transition from Level of Service (LOS) to Vehicle Miles Traveled (VMT), in accordance with Senate Bill 743.

Capitol Expressway and Tully Road, which currently operates at LOS D, during the AM peak hours and LOS E during the PM peak hours.

The addition of vehicle trips associated with construction workers and a maximum of 12 truck trips per day for materials deliveries and off-haul of construction waste over the construction period would result in minor to negligible changes to existing traffic patterns along Project area access roads. While construction worker vehicle trips may coincide with peak morning and peak evening commute traffic, truck trips would occur over the course of the workday, thus lessening the effect of construction-related vehicle trips during the most congested times of the day. These additional trips are not anticipated to reduce level of service noticeably, and the intersections would continue to operate at acceptable service levels according to the VTA's designated LOS standard for these intersections (i.e., LOS E or better).

The Project site is not directly served by transit, although a limited number of VTA bus routes operate in the area. Existing transit service does not serve the Project site directly, and the Project would not conflict with any planned transit facilities nor would the Project prohibit access to such facilities.

The Project site currently has limited pedestrian access, and no sidewalks are provided within the Project site. The Project would not affect any existing or planned pedestrian facilities nor would the Project conflict with any plans or policies associated with such facilities and users of such facilities.

Based on the discussion above, there would be no potential to conflict with a circulation plan or policy and impacts would be **less than significant**.

b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)? (*Less Than Significant Impact*)

Section 15064.3 of the CEQA Guidelines suggests that the analysis of VMT impacts applies mainly to land use and transportation projects. Furthermore, consistent with the City's VMT analysis guidance as stated in Council Policy 5-1 (City of San José, 2018):

> "The requirements to prepare a detailed VMT analysis applies to all Projects except the following types of Projects because the City Council finds, as documented in the administrative record for this Policy that these Projects will further City goals and policies and will not result in significant transportation impacts:
>
> 1. Small Infill Projects;
> 2. Local-Serving Retail;
> 3. Local-Serving Public Facilities;[41]
> 4. Transit Supportive Projects in Planned Growth Areas with Low VMT and High Quality Transit;
> 5. Restricted Affordable, Transit Supportive Residential Projects in Planned Growth Areas with High Quality Transit;

[41] Local-serving public facilities either produce very low VMT or divert existing trips from established local facilities to new local facilities without measurably increasing trips outside of the area. For these reasons, they meet the City's screening criteria. These facilities must be publicly owned or controlled; this does not include schools, public or private. Examples of these Projects are: a. Branch Library; b. Community Center; c. Fire station; d. Pumping station; e. Passive Parks.

6. Transportation Projects that reduce or do not increase VMT.

For operational impacts, the City's Transportation Impact Policy (5-1) indicates that local-serving public facilities meet the City's screening criteria, meaning they are not subject to analysis because they are expected to result in less-than-significant VMT impacts based on project description, characteristics, and/or location (City of San José, 2018). If the Project included a substantial increase in traffic it may be subject to Policy 5-1. However, since Project operations would not result in any increases traffic to the Project site, it meets the screening criteria.

There would be temporary increases in VMT during construction, due to employee vehicle trips and haul trips. However, these impacts would be temporary, and haul truck trips would be intermittent during the construction duration. Construction-only projects that do not result in increased operational VMT are not subject to Policy 5-1, and the City does not require additional analysis for CEQA compliance.

Since the Project is a qualifying local-serving public facility, and would not generate more vehicle trips than existing operation and maintenance activities once operational, it would not conflict or be inconsistent with CEQA Guidelines section 15064.3(b). Therefore, this impact would be **less than significant**.

c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? (*No Impact*)

The Project would not alter roadway geometries or provide new roadway design features that would result in traffic safety hazards for vehicles, bicyclists, and pedestrians along nearby roadways. There would be **no impact**.

d) Result in inadequate emergency access? (*No Impact*)

Existing emergency access to the Project site is gained via Capitol Expressway. Project construction would not require any lane closures on any of these public roadways. Therefore, similar to existing conditions, access would be maintained to the Project site for emergency vehicles during Project construction. Based on these findings, there would be **no impact** to existing emergency access to the Project site.

4.12.9 Wildfire

Based on fire hazard mapping by the California Department of Forestry and Fire Protection's Forest Resources Assessment Program, the FHSZs map in the LRAs for Santa Clara County shows no VHFHSZs on or adjacent to the Project site. (CAL FIRE, 2025).[42] Additionally, the Project site is not located in or adjacent to an SRA (CAL FIRE, 2024).

Wildfire Impacts

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:

[42] Wildland fire protection in California is the responsibility of either the federal, state, or local government. LRAs include incorporated cities, cultivated agricultural lands, and portions of the desert. In LRAs, fire protection is typically provided by city fire departments, fire protection districts, counties, and the California Department of Forestry and Fire Protection, which operates under contract with local governments.

a) Substantially impair an adopted emergency response plan or emergency evacuation plan? (*No Impact*)

Santa Clara County has developed an Emergency Operations Plan that establishes Santa Clara County's incident management organization that supports first responders, facilitates public information and interagency communication, and maintains continuity of government (County of Santa Clara, 2025). This plan does not designate specific emergency response or evacuation routes within or surrounding the Project area; therefore, **no impact** would occur.

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? (*Less Than Significant Impact*)

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

The Project site is not within a high fire hazard area and, in the unlikely event of a fire, the potential to expose people or structures to a significant risk involving fires is low. The topography of the Project site is generally flat. Prevailing winds are primarily from a northwest direction. Vegetation communities surrounding the Project site consist of disturbed/ruderal habitat and trees. No new roads would be installed as part of the Project. The use of construction equipment and the possible temporary on site storage of fuels and/or other flammable construction chemicals could pose an increased fire risk resulting in injury to workers or the public during construction. However, contractors would be required to comply with hazardous materials storage and fire protection regulations, which would reduce the potential for fire creation, and ensure that the risk of hazards related to fires during construction would be less than significant. Compliance with existing safety regulations and widely-accepted industry standards, such as the California Fire Code, the 2018 Strategic Fire Plan for California, and the National Cohesive Wildland Fire Management Strategy, would reduce the hazard to the public and the environment. The local fire agency would be responsible for enforcing the provisions of the fire code. Therefore, this impact would be **less than significant**.

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? (*Less Than Significant Impact*)

Due to the overall flat topography and low elevation of the Project site, the Project would not expose people or structures to significant risks resulting from post-fire land changes. Therefore, impacts would be **less than significant**.

4.12.10 Mandatory Findings of Significance

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant 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?	☐	☒	☐	☐

Discussion

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

Based upon background research, and the analysis contained herein, with implementation of mitigation measures identified in this Initial Study and listed below, the Project does not have the potential to substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory. Any potential short-term increases in potential effects to the environment during construction, and long-term effects on the environment during Project operation would be **less than significant with mitigation** incorporated, as described throughout the Initial Study.

> **Mitigation Measure BIO-1: Avoidance and Minimization Measures for Crotch's Bumble Bee.** (see Section 4.2, *Biological Resources*, above)

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

In accordance with CEQA Guidelines Section 15183, the environmental analysis in this document was conducted to determine if there were any Project-specific effects that are peculiar to the Project or its site. In addition to this requirement, Section 15065(a)(3) states that a lead agency shall find that a project may

have a significant effect on the environment where there is substantial evidence that the project has potential environmental effects "that are individually limited, but cumulatively considerable."[43] If cumulative impacts could occur, cumulative analysis asks whether the project's contribution to the significant cumulative impact would be cumulatively considerable.

Cumulative environmental effects are multiple individual effects that, when considered together are considerable or compound or increase other environmental impacts. The individual effects may result from a single project or a number of separate projects and may occur at the same place and point in time or at different locations and over extended periods of time.

As discussed in the Initial Study Checklist above, individual project-related significant impacts have been identified for the Project, all of which would be mitigated to less-than-significant levels through implementation of the mitigation measures described in the Initial Study Checklist. The Project has limited impacts on the physical environment and most of the impacts associated with implementation of the Project would occur during construction, and thus would be short-term.

The potential for Project-generated impacts to contribute to a significant cumulative impact would arise if they are located within the same geographic area. In addition to the geographic scope, cumulative impacts can be determined by timing of the other projects relative to the Project. Schedule is particularly important for construction-related impacts. For a group of projects to generate cumulative construction impacts, they must be temporally as well as spatially proximate. There is one project identified by the City within ½ mile of the Project site that could be under construction at the same time as the Project; a proposed construction of a new car dealership east of North Evergreen Place (City of San José File No. PD23-017) (City of San José, 2026b).

Construction of this other project, in conjunction with the facilities for the Project, could cause wind-blown dust that would contribute particulate matter into the local atmosphere. As described in Section 4.1, *Air Quality*, the Project would be required to comply with **SPC AIR-1: Bay Area Air District Dust Control Best Management Practices**, which includes measures to reduce construction-related air pollutant emissions and fugitive dust. In addition, implementation of **Mitigation Measure AIR-1: Clean Construction Equipment** would reduce health risk impacts associated with diesel construction equipment to less than significant. Therefore, there would be no significant cumulative impact associated with dust.

Construction of this other project, in conjunction with the facilities for the Project, could result in impacts to unknown paleontological resources. Impacts for the Project would be reduced less-than-significant levels through mandatory compliance with **SPC GEO-2: Paleontological Resources**. Therefore, there would be no significant cumulative impact associated with paleontological resources.

Construction of this other project, in conjunction with the facilities for the Project, could result in noise impacts on existing sensitive receptors. Impacts from the Project would be reduced to less-than-significant levels through mandatory compliance with **SPC NOI-1: Construction Noise Reduction Measures**. Therefore, there would be no significant cumulative impact associated with construction-related noise.

[43] *Cumulatively considerable* is defined in Section 15065(a)(3) of the CEQA Guidelines as "the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects."

Based on the discussion above, cumulative impacts related to construction would be **less than significant with mitigation** incorporated. No further mitigation would be required.

> **Mitigation Measure AIR-1: Clean Construction Equipment.** (see Section 4.1, *Air Quality*, above)

c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly? (*Less Than Significant Impact with Mitigation*)

Impacts to air quality (i.e., fugitive dust during construction), water quality (i.e., release of pollutants due to project inundation), and hazardous materials (i.e., exposure to hazardous materials) by the Project could directly affect human beings, and all CEQA impacts discussed above could indirectly affect human beings. However, compliance with applicable federal, state, and local regulations as discussed in this document, mandatory compliance with the Standard Project Conditions, and implementation of the identified mitigation measures would reduce these impacts to **less than significant with mitigation** incorporated. This analysis has identified no other direct or indirect adverse effects on human beings. No further mitigation would be required.

> **Mitigation Measure AIR-1: Clean Construction Equipment.** (see Section 4.1, *Air Quality*, above)
>
> **Mitigation Measure HAZ-1: Soil Management Plan.** (see Section 4.7, *Hazards and Hazardous Materials*, above)

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CHAPTER 5
Lead Agency and Consultants

5.1 Lead Agency

City of San José

Department of Planning, Building, and Code Enforcement

Tina Garg, Supervising Planner
Charlotte Yuen, Planner II

City of San José

Department of Environmental Services
Water Resources Division

Sukhpreet Mann, Supervising Engineer
Alvina Narayan, Senior Engineer

5.2 Consultants

Environmental Science Associates (ESA)

Meryka Dirks, Project Director
Zachary Martin, Project Manager; Geology, Hydrology, Hazards, and Utilities Analyst
Erika Walther, Biological Resources Lead
Sharon Melesurgo, Biological Resources Analyst
Jyothi Iyer, Air Quality, Energy, Greenhouse Gas Emissions, and Noise Lead
James Cobb, Air Quality Analyst
Joneil Manansala, Energy, Greenhouse Gas Emissions, and Noise Analyst
Heidi Koenig, Cultural Resources Lead
Karen Lancelle, Geology and Hydrology Lead
Michael Burns, Hazards Lead

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Appendix A

Air Quality and Greenhouse Gas Modeling Data

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5.12.2. Mitigated

5.13. Operational Waste Generation

5.13.1. Unmitigated

5.13.2. Mitigated

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

5.14.2. Mitigated

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

5.15.2. Mitigated

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

5.16.2. Process Boilers

5.17. User Defined

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

5.18.1.2. Mitigated

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

5.18.1.2. Mitigated

5.18.2. Sequestration

5.18.2.1. Unmitigated

5.18.2.2. Mitigated

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

6.2. Initial Climate Risk Scores

6.3. Adjusted Climate Risk Scores

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

7.2. Healthy Places Index Scores

7.3. Overall Health & Equity Scores

7.4. Health & Equity Measures

7.5. Evaluation Scorecard

7.6. Health & Equity Custom Measures

8. User Changes to Default Data

8.1. Justifications

8.3. Land Use

8.4. Construction

8.4.2. Off-Road Equipment

8.4.6. Trips and VMT

8.4.9. Paving

8.5. Operations

8.5.3. Energy Usage

8.5.4. Water and Waste Water

8.5.5. Solid Waste

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Evergreen Water Well
Construction Start Date	9/1/2026
Operational Year	2029
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.40000
Precipitation (days)	35.0000
Location	37.31767331145363, -121.80830141258508
County	Santa Clara
City	San Jose
Air District	Bay Area AQMD
Air Basin	San Francisco Bay Area
TAZ	1971
EDFZ	1
Electric Utility	Pacific Gas & Electric Company
Gas Utility	Pacific Gas & Electric
App Version	2022.1.1.43

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
General Light Industry	4.00000	1000sqft	0.15000	0.00000	0.00000	—	0.00000	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-5	Use Advanced Engine Tiers
Construction	C-10-A	Water Exposed Surfaces

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.97983	0.81722	7.46872	11.6071	0.01753	0.17582	0.18549	0.36131	0.16150	0.04397	0.20547	—	1,811.22	1,811.22	0.07515	0.05659	0.78249	1,819.57
Mit.	0.26909	0.26012	4.82325	12.0424	0.01753	0.02984	0.18549	0.21533	0.02954	0.04397	0.07350	—	1,811.22	1,811.22	0.07531	0.05662	0.78249	1,819.57
% Reduced	73%	68%	35%	-4%	—	83%	—	40%	82%	—	64%	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.51342	2.07648	18.1144	23.2930	0.05880	0.56231	0.16081	0.72312	0.51765	0.04095	0.55861	—	5,873.90	5,873.90	0.24873	0.09720	0.02279	5,909.11
Mit.	0.90500	0.82793	8.82074	32.4853	0.05880	0.17720	0.15971	0.33691	0.17122	0.04078	0.21201	—	5,873.90	5,873.90	0.24873	0.09720	0.02279	5,909.11
% Reduced	64%	60%	51%	-39%	—	68%	1%	53%	67%	—	62%	—	—	—	—	—	—	—
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.38335	0.31891	2.91465	4.42360	0.00684	0.07026	0.08763	0.15789	0.06443	0.02091	0.08534	—	712.716	712.716	0.02781	0.01307	0.11925	717.426
Mit.	0.10739	0.10243	1.86430	4.57810	0.00684	0.01157	0.08763	0.09919	0.01131	0.02091	0.03222	—	712.716	712.716	0.02781	0.01307	0.11925	717.426
% Reduced	72%	68%	36%	-3%	—	84%	—	37%	82%	—	62%	—	—	—	—	—	—	—

Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.06996	0.05820	0.53192	0.80731	0.00125	0.01282	0.01599	0.02881	0.01176	0.00382	0.01557	—	117.998	117.998	0.00460	0.00216	0.01974	118.778
Mit.	0.01960	0.01869	0.34024	0.83550	0.00125	0.00211	0.01599	0.01810	0.00206	0.00382	0.00588	—	117.998	117.998	0.00460	0.00216	0.01974	118.778
% Reduced	72%	68%	36%	-3%	—	84%	—	37%	82%	—	62%	—	—	—	—	—	—	—

2.2. Construction Emissions by Year

2.2.1. Total Construction Emissions by Year, Unmitigated

Includes both onsite and offsite emissions.

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.60823	0.49593	3.82754	8.64793	0.01368	0.14986	0.14854	0.29840	0.13815	0.03764	0.17579	—	1,628.17	1,628.17	0.07515	0.05659	0.78249	1,647.70
2028	0.26166	0.22043	1.86412	3.09555	0.00445	0.05653	0.12205	0.16386	0.05200	0.03055	0.06916	—	554.598	554.598	0.02589	0.03084	0.54994	564.985
2029	0.97983	0.81722	7.46872	11.6071	0.01753	0.17582	0.18549	0.36131	0.16150	0.04397	0.20547	—	1,811.22	1,811.22	0.06976	0.02038	0.54092	1,819.57
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	2.51342	2.07648	18.1144	23.2930	0.05880	0.56231	0.16081	0.72312	0.51765	0.04095	0.55861	—	5,873.90	5,873.90	0.24873	0.09720	0.02279	5,909.11
2028	1.01950	0.85734	7.39763	7.91036	0.01894	0.32140	0.13308	0.38770	0.29536	0.03217	0.31066	—	1,984.95	1,984.95	0.07740	0.02019	0.01291	1,991.03
2029	0.32233	0.26596	2.40081	3.51071	0.00566	0.06200	0.13308	0.19509	0.05653	0.03217	0.08870	—	628.575	628.575	0.02452	0.02010	0.01148	635.190
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.07551	0.06231	0.53816	0.73232	0.00176	0.01705	0.00592	0.02296	0.01570	0.00150	0.01720	—	178.740	178.740	0.00764	0.00328	0.01410	179.923
2028	0.11648	0.09631	0.85569	1.17247	0.00207	0.02666	0.03581	0.06247	0.02442	0.00866	0.03308	—	229.164	229.164	0.00913	0.00626	0.05939	231.316
2029	0.38335	0.31891	2.91465	4.42360	0.00684	0.07026	0.08763	0.15789	0.06443	0.02091	0.08534	—	712.716	712.716	0.02781	0.01307	0.11925	717.426
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2027	0.01378	0.01137	0.09821	0.13365	0.00032	0.00311	0.00108	0.00419	0.00286	0.00027	0.00314	—	29.5924	29.5924	0.00126	0.00054	0.00233	29.7883
2028	0.02126	0.01758	0.15616	0.21398	0.00038	0.00487	0.00654	0.01140	0.00446	0.00158	0.00604	—	37.9406	37.9406	0.00151	0.00104	0.00983	38.2970
2029	0.06996	0.05820	0.53192	0.80731	0.00125	0.01282	0.01599	0.02881	0.01176	0.00382	0.01557	—	117.998	117.998	0.00460	0.00216	0.01974	118.778

2.2.2. Onsite Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.55631	0.46746	3.47706	8.17081	0.01183	0.14633	0.00118	0.14751	0.13463	0.00018	0.13481	—	1,280.85	1,280.85	0.05196	0.01039	0.00000	1,285.24
2028	0.23734	0.19892	1.85630	2.80355	0.00424	0.05653	0.00013	0.05653	0.05200	0.00002	0.05200	—	431.310	431.310	0.01750	0.00350	0.00000	432.790
2029	0.92080	0.76715	7.38171	10.9261	0.01723	0.17521	0.00000	0.17521	0.16120	0.00000	0.16120	—	1,602.78	1,602.78	0.06502	0.01300	0.00000	1,608.29
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	2.45852	2.04757	17.6840	22.8349	0.05664	0.55817	0.00181	0.55998	0.51351	0.00027	0.51379	—	5,488.53	5,488.53	0.22264	0.04453	0.00000	5,507.37
2028	0.99877	0.83656	7.40552	7.67735	0.01910	0.32167	0.00000	0.32167	0.29593	0.00000	0.29593	—	1,943.15	1,943.15	0.07882	0.01576	0.00000	1,949.82
2029	0.28086	0.23353	2.26672	3.10723	0.00505	0.06078	0.00000	0.06078	0.05592	0.00000	0.05592	—	448.478	448.478	0.01819	0.00364	0.00000	450.017
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.07345	0.06122	0.52260	0.71516	0.00168	0.01690	0.00006	0.01696	0.01554	0.00001	0.01555	—	164.407	164.407	0.00667	0.00133	0.00000	164.972
2028	0.10454	0.08714	0.81667	1.05704	0.00189	0.02631	0.00001	0.02632	0.02421	< 0.000005	0.02421	—	177.187	177.187	0.00719	0.00144	0.00000	177.795
2029	0.35562	0.29614	2.85432	4.15007	0.00659	0.06975	0.00000	0.06975	0.06417	0.00000	0.06417	—	606.550	606.550	0.02460	0.00492	0.00000	608.632
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.01341	0.01117	0.09537	0.13052	0.00031	0.00308	0.00001	0.00309	0.00284	< 0.000005	0.00284	—	27.2195	27.2195	0.00110	0.00022	0.00000	27.3129
2028	0.01908	0.01590	0.14904	0.19291	0.00035	0.00480	< 0.000005	0.00480	0.00442	< 0.000005	0.00442	—	29.3353	29.3353	0.00119	0.00024	0.00000	29.4359
2029	0.06490	0.05405	0.52091	0.75739	0.00120	0.01273	0.00000	0.01273	0.01171	0.00000	0.01171	—	100.421	100.421	0.00407	0.00081	0.00000	100.766

2.2.3. Offsite Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.05192	0.02847	0.35048	0.47712	0.00185	0.00353	0.14736	0.15088	0.00353	0.03746	0.04099	—	347.330	347.330	0.02319	0.04620	0.78249	362.460
2028	0.04172	0.02604	0.22864	0.39964	0.00123	0.00238	0.12192	0.12430	0.00207	0.03053	0.03260	—	247.536	247.536	0.01343	0.02835	0.54994	256.869
2029	0.05902	0.05006	0.12372	0.68097	0.00061	0.00122	0.18549	0.18610	0.00061	0.04397	0.04427	—	208.431	208.431	0.00606	0.01304	0.54092	211.289
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.05490	0.02891	0.43035	0.45819	0.00216	0.00414	0.15900	0.16314	0.00414	0.04068	0.04482	—	385.369	385.369	0.02609	0.05267	0.02279	401.741
2028	0.04279	0.03402	0.14268	0.42440	0.00061	0.00122	0.13308	0.13431	0.00061	0.03217	0.03278	—	184.102	184.102	0.00659	0.01655	0.01291	189.212
2029	0.04147	0.03243	0.13409	0.40348	0.00061	0.00122	0.13308	0.13431	0.00061	0.03217	0.03278	—	180.097	180.097	0.00632	0.01647	0.01148	185.173
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.00206	0.00109	0.01556	0.01716	0.00008	0.00015	0.00585	0.00601	0.00015	0.00150	0.00165	—	14.3322	14.3322	0.00097	0.00195	0.01410	14.9514
2028	0.01194	0.00917	0.03903	0.11543	0.00018	0.00035	0.03581	0.03616	0.00021	0.00866	0.00887	—	51.9770	51.9770	0.00194	0.00482	0.05939	53.5215
2029	0.02773	0.02277	0.06033	0.27353	0.00025	0.00051	0.08763	0.08814	0.00025	0.02091	0.02117	—	106.166	106.166	0.00320	0.00815	0.11925	108.794
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.00038	0.00020	0.00284	0.00313	0.00001	0.00003	0.00107	0.00110	0.00003	0.00027	0.00030	—	2.37286	2.37286	0.00016	0.00032	0.00233	2.47537
2028	0.00218	0.00167	0.00712	0.02107	0.00003	0.00006	0.00653	0.00660	0.00004	0.00158	0.00162	—	8.60539	8.60539	0.00032	0.00080	0.00983	8.86109
2029	0.00506	0.00416	0.01101	0.04992	0.00005	0.00009	0.01599	0.01608	0.00005	0.00382	0.00386	—	17.5769	17.5769	0.00053	0.00135	0.01974	18.0121

2.2.4. Total Construction Emissions by Year, Mitigated

Includes both onsite and offsite emissions.

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.17330	0.14985	0.98165	9.45907	0.01372	0.02780	0.14782	0.17562	0.02780	0.03753	0.06533	—	1,632.15	1,632.15	0.07531	0.05662	0.78249	1,651.69
2028	0.10344	0.09428	1.59601	3.24419	0.00445	0.01650	0.12197	0.13002	0.01578	0.03053	0.03828	—	554.598	554.598	0.02589	0.03084	0.54994	564.985
2029	0.26909	0.26012	4.82325	12.0424	0.01753	0.02984	0.18549	0.21533	0.02954	0.04397	0.07350	—	1,811.22	1,811.22	0.06976	0.02038	0.54092	1,819.57
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.90500	0.82793	8.82074	32.4853	0.05880	0.17720	0.15971	0.33691	0.17122	0.04078	0.21201	—	5,873.90	5,873.90	0.24873	0.09720	0.02279	5,909.11
2028	0.22604	0.22608	2.31059	11.5445	0.01894	0.03641	0.13308	0.14247	0.03610	0.03217	0.05140	—	1,984.95	1,984.95	0.07740	0.02019	0.01291	1,991.03
2029	0.10080	0.09176	1.49681	3.59915	0.00566	0.00939	0.13308	0.14247	0.00878	0.03217	0.04095	—	628.575	628.575	0.02452	0.02010	0.01148	635.190
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.02668	0.02431	0.25235	0.99305	0.00176	0.00516	0.00588	0.01104	0.00500	0.00150	0.00649	—	178.783	178.783	0.00764	0.00328	0.01410	179.967
2028	0.03501	0.03200	0.47046	1.30377	0.00207	0.00394	0.03581	0.03975	0.00378	0.00866	0.01244	—	229.164	229.164	0.00913	0.00626	0.05939	231.316
2029	0.10739	0.10243	1.86430	4.57810	0.00684	0.01157	0.08763	0.09919	0.01131	0.02091	0.03222	—	712.716	712.716	0.02781	0.01307	0.11925	717.426
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.00487	0.00444	0.04605	0.18123	0.00032	0.00094	0.00107	0.00201	0.00091	0.00027	0.00119	—	29.5996	29.5996	0.00126	0.00054	0.00233	29.7955
2028	0.00639	0.00584	0.08586	0.23794	0.00038	0.00072	0.00654	0.00725	0.00069	0.00158	0.00227	—	37.9406	37.9406	0.00151	0.00104	0.00983	38.2970
2029	0.01960	0.01869	0.34024	0.83550	0.00125	0.00211	0.01599	0.01810	0.00206	0.00382	0.00588	—	117.998	117.998	0.00460	0.00216	0.01974	118.778

2.2.5. Onsite Construction Emissions by Year, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.12138	0.12138	0.63116	8.98195	0.01187	0.02428	0.00046	0.02474	0.02428	0.00007	0.02435	—	1,284.82	1,284.82	0.05212	0.01042	0.00000	1,289.23
2028	0.07912	0.07277	1.58819	2.95219	0.00424	0.01650	0.00005	0.01650	0.01578	0.00001	0.01578	—	431.310	431.310	0.01750	0.00350	0.00000	432.790
2029	0.21006	0.21006	4.73623	11.3615	0.01723	0.02923	0.00000	0.02923	0.02923	0.00000	0.02923	—	1,602.78	1,602.78	0.06502	0.01300	0.00000	1,608.29

Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.85010	0.79902	8.39039	32.0271	0.05664	0.17306	0.00071	0.17377	0.16708	0.00011	0.16719	—	5,488.53	5,488.53	0.22264	0.04453	0.00000	5,507.37
2028	0.20531	0.20531	2.31848	11.3115	0.01910	0.03668	0.00000	0.03668	0.03668	0.00000	0.03668	—	1,943.15	1,943.15	0.07882	0.01576	0.00000	1,949.82
2029	0.05933	0.05933	1.36272	3.19567	0.00505	0.00817	0.00000	0.00817	0.00817	0.00000	0.00817	—	448.478	448.478	0.01819	0.00364	0.00000	450.017
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.02462	0.02322	0.23679	0.97589	0.00168	0.00501	0.00002	0.00503	0.00484	< 0.000005	0.00485	—	164.451	164.451	0.00667	0.00133	0.00000	165.015
2028	0.02307	0.02283	0.43144	1.18835	0.00189	0.00359	< 0.000005	0.00360	0.00357	< 0.000005	0.00357	—	177.187	177.187	0.00719	0.00144	0.00000	177.795
2029	0.07966	0.07966	1.80397	4.30457	0.00659	0.01106	0.00000	0.01106	0.01106	0.00000	0.01106	—	606.550	606.550	0.02460	0.00492	0.00000	608.632
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.00449	0.00424	0.04321	0.17810	0.00031	0.00091	< 0.000005	0.00092	0.00088	< 0.000005	0.00088	—	27.2267	27.2267	0.00110	0.00022	0.00000	27.3202
2028	0.00421	0.00417	0.07874	0.21687	0.00035	0.00066	< 0.000005	0.00066	0.00065	< 0.000005	0.00065	—	29.3353	29.3353	0.00119	0.00024	0.00000	29.4359
2029	0.01454	0.01454	0.32922	0.78558	0.00120	0.00202	0.00000	0.00202	0.00202	0.00000	0.00202	—	100.421	100.421	0.00407	0.00081	0.00000	100.766

2.2.6. Offsite Construction Emissions by Year, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.05192	0.02847	0.35048	0.47712	0.00185	0.00353	0.14736	0.15088	0.00353	0.03746	0.04099	—	347.330	347.330	0.02319	0.04620	0.78249	362.460
2028	0.04172	0.02604	0.22864	0.39964	0.00123	0.00238	0.12192	0.12430	0.00207	0.03053	0.03260	—	247.536	247.536	0.01343	0.02835	0.54994	256.869
2029	0.05902	0.05006	0.12372	0.68097	0.00061	0.00122	0.18549	0.18610	0.00061	0.04397	0.04427	—	208.431	208.431	0.00606	0.01304	0.54092	211.289
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2027	0.05490	0.02891	0.43035	0.45819	0.00216	0.00414	0.15900	0.16314	0.00414	0.04068	0.04482	—	385.369	385.369	0.02609	0.05267	0.02279	401.741
2028	0.04279	0.03402	0.14268	0.42440	0.00061	0.00122	0.13308	0.13431	0.00061	0.03217	0.03278	—	184.102	184.102	0.00659	0.01655	0.01291	189.212
2029	0.04147	0.03243	0.13409	0.40348	0.00061	0.00122	0.13308	0.13431	0.00061	0.03217	0.03278	—	180.097	180.097	0.00632	0.01647	0.01148	185.173
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.00206	0.00109	0.01556	0.01716	0.00008	0.00015	0.00585	0.00601	0.00015	0.00150	0.00165	—	14.3322	14.3322	0.00097	0.00195	0.01410	14.9514
2028	0.01194	0.00917	0.03903	0.11543	0.00018	0.00035	0.03581	0.03616	0.00021	0.00866	0.00887	—	51.9770	51.9770	0.00194	0.00482	0.05939	53.5215
2029	0.02773	0.02277	0.06033	0.27353	0.00025	0.00051	0.08763	0.08814	0.00025	0.02091	0.02117	—	106.166	106.166	0.00320	0.00815	0.11925	108.794
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.00038	0.00020	0.00284	0.00313	0.00001	0.00003	0.00107	0.00110	0.00003	0.00027	0.00030	—	2.37286	2.37286	0.00016	0.00032	0.00233	2.47537
2028	0.00218	0.00167	0.00712	0.02107	0.00003	0.00006	0.00653	0.00660	0.00004	0.00158	0.00162	—	8.60539	8.60539	0.00032	0.00080	0.00983	8.86109
2029	0.00506	0.00416	0.01101	0.04992	0.00005	0.00009	0.01599	0.01608	0.00005	0.00382	0.00386	—	17.5769	17.5769	0.00053	0.00135	0.01974	18.0121

2.3. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.00246	0.00241	0.00052	0.00511	< 0.000005	< 0.000005	0.00000	< 0.000005	< 0.000005	0.00000	< 0.000005	0.00000	39.2708	39.2708	0.00644	0.00083	0.00000	39.6789
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.00234	0.00227	0.00062	0.00762	< 0.000005	< 0.000005	0.00000	< 0.000005	< 0.000005	0.00000	< 0.000005	0.00000	39.2755	39.2755	0.00648	0.00084	0.00000	39.6870
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	39.1200	39.1200	0.00633	0.00077	0.00000	39.5068
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unmit.	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	6.47677	6.47677	0.00105	0.00013	0.00000	6.54081

2.4. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.00246	0.00241	0.00052	0.00511	< 0.000005	< 0.000005	0.00000	< 0.000005	< 0.000005	0.00000	< 0.000005	—	0.15082	0.15082	0.00012	0.00006	0.00000	0.17204
Area	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Energy	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	39.1200	39.1200	0.00633	0.00077	—	39.5068
Water	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Waste	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	0.00246	0.00241	0.00052	0.00511	< 0.000005	< 0.000005	0.00000	< 0.000005	< 0.000005	0.00000	< 0.000005	0.00000	39.2708	39.2708	0.00644	0.00083	0.00000	39.6789
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.00234	0.00227	0.00062	0.00762	< 0.000005	< 0.000005	0.00000	< 0.000005	< 0.000005	0.00000	< 0.000005	—	0.15551	0.15551	0.00015	0.00007	0.00000	0.18016
Area	0.00000	0.00000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	39.1200	39.1200	0.00633	0.00077	—	39.5068
Water	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Waste	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	0.00234	0.00227	0.00062	0.00762	< 0.000005	< 0.000005	0.00000	< 0.000005	< 0.000005	0.00000	< 0.000005	0.00000	39.2755	39.2755	0.00648	0.00084	0.00000	39.6870
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Area	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000

Energy	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	39.1200	39.1200	0.00633	0.00077	—	39.5068
Water	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Waste	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	39.1200	39.1200	0.00633	0.00077	0.00000	39.5068
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Area	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Energy	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	6.47677	6.47677	0.00105	0.00013	—	6.54081
Water	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Waste	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	6.47677	6.47677	0.00105	0.00013	0.00000	6.54081

2.5. Operations Emissions by Sector, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.00246	0.00241	0.00052	0.00511	< 0.000005	< 0.000005	0.00000	< 0.000005	< 0.000005	0.00000	< 0.000005	—	0.15082	0.15082	0.00012	0.00006	0.00000	0.17204
Area	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Energy	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	39.1200	39.1200	0.00633	0.00077	—	39.5068
Water	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Waste	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	0.00246	0.00241	0.00052	0.00511	< 0.000005	< 0.000005	0.00000	< 0.000005	< 0.000005	0.00000	< 0.000005	0.00000	39.2708	39.2708	0.00644	0.00083	0.00000	39.6789
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.00234	0.00227	0.00062	0.00762	< 0.000005	< 0.000005	0.00000	< 0.000005	< 0.000005	0.00000	< 0.000005	—	0.15551	0.15551	0.00015	0.00007	0.00000	0.18016

Area	0.00000	0.00000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	39.1200	39.1200	0.00633	0.00077	—	39.5068
Water	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Waste	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	0.00234	0.00227	0.00062	0.00762	< 0.000005	< 0.000005	0.00000	< 0.000005	< 0.000005	0.00000	< 0.000005	0.00000	39.2755	39.2755	0.00648	0.00084	0.00000	39.6870
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Area	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Energy	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	39.1200	39.1200	0.00633	0.00077	—	39.5068
Water	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Waste	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	39.1200	39.1200	0.00633	0.00077	0.00000	39.5068
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Area	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Energy	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	6.47677	6.47677	0.00105	0.00013	—	6.54081
Water	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Waste	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	6.47677	6.47677	0.00105	0.00013	0.00000	6.54081

3. Construction Emissions Details

3.1. Well Site Preparation (2027)

3.1.1. Onsite - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.55631	0.46746	3.47706	8.17081	0.01183	0.14633	—	0.14633	0.13463	—	0.13463	—	1,280.85	1,280.85	0.05196	0.01039	—	1,285.24
Dust From Material Movement	—	—	—	—	—	—	0.00118	0.00118	—	0.00018	0.00018	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00610	0.00512	0.03810	0.08954	0.00013	0.00160	—	0.00160	0.00148	—	0.00148	—	14.0367	14.0367	0.00057	0.00011	—	14.0848
Dust From Material Movement	—	—	—	—	—	—	0.00001	0.00001	—	< 0.000005	< 0.000005	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00111	0.00093	0.00695	0.01634	0.00002	0.00029	—	0.00029	0.00027	—	0.00027	—	2.32393	2.32393	0.00009	0.00002	—	2.33190
Dust From Material Movement	—	—	—	—	—	—	< 0.000005	< 0.000005	—	< 0.000005	< 0.000005	—	—	—	—	—	—	—

Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.1.2. Offsite - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02520	0.02239	0.01811	0.31063	0.00000	0.00000	0.07320	0.07320	0.00000	0.01716	0.01716	—	72.9506	72.9506	0.00106	0.00281	0.24528	74.0606
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.02672	0.00608	0.33237	0.16649	0.00185	0.00353	0.07416	0.07769	0.00353	0.02030	0.02383	—	274.379	274.379	0.02213	0.04339	0.53720	288.399
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00026	0.00023	0.00023	0.00285	0.00000	0.00000	0.00078	0.00078	0.00000	0.00018	0.00018	—	0.74867	0.74867	0.00001	0.00003	0.00116	0.75935
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00029	0.00007	0.00377	0.00183	0.00002	0.00004	0.00080	0.00084	0.00004	0.00022	0.00026	—	3.00743	3.00743	0.00024	0.00048	0.00255	3.15773
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00005	0.00004	0.00004	0.00052	0.00000	0.00000	0.00014	0.00014	0.00000	0.00003	0.00003	—	0.12395	0.12395	< 0.000005	0.00001	0.00019	0.12572
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00005	0.00001	0.00069	0.00033	< 0.000005	0.00001	0.00015	0.00015	0.00001	0.00004	0.00005	—	0.49791	0.49791	0.00004	0.00008	0.00042	0.52280

3.1.3. Onsite - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12138	0.12138	0.63116	8.98195	0.01187	0.02428	—	0.02428	0.02428	—	0.02428	—	1,284.82	1,284.82	0.05212	0.01042	—	1,289.23
Dust From Material Movement	—	—	—	—	—	—	0.00046	0.00046	—	0.00007	0.00007	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00133	0.00133	0.00692	0.09843	0.00013	0.00027	—	0.00027	0.00027	—	0.00027	—	14.0802	14.0802	0.00057	0.00011	—	14.1285
Dust From Material Movement	—	—	—	—	—	—	0.00001	0.00001	—	< 0.000005	< 0.000005	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00024	0.00024	0.00126	0.01796	0.00002	0.00005	—	0.00005	0.00005	—	0.00005	—	2.33114	2.33114	0.00009	0.00002	—	2.33914
Dust From Material Movement	—	—	—	—	—	—	< 0.000005	< 0.000005	—	< 0.000005	< 0.000005	—	—	—	—	—	—	—

Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.1.4. Offsite - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02520	0.02239	0.01811	0.31063	0.00000	0.00000	0.07320	0.07320	0.00000	0.01716	0.01716	—	72.9506	72.9506	0.00106	0.00281	0.24528	74.0606
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.02672	0.00608	0.33237	0.16649	0.00185	0.00353	0.07416	0.07769	0.00353	0.02030	0.02383	—	274.379	274.379	0.02213	0.04339	0.53720	288.399
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00026	0.00023	0.00023	0.00285	0.00000	0.00000	0.00078	0.00078	0.00000	0.00018	0.00018	—	0.74867	0.74867	0.00001	0.00003	0.00116	0.75935
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00029	0.00007	0.00377	0.00183	0.00002	0.00004	0.00080	0.00084	0.00004	0.00022	0.00026	—	3.00743	3.00743	0.00024	0.00048	0.00255	3.15773
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00005	0.00004	0.00004	0.00052	0.00000	0.00000	0.00014	0.00014	0.00000	0.00003	0.00003	—	0.12395	0.12395	< 0.000005	0.00001	0.00019	0.12572
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00005	0.00001	0.00069	0.00033	< 0.000005	0.00001	0.00015	0.00015	0.00001	0.00004	0.00005	—	0.49791	0.49791	0.00004	0.00008	0.00042	0.52280

3.2. Pipeline Site Preparation (2028)

3.2.1. Onsite - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16484	0.13741	1.36988	2.06827	0.00322	0.03943	—	0.03943	0.03628	—	0.03628	—	307.062	307.062	0.01246	0.00249	—	308.116
Dust From Material Movement	—	—	—	—	—	—	0.00013	0.00013	—	0.00002	0.00002	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00948	0.00791	0.07881	0.11900	0.00019	0.00227	—	0.00227	0.00209	—	0.00209	—	17.6666	17.6666	0.00072	0.00014	—	17.7272
Dust From Material Movement	—	—	—	—	—	—	0.00001	0.00001	—	< 0.000005	< 0.000005	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00173	0.00144	0.01438	0.02172	0.00003	0.00041	—	0.00041	0.00038	—	0.00038	—	2.92491	2.92491	0.00012	0.00002	—	2.93494
Dust From Material Movement	—	—	—	—	—	—	< 0.000005	< 0.000005	—	< 0.000005	< 0.000005	—	—	—	—	—	—	—

Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.2.2. Offsite - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02432	0.02151	0.01565	0.29200	0.00000	0.00000	0.07320	0.07320	0.00000	0.01716	0.01716	—	71.6781	71.6781	0.00106	0.00053	0.22046	72.0827
Vendor	0.00408	0.00149	0.05249	0.02700	0.00031	0.00061	0.01164	0.01225	0.00031	0.00322	0.00352	—	42.2156	42.2156	0.00224	0.00612	0.08358	44.1796
Hauling	0.01332	0.00304	0.16050	0.08065	0.00093	0.00176	0.03708	0.03884	0.00176	0.01015	0.01192	—	133.642	133.642	0.01014	0.02169	0.24590	140.607
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00135	0.00119	0.00106	0.01409	0.00000	0.00000	0.00412	0.00412	0.00000	0.00096	0.00096	—	3.86220	3.86220	0.00007	0.00016	0.00547	3.91767
Vendor	0.00023	0.00008	0.00313	0.00157	0.00002	0.00004	0.00066	0.00069	0.00002	0.00018	0.00020	—	2.42973	2.42973	0.00013	0.00035	0.00207	2.54000
Hauling	0.00076	0.00017	0.00957	0.00466	0.00005	0.00010	0.00210	0.00220	0.00010	0.00057	0.00068	—	7.69045	7.69045	0.00058	0.00125	0.00612	8.08309
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00025	0.00022	0.00019	0.00257	0.00000	0.00000	0.00075	0.00075	0.00000	0.00018	0.00018	—	0.63943	0.63943	0.00001	0.00003	0.00091	0.64862
Vendor	0.00004	0.00002	0.00057	0.00029	< 0.000005	0.00001	0.00012	0.00013	< 0.000005	0.00003	0.00004	—	0.40227	0.40227	0.00002	0.00006	0.00034	0.42053
Hauling	0.00014	0.00003	0.00175	0.00085	0.00001	0.00002	0.00038	0.00040	0.00002	0.00010	0.00012	—	1.27324	1.27324	0.00010	0.00021	0.00101	1.33825

3.2.3. Onsite - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04009	0.04009	0.87579	2.17242	0.00322	0.00567	—	0.00567	0.00567	—	0.00567	—	307.062	307.062	0.01246	0.00249	—	308.116
Dust From Material Movement	—	—	—	—	—	—	0.00005	0.00005	—	0.00001	0.00001	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00231	0.00231	0.05039	0.12499	0.00019	0.00033	—	0.00033	0.00033	—	0.00033	—	17.6666	17.6666	0.00072	0.00014	—	17.7272
Dust From Material Movement	—	—	—	—	—	—	< 0.000005	< 0.000005	—	< 0.000005	< 0.000005	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00042	0.00042	0.00920	0.02281	0.00003	0.00006	—	0.00006	0.00006	—	0.00006	—	2.92491	2.92491	0.00012	0.00002	—	2.93494
Dust From Material Movement	—	—	—	—	—	—	< 0.000005	< 0.000005	—	< 0.000005	< 0.000005	—	—	—	—	—	—	—

Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.2.4. Offsite - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02432	0.02151	0.01565	0.29200	0.00000	0.00000	0.07320	0.07320	0.00000	0.01716	0.01716	—	71.6781	71.6781	0.00106	0.00053	0.22046	72.0827
Vendor	0.00408	0.00149	0.05249	0.02700	0.00031	0.00061	0.01164	0.01225	0.00031	0.00322	0.00352	—	42.2156	42.2156	0.00224	0.00612	0.08358	44.1796
Hauling	0.01332	0.00304	0.16050	0.08065	0.00093	0.00176	0.03708	0.03884	0.00176	0.01015	0.01192	—	133.642	133.642	0.01014	0.02169	0.24590	140.607
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00135	0.00119	0.00106	0.01409	0.00000	0.00000	0.00412	0.00412	0.00000	0.00096	0.00096	—	3.86220	3.86220	0.00007	0.00016	0.00547	3.91767
Vendor	0.00023	0.00008	0.00313	0.00157	0.00002	0.00004	0.00066	0.00069	0.00002	0.00018	0.00020	—	2.42973	2.42973	0.00013	0.00035	0.00207	2.54000
Hauling	0.00076	0.00017	0.00957	0.00466	0.00005	0.00010	0.00210	0.00220	0.00010	0.00057	0.00068	—	7.69045	7.69045	0.00058	0.00125	0.00612	8.08309
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00025	0.00022	0.00019	0.00257	0.00000	0.00000	0.00075	0.00075	0.00000	0.00018	0.00018	—	0.63943	0.63943	0.00001	0.00003	0.00091	0.64862
Vendor	0.00004	0.00002	0.00057	0.00029	< 0.000005	0.00001	0.00012	0.00013	< 0.000005	0.00003	0.00004	—	0.40227	0.40227	0.00002	0.00006	0.00034	0.42053
Hauling	0.00014	0.00003	0.00175	0.00085	0.00001	0.00002	0.00038	0.00040	0.00002	0.00010	0.00012	—	1.27324	1.27324	0.00010	0.00021	0.00101	1.33825

3.3. Well Drilling (2027)

3.3.1. Onsite - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.45852	2.04757	17.6840	22.8349	0.05664	0.55817	—	0.55817	0.51351	—	0.51351	—	5,488.53	5,488.53	0.22264	0.04453	—	5,507.37
Dust From Material Movement	—	—	—	—	—	—	0.00181	0.00181	—	0.00027	0.00027	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06736	0.05610	0.48449	0.62561	0.00155	0.01529	—	0.01529	0.01407	—	0.01407	—	150.371	150.371	0.00610	0.00122	—	150.887
Dust From Material Movement	—	—	—	—	—	—	0.00005	0.00005	—	0.00001	0.00001	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01229	0.01024	0.08842	0.11417	0.00028	0.00279	—	0.00279	0.00257	—	0.00257	—	24.8956	24.8956	0.00101	0.00020	—	24.9810
Dust From Material Movement	—	—	—	—	—	—	0.00001	0.00001	—	< 0.000005	< 0.000005	—	—	—	—	—	—	—

Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.3.2. Offsite - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02450	0.02168	0.02128	0.26153	0.00000	0.00000	0.07320	0.07320	0.00000	0.01716	0.01716	—	67.5705	67.5705	0.00141	0.00281	0.00637	68.4505
Vendor	0.00404	0.00141	0.05801	0.02884	0.00031	0.00061	0.01164	0.01225	0.00061	0.00322	0.00383	—	43.3038	43.3038	0.00254	0.00647	0.00245	45.2987
Hauling	0.02637	0.00582	0.35106	0.16782	0.00185	0.00353	0.07416	0.07769	0.00353	0.02030	0.02383	—	274.495	274.495	0.02213	0.04339	0.01397	287.992
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00066	0.00058	0.00057	0.00713	0.00000	0.00000	0.00196	0.00196	0.00000	0.00046	0.00046	—	1.87167	1.87167	0.00003	0.00008	0.00290	1.89838
Vendor	0.00011	0.00004	0.00156	0.00078	0.00001	0.00002	0.00031	0.00033	0.00002	0.00009	0.00010	—	1.18585	1.18585	0.00007	0.00018	0.00112	1.24158
Hauling	0.00073	0.00016	0.00943	0.00458	0.00005	0.00010	0.00200	0.00209	0.00010	0.00055	0.00064	—	7.51857	7.51857	0.00061	0.00119	0.00637	7.89433
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00012	0.00011	0.00010	0.00130	0.00000	0.00000	0.00036	0.00036	0.00000	0.00008	0.00008	—	0.30988	0.30988	0.00001	0.00001	0.00048	0.31430
Vendor	0.00002	0.00001	0.00028	0.00014	< 0.000005	< 0.000005	0.00006	0.00006	< 0.000005	0.00002	0.00002	—	0.19633	0.19633	0.00001	0.00003	0.00018	0.20556
Hauling	0.00013	0.00003	0.00172	0.00084	0.00001	0.00002	0.00036	0.00038	0.00002	0.00010	0.00012	—	1.24479	1.24479	0.00010	0.00020	0.00105	1.30700

3.3.3. Onsite - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.85010	0.79902	8.39039	32.0271	0.05664	0.17306	—	0.17306	0.16708	—	0.16708	—	5,488.53	5,488.53	0.22264	0.04453	—	5,507.37
Dust From Material Movement	—	—	—	—	—	—	0.00071	0.00071	—	0.00011	0.00011	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02329	0.02189	0.22987	0.87746	0.00155	0.00474	—	0.00474	0.00458	—	0.00458	—	150.371	150.371	0.00610	0.00122	—	150.887
Dust From Material Movement	—	—	—	—	—	—	0.00002	0.00002	—	< 0.000005	< 0.000005	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00425	0.00400	0.04195	0.16014	0.00028	0.00087	—	0.00087	0.00084	—	0.00084	—	24.8956	24.8956	0.00101	0.00020	—	24.9810
Dust From Material Movement	—	—	—	—	—	—	< 0.000005	< 0.000005	—	< 0.000005	< 0.000005	—	—	—	—	—	—	—

Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.3.4. Offsite - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02450	0.02168	0.02128	0.26153	0.00000	0.00000	0.07320	0.07320	0.00000	0.01716	0.01716	—	67.5705	67.5705	0.00141	0.00281	0.00637	68.4505
Vendor	0.00404	0.00141	0.05801	0.02884	0.00031	0.00061	0.01164	0.01225	0.00061	0.00322	0.00383	—	43.3038	43.3038	0.00254	0.00647	0.00245	45.2987
Hauling	0.02637	0.00582	0.35106	0.16782	0.00185	0.00353	0.07416	0.07769	0.00353	0.02030	0.02383	—	274.495	274.495	0.02213	0.04339	0.01397	287.992
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00066	0.00058	0.00057	0.00713	0.00000	0.00000	0.00196	0.00196	0.00000	0.00046	0.00046	—	1.87167	1.87167	0.00003	0.00008	0.00290	1.89838
Vendor	0.00011	0.00004	0.00156	0.00078	0.00001	0.00002	0.00031	0.00033	0.00002	0.00009	0.00010	—	1.18585	1.18585	0.00007	0.00018	0.00112	1.24158
Hauling	0.00073	0.00016	0.00943	0.00458	0.00005	0.00010	0.00200	0.00209	0.00010	0.00055	0.00064	—	7.51857	7.51857	0.00061	0.00119	0.00637	7.89433
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00012	0.00011	0.00010	0.00130	0.00000	0.00000	0.00036	0.00036	0.00000	0.00008	0.00008	—	0.30988	0.30988	0.00001	0.00001	0.00048	0.31430
Vendor	0.00002	0.00001	0.00028	0.00014	< 0.000005	< 0.000005	0.00006	0.00006	< 0.000005	0.00002	0.00002	—	0.19633	0.19633	0.00001	0.00003	0.00018	0.20556
Hauling	0.00013	0.00003	0.00172	0.00084	0.00001	0.00002	0.00036	0.00038	0.00002	0.00010	0.00012	—	1.24479	1.24479	0.00010	0.00020	0.00105	1.30700

3.4. Well Installation (2028)

3.4.1. Onsite - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.99877	0.83656	7.40552	7.67735	0.01910	0.32167	—	0.32167	0.29593	—	0.29593	—	1,943.15	1,943.15	0.07882	0.01576	—	1,949.82
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02736	0.02292	0.20289	0.21034	0.00052	0.00881	—	0.00881	0.00811	—	0.00811	—	53.2370	53.2370	0.00216	0.00043	—	53.4197
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00499	0.00418	0.03703	0.03839	0.00010	0.00161	—	0.00161	0.00148	—	0.00148	—	8.81399	8.81399	0.00036	0.00007	—	8.84424
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.4.2. Offsite - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02362	0.02080	0.02110	0.24588	0.00000	0.00000	0.07320	0.07320	0.00000	0.01716	0.01716	—	66.3980	66.3980	0.00141	0.00281	0.00572	67.2773
Vendor	0.00369	0.00141	0.05551	0.02779	0.00031	0.00061	0.01164	0.01225	0.00031	0.00322	0.00352	—	42.2524	42.2524	0.00224	0.00617	0.00217	44.1481
Hauling	-0.00657	-0.00143	-0.08450	-0.04065	-0.00046	-0.00088	-0.01854	-0.01942	-0.00088	-0.00508	-0.00596	—	-66.8508	-66.8508	-0.00507	-0.01085	-0.00319	-70.2131
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00064	0.00057	0.00051	0.00671	0.00000	0.00000	0.00196	0.00196	0.00000	0.00046	0.00046	—	1.83914	1.83914	0.00003	0.00008	0.00260	1.86556
Vendor	0.00011	0.00004	0.00149	0.00075	0.00001	0.00002	0.00031	0.00033	0.00001	0.00009	0.00010	—	1.15701	1.15701	0.00006	0.00017	0.00099	1.20952
Hauling	-0.00018	-0.00004	-0.00228	-0.00111	-0.00001	-0.00002	-0.00050	-0.00052	-0.00002	-0.00014	-0.00016	—	-1.83106	-1.83106	-0.00014	-0.00030	-0.00146	-1.92455
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00012	0.00010	0.00009	0.00122	0.00000	0.00000	0.00036	0.00036	0.00000	0.00008	0.00008	—	0.30449	0.30449	0.00001	0.00001	0.00043	0.30886
Vendor	0.00002	0.00001	0.00027	0.00014	< 0.000005	< 0.000005	0.00006	0.00006	< 0.000005	0.00002	0.00002	—	0.19156	0.19156	0.00001	0.00003	0.00016	0.20025
Hauling	-0.00003	-0.00001	-0.00042	-0.00020	> -0.000005	> -0.000005	-0.00009	-0.00010	> -0.000005	-0.00002	-0.00003	—	-0.30315	-0.30315	-0.00002	-0.00005	-0.00024	-0.31863

3.4.3. Onsite - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.20531	0.20531	2.31848	11.3115	0.01910	0.03668	—	0.03668	0.03668	—	0.03668	—	1,943.15	1,943.15	0.07882	0.01576	—	1,949.82

Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00562	0.00562	0.06352	0.30990	0.00052	0.00100	—	0.00100	0.00100	—	0.00100	—	53.2370	53.2370	0.00216	0.00043	—	53.4197
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00103	0.00103	0.01159	0.05656	0.00010	0.00018	—	0.00018	0.00018	—	0.00018	—	8.81399	8.81399	0.00036	0.00007	—	8.84424
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.4.4. Offsite - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02362	0.02080	0.02110	0.24588	0.00000	0.00000	0.07320	0.07320	0.00000	0.01716	0.01716	—	66.3980	66.3980	0.00141	0.00281	0.00572	67.2773
Vendor	0.00369	0.00141	0.05551	0.02779	0.00031	0.00061	0.01164	0.01225	0.00031	0.00322	0.00352	—	42.2524	42.2524	0.00224	0.00617	0.00217	44.1481
Hauling	-0.00657	-0.00143	-0.08450	-0.04065	-0.00046	-0.00088	-0.01854	-0.01942	-0.00088	-0.00508	-0.00596	—	-66.8508	-66.8508	-0.00507	-0.01085	-0.00319	-70.2131
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00064	0.00057	0.00051	0.00671	0.00000	0.00000	0.00196	0.00196	0.00000	0.00046	0.00046	—	1.83914	1.83914	0.00003	0.00008	0.00260	1.86556

Vendor	0.00011	0.00004	0.00149	0.00075	0.00001	0.00002	0.00031	0.00033	0.00001	0.00009	0.00010	—	1.15701	1.15701	0.00006	0.00017	0.00099	1.20952
Hauling	-0.00018	-0.00004	-0.00228	-0.00111	-0.00001	-0.00002	-0.00050	-0.00052	-0.00002	-0.00014	-0.00016	—	-1.83106	-1.83106	-0.00014	-0.00030	-0.00146	-1.92455
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00012	0.00010	0.00009	0.00122	0.00000	0.00000	0.00036	0.00036	0.00000	0.00008	0.00008	—	0.30449	0.30449	0.00001	0.00001	0.00043	0.30886
Vendor	0.00002	0.00001	0.00027	0.00014	< 0.000005	< 0.000005	0.00006	0.00006	< 0.000005	0.00002	0.00002	—	0.19156	0.19156	0.00001	0.00003	0.00016	0.20025
Hauling	-0.00003	-0.00001	-0.00042	-0.00020	> -0.000005	> -0.000005	-0.00009	-0.00010	> -0.000005	-0.00002	-0.00003	—	-0.30315	-0.30315	-0.00002	-0.00005	-0.00024	-0.31863

3.5. Pipeline Construction (2028)

3.5.1. Onsite - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04338	0.03616	0.36049	0.54428	0.00085	0.01038	—	0.01038	0.00955	—	0.00955	—	80.8059	80.8059	0.00328	0.00066	—	81.0832
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00781	0.00651	0.06490	0.09799	0.00015	0.00187	—	0.00187	0.00172	—	0.00172	—	14.5482	14.5482	0.00059	0.00012	—	14.5981

Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00143	0.00119	0.01184	0.01788	0.00003	0.00034	—	0.00034	0.00031	—	0.00031	—	2.40862	2.40862	0.00010	0.00002	—	2.41689
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.5.2. Offsite - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02362	0.02080	0.02110	0.24588	0.00000	0.00000	0.07320	0.07320	0.00000	0.01716	0.01716	—	66.3980	66.3980	0.00141	0.00281	0.00572	67.2773
Vendor	0.00369	0.00141	0.05551	0.02779	0.00031	0.00061	0.01164	0.01225	0.00031	0.00322	0.00352	—	42.2524	42.2524	0.00224	0.00617	0.00217	44.1481
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00422	0.00371	0.00332	0.04410	0.00000	0.00000	0.01288	0.01288	0.00000	0.00301	0.00301	—	12.0858	12.0858	0.00022	0.00051	0.01711	12.2594
Vendor	0.00073	0.00026	0.00980	0.00492	0.00006	0.00011	0.00206	0.00217	0.00006	0.00057	0.00062	—	7.60324	7.60324	0.00040	0.00110	0.00649	7.94829
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00077	0.00068	0.00061	0.00805	0.00000	0.00000	0.00235	0.00235	0.00000	0.00055	0.00055	—	2.00094	2.00094	0.00004	0.00008	0.00283	2.02968
Vendor	0.00013	0.00005	0.00179	0.00090	0.00001	0.00002	0.00038	0.00040	0.00001	0.00010	0.00011	—	1.25880	1.25880	0.00007	0.00018	0.00107	1.31593
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.5.3. Onsite - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01055	0.01055	0.23047	0.57169	0.00085	0.00149	—	0.00149	0.00149	—	0.00149	—	80.8059	80.8059	0.00328	0.00066	—	81.0832
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00190	0.00190	0.04149	0.10293	0.00015	0.00027	—	0.00027	0.00027	—	0.00027	—	14.5482	14.5482	0.00059	0.00012	—	14.5981
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00035	0.00035	0.00757	0.01878	0.00003	0.00005	—	0.00005	0.00005	—	0.00005	—	2.40862	2.40862	0.00010	0.00002	—	2.41689
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.5.4. Offsite - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02362	0.02080	0.02110	0.24588	0.00000	0.00000	0.07320	0.07320	0.00000	0.01716	0.01716	—	66.3980	66.3980	0.00141	0.00281	0.00572	67.2773
Vendor	0.00369	0.00141	0.05551	0.02779	0.00031	0.00061	0.01164	0.01225	0.00031	0.00322	0.00352	—	42.2524	42.2524	0.00224	0.00617	0.00217	44.1481
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00422	0.00371	0.00332	0.04410	0.00000	0.00000	0.01288	0.01288	0.00000	0.00301	0.00301	—	12.0858	12.0858	0.00022	0.00051	0.01711	12.2594
Vendor	0.00073	0.00026	0.00980	0.00492	0.00006	0.00011	0.00206	0.00217	0.00006	0.00057	0.00062	—	7.60324	7.60324	0.00040	0.00110	0.00649	7.94829
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00077	0.00068	0.00061	0.00805	0.00000	0.00000	0.00235	0.00235	0.00000	0.00055	0.00055	—	2.00094	2.00094	0.00004	0.00008	0.00283	2.02968
Vendor	0.00013	0.00005	0.00179	0.00090	0.00001	0.00002	0.00038	0.00040	0.00001	0.00010	0.00011	—	1.25880	1.25880	0.00007	0.00018	0.00107	1.31593
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.6. Pipeline Construction (2029)

3.6.1. Onsite - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04187	0.03491	0.35271	0.54363	0.00085	0.00940	—	0.00940	0.00865	—	0.00865	—	80.8046	80.8046	0.00328	0.00066	—	81.0819

Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04187	0.03491	0.35271	0.54363	0.00085	0.00940	—	0.00940	0.00865	—	0.00865	—	80.8046	80.8046	0.00328	0.00066	—	81.0819
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00983	0.00820	0.08283	0.12766	0.00020	0.00221	—	0.00221	0.00203	—	0.00203	—	18.9756	18.9756	0.00077	0.00015	—	19.0408
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00179	0.00150	0.01512	0.02330	0.00004	0.00040	—	0.00040	0.00037	—	0.00037	—	3.14163	3.14163	0.00013	0.00003	—	3.15241
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.6.2. Offsite - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02326	0.02045	0.01548	0.27565	0.00000	0.00000	0.07320	0.07320	0.00000	0.01716	0.01716	—	70.4801	70.4801	0.00106	0.00053	0.19662	70.8609
Vendor	0.00377	0.00149	0.05025	0.02630	0.00031	0.00061	0.01164	0.01225	0.00031	0.00322	0.00352	—	41.0404	41.0404	0.00224	0.00612	0.07395	42.9947

Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02273	0.01974	0.01864	0.23286	0.00000	0.00000	0.07320	0.07320	0.00000	0.01716	0.01716	—	65.2934	65.2934	0.00123	0.00281	0.00510	66.1676
Vendor	0.00369	0.00141	0.05306	0.02709	0.00031	0.00061	0.01164	0.01225	0.00031	0.00322	0.00352	—	41.0784	41.0784	0.00224	0.00612	0.00192	42.9607
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00530	0.00464	0.00372	0.05406	0.00000	0.00000	0.01680	0.01680	0.00000	0.00393	0.00393	—	15.5017	15.5017	0.00029	0.00066	0.01994	15.7258
Vendor	0.00088	0.00034	0.01218	0.00626	0.00007	0.00014	0.00268	0.00283	0.00007	0.00074	0.00081	—	9.64141	9.64141	0.00052	0.00144	0.00750	10.0905
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00097	0.00085	0.00068	0.00987	0.00000	0.00000	0.00307	0.00307	0.00000	0.00072	0.00072	—	2.56649	2.56649	0.00005	0.00011	0.00330	2.60358
Vendor	0.00016	0.00006	0.00222	0.00114	0.00001	0.00003	0.00049	0.00052	0.00001	0.00014	0.00015	—	1.59625	1.59625	0.00009	0.00024	0.00124	1.67060
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.6.3. Onsite - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01055	0.01055	0.23047	0.57169	0.00085	0.00149	—	0.00149	0.00149	—	0.00149	—	80.8046	80.8046	0.00328	0.00066	—	81.0819
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Roa Equipment	0.01055	0.01055	0.23047	0.57169	0.00085	0.00149	—	0.00149	0.00149	—	0.00149	—	80.8046	80.8046	0.00328	0.00066	—	81.0819
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Roa d Equipm ent	0.00248	0.00248	0.05412	0.13425	0.00020	0.00035	—	0.00035	0.00035	—	0.00035	—	18.9756	18.9756	0.00077	0.00015	—	19.0408
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Roa d Equipm ent	0.00045	0.00045	0.00988	0.02450	0.00004	0.00006	—	0.00006	0.00006	—	0.00006	—	3.14163	3.14163	0.00013	0.00003	—	3.15241
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.6.4. Offsite - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02326	0.02045	0.01548	0.27565	0.00000	0.00000	0.07320	0.07320	0.00000	0.01716	0.01716	—	70.4801	70.4801	0.00106	0.00053	0.19662	70.8609
Vendor	0.00377	0.00149	0.05025	0.02630	0.00031	0.00061	0.01164	0.01225	0.00031	0.00322	0.00352	—	41.0404	41.0404	0.00224	0.00612	0.07395	42.9947
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02273	0.01974	0.01864	0.23286	0.00000	0.00000	0.07320	0.07320	0.00000	0.01716	0.01716	—	65.2934	65.2934	0.00123	0.00281	0.00510	66.1676
Vendor	0.00369	0.00141	0.05306	0.02709	0.00031	0.00061	0.01164	0.01225	0.00031	0.00322	0.00352	—	41.0784	41.0784	0.00224	0.00612	0.00192	42.9607

Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00530	0.00464	0.00372	0.05406	0.00000	0.00000	0.01680	0.01680	0.00000	0.00393	0.00393	—	15.5017	15.5017	0.00029	0.00066	0.01994	15.7258
Vendor	0.00088	0.00034	0.01218	0.00626	0.00007	0.00014	0.00268	0.00283	0.00007	0.00074	0.00081	—	9.64141	9.64141	0.00052	0.00144	0.00750	10.0905
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00097	0.00085	0.00068	0.00987	0.00000	0.00000	0.00307	0.00307	0.00000	0.00072	0.00072	—	2.56649	2.56649	0.00005	0.00011	0.00330	2.60358
Vendor	0.00016	0.00006	0.00222	0.00114	0.00001	0.00003	0.00049	0.00052	0.00001	0.00014	0.00015	—	1.59625	1.59625	0.00009	0.00024	0.00124	1.67060
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.7. Well Development (2028)

3.7.1. Onsite - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.23734	0.19892	1.74570	2.80355	0.00411	0.05653	—	0.05653	0.05200	—	0.05200	—	431.310	431.310	0.01750	0.00350	—	432.790
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.00910	0.00763	0.06696	0.10753	0.00016	0.00217	—	0.00217	0.00199	—	0.00199	—	16.5434	16.5434	0.00067	0.00013	—	16.6002
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00166	0.00139	0.01222	0.01962	0.00003	0.00040	—	0.00040	0.00036	—	0.00036	—	2.73895	2.73895	0.00011	0.00002	—	2.74835
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.7.2. Offsite - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02432	0.02151	0.01565	0.29200	0.00000	0.00000	0.07320	0.07320	0.00000	0.01716	0.01716	—	71.6781	71.6781	0.00106	0.00053	0.22046	72.0827
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00090	0.00079	0.00071	0.00940	0.00000	0.00000	0.00274	0.00274	0.00000	0.00064	0.00064	—	2.57480	2.57480	0.00005	0.00011	0.00365	2.61178
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00016	0.00014	0.00013	0.00171	0.00000	0.00000	0.00050	0.00050	0.00000	0.00012	0.00012	—	0.42629	0.42629	0.00001	0.00002	0.00060	0.43241

Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.7.3. Onsite - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07912	0.07277	0.74752	2.95219	0.00411	0.01650	—	0.01650	0.01578	—	0.01578	—	431.310	431.310	0.01750	0.00350	—	432.790
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00303	0.00279	0.02867	0.11323	0.00016	0.00063	—	0.00063	0.00061	—	0.00061	—	16.5434	16.5434	0.00067	0.00013	—	16.6002
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00055	0.00051	0.00523	0.02067	0.00003	0.00012	—	0.00012	0.00011	—	0.00011	—	2.73895	2.73895	0.00011	0.00002	—	2.74835
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.7.4. Offsite - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02432	0.02151	0.01565	0.29200	0.00000	0.00000	0.07320	0.07320	0.00000	0.01716	0.01716	—	71.6781	71.6781	0.00106	0.00053	0.22046	72.0827
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00090	0.00079	0.00071	0.00940	0.00000	0.00000	0.00274	0.00274	0.00000	0.00064	0.00064	—	2.57480	2.57480	0.00005	0.00011	0.00365	2.61178
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00016	0.00014	0.00013	0.00171	0.00000	0.00000	0.00050	0.00050	0.00000	0.00012	0.00012	—	0.42629	0.42629	0.00001	0.00002	0.00060	0.43241
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.8. Well Testing Startup (2028)

3.8.1. Onsite - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Roa Equipment	0.21298	0.17602	1.85630	2.16599	0.00424	0.03165	—	0.03165	0.02912	—	0.02912	—	328.219	328.219	0.01331	0.00266	—	329.345
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00584	0.00482	0.05086	0.05934	0.00012	0.00087	—	0.00087	0.00080	—	0.00080	—	8.99230	8.99230	0.00036	0.00007	—	9.02316
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00106	0.00088	0.00928	0.01083	0.00002	0.00016	—	0.00016	0.00015	—	0.00015	—	1.48878	1.48878	0.00006	0.00001	—	1.49389
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.8.2. Offsite - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01216	0.01075	0.00783	0.14600	0.00000	0.00000	0.03660	0.03660	0.00000	0.00858	0.00858	—	35.8391	35.8391	0.00053	0.00026	0.11023	36.0413
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00032	0.00028	0.00025	0.00336	0.00000	0.00000	0.00098	0.00098	0.00000	0.00023	0.00023	—	0.91957	0.91957	0.00002	0.00004	0.00130	0.93278
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00006	0.00005	0.00005	0.00061	0.00000	0.00000	0.00018	0.00018	0.00000	0.00004	0.00004	—	0.15225	0.15225	< 0.000005	0.00001	0.00022	0.15443
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.8.3. Onsite - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05198	0.05198	1.58819	2.36784	0.00424	0.00578	—	0.00578	0.00578	—	0.00578	—	328.219	328.219	0.01331	0.00266	—	329.345
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.00142	0.00142	0.04351	0.06487	0.00012	0.00016	—	0.00016	0.00016	—	0.00016	—	8.99230	8.99230	0.00036	0.00007	—	9.02316
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00026	0.00026	0.00794	0.01184	0.00002	0.00003	—	0.00003	0.00003	—	0.00003	—	1.48878	1.48878	0.00006	0.00001	—	1.49389
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.8.4. Offsite - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01216	0.01075	0.00783	0.14600	0.00000	0.00000	0.03660	0.03660	0.00000	0.00858	0.00858	—	35.8391	35.8391	0.00053	0.00026	0.11023	36.0413
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00032	0.00028	0.00025	0.00336	0.00000	0.00000	0.00098	0.00098	0.00000	0.00023	0.00023	—	0.91957	0.91957	0.00002	0.00004	0.00130	0.93278
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.00006	0.00005	0.00005	0.00061	0.00000	0.00000	0.00018	0.00018	0.00000	0.00004	0.00004	—	0.15225	0.15225	< 0.000005	0.00001	0.00022	0.15443
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.9. Pipeline Startup (2028)

3.9.1. Onsite - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.24963	0.20744	1.95646	2.57076	0.00420	0.05736	—	0.05736	0.05277	—	0.05277	—	367.693	367.693	0.01492	0.00298	—	368.954
Paving	0.00000	0.00000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04494	0.03735	0.35224	0.46284	0.00076	0.01033	—	0.01033	0.00950	—	0.00950	—	66.1990	66.1990	0.00269	0.00054	—	66.4262
Paving	0.00000	0.00000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road	0.00820	0.00682	0.06428	0.08447	0.00014	0.00188	—	0.00188	0.00173	—	0.00173	—	10.9600	10.9600	0.00044	0.00009	—	10.9976
Paving	0.00000	0.00000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.9.2. Offsite - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01181	0.01040	0.01055	0.12294	0.00000	0.00000	0.03660	0.03660	0.00000	0.00858	0.00858	—	33.1990	33.1990	0.00071	0.00141	0.00286	33.6387
Vendor	0.00369	0.00141	0.05551	0.02779	0.00031	0.00061	0.01164	0.01225	0.00031	0.00322	0.00352	—	42.2524	42.2524	0.00224	0.00617	0.00217	44.1481
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00211	0.00186	0.00166	0.02205	0.00000	0.00000	0.00644	0.00644	0.00000	0.00151	0.00151	—	6.04289	6.04289	0.00011	0.00025	0.00856	6.12969
Vendor	0.00073	0.00026	0.00980	0.00492	0.00006	0.00011	0.00206	0.00217	0.00006	0.00057	0.00062	—	7.60324	7.60324	0.00040	0.00110	0.00649	7.94829
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00039	0.00034	0.00030	0.00402	0.00000	0.00000	0.00118	0.00118	0.00000	0.00028	0.00028	—	1.00047	1.00047	0.00002	0.00004	0.00142	1.01484
Vendor	0.00013	0.00005	0.00179	0.00090	0.00001	0.00002	0.00038	0.00040	0.00001	0.00010	0.00011	—	1.25880	1.25880	0.00007	0.00018	0.00107	1.31593
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.9.3. Onsite - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04878	0.04878	1.13225	2.62398	0.00420	0.00668	—	0.00668	0.00668	—	0.00668	—	367.693	367.693	0.01492	0.00298	—	368.954
Paving	0.00000	0.00000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00878	0.00878	0.20385	0.47242	0.00076	0.00120	—	0.00120	0.00120	—	0.00120	—	66.1990	66.1990	0.00269	0.00054	—	66.4262
Paving	0.00000	0.00000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00160	0.00160	0.03720	0.08622	0.00014	0.00022	—	0.00022	0.00022	—	0.00022	—	10.9600	10.9600	0.00044	0.00009	—	10.9976
Paving	0.00000	0.00000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.9.4. Offsite - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01181	0.01040	0.01055	0.12294	0.00000	0.00000	0.03660	0.03660	0.00000	0.00858	0.00858	—	33.1990	33.1990	0.00071	0.00141	0.00286	33.6387
Vendor	0.00369	0.00141	0.05551	0.02779	0.00031	0.00061	0.01164	0.01225	0.00031	0.00322	0.00352	—	42.2524	42.2524	0.00224	0.00617	0.00217	44.1481
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00211	0.00186	0.00166	0.02205	0.00000	0.00000	0.00644	0.00644	0.00000	0.00151	0.00151	—	6.04289	6.04289	0.00011	0.00025	0.00856	6.12969
Vendor	0.00073	0.00026	0.00980	0.00492	0.00006	0.00011	0.00206	0.00217	0.00006	0.00057	0.00062	—	7.60324	7.60324	0.00040	0.00110	0.00649	7.94829
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00039	0.00034	0.00030	0.00402	0.00000	0.00000	0.00118	0.00118	0.00000	0.00028	0.00028	—	1.00047	1.00047	0.00002	0.00004	0.00142	1.01484
Vendor	0.00013	0.00005	0.00179	0.00090	0.00001	0.00002	0.00038	0.00040	0.00001	0.00010	0.00011	—	1.25880	1.25880	0.00007	0.00018	0.00107	1.31593
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.10. Pipeline Startup (2029)

3.10.1. Onsite - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.23899	0.19863	1.91401	2.56360	0.00420	0.05138	—	0.05138	0.04727	—	0.04727	—	367.674	367.674	0.01491	0.00298	—	368.935

Paving	0.00000	0.00000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.23899	0.19863	1.91401	2.56360	0.00420	0.05138	—	0.05138	0.04727	—	0.04727	—	367.674	367.674	0.01491	0.00298	—	368.935
Paving	0.00000	0.00000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14218	0.11817	1.13867	1.52512	0.00250	0.03056	—	0.03056	0.02812	—	0.02812	—	218.733	218.733	0.00887	0.00177	—	219.484
Paving	0.00000	0.00000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02595	0.02157	0.20781	0.27833	0.00046	0.00558	—	0.00558	0.00513	—	0.00513	—	36.2138	36.2138	0.00147	0.00029	—	36.3381
Paving	0.00000	0.00000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.10.2. Offsite - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01163	0.01023	0.00774	0.13782	0.00000	0.00000	0.03660	0.03660	0.00000	0.00858	0.00858	—	35.2401	35.2401	0.00053	0.00026	0.09831	35.4304
Vendor	0.00377	0.00149	0.05025	0.02630	0.00031	0.00061	0.01164	0.01225	0.00031	0.00322	0.00352	—	41.0404	41.0404	0.00224	0.00612	0.07395	42.9947
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01137	0.00987	0.00932	0.11643	0.00000	0.00000	0.03660	0.03660	0.00000	0.00858	0.00858	—	32.6467	32.6467	0.00062	0.00141	0.00255	33.0838
Vendor	0.00369	0.00141	0.05306	0.02709	0.00031	0.00061	0.01164	0.01225	0.00031	0.00322	0.00352	—	41.0784	41.0784	0.00224	0.00612	0.00192	42.9607
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00671	0.00587	0.00471	0.06847	0.00000	0.00000	0.02128	0.02128	0.00000	0.00498	0.00498	—	19.6355	19.6355	0.00037	0.00084	0.02526	19.9193
Vendor	0.00222	0.00086	0.03086	0.01586	0.00018	0.00036	0.00680	0.00716	0.00018	0.00188	0.00206	—	24.4249	24.4249	0.00133	0.00364	0.01900	25.5626
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00122	0.00107	0.00086	0.01250	0.00000	0.00000	0.00388	0.00388	0.00000	0.00091	0.00091	—	3.25088	3.25088	0.00006	0.00014	0.00418	3.29787
Vendor	0.00040	0.00016	0.00563	0.00289	0.00003	0.00007	0.00124	0.00131	0.00003	0.00034	0.00038	—	4.04382	4.04382	0.00022	0.00060	0.00315	4.23218
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.10.3. Onsite - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04878	0.04878	1.13225	2.62398	0.00420	0.00668	—	0.00668	0.00668	—	0.00668	—	367.674	367.674	0.01491	0.00298	—	368.935

Paving	0.00000	0.00000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04878	0.04878	1.13225	2.62398	0.00420	0.00668	—	0.00668	0.00668	—	0.00668	—	367.674	367.674	0.01491	0.00298	—	368.935
Paving	0.00000	0.00000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02902	0.02902	0.67359	1.56104	0.00250	0.00397	—	0.00397	0.00397	—	0.00397	—	218.733	218.733	0.00887	0.00177	—	219.484
Paving	0.00000	0.00000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00530	0.00530	0.12293	0.28489	0.00046	0.00072	—	0.00072	0.00072	—	0.00072	—	36.2138	36.2138	0.00147	0.00029	—	36.3381
Paving	0.00000	0.00000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.10.4. Offsite - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01163	0.01023	0.00774	0.13782	0.00000	0.00000	0.03660	0.03660	0.00000	0.00858	0.00858	—	35.2401	35.2401	0.00053	0.00026	0.09831	35.4304
Vendor	0.00377	0.00149	0.05025	0.02630	0.00031	0.00061	0.01164	0.01225	0.00031	0.00322	0.00352	—	41.0404	41.0404	0.00224	0.00612	0.07395	42.9947
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01137	0.00987	0.00932	0.11643	0.00000	0.00000	0.03660	0.03660	0.00000	0.00858	0.00858	—	32.6467	32.6467	0.00062	0.00141	0.00255	33.0838
Vendor	0.00369	0.00141	0.05306	0.02709	0.00031	0.00061	0.01164	0.01225	0.00031	0.00322	0.00352	—	41.0784	41.0784	0.00224	0.00612	0.00192	42.9607
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00671	0.00587	0.00471	0.06847	0.00000	0.00000	0.02128	0.02128	0.00000	0.00498	0.00498	—	19.6355	19.6355	0.00037	0.00084	0.02526	19.9193
Vendor	0.00222	0.00086	0.03086	0.01586	0.00018	0.00036	0.00680	0.00716	0.00018	0.00188	0.00206	—	24.4249	24.4249	0.00133	0.00364	0.01900	25.5626
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00122	0.00107	0.00086	0.01250	0.00000	0.00000	0.00388	0.00388	0.00000	0.00091	0.00091	—	3.25088	3.25088	0.00006	0.00014	0.00418	3.29787
Vendor	0.00040	0.00016	0.00563	0.00289	0.00003	0.00007	0.00124	0.00131	0.00003	0.00034	0.00038	—	4.04382	4.04382	0.00022	0.00060	0.00315	4.23218
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.11. Pipeline Trenching (2029)

3.11.1. Onsite - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road	0.68181	0.56852	5.46770	8.36249	0.01302	0.12384	—	0.12384	0.11393	—	0.11393	—	1,235.11	1,235.11	0.05010	0.01002	—	1,239.35
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.20361	0.16978	1.63282	2.49729	0.00389	0.03698	—	0.03698	0.03402	—	0.03402	—	368.841	368.841	0.01496	0.00299	—	370.107
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03716	0.03098	0.29799	0.45576	0.00071	0.00675	—	0.00675	0.00621	—	0.00621	—	61.0659	61.0659	0.00248	0.00050	—	61.2755
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.11.2. Offsite - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04362	0.03834	0.02902	0.51684	0.00000	0.00000	0.13724	0.13724	0.00000	0.03217	0.03217	—	132.150	132.150	0.00198	0.00099	0.36866	132.864
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01263	0.01106	0.00886	0.12889	0.00000	0.00000	0.04006	0.04006	0.00000	0.00938	0.00938	—	36.9619	36.9619	0.00069	0.00158	0.04755	37.4961
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00231	0.00202	0.00162	0.02352	0.00000	0.00000	0.00731	0.00731	0.00000	0.00171	0.00171	—	6.11947	6.11947	0.00011	0.00026	0.00787	6.20792
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.11.3. Onsite - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16128	0.16128	3.60398	8.73750	0.01302	0.02255	—	0.02255	0.02255	—	0.02255	—	1,235.11	1,235.11	0.05010	0.01002	—	1,239.35
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04816	0.04816	1.07626	2.60928	0.00389	0.00674	—	0.00674	0.00674	—	0.00674	—	368.841	368.841	0.01496	0.00299	—	370.107

Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00879	0.00879	0.19642	0.47619	0.00071	0.00123	—	0.00123	0.00123	—	0.00123	—	61.0659	61.0659	0.00248	0.00050	—	61.2755
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.11.4. Offsite - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04362	0.03834	0.02902	0.51684	0.00000	0.00000	0.13724	0.13724	0.00000	0.03217	0.03217	—	132.150	132.150	0.00198	0.00099	0.36866	132.864
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01263	0.01106	0.00886	0.12889	0.00000	0.00000	0.04006	0.04006	0.00000	0.00938	0.00938	—	36.9619	36.9619	0.00069	0.00158	0.04755	37.4961
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00231	0.00202	0.00162	0.02352	0.00000	0.00000	0.00731	0.00731	0.00000	0.00171	0.00171	—	6.11947	6.11947	0.00011	0.00026	0.00787	6.20792
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Mobile source emissions results are presented in Sections 2.6. No further detailed breakdown of emissions is available.

4.1.2. Mitigated

Mobile source emissions results are presented in Sections 2.5. No further detailed breakdown of emissions is available.

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	39.1200	39.1200	0.00633	0.00077	—	39.5068
Total	—	—	—	—	—	—	—	—	—	—	—	—	39.1200	39.1200	0.00633	0.00077	—	39.5068
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	39.1200	39.1200	0.00633	0.00077	—	39.5068
Total	—	—	—	—	—	—	—	—	—	—	—	—	39.1200	39.1200	0.00633	0.00077	—	39.5068
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	6.47677	6.47677	0.00105	0.00013	—	6.54081

Total	—	—	—	—	—	—	—	—	—	—	—	—	6.47677	6.47677	0.00105	0.00013	—	6.54081

4.2.2. Electricity Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	39.1200	39.1200	0.00633	0.00077	—	39.5068
Total	—	—	—	—	—	—	—	—	—	—	—	—	39.1200	39.1200	0.00633	0.00077	—	39.5068
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	39.1200	39.1200	0.00633	0.00077	—	39.5068
Total	—	—	—	—	—	—	—	—	—	—	—	—	39.1200	39.1200	0.00633	0.00077	—	39.5068
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	6.47677	6.47677	0.00105	0.00013	—	6.54081
Total	—	—	—	—	—	—	—	—	—	—	—	—	6.47677	6.47677	0.00105	0.00013	—	6.54081

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

General Light Industry	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000

4.2.4. Natural Gas Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000

Total	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.00000	0.00000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.00000	0.00000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.00000	0.00000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Architect Coatings	0.00000	0.00000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.00000	0.00000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.00000	0.00000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.00000	0.00000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000

4.3.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.00000	0.00000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.00000	0.00000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000

Total	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.00000	0.00000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.00000	0.00000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.00000	0.00000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.00000	0.00000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.00000	0.00000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000

4.4.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

General Light Industry	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000

Total	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000

4.5.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.6.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.7.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Well Site Preparation	Site Preparation	9/1/2027	9/6/2027	5.00000	4.00000	Site Prep
Pipeline Site Preparation	Site Preparation	9/1/2028	9/30/2028	5.00000	21.0000	Site Prep
Well Drilling	Building Construction	10/1/2027	10/14/2027	5.00000	10.00000	Drilling
Well Installation	Building Construction	1/1/2028	1/14/2028	5.00000	10.00000	Installation
Pipeline Construction	Building Construction	10/1/2028	4/30/2029	5.00000	151.000	Construction of Appurtenant Facilities
Well Development	Building Construction	4/1/2028	4/20/2028	5.00000	14.0000	Development
Well Testing Startup	Building Construction	5/1/2028	5/12/2028	5.00000	10.00000	Testing Startup
Pipeline Startup	Paving	10/1/2028	10/31/2029	5.00000	23.0000	—
Pipeline Trenching	Trenching	5/1/2029	9/30/2029	5.00000	109.000	Trenching/Installing Pipelines

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Well Site Preparation	Rubber Tired Loaders	Diesel	Average	1.000000	12.0000	148.000	0.41000
Well Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	1.000000	12.0000	84.0000	0.37000
Pipeline Site Preparation	Air Compressors	Diesel	Average	1.000000	1.90000	37.0000	0.48000
Pipeline Site Preparation	Skid Steer Loaders	Diesel	Average	1.000000	1.90000	71.0000	0.37000
Pipeline Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	1.000000	1.90000	84.0000	0.37000
Pipeline Site Preparation	Other Construction Equipment	Diesel	Average	1.000000	1.90000	82.0000	0.42000
Pipeline Site Preparation	Generator Sets	Diesel	Average	1.000000	1.90000	35.0000	0.74000
Well Drilling	Bore/Drill Rigs	Diesel	Average	1.000000	24.0000	367.000	0.29000
Well Drilling	Air Compressors	Diesel	Average	1.000000	24.0000	82.0000	0.20000
Well Drilling	Skid Steer Loaders	Diesel	Average	1.000000	4.00000	71.0000	0.37000
Well Drilling	Tractors/Loaders/Backhoes	Diesel	Average	1.000000	12.0000	84.0000	0.37000
Well Drilling	Other Construction Equipment	Diesel	Average	1.000000	12.0000	82.0000	0.42000
Well Drilling	Pumps	Diesel	Average	1.000000	24.0000	11.0000	0.74000
Well Drilling	Generator Sets	Diesel	Average	1.000000	24.0000	35.0000	0.74000
Well Installation	Bore/Drill Rigs	Diesel	Average	1.000000	9.60000	367.000	0.29000
Well Installation	Skid Steer Loaders	Diesel	Average	1.000000	4.80000	82.0000	0.20000
Well Installation	Tractors/Loaders/Backhoes	Diesel	Average	1.000000	4.80000	84.0000	0.37000
Well Installation	Other Construction Equipment	Diesel	Average	1.000000	4.80000	82.0000	0.42000

Well Installation	Generator Sets	Diesel	Average	1.000000	9.60000	35.0000	0.74000
Pipeline Construction	Air Compressors	Diesel	Average	1.000000	0.50000	37.0000	0.48000
Pipeline Construction	Skid Steer Loaders	Diesel	Average	1.000000	0.50000	71.0000	0.37000
Pipeline Construction	Tractors/Loaders/Backhoes	Diesel	Average	1.000000	0.50000	84.0000	0.37000
Pipeline Construction	Other Construction Equipment	Diesel	Average	1.000000	0.50000	82.0000	0.42000
Pipeline Construction	Generator Sets	Diesel	Average	1.000000	0.50000	35.0000	0.74000
Well Development	Air Compressors	Diesel	Average	1.000000	4.30000	10.00000	0.56000
Well Development	Bore/Drill Rigs	Diesel	Average	1.000000	4.30000	81.0000	0.42000
Well Development	Other Construction Equipment	Diesel	Average	1.000000	4.30000	36.0000	0.38000
Well Development	Tractors/Loaders/Backhoes	Diesel	Average	1.000000	4.30000	84.0000	0.37000
Well Testing Startup	Pumps	Diesel	Average	1.000000	6.00000	37.0000	0.48000
Well Testing Startup	Generator Sets	Diesel	Average	1.000000	6.00000	35.0000	0.74000
Pipeline Startup	Air Compressors	Diesel	Average	1.000000	4.00000	37.0000	0.48000
Pipeline Startup	Other Construction Equipment	Diesel	Average	1.000000	4.00000	89.0000	0.36000
Pipeline Startup	Generator Sets	Diesel	Average	1.000000	4.00000	35.0000	0.74000
Pipeline Trenching	Air Compressors	Diesel	Average	1.000000	8.00000	37.0000	0.48000
Pipeline Trenching	Paving Equipment	Diesel	Average	1.000000	7.00000	89.0000	0.36000
Pipeline Trenching	Rollers	Diesel	Average	1.000000	7.00000	36.0000	0.38000
Pipeline Trenching	Skid Steer Loaders	Diesel	Average	1.000000	4.00000	71.0000	0.37000
Pipeline Trenching	Tractors/Loaders/Backhoes	Diesel	Average	1.000000	8.00000	84.0000	0.37000
Pipeline Trenching	Generator Sets	Diesel	Average	1.000000	8.00000	35.0000	0.74000

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

Well Site Preparation	Rubber Tired Loaders	Diesel	Tier 4 Final	1.000000	12.0000	148.000	0.41000
Well Site Preparation	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.000000	12.0000	84.0000	0.37000
Pipeline Site Preparation	Air Compressors	Diesel	Tier 4 Final	1.000000	1.90000	37.0000	0.48000
Pipeline Site Preparation	Skid Steer Loaders	Diesel	Tier 4 Final	1.000000	1.90000	71.0000	0.37000
Pipeline Site Preparation	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.000000	1.90000	84.0000	0.37000
Pipeline Site Preparation	Other Construction Equipment	Diesel	Tier 4 Final	1.000000	1.90000	82.0000	0.42000
Pipeline Site Preparation	Generator Sets	Diesel	Tier 4 Final	1.000000	1.90000	35.0000	0.74000
Well Drilling	Bore/Drill Rigs	Diesel	Tier 4 Final	1.000000	24.0000	367.000	0.29000
Well Drilling	Air Compressors	Diesel	Tier 4 Final	1.000000	24.0000	82.0000	0.20000
Well Drilling	Skid Steer Loaders	Diesel	Tier 4 Final	1.000000	4.00000	71.0000	0.37000
Well Drilling	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.000000	12.0000	84.0000	0.37000
Well Drilling	Other Construction Equipment	Diesel	Tier 4 Final	1.000000	12.0000	82.0000	0.42000
Well Drilling	Pumps	Diesel	Average	1.000000	24.0000	11.0000	0.74000
Well Drilling	Generator Sets	Diesel	Tier 4 Final	1.000000	24.0000	35.0000	0.74000
Well Installation	Bore/Drill Rigs	Diesel	Tier 4 Final	1.000000	9.60000	367.000	0.29000
Well Installation	Skid Steer Loaders	Diesel	Tier 4 Final	1.000000	4.80000	82.0000	0.20000
Well Installation	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.000000	4.80000	84.0000	0.37000
Well Installation	Other Construction Equipment	Diesel	Tier 4 Final	1.000000	4.80000	82.0000	0.42000
Well Installation	Generator Sets	Diesel	Tier 4 Final	1.000000	9.60000	35.0000	0.74000
Pipeline Construction	Air Compressors	Diesel	Tier 4 Final	1.000000	0.50000	37.0000	0.48000
Pipeline Construction	Skid Steer Loaders	Diesel	Tier 4 Final	1.000000	0.50000	71.0000	0.37000

Pipeline Construction	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.000000	0.50000	84.0000	0.37000
Pipeline Construction	Other Construction Equipment	Diesel	Tier 4 Final	1.000000	0.50000	82.0000	0.42000
Pipeline Construction	Generator Sets	Diesel	Tier 4 Final	1.000000	0.50000	35.0000	0.74000
Well Development	Air Compressors	Diesel	Average	1.000000	4.30000	10.00000	0.56000
Well Development	Bore/Drill Rigs	Diesel	Tier 4 Final	1.000000	4.30000	81.0000	0.42000
Well Development	Other Construction Equipment	Diesel	Tier 4 Final	1.000000	4.30000	36.0000	0.38000
Well Development	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.000000	4.30000	84.0000	0.37000
Well Testing Startup	Pumps	Diesel	Tier 4 Final	1.000000	6.00000	37.0000	0.48000
Well Testing Startup	Generator Sets	Diesel	Tier 4 Final	1.000000	6.00000	35.0000	0.74000
Pipeline Startup	Air Compressors	Diesel	Tier 4 Final	1.000000	4.00000	37.0000	0.48000
Pipeline Startup	Other Construction Equipment	Diesel	Tier 4 Final	1.000000	4.00000	89.0000	0.36000
Pipeline Startup	Generator Sets	Diesel	Tier 4 Final	1.000000	4.00000	35.0000	0.74000
Pipeline Trenching	Air Compressors	Diesel	Tier 4 Final	1.000000	8.00000	37.0000	0.48000
Pipeline Trenching	Paving Equipment	Diesel	Tier 4 Final	1.000000	7.00000	89.0000	0.36000
Pipeline Trenching	Rollers	Diesel	Tier 4 Final	1.000000	7.00000	36.0000	0.38000
Pipeline Trenching	Skid Steer Loaders	Diesel	Tier 4 Final	1.000000	4.00000	71.0000	0.37000
Pipeline Trenching	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.000000	8.00000	84.0000	0.37000
Pipeline Trenching	Generator Sets	Diesel	Tier 4 Final	1.000000	8.00000	35.0000	0.74000

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Well Site Preparation	Worker	8.00000	12.9500	LDA,LDT1,LDT2

Well Site Preparation	Vendor	0.00000	6.94000	HHDT,MHDT
Well Site Preparation	Hauling	4.00000	20.0000	HHDT
Well Site Preparation	Onsite truck	0.00000	—	HHDT
Pipeline Site Preparation	Worker	8.00000	12.9500	LDA,LDT1,LDT2
Pipeline Site Preparation	Vendor	2.00000	6.94000	HHDT,MHDT
Pipeline Site Preparation	Hauling	2.00000	20.0000	HHDT
Pipeline Site Preparation	Onsite truck	—	—	HHDT
Well Drilling	Worker	8.00000	12.9500	LDA,LDT1,LDT2
Well Drilling	Vendor	2.00000	6.94000	HHDT,MHDT
Well Drilling	Hauling	4.00000	20.0000	HHDT
Well Drilling	Onsite truck	—	—	HHDT
Well Installation	Worker	8.00000	12.9500	LDA,LDT1,LDT2
Well Installation	Vendor	2.00000	6.94000	HHDT,MHDT
Well Installation	Hauling	-1.000000	20.0000	HHDT
Well Installation	Onsite truck	—	—	HHDT
Pipeline Construction	Worker	8.00000	12.9500	LDA,LDT1,LDT2
Pipeline Construction	Vendor	2.00000	6.94000	HHDT,MHDT
Pipeline Construction	Hauling	0.00000	20.0000	HHDT
Pipeline Construction	Onsite truck	—	—	HHDT
Well Development	Worker	8.00000	12.9500	LDA,LDT1,LDT2
Well Development	Vendor	0.00000	6.94000	HHDT,MHDT
Well Development	Hauling	0.00000	20.0000	HHDT
Well Development	Onsite truck	—	—	HHDT
Well Testing Startup	Worker	4.00000	12.9500	LDA,LDT1,LDT2
Well Testing Startup	Vendor	0.00000	6.94000	HHDT,MHDT
Well Testing Startup	Hauling	0.00000	20.0000	HHDT
Well Testing Startup	Onsite truck	—	—	HHDT
Pipeline Startup	Worker	4.00000	12.9500	LDA,LDT1,LDT2

Pipeline Startup	Vendor	2.00000	6.94000	HHDT,MHDT
Pipeline Startup	Hauling	0.00000	20.0000	HHDT
Pipeline Startup	Onsite truck	—	—	HHDT
Pipeline Trenching	Worker	15.0000	12.9500	LDA,LDT1,LDT2
Pipeline Trenching	Vendor	—	6.94000	HHDT,MHDT
Pipeline Trenching	Hauling	0.00000	20.0000	HHDT
Pipeline Trenching	Onsite truck	—	—	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Well Site Preparation	Worker	8.00000	12.9500	LDA,LDT1,LDT2
Well Site Preparation	Vendor	0.00000	6.94000	HHDT,MHDT
Well Site Preparation	Hauling	4.00000	20.0000	HHDT
Well Site Preparation	Onsite truck	0.00000	—	HHDT
Pipeline Site Preparation	Worker	8.00000	12.9500	LDA,LDT1,LDT2
Pipeline Site Preparation	Vendor	2.00000	6.94000	HHDT,MHDT
Pipeline Site Preparation	Hauling	2.00000	20.0000	HHDT
Pipeline Site Preparation	Onsite truck	—	—	HHDT
Well Drilling	Worker	8.00000	12.9500	LDA,LDT1,LDT2
Well Drilling	Vendor	2.00000	6.94000	HHDT,MHDT
Well Drilling	Hauling	4.00000	20.0000	HHDT
Well Drilling	Onsite truck	—	—	HHDT
Well Installation	Worker	8.00000	12.9500	LDA,LDT1,LDT2
Well Installation	Vendor	2.00000	6.94000	HHDT,MHDT
Well Installation	Hauling	-1.000000	20.0000	HHDT
Well Installation	Onsite truck	—	—	HHDT
Pipeline Construction	Worker	8.00000	12.9500	LDA,LDT1,LDT2
Pipeline Construction	Vendor	2.00000	6.94000	HHDT,MHDT

Pipeline Construction	Hauling	0.00000	20.0000	HHDT
Pipeline Construction	Onsite truck	—	—	HHDT
Well Development	Worker	8.00000	12.9500	LDA,LDT1,LDT2
Well Development	Vendor	0.00000	6.94000	HHDT,MHDT
Well Development	Hauling	0.00000	20.0000	HHDT
Well Development	Onsite truck	—	—	HHDT
Well Testing Startup	Worker	4.00000	12.9500	LDA,LDT1,LDT2
Well Testing Startup	Vendor	0.00000	6.94000	HHDT,MHDT
Well Testing Startup	Hauling	0.00000	20.0000	HHDT
Well Testing Startup	Onsite truck	—	—	HHDT
Pipeline Startup	Worker	4.00000	12.9500	LDA,LDT1,LDT2
Pipeline Startup	Vendor	2.00000	6.94000	HHDT,MHDT
Pipeline Startup	Hauling	0.00000	20.0000	HHDT
Pipeline Startup	Onsite truck	—	—	HHDT
Pipeline Trenching	Worker	15.0000	12.9500	LDA,LDT1,LDT2
Pipeline Trenching	Vendor	—	6.94000	HHDT,MHDT
Pipeline Trenching	Hauling	0.00000	20.0000	HHDT
Pipeline Trenching	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Well Site Preparation	0.00000	60.0000	0.00000	0.00000	0.00000
Pipeline Site Preparation	15.0000	20.0000	0.00000	0.00000	0.00000
Well Drilling	0.00000	230.000	0.00000	0.00000	0.00000
Pipeline Startup	0.00000	0.00000	0.00000	0.00000	0.00020

5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

5.7. Construction Paving

Phase Name	Land Use	Area Paved (acres)	% Asphalt
Pipeline Startup	General Light Industry	0.00020	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2027	0.00000	203.983	0.03300	0.00400
2028	0.00000	203.983	0.03300	0.00400
2029	0.00000	203.983	0.03300	0.00400

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Total all Land Uses	1.000000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

5.9.2. Mitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Total all Land Uses	1.000000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

5.10. Operational Area Sources

5.10.1. Hearths

Land Use	Hearth Type	Unmitigated (number)	Mitigated (number)
General Light Industry	Wood Fireplaces	0	0
General Light Industry	Gas Fireplaces	0	0
General Light Industry	Propane Fireplaces	0	0
General Light Industry	Electric Fireplaces	0	0
General Light Industry	No Fireplaces	0	0
General Light Industry	Conventional Wood Stoves	0	0
General Light Industry	Catalytic Wood Stoves	0	0
General Light Industry	Non-Catalytic Wood Stoves	0	0
General Light Industry	Pellet Wood Stoves	0	0

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
0.00000	0.00000	0.00000	0.00000	—

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00000
Summer Days	day/yr	180.000

5.10.4. Landscape Equipment - Mitigated

Season	Unit	Value
Snow Days	day/yr	0.00000
Summer Days	day/yr	180.000

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
General Light Industry	70,000.0	203.983	0.0330	0.0040	0.00000

5.11.2. Mitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
General Light Industry	70,000.0	203.983	0.0330	0.0040	0.00000

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
General Light Industry	0.00000	0.00000

5.12.2. Mitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
General Light Industry	0.00000	0.00000

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
General Light Industry	0.00000	0.00000

5.13.2. Mitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
General Light Industry	0.00000	0.00000

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

5.14.2. Mitigated

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

5.15.2. Mitigated

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

5.16.2. Process Boilers

5.17. User Defined

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

5.18.2.2. Mitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	15.2900	annual days of extreme heat
Extreme Precipitation	3.55000	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	14.9400	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	1	0	0	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	1	1	1	2
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	24.8787
AQ-PM	30.4294

AQ-DPM	55.4698
Drinking Water	55.4140
Lead Risk Housing	45.0284
Pesticides	0.00000
Toxic Releases	27.9070
Traffic	75.6500
Effect Indicators	—
CleanUp Sites	53.4341
Groundwater	22.1152
Haz Waste Facilities/Generators	51.7273
Impaired Water Bodies	0.00000
Solid Waste	0.00000
Sensitive Population	—
Asthma	50.5359
Cardio-vascular	30.1720
Low Birth Weights	68.4116
Socioeconomic Factor Indicators	—
Education	83.3333
Housing	41.3815
Linguistic	95.6692
Poverty	42.1106
Unemployment	37.7147

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	34.85179007

Employed	29.51366611
Median HI	54.02284101
Education	—
Bachelor's or higher	29.0645451
High school enrollment	19.24804312
Preschool enrollment	5.440780187
Transportation	—
Auto Access	27.10124471
Active commuting	53.71487232
Social	—
2-parent households	86.71885025
Voting	47.02938535
Neighborhood	—
Alcohol availability	30.0012832
Park access	81.35506224
Retail density	92.12113435
Supermarket access	94.25125112
Tree canopy	31.41280636
Housing	—
Homeownership	49.49313486
Housing habitability	44.68112409
Low-inc homeowner severe housing cost burden	40.70319518
Low-inc renter severe housing cost burden	42.93596818
Uncrowded housing	27.62735789
Health Outcomes	—
Insured adults	39.81778519
Arthritis	51.7
Asthma ER Admissions	59.5

High Blood Pressure	33.3
Cancer (excluding skin)	74.5
Asthma	55.1
Coronary Heart Disease	47.4
Chronic Obstructive Pulmonary Disease	45.1
Diagnosed Diabetes	15.4
Life Expectancy at Birth	69.0
Cognitively Disabled	30.7
Physically Disabled	20.3
Heart Attack ER Admissions	55.3
Mental Health Not Good	40.6
Chronic Kidney Disease	27.1
Obesity	64.2
Pedestrian Injuries	91.2
Physical Health Not Good	32.1
Stroke	34.3
Health Risk Behaviors	—
Binge Drinking	96.6
Current Smoker	45.1
No Leisure Time for Physical Activity	15.9
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	23.1
Elderly	44.5
English Speaking	5.1
Foreign-born	96.0
Outdoor Workers	11.5

Climate Change Adaptive Capacity	—
Impervious Surface Cover	29.8
Traffic Density	57.4
Traffic Access	87.4
Other Indices	—
Hardship	74.1
Other Decision Support	—
2016 Voting	48.8

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	47.0000
Healthy Places Index Score for Project Location (b)	37.0000
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

8.1. Justifications

Screen	Justification
Land Use	The project is drilling a well on a residential zoned parcel, not constructing residential buildings
Construction: Construction Phases	Applicant provided specific workdays per phase
Construction: Off-Road Equipment	Applicant provided specific construction equipment and usages per phase.
Construction: Dust From Material Movement	Applicant provided specific volumes of material anticipated to be imported and exported per phase.
Construction: Trips and VMT	Applicant provided average trips/day for workers, vendor trucks, and haul trucks by phase.
Construction: Architectural Coatings	This project will install a water well and will not require architectural coatings.
Construction: Paving	The project will pave a 9-feet by 9-feet cement pad where above ground water facilities would be installed.
Operations: Fleet Mix	Operations of the well would require a weekly trip for routine maintenance by facility operators to check pumps and treatment equipment.
Operations: Architectural Coatings	This is a well project that will not require architectural coatings
Operations: Energy Use	During operation, the project would have a maximum pump rate of approximately 2,000 gpm. The total estimated annual power requirements under the maximum production scenario are approximately 70,000 kilowatt hours per year for the well.
Operations: Water and Waste Water	This is a well project that does not require indoor or outdoor water use.
Operations: Solid Waste	This is a well project that would not generate waste.
Operations: Refrigerants	This is a well project that would not require refrigerants.

8.3. Land Use

Model Parameter	Units	Default Value	New Value
Lot Area	acre	0.09183	0.15000
Building Area	sq. ft	4,000.00	0.00000
Landscape Area	sq. ft	—	0.00000

8.4. Construction

8.4.2. Off-Road Equipment

Phase Name	Equipment Type	Model Parameter	Default Value	New Value
Well Site Preparation	Rubber Tired Loaders	Hours Per Day	8.00000	12.0000
Well Site Preparation	Tractors/Loaders/Backhoes	Hours Per Day	8.00000	12.0000
Pipeline Site Preparation	Air Compressors	Hours Per Day	8.00000	1.90000
Pipeline Site Preparation	Skid Steer Loaders	Hours Per Day	8.00000	1.90000
Pipeline Site Preparation	Tractors/Loaders/Backhoes	Hours Per Day	8.00000	1.90000
Pipeline Site Preparation	Other Construction Equipment	Hours Per Day	8.00000	1.90000
Pipeline Site Preparation	Generator Sets	Hours Per Day	8.00000	1.90000
Pipeline Site Preparation	Generator Sets	Horsepower	14.0000	35.0000
Well Drilling	Bore/Drill Rigs	Hours Per Day	4.00000	24.0000
Well Drilling	Air Compressors	Number per Day	2.00000	1.000000
Well Drilling	Air Compressors	Hours Per Day	6.00000	24.0000
Well Installation	Bore/Drill Rigs	Hours Per Day	4.00000	9.60000
Well Installation	Skid Steer Loaders	Number per Day	2.00000	1.000000
Well Installation	Skid Steer Loaders	Hours Per Day	6.00000	4.80000
Well Installation	Tractors/Loaders/Backhoes	Number per Day	2.00000	1.000000
Well Installation	Tractors/Loaders/Backhoes	Hours Per Day	8.00000	4.80000
Well Installation	Other Construction Equipment	Hours Per Day	12.0000	4.80000
Well Installation	Generator Sets	Hours Per Day	24.0000	9.60000
Pipeline Construction	Air Compressors	Hours Per Day	8.00000	0.50000
Pipeline Construction	Skid Steer Loaders	Hours Per Day	8.00000	0.50000
Pipeline Construction	Tractors/Loaders/Backhoes	Hours Per Day	8.00000	0.50000
Pipeline Construction	Other Construction Equipment	Hours Per Day	8.00000	0.50000
Pipeline Construction	Generator Sets	Hours Per Day	8.00000	0.50000
Well Development	Air Compressors	Number per Day	4.00000	1.000000
Well Development	Air Compressors	Hours Per Day	6.00000	4.30000
Well Development	Bore/Drill Rigs	Hours Per Day	7.00000	4.30000

Well Development	Other Construction Equipment	Hours Per Day	7.00000	4.30000
Well Development	Tractors/Loaders/Backhoes	Number per Day	2.00000	1.000000
Well Development	Tractors/Loaders/Backhoes	Hours Per Day	8.00000	4.30000
Pipeline Startup	Air Compressors	Hours Per Day	8.00000	4.00000
Pipeline Startup	Other Construction Equipment	Hours Per Day	7.00000	4.00000
Pipeline Trenching	Air Compressors	Hours Per Day	4.00000	8.00000
Pipeline Trenching	Paving Equipment	Hours Per Day	4.00000	7.00000
Pipeline Trenching	Paving Equipment	Horsepower	82.0000	89.0000
Pipeline Trenching	Paving Equipment	Load Factor	0.42000	0.36000
Pipeline Trenching	Generator Sets	Horsepower	14.0000	35.0000

8.4.6. Trips and VMT

Phase Name	Trip Type	Model Parameter	Default Value	New Value
Well Site Preparation	Worker	One-Way Trips per Day	5.00000	8.00000
Well Site Preparation	Hauling	One-Way Trips per Day	2.00000	4.00000
Pipeline Site Preparation	Worker	One-Way Trips per Day	12.5000	8.00000
Pipeline Site Preparation	Hauling	One-Way Trips per Day	0.23810	2.00000
Well Drilling	Worker	One-Way Trips per Day	0.00000	8.00000
Well Drilling	Vendor	One-Way Trips per Day	0.00000	2.00000
Well Drilling	Hauling	One-Way Trips per Day	2.90000	4.00000
Well Installation	Worker	One-Way Trips per Day	0.00000	8.00000
Well Installation	Vendor	One-Way Trips per Day	0.00000	2.00000
Well Installation	Hauling	One-Way Trips per Day	0.00000	-1.000000
Pipeline Construction	Worker	One-Way Trips per Day	0.00000	8.00000
Pipeline Construction	Vendor	One-Way Trips per Day	0.00000	2.00000
Well Development	Worker	One-Way Trips per Day	0.00000	8.00000
Well Testing Startup	Worker	One-Way Trips per Day	0.00000	4.00000
Pipeline Startup	Worker	One-Way Trips per Day	7.50000	4.00000

8.4.9. Paving

Phase Name	Land Use	Model Parameter	Units	Default Value	New Value
Pipeline Startup	General Light Industry	Area Paved	acres	0.00000	0.00020

8.5. Operations

8.5.3. Energy Usage

Land Use	Model Parameter	Units	Default Value	New Value
General Light Industry	Electricity	kWh/yr	0.00000	70,000.0
General Light Industry	Electricity (Not Subject to Title 24)	kWh/yr	0.00000	70,000.0

8.5.4. Water and Waste Water

Land Use	Model Parameter	Units	Default Value	New Value
General Light Industry	Indoor Water	gal/year	925,000	0.00000

8.5.5. Solid Waste

Land Use	Model Parameter	Units	Default Value	New Value
General Light Industry	Solid Waste Generation Rate	ton/1000sqft/yr	1.24000	0.00000

Evergreen Water Production Well
Construction Health Risk Assessment

Evergreen Water Production Well
Summary of Health Risk Assessment Results

Construction

Receptor	Cancer Risk			Hazard Index			Annual $PM_{2.5}$ Concentration		
	(# in one million)	UTM X	UTM Y	HI (unitless)	UTM X	UTM Y	($\mu g/m^3$)	UTM X	UTM Y
Unmitigated									
Resident - child	**10.30**	605665	4130698	0.012	605665	4130698	0.055	605665	4130698
Worker	0.34	605545	4130818	0.005	605545	4130818	0.022	605545	4130818
Preschool	0.03	605465	4130538	0.000	605465	4130538	0.000	605465	4130538
Mitigated									
Resident - child	1.70	605665	4130698	0.002	605665	4130698	0.010	605665	4130698
Worker	0.06	605545	4130818	0.001	605545	4130818	0.004	605665	4130638
Preschool	0.01	605465	4130538	0.000	605465	4130538	0.000	605465	4130538

Evergreen Water Production Well
Particulate Matter Emissions Summary

Construction

Construction Area - Exhaust	PAREA1	2027	9/1/2027	12/31/2027	0.0031		0.0028		0.0028	0.0009		0.0009		0.0009	0.0031	0.0028	0.0009	0.0009	
	PAREA1	2028	1/1/2028	12/31/2028	0.0048		0.0044		0.0044	0.0007		0.0007		0.0007	0.0048	0.0044	0.0007	0.0007	
	PAREA1	2029	1/1/2029	10/31/2029	0.0127		0.0117		0.0117	0.0020		0.0020		0.0020	0.0127	0.0117	0.0020	0.0020	
Construction Area - Fugitive Dust	PAREA2	2027	9/1/2027	12/31/2027		0.0000		0.0000	0.0000		0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
	PAREA2	2028	1/1/2028	12/31/2028		0.0000		0.0000	0.0000		0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
	PAREA2	2029	1/1/2029	10/31/2029		0.0000		0.0000	0.0000		0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	Modeled trip length = 823 m
Construction Truck Trips - Exhaust & Fugitive Dust	SLINE1	2027	9/1/2027	12/31/2027	0.0000	0.0011	0.0000	0.0003	0.0003	0.0000	0.0011	0.0000	0.0003	0.0003	0.0000	0.0000	0.0000	0.0000	Worker trip modeled fraction 0.0437
	SLINE1	2028	1/1/2028	12/31/2028	0.0001	0.0065	0.0000	0.0016	0.0016	0.0001	0.0065	0.0000	0.0016	0.0016	0.0000	0.0001	0.0000	0.0001	Vendor trip modeled fraction 0.0609
	SLINE1	2029	1/1/2029	10/31/2029	0.0005	0.0168	0.0003	0.0043	0.0046	0.0005	0.0168	0.0003	0.0043	0.0046	0.0000	0.0001	0.0000	0.0001	Haul trip modeled fraction 0.0256

Evergreen Water Production Well
Construction Health Risk Calculations - Residential Unmitigated
Incremental Lifetime Cancer Risk and Hazard Index Calculations

					Exposure Duration (Days)						DPM	
				Start Date	9/1/2027	12/1/2027	12/1/2029				Emisions (tons)	Emission Rate (g/s)
				Stop Date	11/30/2027	11/30/2029					Uncontrolled	
Source	AERMOD Source	Year	Start Date	End Date	3rd Trimester	0<2	2<16	Exposure Duration	Calendar Days	Workdays		
Construction Area - Exhaust	PAREA1	2027	9/1/2027	12/31/2027	91	31	0	121	121	88	0.003	0.001
	PAREA1	2028	1/1/2028	12/31/2028	0	366	0	365	365	260	0.005	0.000
	PAREA1	2029	1/1/2029	10/31/2029	0	304	0	303	303	218	0.013	0.001
Construction Area - Fugitive Dust	PAREA2	2027	9/1/2027	12/31/2027	91	31	0	121	121	88	0.000	0.000
	PAREA2	2028	1/1/2028	12/31/2028	0	366	0	365	365	260	0.000	0.000
	PAREA2	2029	1/1/2029	10/31/2029	0	304	0	303	303	218	0.000	0.000
Construction Truck Trips - Exhaust & Fugitive Dust	SLINE1	2027	9/1/2027	12/31/2027	91	31	0	121	121	88	0.000	0.000
	SLINE1	2028	1/1/2028	12/31/2028	0	366	0	365	365	260	0.000	0.000
	SLINE1	2029	1/1/2029	10/31/2029	0	304	0	303	303	218	0.000	0.000

Cancer Risk Factors

	Abbreviation	UOM	3rd Trimester	0<2	2<16	
Daily Breathing Rate	DBR	L/kg-day	361	1090	572	
Fraction Of Time At Home	FAH	unitless	0.85	0.85	0.72	School risk < 1
Exposure Frequency	EF	days/year	0.96	0.96	0.96	
Age Sensitivity Factor	ASF	unitless	10	10	3	
Inhalation Absorption Factor	A	unitless	1	1	1	
Conversion Factor	CF_1	m^3/L	0.001	0.001	0.001	
Conversion Factor	CF_2	$\mu g/m^3$	0.001	0.001	0.001	
Cancer Potency Factor (diesel exhaust)	CPF	$mg/kg\text{-}day^{-1}$	1.1	1.1	1.1	
Averaging Time (for residential exposure)	AT	years	70.00	70.00	70.00	

SOURCE: Office of Environmental Health Hazard Assessment, 2015. *Air Toxics Hot Spots Program Guidance Manual for the Preparation of Health Risk Assessments* . February 2015
Daily breathing rate for residential receptor is based on the OEHHA 95th percentile moderate intensity breathing rates (OEHHA Table 5.7).
Fraction of time at home is set to values per OEHHA Table 8.4 for residential since the nearest school has an unmitigated cancer risk of <1 per million.
Inhalation cancer potency factor from OEHHA Table 7.1

Hazard Index

Chronic Inhalation	REL	$\mu g/m^3$	5

Intake Factor for Inhalation, IF (m^3/kg-day) = DBR*FAH*EF*ED*ASF*A*CF/AT

AERMOD Source	3rd Trimester	0<2	2<16
PAREA1	0.010	0.011	0.000
PAREA1	0.000	0.127	0.000
PAREA1	0.000	0.106	0.000
PAREA2	0.010	0.011	0.000
PAREA2	0.000	0.127	0.000
PAREA2	0.000	0.106	0.000
SLINE1	0.010	0.011	0.000
SLINE1	0.000	0.127	0.000
SLINE1	0.000	0.106	0.000

Risk Calculation Part 1, R1 = IF*CPF*CF

3rd Trimester	0<2	2<16
1.15E-05	1.19E-05	0.00E+00
0.00E+00	1.40E-04	0.00E+00
0.00E+00	1.16E-04	0.00E+00
1.15E-05	1.19E-05	0.00E+00
0.00E+00	1.40E-04	0.00E+00
0.00E+00	1.16E-04	0.00E+00
1.15E-05	1.19E-05	0.00E+00
0.00E+00	1.40E-04	0.00E+00
0.00E+00	1.16E-04	0.00E+00

MEIR - Resident Infant

Cancer Risk	UTM X	UTM Y
10.30	605665	4130698

HI	UTM X	UTM Y	
0.0118	605665	4130698	Residence

Evergreen Water Production Well
Construction Health Risk Calculations - Residential Unmitigated
Incremental Annual Average $PM_{2.5}$ Comcentration Calculations

							$PM_{2.5}$	
							Emisions (tons)	Emission Rate (g/s)
Source	AERMOD Source	Year	Start Date	End Date	Calendar Days	Workdays	Uncontrolled	
Construction Area - Exhaust	PAREA1	2027	9/1/2027	12/31/2027	121	88	0.00	0.001
	PAREA1	2028	1/1/2028	12/31/2028	365	260	0.00	0.000
	PAREA1	2029	1/1/2029	10/31/2029	303	218	0.01	0.001
Construction Area - Fugitive Dust	PAREA2	2027	9/1/2027	12/31/2027	121	88	0.00	0.000
	PAREA2	2028	1/1/2028	12/31/2028	365	260	0.00	0.000
	PAREA2	2029	1/1/2029	10/31/2029	303	218	0.00	0.000
Construction Truck Trips - Exhaust & Fugitive Dust	SLINE1	2027	9/1/2027	12/31/2027	121	88	0.00	0.000
	SLINE1	2028	1/1/2028	12/31/2028	365	260	0.00	0.000
	SLINE1	2029	1/1/2029	10/31/2029	303	218	0.00	0.000

MEIR - Resident Infant

$PM_{2.5}$ Conc.	UTM X	UTM Y	
0.0548	605665	4130698	Residence

Evergreen Water Production Well
Construction Health Risk Calculations - Residential Mitigated
Incremental Lifetime Cancer Risk and Hazard Index Calculations

					Exposure Duration (Days)						DPM	
				Start Date	9/1/2027	12/1/2027	12/1/2029				Emisions (tons)	Emission Rate (g/s)
				Stop Date	11/30/2027	11/30/2029					Mitigated - Tier 4F	
Source	AERMOD Source	Year	Start Date	End Date	3rd Trimester	0<2	2<16	Exposure Duration	Calendar Days	Workdays		
Construction Area - Exhaust	PAREA1	2027	9/1/2027	12/31/2027	91	31	0	121	121	88	0.00	0.000
	PAREA1	2028	1/1/2028	12/31/2028	0	366	0	365	365	260	0.00	0.000
	PAREA1	2029	1/1/2029	10/31/2029	0	304	0	303	303	218	0.00	0.000
Construction Area - Fugitive Dust	PAREA2	2027	9/1/2027	12/31/2027	91	31	0	121	121	88	0.00	0.000
	PAREA2	2028	1/1/2028	12/31/2028	0	366	0	365	365	260	0.00	0.000
	PAREA2	2029	1/1/2029	10/31/2029	0	304	0	303	303	218	0.00	0.000
Construction Truck Trips - Exhaust & Fugitive Dust	SLINE1	2027	9/1/2027	12/31/2027	91	31	0	121	121	88	0.00	0.000
	SLINE1	2028	1/1/2028	12/31/2028	0	366	0	365	365	260	0.00	0.000
	SLINE1	2029	1/1/2029	10/31/2029	0	304	0	303	303	218	0.00	0.000

Cancer Risk Factors

	Abbreviation	UOM	3rd Trimester	0<2	2<16	
Daily Breathing Rate	DBR	L/kg-day	361	1090	572	
Fraction Of Time At Home	FAH	unitless	0.85	0.85	0.72	School risk < 1
Exposure Frequency	EF	days/year	0.96	0.96	0.96	
Age Sensitivity Factor	ASF	unitless	10	10	3	
Inhalation Absorption Factor	A	unitless	1	1	1	
Conversion Factor	CF_1	m^3/L	0.001	0.001	0.001	
Conversion Factor	CF_2	$\mu g/m^3$	0.001	0.001	0.001	
Cancer Potency Factor (diesel exhaust)	CPF	$mg/kg\text{-}day^{-1}$	1.1	1.1	1.1	
Averaging Time (for residential exposure)	AT	years	70.00	70.00	70.00	

SOURCE: Office of Environmental Health Hazard Assessment, 2015. *Air Toxics Hot Spots Program Guidance Manual for the Preparation of Health Risk Assessments* . February 2015
Daily breathing rate for residential receptor is based on the OEHHA 95th percentile moderate intensity breathing rates (OEHHA Table 5.7).
Fraction of time at home is set to values per OEHHA Table 8.4 for residential since the nearest school has an unmitigated cancer risk of <1 per million.
Inhalation cancer potency factor from OEHHA Table 7.1

Hazard Index

Chronic Inhalation	REL	$\mu g/m^3$	5

Evergreen Water Production Well
Construction Health Risk Calculations - Residential Mitigated
Incremental Annual Average $PM_{2.5}$ Comcentration Calculations

							$PM_{2.5}$	
							Emisions (tons)	Emission Rate (g/s)
Source	AERMOD Source	Year	Start Date	End Date	Calendar Days	Workdays	Mitigated - Tier 4F	
Construction Area - Exhaust	PAREA1	2027	9/1/2027	12/31/2027	121	88	0.00	0.000
	PAREA1	2028	1/1/2028	12/31/2028	365	260	0.00	0.000
	PAREA1	2029	1/1/2029	10/31/2029	303	218	0.00	0.000
Construction Area - Fugitive Dust	PAREA2	2027	9/1/2027	12/31/2027	121	88	0.00	0.000
	PAREA2	2028	1/1/2028	12/31/2028	365	260	0.00	0.000
	PAREA2	2029	1/1/2029	10/31/2029	303	218	0.00	0.000
Construction Truck Trips - Exhaust & Fugitive Dust	SLINE1	2027	9/1/2027	12/31/2027	121	88	0.00	0.000
	SLINE1	2028	1/1/2028	12/31/2028	365	260	0.00	0.000
	SLINE1	2029	1/1/2029	10/31/2029	303	218	0.00	0.000

MEIR - Resident Infant

$PM_{2.5}$ Conc.	UTM X	UTM Y	
0.0103	605665.5	4130697.6	Residence

Evergreen Water Production Well
Construction Health Risk Calculations - Worker Unmitigated
Incremental Lifetime Cancer Risk and Hazard Index Calculations

						Days			DPM	
					Start Date	9/1/2027			Emisions (tons)	Emission Rate (g/s)
					Stop Date	10/31/2029				
Source	AERMOD Source	Year	Start Date	End Date	Calendar Days	Age 16<70	Exposure Duration	Workdays	Uncontrolled	
Construction Area - Exhaust	PAREA1	2027	9/1/2027	12/31/2027	121	121	121	88	0.00	0.00
	PAREA1	2028	1/1/2028	12/31/2028	365	365	365	260	0.00	0.00
	PAREA1	2029	1/1/2029	10/31/2029	303	303	303	218	0.01	0.00
Construction Area - Fugitive Dust	PAREA2	2027	9/1/2027	12/31/2027	121	121	121	88	0.00	0.00
	PAREA2	2028	1/1/2028	12/31/2028	365	365	365	260	0.00	0.00
	PAREA2	2029	1/1/2029	10/31/2029	303	303	303	218	0.00	0.00
Construction Truck Trips - Exhaust & Fugitive Dust	SLINE1	2027	9/1/2027	12/31/2027	121	121	121	88	0.00	0.000
	SLINE1	2028	1/1/2028	12/31/2028	365	365	365	260	0.00	0.000
	SLINE1	2029	1/1/2029	10/31/2029	303	303	303	218	0.00	0.000

Cancer Risk Factors

	Abbreviation	UOM	16<70	
8HR Breathing Rate (95th percentile)	8HR-BR	L/kg-day	230	95th percentile
Worker Adjustment Factor	WAF	unitless	4.20	Worst case
Exposure Frequency	EF	days/year	0.68	
Age Sensitivity Factor	ASF	unitless	1	
Inhalation Absorption Factor	A	unitless	1	
Conversion Factor	CF_1	m^3/L	0.001	
Conversion Factor	CF_2	$\mu g/m^3$	0.001	
Cancer Potency Factor (diesel exhaust)	CPF	$mg/kg\text{-}day^{-1}$	1.1	
Averaging Time (for residential exposure)	AT	years	70.00	

SOURCE: Office of Environmental Health Hazard Assessment, 2015. *Air Toxics Hot Spots Program Guidance Manual for the Preparation of Health Risk Assessments* . February 2015
Daily breathing rate for residential receptor is based on the OEHHA 95th percentile moderate intensity breathing rates (OEHHA Table 5.7).
Fraction of time at home is set to values per OEHHA Table 8.4 for residential since the nearest school has an unmitigated cancer risk of <1 per million.
Inhalation cancer potency factor from OEHHA Table 7.1

Hazard Index

Chronic Inhalation	REL	$\mu g/m^3$	5

Intake Factor for Inhalation, IF (m^3/kg-day) = DBR*WAF*EF*ED*ASF*A*CF/AT

Risk Calculation Part 1, R1 = IF*CPF*CF

AERMOD Source	16<70	16<70
PAREA1	0.003	3.45E-06
PAREA1	0.009	1.04E-05
PAREA1	0.008	8.63E-06
PAREA2	0.003	3.45E-06
PAREA2	0.009	1.04E-05
PAREA2	0.008	8.63E-06
SLINE1	0.003	3.45E-06
SLINE1	0.009	1.04E-05
SLINE1	0.008	8.63E-06

MEIW

Cancer Risk	UTM X	UTM Y
0.34	605545	4130818

HI	UTM X	UTM Y	
0.00	605545	4130818	Worker

WAF Calculation

Basis and Source: OEHHA Air Toxics Hot Spots Program, Feb. 2015.

https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf

Please note that worker adjustment factor does not apply if the source's emission schedule and the offsite worker's schedule do not overlap. Since the worker is not present during the time that the source is emitting, the worker is not exposed to the source's emission (i.e., the DF in Equation 4.2 becomes 0).

$$WAF = \frac{H_{residentid}}{H_{source}} \times \frac{D_{residentid}}{D_{source}} \times DF \qquad \text{Eq. 4.1}$$

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Where:
WAF = the worker adjustment factor
$H_{residential}$= the number of hours per day the long-term residential concentration is based on (always 24 hours)
H_{source} = the number of hours the source operates per day
$D_{residential}$ = the number of days per week the long-term residential concentration is based on (always 7 days)
D_{source}= the number of days the source operates per week
DF = a discount factor for when the offsite worker's schedule partially overlaps the source's emission schedule. Use 1 if the offsite worker's schedule occurs within the source's emission schedule. If the offsite worker's schedule partially overlaps with the source's emission schedule, then calculate the discount factor using Equation 4.2 below.

$$DF = \frac{H_{coincident}}{H_{worker}} \times \frac{D_{coincident}}{D_{worker}} \qquad \text{Eq. 4.2}$$

Where:
DF = the discount factor for assessing cancer impacts
$H_{coincident}$ = the number of hours per day the offsite worker's schedule and the source's emission schedule overlap
$D_{coincident}$= the number of days per week the offsite worker's schedule and the source's emission schedule overlap
H_{worker} = the number of hours the offsite worker works per day
D_{worker}= the number of days the offsite worker works per week

Evergreen Water Production Well
Construction Health Risk Calculations - Worker Unmitigated
Incremental Annual Average $PM_{2.5}$ Comcentration Calculations

						$PM_{2.5}$	
						Emisions (tons)	Emission Rate (g/s)
Source	AERMOD Source	Year	Start Date	End Date	Workdays	Uncontrolled	
Construction Area - Exhaust	PAREA1	2027	9/1/2027	12/31/2027	88	0.00	0.00
	PAREA1	2028	1/1/2028	12/31/2028	260	0.00	0.00
	PAREA1	2029	1/1/2029	10/31/2029	218	0.01	0.00
Construction Area - Fugitive Dust	PAREA2	2027	9/1/2027	12/31/2027	88	0.00	0.00
	PAREA2	2028	1/1/2028	12/31/2028	260	0.00	0.00
	PAREA2	2029	1/1/2029	10/31/2029	218	0.00	0.00
Construction Truck Trips - Exhaust & Fugitive Dust	SLINE1	2027	9/1/2027	12/31/2027	88	0.00	0.000
	SLINE1	2028	1/1/2028	12/31/2028	260	0.00	0.000
	SLINE1	2029	1/1/2029	10/31/2029	218	0.00	0.000

MEIW

$PM_{2.5}$ Conc.	UTM X	UTM Y	
0.02	605545	4130818	Worker

Evergreen Water Production Well
Construction Health Risk Calculations - Worker Mitigated
Incremental Lifetime Cancer Risk and Hazard Index Calculations

						Days			DPM	
					Start Date	9/1/2027				
					Stop Date	#REF!			Emisions (tons)	Emission Rate (g/s)
Source	AERMOD Source	Year	Start Date	End Date	Calendar Days	Age 16<70	Exposure Duration	Workdays	Mitigated - Tier 4F	
Construction Area - Exhaust	PAREA1	2027	9/1/2027	12/31/2027	121	121	121	88	0.00	0.00
	PAREA1	2028	1/1/2028	12/31/2028	365	365	365	260	0.00	0.00
	PAREA1	2029	1/1/2029	10/31/2029	303	303	303	218	0.00	0.00
Construction Area - Fugitive Dust	PAREA2	2027	9/1/2027	12/31/2027	121	121	121	88	0.00	0.00
	PAREA2	2028	1/1/2028	12/31/2028	365	365	365	260	0.00	0.00
	PAREA2	2029	1/1/2029	10/31/2029	303	303	303	218	0.00	0.00
Construction Truck Trips - Exhaust & Fugitive Dust	SLINE1	2027	9/1/2027	12/31/2027	121	121	121	88	0.00	0.000
	SLINE1	2028	1/1/2028	12/31/2028	365	365	365	260	0.00	0.000
	SLINE1	2029	1/1/2029	10/31/2029	303	303	303	218	0.00	0.000

Cancer Risk Factors

	Abbreviation	UOM	16<70	
8HR Breathing Rate (95th percentile)	8HR-BR	L/kg-day	230	95th percentile
Worker Adjustment Factor	WAF	unitless	4.20	Worst case
Exposure Frequency	EF	days/year	0.68	
Age Sensitivity Factor	ASF	unitless	1	
Inhalation Absorption Factor	A	unitless	1	
Conversion Factor	CF_1	m^3/L	0.001	
Conversion Factor	CF_2	$\mu g/m^3$	0.001	
Cancer Potency Factor (diesel exhaust)	CPF	$mg/kg\text{-}day^{-1}$	1.1	
Averaging Time (for residential exposure)	AT	years	70.00	

SOURCE: Office of Environmental Health Hazard Assessment, 2015. *Air Toxics Hot Spots Program Guidance Manual for the Preparation of Health Risk Assessments* . February 2015
Daily breathing rate for residential receptor is based on the OEHHA 95th percentile moderate intensity breathing rates (OEHHA Table 5.7).
Fraction of time at home is set to values per OEHHA Table 8.4 for residential since the nearest school has an unmitigated cancer risk of <1 per million.
Inhalation cancer potency factor from OEHHA Table 7.1

Hazard Index

Chronic Inhalation	REL	$\mu g/m^3$	5

Intake Factor for Inhalation, IF (m^3/kg-day) = DBR*WAF*EF*ED*ASF*A*CF/AT

AERMOD Source	16<70
PAREA1	0.003
PAREA1	0.009
PAREA1	0.008
PAREA2	0.003
PAREA2	0.009
PAREA2	0.008
SLINE1	0.003
SLINE1	0.009
SLINE1	0.008

Risk Calculation Part 1, R1 = IF*CPF*CF

16<70
3.45E-06
1.04E-05
8.63E-06
3.45E-06
1.04E-05
8.63E-06
3.45E-06
1.04E-05
8.63E-06

MEIW

Cancer Risk	UTM X	UTM Y
0.06	605545	4130818

HI	UTM X	UTM Y	
0.001	605545	4130818	Worker

WAF Calculation

Basis and Source: OEHHA Air Toxics Hot Spots Program, Feb. 2015.

https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf

Please note that worker adjustment factor does not apply if the source's emission schedule and the offsite worker's schedule do not overlap. Since the worker is not present during the time that the source is emitting, the worker is not exposed to the source's emission (i.e., the DF in Equation 4.2 becomes 0).

$$WAF = \frac{H_{residentid}}{H_{source}} \times \frac{D_{residentid}}{D_{source}} \times DF$$ Eq. 4.1

4-44

Where:
WAF = the worker adjustment factor
$H_{residential}$= the number of hours per day the long-term residential concentration is based on (always 24 hours)
H_{source} = the number of hours the source operates per day
$D_{residential}$ = the number of days per week the long-term residential concentration is based on (always 7 days)
D_{source}= the number of days the source operates per week
DF = a discount factor for when the offsite worker's schedule partially overlaps the source's emission schedule. Use 1 if the offsite worker's schedule occurs within the source's emission schedule. If the offsite worker's schedule partially overlaps with the source's emission schedule, then calculate the discount factor using Equation 4.2 below.

$$DF = \frac{H_{coincident}}{H_{worker}} \times \frac{D_{coincident}}{D_{worker}}$$ Eq. 4.2

Where:
DF = the discount factor for assessing cancer impacts
$H_{coincident}$ = the number of hours per day the offsite worker's schedule and the source's emission schedule overlap
$D_{coincident}$= the number of days per week the offsite worker's schedule and the source's emission schedule overlap
H_{worker} = the number of hours the offsite worker works per day
D_{worker}= the number of days the offsite worker works per week

Evergreen Water Production Well
Construction Health Risk Calculations - Worker Mitigated
Incremental Annual Average $PM_{2.5}$ Comcentration Calculations

						$PM_{2.5}$	
						Emisions (tons)	Emission Rate (g/s)
Source	AERMOD Source	Year	Start Date	End Date	Workdays	Mitigated - Tier 4F	
Construction Area - Exhaust	PAREA1	2027	9/1/2027	12/31/2027	88	0.00	0.00
	PAREA1	2028	1/1/2028	12/31/2028	260	0.00	0.00
	PAREA1	2029	1/1/2029	10/31/2029	218	0.00	0.00
Construction Area - Fugitive Dust	PAREA2	2027	9/1/2027	12/31/2027	88	0.00	0.00
	PAREA2	2028	1/1/2028	12/31/2028	260	0.00	0.00
	PAREA2	2029	1/1/2029	10/31/2029	218	0.00	0.00
Construction Truck Trips - Exhaust & Fugitive Dust	SLINE1	2027	9/1/2027	12/31/2027	88	0.00	0.000
	SLINE1	2028	1/1/2028	12/31/2028	260	0.00	0.000
	SLINE1	2029	1/1/2029	10/31/2029	218	0.00	0.000

MEIW

$PM_{2.5}$ Conc.	UTM X	UTM Y	
0.004	605665	4130638	Worker

Evergreen Water Production Well
Construction Health Risk Calculations - School Unmitigated
Incremental Lifetime Cancer Risk and Hazard Index Calculations

					Daycare/Preschool		School				DPM	
					Exposure Duration (Days)							
				Start Date	9/1/2027	3/2/2028	9/1/2027					
				Stop Date	3/1/2028	10/31/2029	10/31/2029				Emisions (tons)	Emission Rate (g/s)
Source	AERMOD Source	Year	Start Date	End Date	0<2	2<16	2<16	Exposure Duration	Calendar Days	Workdays	Uncontrolled	
Construction Area - Exhaust	PAREA1	2027	9/1/2027	12/31/2027	121	0	121	121	121	88	0.00	0.001
	PAREA1	2028	1/1/2028	12/31/2028	61	305	365	365	365	260	0.00	0.000
	PAREA1	2029	1/1/2029	10/31/2029	0	303	303	303	303	218	0.01	0.001
Construction Area - Fugitive Dust	PAREA2	2027	9/1/2027	12/31/2027	121	0	121	121	121	88	0.00	0.000
	PAREA2	2028	1/1/2028	12/31/2028	61	305	365	365	365	260	0.00	0.000
	PAREA2	2029	1/1/2029	10/31/2029	0	303	303	303	303	218	0.00	0.000
Construction Truck Trips - Exhaust & Fugitive Dust	SLINE1	2027	9/1/2027	12/31/2027	121	0	121	121	121	88	0.00	0.000
	SLINE1	2028	1/1/2028	12/31/2028	61	305	365	365	365	260	0.00	0.000
	SLINE1	2029	1/1/2029	10/31/2029	0	303	303	303	303	218	0.00	0.000

Cancer Risk Factors

	Abbreviation	UOM	0<2	2<16	
Daily Breathing Rate (8 hour)	DBR	L/kg-day	1200	520	95th percentile for both age groups
Modeling Adjustment Factor	MAF	unitless	4.2	4.2	Worst case
Exposure Frequency	EF	days/year	0.68	0.68	
Age Sensitivity Factor	ASF	unitless	10	3	
Inhalation Absorption Factor	A	unitless	1	1	
Conversion Factor	CF_1	m^3/L	0.001	0.001	
Conversion Factor	CF_2	$\mu g/m^3$	0.001	0.001	
Cancer Potency Factor (diesel exhaust)	CPF	$mg/kg\text{-}day^{-1}$	1.1	1.1	
Averaging Time (for residential exposure)	AT	years	70.00	70.00	

SOURCE: Office of Environmental Health Hazard Assessment, 2015. *Air Toxics Hot Spots Program Guidance Manual for the Preparation of Health Risk Assessments* . February 2015
Daily breathing rate for residential receptor is based on the OEHHA 95th percentile moderate intensity breathing rates (OEHHA Table 5.7).
Fraction of time at home is set to values per OEHHA Table 8.4 for residential since the nearest school has an unmitigated cancer risk of <1 per million.
Inhalation cancer potency factor from OEHHA Table 7.1

Hazard Index

Chronic Inhalation	REL	$\mu g/m^3$	5

Intake Factor for Inhalation, IF (m^3/kg-day) = DBR*MAF*EF*ED*ASF*A*CF/AT

	Daycare/Preschool		School
AERMOD Source	0<2	2<16	2<16
PAREA1	0.163	0.000	0.021
PAREA1	0.082	0.053	0.064
PAREA1	0.000	0.053	0.053
PAREA2	0.163	0.000	0.021
PAREA2	0.082	0.053	0.064
PAREA2	0.000	0.053	0.053
SLINE1	0.163	0.000	0.021
SLINE1	0.082	0.053	0.064
SLINE1	0.000	0.053	0.053

Risk Calculation Part 1, R1 = IF*CPF*CF

	Daycare/Preschool		School
	0<2	2<16	2<16
	1.80E-04	0.00E+00	2.34E-05
	8.99E-05	5.88E-05	7.05E-05
	0.00E+00	5.85E-05	5.85E-05
	1.80E-04	0.00E+00	2.34E-05
	8.99E-05	5.88E-05	7.05E-05
	0.00E+00	5.85E-05	5.85E-05
	1.80E-04	0.00E+00	2.34E-05
	8.99E-05	5.88E-05	7.05E-05
	0.00E+00	5.85E-05	5.85E-05

MEIR	Cancer Risk	UTM X	UTM Y
George V LevYa Middle School	0.03	605465	4130538

HI	UTM X	UTM Y
0.000	605465	4130538

Evergreen Water Production Well
Construction Health Risk Calculations - School Unmitigated
Incremental Annual Average $PM_{2.5}$ Comcentration Calculations

							$PM_{2.5}$	
							Emisions (tons)	Emission Rate (g/s)
Source	AERMOD Source	Year	Start Date	End Date	Calendar Days	Workdays	Uncontrolled	
Construction Area - Exhaust	PAREA1	2027	9/1/2027	12/31/2027	121	88	0.00	0.001
	PAREA1	2028	1/1/2028	12/31/2028	365	260	0.00	0.000
	PAREA1	2029	1/1/2029	10/31/2029	303	218	0.01	0.001
Construction Area - Fugitive Dust	PAREA2	2027	9/1/2027	12/31/2027	121	88	0.00	0.000
	PAREA2	2028	1/1/2028	12/31/2028	365	260	0.00	0.000
	PAREA2	2029	1/1/2029	10/31/2029	303	218	0.00	0.000
Construction Truck Trips - Exhaust & Fugitive Dust	SLINE1	2027	9/1/2027	12/31/2027	121	88	0.00	0.000
	SLINE1	2028	1/1/2028	12/31/2028	365	260	0.00	0.000
	SLINE1	2029	1/1/2029	10/31/2029	303	218	0.00	0.000

MEIR	$PM_{2.5}$ Conc.	UTM X	UTM Y
George V LevYa Middle School	0.0005	605465	4130538

Evergreen Water Production Well
Construction Health Risk Calculations - School Mitigated
Incremental Lifetime Cancer Risk and Hazard Index Calculations

					Daycare/Preschool		School				DPM	
					Exposure Duration (Days)							
				Start Date	9/1/2027	3/2/2028	9/1/2027					
				Stop Date	3/1/2028	10/31/2029	10/31/2029				Emisions (tons)	Emission Rate (g/s)
Source	AERMOD Source	Year	Start Date	End Date	0<2	2<16	2<16	Exposure Duration	Calendar Days	Workdays	Mitigated - Tier 4F	
Construction Area - Exhaust	PAREA1	2027	9/1/2027	12/31/2027	121	0	121	121	121	88	0.00	0.000
	PAREA1	2028	1/1/2028	12/31/2028	61	305	365	365	365	260	0.00	0.000
	PAREA1	2029	1/1/2029	10/31/2029	0	303	303	303	303	218	0.00	0.000
Construction Area - Fugitive Dust	PAREA2	2027	9/1/2027	12/31/2027	121	0	121	121	121	88	0.00	0.000
	PAREA2	2028	1/1/2028	12/31/2028	61	305	365	365	365	260	0.00	0.000
	PAREA2	2029	1/1/2029	10/31/2029	0	303	303	303	303	218	0.00	0.000
Construction Truck Trips - Exhaust & Fugitive Dust	SLINE1	2027	9/1/2027	12/31/2027	121	0	121	121	121	88	0.00	0.000
	SLINE1	2028	1/1/2028	12/31/2028	61	305	365	365	365	260	0.00	0.000
	SLINE1	2029	1/1/2029	10/31/2029	0	303	303	303	303	218	0.00	0.000

Cancer Risk Factors

	Abbreviation	UOM	0<2	2<16	
Daily Breathing Rate (8 hour)	DBR	L/kg-day	1200	520	95th percentile for both age groups
Modeling Adjustment Factor	MAF	unitless	4.2	4.2	Worst case
Exposure Frequency	EF	days/year	0.68	0.68	
Age Sensitivity Factor	ASF	unitless	10	3	
Inhalation Absorption Factor	A	unitless	1	1	
Conversion Factor	CF_1	m^3/L	0.001	0.001	
Conversion Factor	CF_2	$\mu g/m^3$	0.001	0.001	
Cancer Potency Factor (diesel exhaust)	CPF	$mg/kg\text{-}day^{-1}$	1.1	1.1	
Averaging Time (for residential exposure)	AT	years	70.00	70.00	

SOURCE: Office of Environmental Health Hazard Assessment, 2015. *Air Toxics Hot Spots Program Guidance Manual for the Preparation of Health Risk Assessments* . February 2015
Daily breathing rate for residential receptor is based on the OEHHA 95th percentile moderate intensity breathing rates (OEHHA Table 5.7).
Fraction of time at home is set to values per OEHHA Table 8.4 for residential since the nearest school has an unmitigated cancer risk of <1 per million.
Inhalation cancer potency factor from OEHHA Table 7.1

Hazard Index

Chronic Inhalation	REL	$\mu g/m^3$	5

Intake Factor for Inhalation, IF (m^3/kg-day) = DBR*MAF*EF*ED*ASF*A*CF/AT

	Daycare/Preschool		School
AERMOD Source	0<2	2<16	2<16
PAREA1	0.163	0.000	0.021
PAREA1	0.082	0.053	0.064
PAREA1	0.000	0.053	0.053
PAREA2	0.163	0.000	0.021
PAREA2	0.082	0.053	0.064
PAREA2	0.000	0.053	0.053
SLINE1	0.163	0.000	0.021
SLINE1	0.082	0.053	0.064
SLINE1	0.000	0.053	0.053

Risk Calculation Part 1, R1 = IF*CPF*CF

	Daycare/Preschool		School
	0<2	2<16	2<16
	1.80E-04	0.00E+00	2.34E-05
	8.99E-05	5.88E-05	7.05E-05
	0.00E+00	5.85E-05	5.85E-05
	1.80E-04	0.00E+00	2.34E-05
	8.99E-05	5.88E-05	7.05E-05
	0.00E+00	5.85E-05	5.85E-05
	1.80E-04	0.00E+00	2.34E-05
	8.99E-05	5.88E-05	7.05E-05
	0.00E+00	5.85E-05	5.85E-05

MEIR	Cancer Risk	UTM X	UTM Y
George V LevYa Middle School	0.01	605465	4130538

HI	UTM X	UTM Y
0.00001	605465	4130538

Evergreen Water Production Well
Construction Health Risk Calculations - School & Daycare Mitigated
Incremental Annual Average $PM_{2.5}$ Comcentration Calculations

							$PM_{2.5}$	
							Emisions (tons)	Emission Rate (g/s)
Source	AERMOD Source	Year	Start Date	End Date	Calendar Days	Workdays	Mitigated - Tier 4F	
Construction Area - Exhaust	PAREA1	2027	9/1/2027	12/31/2027	121	88	0.00	0.000
	PAREA1	2028	1/1/2028	12/31/2028	365	260	0.00	0.000
	PAREA1	2029	1/1/2029	10/31/2029	303	218	0.00	0.000
Construction Area - Fugitive Dust	PAREA2	2027	9/1/2027	12/31/2027	121	88	0.00	0.000
	PAREA2	2028	1/1/2028	12/31/2028	365	260	0.00	0.000
	PAREA2	2029	1/1/2029	10/31/2029	303	218	0.00	0.000
Construction Truck Trips - Exhaust & Fugitive Dust	SLINE1	2027	9/1/2027	12/31/2027	121	88	0.00	0.000
	SLINE1	2028	1/1/2028	12/31/2028	365	260	0.00	0.000
	SLINE1	2029	1/1/2029	10/31/2029	303	218	0.00	0.000

MEIR	$PM_{2.5}$ Conc.	UTM X	UTM Y
George V LevYa Middle School	0.0002	605465	4130538

Evergreen Water Production Well
AERMOD Outputs

Evergreen Water Production Well

Summary of AERMOD Outputs for All Offsite Receptors

			Construction Sources		
X	Y	X_Y	PAREA1	PAREA2	SLINE1
605225	4130338	605225.45_4130337.61	0.04754	0.03812	1.86764
605245	4130338	605245.45_4130337.61	0.04926	0.03964	1.97756
605265	4130338	605265.45_4130337.61	0.05155	0.04182	2.09646
605285	4130338	605285.45_4130337.61	0.05457	0.04466	2.22414
605305	4130338	605305.45_4130337.61	0.05792	0.04775	2.37042
605325	4130338	605325.45_4130337.61	0.06171	0.05117	2.53801
605345	4130338	605345.45_4130337.61	0.06634	0.05534	2.72504
605445	4130338	605445.45_4130337.61	0.10524	0.096	4.18034
605465	4130338	605465.45_4130337.61	0.11741	0.10688	4.65594
605485	4130338	605485.45_4130337.61	0.13188	0.11822	5.24374
605505	4130338	605505.45_4130337.61	0.14899	0.13089	5.99457
605525	4130338	605525.45_4130337.61	0.16916	0.14663	6.99144
605545	4130338	605545.45_4130337.61	0.19285	0.16754	8.38124
605565	4130338	605565.45_4130337.61	0.21967	0.19451	10.43056
605585	4130338	605585.45_4130337.61	0.25006	0.22731	13.71736
605605	4130338	605605.45_4130337.61	0.28488	0.26431	20.54801
605665	4130338	605665.45_4130337.61	0.40357	0.37532	44.97704
605685	4130338	605685.45_4130337.61	0.45223	0.41523	33.60446
605725	4130338	605725.45_4130337.61	0.56241	0.50658	21.98263
605745	4130338	605745.45_4130337.61	0.62779	0.5602	18.72703
605765	4130338	605765.45_4130337.61	0.70445	0.62443	16.40448
605785	4130338	605785.45_4130337.61	0.78029	0.69515	14.4478
606025	4130338	606025.45_4130337.61	1.35375	1.35824	5.95143
605225	4130358	605225.45_4130357.61	0.05108	0.04111	1.95483
605245	4130358	605245.45_4130357.61	0.05281	0.04232	2.07436
605265	4130358	605265.45_4130357.61	0.05512	0.04432	2.2043
605285	4130358	605285.45_4130357.61	0.05824	0.04718	2.34438
605305	4130358	605305.45_4130357.61	0.06166	0.05038	2.50612
605325	4130358	605325.45_4130357.61	0.06558	0.05399	2.69217
605345	4130358	605345.45_4130357.61	0.07041	0.05834	2.90161
605365	4130358	605365.45_4130357.61	0.07664	0.064	3.13347
605425	4130358	605425.45_4130357.61	0.10103	0.08988	4.12504
605445	4130358	605445.45_4130357.61	0.11226	0.10171	4.59246
605465	4130358	605465.45_4130357.61	0.12561	0.11419	5.16938
605485	4130358	605485.45_4130357.61	0.1415	0.12712	5.9021
605505	4130358	605505.45_4130357.61	0.16045	0.14135	6.86579
605525	4130358	605525.45_4130357.61	0.18312	0.15894	8.18648
605545	4130358	605545.45_4130357.61	0.20996	0.18235	10.12234
605565	4130358	605565.45_4130357.61	0.24127	0.21344	13.1992
605585	4130358	605585.45_4130357.61	0.27725	0.25176	18.83868
605665	4130358	605665.45_4130357.61	0.45796	0.42422	50.07418
605685	4130358	605685.45_4130357.61	0.51577	0.47176	36.47481
605725	4130358	605725.45_4130357.61	0.64842	0.58144	23.21045

605745	4130358	605745.45_4130357.61	0.72791	0.64748	19.62313
605765	4130358	605765.45_4130357.61	0.8196	0.72768	17.06896
605785	4130358	605785.45_4130357.61	0.90981	0.81717	14.96171
605885	4130358	605885.45_4130357.61	1.34033	1.3152	9.39791
605905	4130358	605905.45_4130357.61	1.39949	1.37613	8.76216
605925	4130358	605925.45_4130357.61	1.44338	1.42016	8.19037
605945	4130358	605945.45_4130357.61	1.47325	1.4517	7.67951
605965	4130358	605965.45_4130357.61	1.49259	1.47639	7.22098
605985	4130358	605985.45_4130357.61	1.5013	1.49538	6.80205
605225	4130378	605225.45_4130377.61	0.05522	0.04507	2.04796
605245	4130378	605245.45_4130377.61	0.05699	0.04587	2.17813
605265	4130378	605265.45_4130377.61	0.05934	0.04753	2.32052
605285	4130378	605285.45_4130377.61	0.06259	0.05026	2.4737
605305	4130378	605305.45_4130377.61	0.06603	0.05343	2.65387
605325	4130378	605325.45_4130377.61	0.07003	0.05716	2.86149
605345	4130378	605345.45_4130377.61	0.07512	0.06178	3.09551
605365	4130378	605365.45_4130377.61	0.08171	0.06768	3.35782
605405	4130378	605405.45_4130377.61	0.09773	0.08364	4.05205
605425	4130378	605425.45_4130377.61	0.10821	0.09498	4.50268
605445	4130378	605445.45_4130377.61	0.1206	0.10821	5.05812
605465	4130378	605465.45_4130377.61	0.13535	0.12256	5.75948
605485	4130378	605485.45_4130377.61	0.15308	0.13759	6.67045
605505	4130378	605505.45_4130377.61	0.1745	0.15401	7.90104
605525	4130378	605525.45_4130377.61	0.20026	0.17394	9.65513
605545	4130378	605545.45_4130377.61	0.23125	0.20066	12.30384
605565	4130378	605565.45_4130377.61	0.26768	0.23645	16.63162
605585	4130378	605585.45_4130377.61	0.3099	0.28105	24.30867
605665	4130378	605665.45_4130377.61	0.52282	0.48261	52.3046
605685	4130378	605685.45_4130377.61	0.59215	0.53985	38.00127
605725	4130378	605725.45_4130377.61	0.75754	0.67596	24.15801
605745	4130378	605745.45_4130377.61	0.85582	0.75974	20.35952
605765	4130378	605765.45_4130377.61	0.96654	0.86228	17.63136
605785	4130378	605785.45_4130377.61	1.07492	0.97666	15.42727
605845	4130378	605845.45_4130377.61	1.3955	1.3532	11.33218
605865	4130378	605865.45_4130377.61	1.47663	1.44636	10.3904
605885	4130378	605885.45_4130377.61	1.53802	1.51367	9.57355
605905	4130378	605905.45_4130377.61	1.59177	1.56833	8.90231
605925	4130378	605925.45_4130377.61	1.62966	1.60844	8.30757
605945	4130378	605945.45_4130377.61	1.65163	1.63737	7.77043
605965	4130378	605965.45_4130377.61	1.66132	1.65981	7.28104
605985	4130378	605985.45_4130377.61	1.66102	1.67794	6.85872
605225	4130398	605225.45_4130397.61	0.06012	0.05027	2.14584
605405	4130398	605405.45_4130397.61	0.10465	0.08844	4.40734
605425	4130398	605425.45_4130397.61	0.11606	0.10047	4.93622
605445	4130398	605445.45_4130397.61	0.12964	0.11505	5.59836
605465	4130398	605465.45_4130397.61	0.14609	0.13156	6.4438
605485	4130398	605485.45_4130397.61	0.16598	0.14914	7.56151

605505	4130398	605505.45_4130397.61	0.19022	0.16822	9.0937
605525	4130398	605525.45_4130397.61	0.21975	0.19108	11.29194
605545	4130398	605545.45_4130397.61	0.25565	0.22169	14.59736
605565	4130398	605565.45_4130397.61	0.29822	0.2631	19.80543
605585	4130398	605585.45_4130397.61	0.34798	0.31525	28.43156
605665	4130398	605665.45_4130397.61	0.60464	0.55566	53.6594
605825	4130398	605825.45_4130397.61	1.52552	1.47389	12.65297
605845	4130398	605845.45_4130397.61	1.62912	1.59322	11.52223
605865	4130398	605865.45_4130397.61	1.7181	1.6887	10.59704
605885	4130398	605885.45_4130397.61	1.77951	1.75369	9.77378
605905	4130398	605905.45_4130397.61	1.82857	1.80605	9.0843
605925	4130398	605925.45_4130397.61	1.8589	1.84514	8.47786
605945	4130398	605945.45_4130397.61	1.87042	1.87301	7.93107
605965	4130398	605965.45_4130397.61	1.86043	1.88704	7.4178
605985	4130398	605985.45_4130397.61	1.84563	1.90133	6.98061
605225	4130418	605225.45_4130417.61	0.06561	0.05666	2.25455
605445	4130418	605445.45_4130417.61	0.13973	0.12247	6.20598
605465	4130418	605465.45_4130417.61	0.15806	0.14129	7.20938
605485	4130418	605485.45_4130417.61	0.18031	0.16179	8.54523
605505	4130418	605505.45_4130417.61	0.20765	0.18402	10.37152
605525	4130418	605525.45_4130417.61	0.24169	0.21052	12.94154
605545	4130418	605545.45_4130417.61	0.28301	0.24545	16.68108
605565	4130418	605565.45_4130417.61	0.33301	0.29359	22.30529
605585	4130418	605585.45_4130417.61	0.39234	0.35523	31.20015
605665	4130418	605665.45_4130417.61	0.70705	0.64677	54.34293
605685	4130418	605685.45_4130417.61	0.81252	0.73356	39.7474
605705	4130418	605705.45_4130417.61	0.93631	0.83503	31.18129
605725	4130418	605725.45_4130417.61	1.07454	0.95362	25.43518
605745	4130418	605745.45_4130417.61	1.22861	1.09857	21.43067
605765	4130418	605765.45_4130417.61	1.38101	1.26167	18.35266
605785	4130418	605785.45_4130417.61	1.5338	1.43965	16.05499
605805	4130418	605805.45_4130417.61	1.68414	1.61731	14.32851
605825	4130418	605825.45_4130417.61	1.80716	1.76332	12.86909
605845	4130418	605845.45_4130417.61	1.91109	1.8791	11.70248
605865	4130418	605865.45_4130417.61	2.00128	1.97291	10.77397
605885	4130418	605885.45_4130417.61	2.05549	2.03337	9.93389
605905	4130418	605905.45_4130417.61	2.09657	2.08557	9.2342
605925	4130418	605925.45_4130417.61	2.1138	2.1235	8.61132
605945	4130418	605945.45_4130417.61	2.10129	2.14142	8.03489
605965	4130418	605965.45_4130417.61	2.07616	2.15306	7.52642
605225	4130438	605225.45_4130437.61	0.07182	0.06426	2.37162
605245	4130438	605245.45_4130437.61	0.07423	0.06432	2.53899
605265	4130438	605265.45_4130437.61	0.07696	0.06463	2.72792
605285	4130438	605285.45_4130437.61	0.0802	0.06564	2.94188
605305	4130438	605305.45_4130437.61	0.08394	0.06758	3.18879
605325	4130438	605325.45_4130437.61	0.08865	0.07094	3.47253
605385	4130438	605385.45_4130437.61	0.11044	0.09007	4.66992

605405	4130438	605405.45_4130437.61	0.12152	0.10039	5.24223
605425	4130438	605425.45_4130437.61	0.13525	0.11391	5.94877
605445	4130438	605445.45_4130437.61	0.15182	0.13118	6.84707
605465	4130438	605465.45_4130437.61	0.17241	0.15251	7.99825
605485	4130438	605485.45_4130437.61	0.19735	0.17638	9.53069
605505	4130438	605505.45_4130437.61	0.22828	0.20248	11.59606
605525	4130438	605525.45_4130437.61	0.26743	0.23333	14.42583
605545	4130438	605545.45_4130437.61	0.31563	0.27378	18.40212
605565	4130438	605565.45_4130437.61	0.37554	0.33076	24.22671
605585	4130438	605585.45_4130437.61	0.44708	0.40442	33.27675
605665	4130438	605665.45_4130437.61	0.8366	0.76164	54.527
605685	4130438	605685.45_4130437.61	0.97059	0.8718	40.09334
605705	4130438	605705.45_4130437.61	1.12843	1.00326	31.54173
605725	4130438	605725.45_4130437.61	1.30478	1.16152	25.79294
605745	4130438	605745.45_4130437.61	1.49542	1.35288	21.72547
605765	4130438	605765.45_4130437.61	1.67619	1.55842	18.57833
605785	4130438	605785.45_4130437.61	1.85703	1.7725	16.29553
605805	4130438	605805.45_4130437.61	2.01704	1.96179	14.49801
605825	4130438	605825.45_4130437.61	2.14933	2.11179	13.05705
605845	4130438	605845.45_4130437.61	2.26484	2.23387	11.93561
605865	4130438	605865.45_4130437.61	2.33111	2.30984	10.92336
605885	4130438	605885.45_4130437.61	2.36466	2.36033	10.05016
605905	4130438	605905.45_4130437.61	2.38781	2.40971	9.34117
605925	4130438	605925.45_4130437.61	2.38992	2.44941	8.71606
605945	4130438	605945.45_4130437.61	2.35247	2.45841	8.12976
606025	4130438	606025.45_4130437.61	2.05598	2.33696	6.25932
605225	4130458	605225.45_4130457.61	0.07918	0.07317	2.49422
605245	4130458	605245.45_4130457.61	0.08198	0.07359	2.67705
605265	4130458	605265.45_4130457.61	0.08496	0.07384	2.88549
605285	4130458	605285.45_4130457.61	0.08852	0.0745	3.12154
605305	4130458	605305.45_4130457.61	0.09254	0.07583	3.39506
605325	4130458	605325.45_4130457.61	0.09751	0.07854	3.71117
605385	4130458	605385.45_4130457.61	0.12038	0.09729	5.05855
605405	4130458	605405.45_4130457.61	0.13227	0.10812	5.70507
605425	4130458	605425.45_4130457.61	0.1474	0.12249	6.49862
605445	4130458	605445.45_4130457.61	0.1657	0.14106	7.50708
605505	4130458	605505.45_4130457.61	0.25187	0.22345	12.71099
605525	4130458	605525.45_4130457.61	0.29774	0.26021	15.68569
605545	4130458	605545.45_4130457.61	0.35502	0.30797	19.78913
605565	4130458	605565.45_4130457.61	0.42713	0.37582	25.70667
605585	4130458	605585.45_4130457.61	0.51481	0.46522	34.8908
605665	4130458	605665.45_4130457.61	1.03312	0.91038	54.53551
605685	4130458	605685.45_4130457.61	1.17982	1.05451	40.35282
605705	4130458	605705.45_4130457.61	1.38582	1.23126	31.85944
605725	4130458	605725.45_4130457.61	1.61462	1.44869	26.14689
605745	4130458	605745.45_4130457.61	1.84613	1.6976	21.96384
605765	4130458	605765.45_4130457.61	2.06988	1.95855	18.88101

605785	4130458	605785.45_4130457.61	2.2668	2.19519	16.50639
605805	4130458	605805.45_4130457.61	2.44165	2.39504	14.72237
605825	4130458	605825.45_4130457.61	2.5763	2.54376	13.27789
605845	4130458	605845.45_4130457.61	2.67843	2.65764	12.1168
605865	4130458	605865.45_4130457.61	2.71605	2.71912	11.06032
605885	4130458	605885.45_4130457.61	2.72764	2.76661	10.18715
605905	4130458	605905.45_4130457.61	2.70598	2.79369	9.42335
606025	4130458	606025.45_4130457.61	2.17888	2.54185	6.29829
605225	4130478	605225.45_4130477.61	0.08768	0.08304	2.62388
605245	4130478	605245.45_4130477.61	0.09094	0.08425	2.82439
605265	4130478	605265.45_4130477.61	0.09423	0.08488	3.05504
605285	4130478	605285.45_4130477.61	0.09827	0.08567	3.31499
605305	4130478	605305.45_4130477.61	0.10287	0.08678	3.6153
605325	4130478	605325.45_4130477.61	0.10829	0.08886	3.96499
605385	4130478	605385.45_4130477.61	0.13235	0.10618	5.46538
605405	4130478	605405.45_4130477.61	0.14516	0.11746	6.18156
605425	4130478	605425.45_4130477.61	0.16142	0.13248	7.0612
605445	4130478	605445.45_4130477.61	0.18167	0.15239	8.16258
605465	4130478	605465.45_4130477.61	0.20676	0.17826	9.56466
605485	4130478	605485.45_4130477.61	0.23925	0.21082	11.34425
605505	4130478	605505.45_4130477.61	0.28071	0.24849	13.65739
605525	4130478	605525.45_4130477.61	0.33397	0.29225	16.72376
605545	4130478	605545.45_4130477.61	0.40133	0.34838	20.87765
605565	4130478	605565.45_4130477.61	0.49	0.43077	26.8728
605585	4130478	605585.45_4130477.61	0.59874	0.54059	36.17869
605665	4130478	605665.45_4130477.61	1.26418	1.10685	54.32795
605685	4130478	605685.45_4130477.61	1.50844	1.3028	40.53984
605705	4130478	605705.45_4130477.61	1.78447	1.54638	32.05313
605725	4130478	605725.45_4130477.61	2.08226	1.84585	26.37555
605785	4130478	605785.45_4130477.61	2.7894	2.73159	16.71155
605805	4130478	605805.45_4130477.61	2.96824	2.93224	14.9252
605825	4130478	605825.45_4130477.61	3.0846	3.06907	13.44829
605845	4130478	605845.45_4130477.61	3.16174	3.17575	12.26968
605865	4130478	605865.45_4130477.61	3.15536	3.21887	11.17999
605885	4130478	605885.45_4130477.61	3.13009	3.25695	10.30439
605965	4130478	605965.45_4130477.61	2.71507	3.09948	7.67801
606025	4130478	606025.45_4130477.61	2.27478	2.69764	6.32352
605225	4130498	605225.45_4130497.61	0.0969	0.09317	2.76595
605245	4130498	605245.45_4130497.61	0.10101	0.09581	2.98329
605265	4130498	605265.45_4130497.61	0.10515	0.09771	3.23362
605285	4130498	605285.45_4130497.61	0.10987	0.0993	3.51884
605305	4130498	605305.45_4130497.61	0.11513	0.1007	3.84871
605325	4130498	605325.45_4130497.61	0.12126	0.10257	4.23211
605385	4130498	605385.45_4130497.61	0.14694	0.11768	5.87932
605405	4130498	605405.45_4130497.61	0.16068	0.129	6.65888
605445	4130498	605445.45_4130497.61	0.20059	0.16584	8.78454
605465	4130498	605465.45_4130497.61	0.22912	0.19455	10.25209

605485	4130498	605485.45_4130497.61	0.2652	0.2313	12.11649
605505	4130498	605505.45_4130497.61	0.31415	0.2771	14.47233
605525	4130498	605525.45_4130497.61	0.37712	0.33033	17.58115
605545	4130498	605545.45_4130497.61	0.4589	0.39856	21.78539
605565	4130498	605565.45_4130497.61	0.56853	0.49938	27.83883
605585	4130498	605585.45_4130497.61	0.70554	0.63648	37.29195
605665	4130498	605665.45_4130497.61	1.57776	1.37394	53.94299
605685	4130498	605685.45_4130497.61	1.90368	1.64593	40.39643
605705	4130498	605705.45_4130497.61	2.20243	1.98963	32.0309
605725	4130498	605725.45_4130497.61	2.58129	2.39653	26.42552
605765	4130498	605765.45_4130497.61	3.22222	3.14713	19.22225
605785	4130498	605785.45_4130497.61	3.44986	3.41105	16.8972
605805	4130498	605805.45_4130497.61	3.60242	3.5946	15.06336
605825	4130498	605825.45_4130497.61	3.67385	3.70999	13.55238
605845	4130498	605845.45_4130497.61	3.70224	3.80211	12.36263
605945	4130498	605945.45_4130497.61	3.08332	3.56101	8.27782
605965	4130498	605965.45_4130497.61	2.88995	3.39	7.68662
606025	4130498	606025.45_4130497.61	2.33278	2.77654	6.32249
605225	4130518	605225.45_4130517.61	0.1078	0.10409	2.91099
605245	4130518	605245.45_4130517.61	0.11278	0.10832	3.14766
605405	4130518	605405.45_4130517.61	0.18078	0.14477	7.10762
605445	4130518	605445.45_4130517.61	0.22439	0.18293	9.34212
605485	4130518	605485.45_4130517.61	0.29765	0.25613	12.76682
605505	4130518	605505.45_4130517.61	0.3552	0.31126	15.14398
605525	4130518	605525.45_4130517.61	0.43117	0.37738	18.26433
605545	4130518	605545.45_4130517.61	0.52967	0.46038	22.53325
605565	4130518	605565.45_4130517.61	0.66721	0.58577	28.64585
605585	4130518	605585.45_4130517.61	0.84321	0.76029	38.25953
605665	4130518	605665.45_4130517.61	2.0199	1.75404	53.60457
605685	4130518	605685.45_4130517.61	2.46262	2.14631	40.2326
605705	4130518	605705.45_4130517.61	2.85907	2.63291	31.92158
605725	4130518	605725.45_4130517.61	3.33746	3.17055	26.41527
605745	4130518	605745.45_4130517.61	3.75273	3.65477	22.40558
605765	4130518	605765.45_4130517.61	4.06392	4.02129	19.36137
605785	4130518	605785.45_4130517.61	4.25183	4.25899	16.97124
605805	4130518	605805.45_4130517.61	4.34577	4.41471	15.11964
605825	4130518	605825.45_4130517.61	4.34864	4.50476	13.62326
605925	4130518	605925.45_4130517.61	3.52461	4.11494	8.95121
605965	4130518	605965.45_4130517.61	3.02759	3.60437	7.71871
606025	4130518	606025.45_4130517.61	2.3459	2.76323	6.30072
605465	4130538	605465.45_4130537.61	0.29423	0.24137	11.29869
605485	4130538	605485.45_4130537.61	0.33761	0.28599	13.32164
605505	4130538	605505.45_4130537.61	0.40557	0.35203	15.70663
605525	4130538	605525.45_4130537.61	0.49687	0.43402	18.84624
605545	4130538	605545.45_4130537.61	0.6182	0.53775	23.16604
605565	4130538	605565.45_4130537.61	0.7936	0.69667	29.34589
605585	4130538	605585.45_4130537.61	1.02515	0.92435	39.13003

605665	4130538	605665.45_4130537.61	2.66327	2.31898	53.2544
605685	4130538	605685.45_4130537.61	3.28484	2.91217	40.22204
605705	4130538	605705.45_4130537.61	3.92241	3.60607	32.05822
605725	4130538	605725.45_4130537.61	4.5015	4.28032	26.54873
605745	4130538	605745.45_4130537.61	4.84584	4.80164	22.47103
605765	4130538	605765.45_4130537.61	5.11783	5.14829	19.40506
605785	4130538	605785.45_4130537.61	5.22026	5.34193	17.00127
605925	4130538	605925.45_4130537.61	3.7244	4.4292	8.97338
605965	4130538	605965.45_4130537.61	3.10372	3.68934	7.74114
606025	4130538	606025.45_4130537.61	2.3157	2.66163	6.29096
605485	4130558	605485.45_4130557.61	0.3879	0.32303	13.7954
605505	4130558	605505.45_4130557.61	0.46772	0.40095	16.19877
605525	4130558	605525.45_4130557.61	0.57815	0.50302	19.36399
605545	4130558	605545.45_4130557.61	0.73086	0.636	23.71544
605565	4130558	605565.45_4130557.61	0.95886	0.842	29.96953
605585	4130558	605585.45_4130557.61	1.26969	1.14605	39.90517
605665	4130558	605665.45_4130557.61	3.62303	3.19601	52.58619
605685	4130558	605685.45_4130557.61	4.50284	4.1029	40.01241
605705	4130558	605705.45_4130557.61	5.31769	5.03568	31.92572
605725	4130558	605725.45_4130557.61	5.97596	5.82315	26.51906
605885	4130558	605885.45_4130557.61	4.66841	5.54316	10.5118
605925	4130558	605925.45_4130557.61	3.83178	4.56001	8.96632
605945	4130558	605945.45_4130557.61	3.4454	4.06914	8.30094
605965	4130558	605965.45_4130557.61	3.09815	3.61401	7.72612
606025	4130558	606025.45_4130557.61	2.23942	2.48008	6.28086
605485	4130578	605485.45_4130577.61	0.453	0.37134	14.20101
605505	4130578	605505.45_4130577.61	0.54769	0.46231	16.6179
605525	4130578	605525.45_4130577.61	0.68233	0.58948	19.8137
605545	4130578	605545.45_4130577.61	0.8765	0.76263	24.19986
605565	4130578	605565.45_4130577.61	1.18038	1.0376	30.5344
605585	4130578	605585.45_4130577.61	1.61517	1.46109	40.66185
605665	4130578	605665.45_4130577.61	5.15611	4.66794	52.27285
605685	4130578	605685.45_4130577.61	6.38998	6.0267	39.97825
605825	4130578	605825.45_4130577.61	6.59886	7.69702	13.75396
605845	4130578	605845.45_4130577.61	5.98415	7.08974	12.45079
605865	4130578	605865.45_4130577.61	5.41733	6.45876	11.44658
605885	4130578	605885.45_4130577.61	4.84603	5.77182	10.51209
605925	4130578	605925.45_4130577.61	3.83255	4.47164	8.96009
605945	4130578	605945.45_4130577.61	3.39944	3.90049	8.30693
605965	4130578	605965.45_4130577.61	3.01658	3.39485	7.72336
606025	4130578	606025.45_4130577.61	2.12837	2.24603	6.29804
605485	4130598	605485.45_4130597.61	0.53846	0.43787	14.56695
605505	4130598	605505.45_4130597.61	0.65286	0.54249	16.99303
605525	4130598	605525.45_4130597.61	0.81985	0.70087	20.21125
605545	4130598	605545.45_4130597.61	1.07185	0.93122	24.63579
605565	4130598	605565.45_4130597.61	1.48734	1.31036	31.05833
605585	4130598	605585.45_4130597.61	2.12148	1.92812	41.3872

605765	4130598	605765.45_4130597.61	9.79967	10.96916	19.59683
605805	4130598	605805.45_4130597.61	8.04891	9.48918	15.31784
605825	4130598	605825.45_4130597.61	7.11913	8.48267	13.69932
605845	4130598	605845.45_4130597.61	6.28173	7.49123	12.42417
605885	4130598	605885.45_4130597.61	4.85253	5.6624	10.49209
605925	4130598	605925.45_4130597.61	3.73062	4.18105	8.99126
605945	4130598	605945.45_4130597.61	3.26696	3.57861	8.33294
605965	4130598	605965.45_4130597.61	2.86887	3.0691	7.74332
606025	4130598	606025.45_4130597.61	1.97326	1.9717	6.26184
605485	4130618	605485.45_4130617.61	0.6575	0.53908	14.88346
605505	4130618	605505.45_4130617.61	0.79812	0.65714	17.32771
605525	4130618	605525.45_4130617.61	1.00987	0.85294	20.56345
605545	4130618	605545.45_4130617.61	1.34426	1.16477	25.03476
605565	4130618	605565.45_4130617.61	1.93077	1.7096	31.54897
605585	4130618	605585.45_4130617.61	2.90069	2.66437	42.0724
605705	4130618	605705.45_4130617.61	14.31966	15.27368	32.02558
605725	4130618	605725.45_4130617.61	13.8341	15.27758	26.61887
605745	4130618	605745.45_4130617.61	12.67891	14.44912	22.48447
605765	4130618	605765.45_4130617.61	11.3296	13.22672	19.46754
605805	4130618	605805.45_4130617.61	8.60971	10.25114	15.32337
605825	4130618	605825.45_4130617.61	7.35449	8.70977	13.67934
605845	4130618	605845.45_4130617.61	6.31297	7.37027	12.41013
605885	4130618	605885.45_4130617.61	4.67424	5.22129	10.46503
605925	4130618	605925.45_4130617.61	3.48326	3.69507	8.92304
605945	4130618	605945.45_4130617.61	3.01751	3.12028	8.24712
605965	4130618	605965.45_4130617.61	2.63268	2.65544	7.66791
606025	4130618	606025.45_4130617.61	1.7835	1.6873	6.16246
605485	4130638	605485.45_4130637.61	0.82908	0.70044	15.15985
605505	4130638	605505.45_4130637.61	1.0114	0.84036	17.61696
605525	4130638	605525.45_4130637.61	1.28757	1.08214	20.88523
605545	4130638	605545.45_4130637.61	1.74159	1.50802	25.40175
605565	4130638	605565.45_4130637.61	2.60531	2.33308	32.01236
605585	4130638	605585.45_4130637.61	4.18997	3.93715	42.73165
605665	4130638	605665.45_4130637.61	19.16326	20.37968	51.29328
605685	4130638	605685.45_4130637.61	20.04905	22.02508	39.41666
605705	4130638	605705.45_4130637.61	19.07795	21.59666	31.83316
605725	4130638	605725.45_4130637.61	17.09299	19.83394	26.54233
605745	4130638	605745.45_4130637.61	14.64538	17.26852	22.39393
605765	4130638	605765.45_4130637.61	12.39829	14.69555	19.41012
605805	4130638	605805.45_4130637.61	8.69462	10.12771	15.32
605825	4130638	605825.45_4130637.61	7.1943	8.2141	13.63564
605845	4130638	605845.45_4130637.61	6.03297	6.71068	12.38736
605885	4130638	605885.45_4130637.61	4.32028	4.53711	10.43182
605925	4130638	605925.45_4130637.61	3.14845	3.13199	8.8448
605945	4130638	605945.45_4130637.61	2.70701	2.62867	8.14929
605965	4130638	605965.45_4130637.61	2.34468	2.22754	7.53889
606025	4130638	606025.45_4130637.61	1.58934	1.43553	6.08138

605485	4130658	605485.45_4130657.61	1.08316	0.95716	15.40652
605505	4130658	605505.45_4130657.61	1.33709	1.1503	17.88646
605525	4130658	605525.45_4130657.61	1.72174	1.47373	21.18893
605545	4130658	605545.45_4130657.61	2.37884	2.08307	25.74572
605565	4130658	605565.45_4130657.61	3.716	3.40969	32.45655
605585	4130658	605585.45_4130657.61	6.53123	6.45364	43.38152
605665	4130658	605665.45_4130657.61	29.84186	34.40338	50.60549
605685	4130658	605685.45_4130657.61	27.51218	32.12439	39.07932
605705	4130658	605705.45_4130657.61	23.59513	27.83988	31.63876
605725	4130658	605725.45_4130657.61	19.45874	23.04592	26.404
605745	4130658	605745.45_4130657.61	15.63562	18.41106	22.31744
605765	4130658	605765.45_4130657.61	12.5901	14.58853	19.3627
605805	4130658	605805.45_4130657.61	8.26852	9.07835	15.29895
605825	4130658	605825.45_4130657.61	6.62587	7.10739	13.58696
605845	4130658	605845.45_4130657.61	5.46643	5.68032	12.34948
605865	4130658	605865.45_4130657.61	4.56923	4.60386	11.33962
605885	4130658	605885.45_4130657.61	3.83407	3.75664	10.3837
605925	4130658	605925.45_4130657.61	2.7714	2.59076	8.79347
605945	4130658	605945.45_4130657.61	2.37874	2.18304	8.09466
605965	4130658	605965.45_4130657.61	2.05567	1.85811	7.4639
605485	4130678	605485.45_4130677.61	1.46738	1.35383	15.63741
605505	4130678	605505.45_4130677.61	1.86495	1.68532	18.1264
605525	4130678	605525.45_4130677.61	2.46597	2.21247	21.45879
605545	4130678	605545.45_4130677.61	3.50359	3.21336	26.06816
605565	4130678	605565.45_4130677.61	5.74111	5.61565	32.8834
605585	4130678	605585.45_4130677.61	11.27544	12.66839	44.0519
605665	4130678	605665.45_4130677.61	41.81075	50.93385	50.07281
605685	4130678	605685.45_4130677.61	33.5362	40.23919	38.79006
605705	4130678	605705.45_4130677.61	25.96611	30.73597	31.43043
605725	4130678	605725.45_4130677.61	19.88104	23.06776	26.2659
605745	4130678	605745.45_4130677.61	15.11811	17.06706	22.22953
605765	4130678	605765.45_4130677.61	11.70446	12.77614	19.32746
605805	4130678	605805.45_4130677.61	7.31944	7.43366	15.2583
605825	4130678	605825.45_4130677.61	5.74632	5.71758	13.5268
605845	4130678	605845.45_4130677.61	4.70506	4.54489	12.2946
605865	4130678	605865.45_4130677.61	3.91644	3.68634	11.28729
605885	4130678	605885.45_4130677.61	3.2799	3.02216	10.3171
605925	4130678	605925.45_4130677.61	2.37393	2.12109	8.70726
605945	4130678	605945.45_4130677.61	2.04252	1.80723	8.0058
605965	4130678	605965.45_4130677.61	1.77312	1.55829	7.38672
606025	4130678	606025.45_4130677.61	1.23482	1.07521	5.98571
605485	4130698	605485.45_4130697.61	2.08154	1.96917	15.83507
605505	4130698	605505.45_4130697.61	2.76851	2.6146	18.34606
605525	4130698	605525.45_4130697.61	3.8545	3.67812	21.7105
605545	4130698	605545.45_4130697.61	5.76627	5.80065	26.37021
605565	4130698	605565.45_4130697.61	10.03735	11.70878	33.29793
605585	4130698	605585.45_4130697.61	21.82072	37.09477	44.69085

605665	4130698	605665.45_4130697.61	48.06399	59.33888	49.41228
605685	4130698	605685.45_4130697.61	34.47674	40.88607	38.45629
605705	4130698	605705.45_4130697.61	24.66367	28.11713	31.22687
605725	4130698	605725.45_4130697.61	17.87176	19.52742	26.12191
605745	4130698	605745.45_4130697.61	13.09051	13.70408	22.1377
605765	4130698	605765.45_4130697.61	9.90978	9.95322	19.27041
605805	4130698	605805.45_4130697.61	6.07131	5.69185	15.19799
605825	4130698	605825.45_4130697.61	4.72137	4.39311	13.45082
605845	4130698	605845.45_4130697.61	3.87568	3.53353	12.22207
605865	4130698	605865.45_4130697.61	3.23906	2.9064	11.20904
605885	4130698	605885.45_4130697.61	2.73351	2.42479	10.26582
605925	4130698	605925.45_4130697.61	1.99973	1.75294	8.62226
605945	4130698	605945.45_4130697.61	1.73009	1.5145	7.91372
605965	4130698	605965.45_4130697.61	1.51391	1.32537	7.30178
606005	4130698	606005.45_4130697.61	1.19624	1.04957	6.31626
606025	4130698	606025.45_4130697.61	1.06773	0.94041	5.85436
605485	4130718	605485.45_4130717.61	3.09421	2.94353	16.01777
605505	4130718	605505.45_4130717.61	4.40734	4.28727	18.54758
605525	4130718	605525.45_4130717.61	6.67681	6.81291	21.94975
605545	4130718	605545.45_4130717.61	11.10389	12.83575	26.65928
605565	4130718	605565.45_4130717.61	21.42966	35.68038	33.70612
605665	4130718	605665.45_4130717.61	44.13237	53.44531	48.89493
605685	4130718	605685.45_4130717.61	29.23917	32.96885	38.14064
605705	4130718	605705.45_4130717.61	19.92584	21.08654	31.0091
605725	4130718	605725.45_4130717.61	14.04973	14.08498	25.93946
605745	4130718	605745.45_4130717.61	10.18614	9.77441	22.03809
605765	4130718	605765.45_4130717.61	7.70607	7.13963	19.19085
605805	4130718	605805.45_4130717.61	4.77903	4.22979	15.11355
605825	4130718	605825.45_4130717.61	3.72798	3.3385	13.36194
605845	4130718	605845.45_4130717.61	3.09968	2.75024	12.15468
605865	4130718	605865.45_4130717.61	2.6181	2.3088	11.12489
605885	4130718	605885.45_4130717.61	2.23382	1.96386	10.17623
605925	4130718	605925.45_4130717.61	1.66767	1.46769	8.52056
605945	4130718	605945.45_4130717.61	1.45513	1.28521	7.8024
605965	4130718	605965.45_4130717.61	1.2859	1.13935	7.20231
606005	4130718	606005.45_4130717.61	1.02972	0.91829	6.19969
606025	4130718	606025.45_4130717.61	0.92178	0.827	5.72109
605225	4130738	605225.45_4130737.61	0.38061	0.35184	4.54887
605245	4130738	605245.45_4130737.61	0.4264	0.39253	4.91609
605265	4130738	605265.45_4130737.61	0.48127	0.44102	5.3278
605525	4130738	605525.45_4130737.61	12.04137	13.33162	22.16712
605545	4130738	605545.45_4130737.61	22.02546	29.9172	26.9452
605565	4130738	605565.45_4130737.61	42.44486	100.59153	34.0903
605665	4130738	605665.45_4130737.61	31.80641	36.19433	48.59278
605685	4130738	605685.45_4130737.61	20.34985	21.0911	37.84087
605705	4130738	605705.45_4130737.61	13.84025	13.42236	30.78509
605725	4130738	605725.45_4130737.61	9.89971	9.17852	25.78829

605745	4130738	605745.45_4130737.61	7.30489	6.58069	21.92586
605765	4130738	605765.45_4130737.61	5.65413	4.99408	19.09877
605805	4130738	605805.45_4130737.61	3.65474	3.1653	15.01764
605825	4130738	605825.45_4130737.61	2.89096	2.57486	13.28587
605845	4130738	605845.45_4130737.61	2.44971	2.17507	12.09976
605865	4130738	605865.45_4130737.61	2.09856	1.8613	11.03069
605885	4130738	605885.45_4130737.61	1.81991	1.61372	10.0915
605925	4130738	605925.45_4130737.61	1.39265	1.24103	8.43193
605945	4130738	605945.45_4130737.61	1.22553	1.09775	7.69081
605965	4130738	605965.45_4130737.61	1.09198	0.98182	7.08075
606005	4130738	606005.45_4130737.61	0.88914	0.80404	6.08652
606025	4130738	606025.45_4130737.61	0.80085	0.72837	5.60264
605225	4130758	605225.45_4130757.61	0.4345	0.39373	4.6662
605245	4130758	605245.45_4130757.61	0.49082	0.44268	5.03969
605265	4130758	605265.45_4130757.61	0.55896	0.50192	5.45335
605285	4130758	605285.45_4130757.61	0.64238	0.57467	5.91018
605705	4130758	605705.45_4130757.61	8.74651	8.10069	30.5085
605725	4130758	605725.45_4130757.61	6.57474	5.9242	25.5648
605745	4130758	605745.45_4130757.61	5.08113	4.50788	21.79786
605765	4130758	605765.45_4130757.61	4.07969	3.5805	19.00671
605785	4130758	605785.45_4130757.61	3.36593	2.93236	16.82369
605805	4130758	605805.45_4130757.61	2.78971	2.42495	14.90317
605825	4130758	605825.45_4130757.61	2.24748	2.02473	13.19992
605845	4130758	605845.45_4130757.61	1.9444	1.74638	12.00896
605865	4130758	605865.45_4130757.61	1.69319	1.51925	10.91913
605885	4130758	605885.45_4130757.61	1.53454	1.33541	9.96642
605925	4130758	605925.45_4130757.61	1.16838	1.05145	8.32631
605945	4130758	605945.45_4130757.61	1.03731	0.93798	7.56085
605965	4130758	605965.45_4130757.61	0.9328	0.84585	6.95286
606005	4130758	606005.45_4130757.61	0.77062	0.70172	5.95493
606025	4130758	606025.45_4130757.61	0.69852	0.63922	5.47454
605225	4130778	605225.45_4130777.61	0.4965	0.43803	4.76441
605245	4130778	605245.45_4130777.61	0.56554	0.49727	5.13983
605265	4130778	605265.45_4130777.61	0.64978	0.5702	5.55603
605285	4130778	605285.45_4130777.61	0.75408	0.66137	6.01151
605345	4130778	605345.45_4130777.61	1.26486	1.12121	7.75435
605365	4130778	605365.45_4130777.61	1.55305	1.38935	8.48607
605385	4130778	605385.45_4130777.61	1.94556	1.76305	9.3238
605405	4130778	605405.45_4130777.61	2.49841	2.3035	10.29113
605425	4130778	605425.45_4130777.61	3.30011	3.11381	11.42537
605725	4130778	605725.45_4130777.61	4.48867	4.10986	25.39105
605745	4130778	605745.45_4130777.61	3.62595	3.27406	21.63414
605765	4130778	605765.45_4130777.61	3.02005	2.69452	18.87331
605785	4130778	605785.45_4130777.61	2.55968	2.2637	16.67904
605805	4130778	605805.45_4130777.61	2.17214	1.91304	14.75961
605825	4130778	605825.45_4130777.61	1.78522	1.63058	13.10019
605845	4130778	605845.45_4130777.61	1.62789	1.42703	11.87657

605865	4130778	605865.45_4130777.61	1.43622	1.25712	10.78006
605885	4130778	605885.45_4130777.61	1.27929	1.11857	9.82138
605925	4130778	605925.45_4130777.61	0.9894	0.89542	8.17365
605945	4130778	605945.45_4130777.61	0.88992	0.80725	7.44227
605965	4130778	605965.45_4130777.61	0.80512	0.7321	6.81726
606005	4130778	606005.45_4130777.61	0.67489	0.6151	5.82877
606025	4130778	606025.45_4130777.61	0.61476	0.56297	5.34913
605225	4130798	605225.45_4130797.61	0.56659	0.4905	4.85323
605245	4130798	605245.45_4130797.61	0.6499	0.56369	5.22783
605265	4130798	605265.45_4130797.61	0.75275	0.65497	5.64611
605325	4130798	605325.45_4130797.61	1.24758	1.11436	7.19948
605345	4130798	605345.45_4130797.61	1.51632	1.37455	7.8464
605365	4130798	605365.45_4130797.61	1.87762	1.73373	8.57755
605385	4130798	605385.45_4130797.61	2.36966	2.2379	9.41534
605405	4130798	605405.45_4130797.61	3.05769	2.96733	10.38482
605425	4130798	605425.45_4130797.61	4.04249	4.05338	11.52321
605445	4130798	605445.45_4130797.61	5.49262	5.72369	12.8808
605465	4130798	605465.45_4130797.61	7.7198	8.40307	14.48826
605485	4130798	605485.45_4130797.61	11.07973	12.76045	16.46505
605505	4130798	605505.45_4130797.61	16.42904	19.97859	19.20639
605525	4130798	605525.45_4130797.61	24.08322	31.64164	22.74053
605925	4130798	605925.45_4130797.61	0.88276	0.77689	8.04477
605945	4130798	605945.45_4130797.61	0.77466	0.70537	7.33013
605965	4130798	605965.45_4130797.61	0.70543	0.64309	6.68935
606005	4130798	606005.45_4130797.61	0.59785	0.54528	5.70359
606025	4130798	606025.45_4130797.61	0.55019	0.50315	5.25624
605225	4130818	605225.45_4130817.61	0.64379	0.55991	4.93722
605245	4130818	605245.45_4130817.61	0.7426	0.6515	5.31473
605265	4130818	605265.45_4130817.61	0.86405	0.76702	5.72492
605325	4130818	605325.45_4130817.61	1.45138	1.35256	7.28028
605345	4130818	605345.45_4130817.61	1.76997	1.68622	7.92443
605365	4130818	605365.45_4130817.61	2.19193	2.14164	8.65464
605385	4130818	605385.45_4130817.61	2.75765	2.77271	9.49159
605405	4130818	605405.45_4130817.61	3.52762	3.66173	10.46161
605425	4130818	605425.45_4130817.61	4.58705	4.92866	11.60179
605445	4130818	605445.45_4130817.61	6.05781	6.74641	12.96276
605465	4130818	605465.45_4130817.61	8.09302	9.33784	14.61932
605485	4130818	605485.45_4130817.61	10.85803	12.93603	16.67904
605505	4130818	605505.45_4130817.61	14.20618	17.37228	19.34205
605525	4130818	605525.45_4130817.61	17.54956	21.65386	22.8797
605545	4130818	605545.45_4130817.61	19.65887	23.98369	27.87911
605565	4130818	605565.45_4130817.61	19.19779	23.62564	35.49432
605645	4130818	605645.45_4130817.61	5.39063	5.56926	64.91773
605665	4130818	605665.45_4130817.61	4.33431	4.41727	47.44366
605685	4130818	605685.45_4130817.61	3.5684	3.60014	36.94815
605705	4130818	605705.45_4130817.61	2.98769	2.98378	29.99283
605725	4130818	605725.45_4130817.61	2.53756	2.50224	25.09332

605745	4130818	605745.45_4130817.61	2.17396	2.11419	21.40227
606005	4130818	606005.45_4130817.61	0.53475	0.4904	5.55903
606025	4130818	606025.45_4130817.61	0.49445	0.45405	5.11713
605225	4130838	605225.45_4130837.61	0.72517	0.65083	5.01241
605245	4130838	605245.45_4130837.61	0.83851	0.76422	5.3856
605265	4130838	605265.45_4130837.61	0.97823	0.90665	5.79939
605325	4130838	605325.45_4130837.61	1.64167	1.61996	7.34761
605345	4130838	605345.45_4130837.61	1.9934	2.01728	7.98925
605365	4130838	605365.45_4130837.61	2.44751	2.54529	8.71782
605385	4130838	605385.45_4130837.61	3.03634	3.24961	9.55377
605405	4130838	605405.45_4130837.61	3.80182	4.18777	10.52362
605425	4130838	605425.45_4130837.61	4.7901	5.42048	11.66468
605445	4130838	605445.45_4130837.61	6.04152	6.99243	13.02904
605465	4130838	605465.45_4130837.61	7.56462	8.88856	14.69234
605485	4130838	605485.45_4130837.61	9.2837	10.95122	16.77065
605505	4130838	605505.45_4130837.61	10.8594	12.67294	19.43746
605525	4130838	605525.45_4130837.61	11.95942	13.51991	23.00859
605545	4130838	605545.45_4130837.61	12.25398	13.6158	28.06016
605565	4130838	605565.45_4130837.61	11.54919	13.06397	35.78452
605645	4130838	605645.45_4130837.61	3.91528	3.91689	63.99693
605665	4130838	605665.45_4130837.61	3.22832	3.2037	46.95322
605685	4130838	605685.45_4130837.61	2.72147	2.70662	36.56712
605705	4130838	605705.45_4130837.61	2.33292	2.33291	29.69271
605725	4130838	605725.45_4130837.61	2.02604	2.0292	24.85376
605745	4130838	605745.45_4130837.61	1.77133	1.76808	21.20545
605765	4130838	605765.45_4130837.61	1.56024	1.54522	18.37429
605785	4130838	605785.45_4130837.61	1.38178	1.35438	16.09339
605805	4130838	605805.45_4130837.61	1.23045	1.19215	14.21941
605825	4130838	605825.45_4130837.61	1.10237	1.05518	12.65921
605845	4130838	605845.45_4130837.61	0.98918	0.93617	11.30095
605225	4130858	605225.45_4130857.61	0.80665	0.75845	5.0804
605245	4130858	605245.45_4130857.61	0.93272	0.89305	5.4526
605265	4130858	605265.45_4130857.61	1.08655	1.06063	5.86657
605305	4130858	605305.45_4130857.61	1.50789	1.53627	6.83349
605325	4130858	605325.45_4130857.61	1.79646	1.87372	7.40148
605345	4130858	605345.45_4130857.61	2.15623	2.30447	8.04104
605365	4130858	605365.45_4130857.61	2.60401	2.85171	8.76784
605385	4130858	605385.45_4130857.61	3.15886	3.53858	9.60196
605405	4130858	605405.45_4130857.61	3.83592	4.37783	10.57117
605425	4130858	605425.45_4130857.61	4.6407	5.36103	11.71286
605445	4130858	605445.45_4130857.61	5.55876	6.44587	13.07986
605465	4130858	605465.45_4130857.61	6.53864	7.53767	14.72771
605485	4130858	605485.45_4130857.61	7.39321	8.38796	16.83521
605505	4130858	605505.45_4130857.61	8.01322	8.80343	19.51513
605525	4130858	605525.45_4130857.61	8.29233	8.78449	23.11933
605545	4130858	605545.45_4130857.61	8.20234	8.77545	28.23187
605565	4130858	605565.45_4130857.61	7.65333	8.3618	36.08692

605645	4130858	605645.45_4130857.61	2.99662	2.95777	62.98749
605665	4130858	605665.45_4130857.61	2.51151	2.45567	46.37079
605685	4130858	605685.45_4130857.61	2.14872	2.09157	36.10972
605705	4130858	605705.45_4130857.61	1.86811	1.8328	29.27171
605725	4130858	605725.45_4130857.61	1.65029	1.63735	24.5188
605745	4130858	605745.45_4130857.61	1.46258	1.46401	20.86663
605765	4130858	605765.45_4130857.61	1.30981	1.31461	18.09187
605785	4130858	605785.45_4130857.61	1.17526	1.17731	15.82184
605805	4130858	605805.45_4130857.61	1.05913	1.05481	13.95937
605825	4130858	605825.45_4130857.61	0.95786	0.94586	12.39884
605845	4130858	605845.45_4130857.61	0.86737	0.84814	11.05375
605865	4130858	605865.45_4130857.61	0.78975	0.76391	9.92677
605885	4130858	605885.45_4130857.61	0.72449	0.69295	8.97991
605905	4130858	605905.45_4130857.61	0.66526	0.62976	8.15516
605925	4130858	605925.45_4130857.61	0.61353	0.57525	7.43172
605945	4130858	605945.45_4130857.61	0.56742	0.52748	6.78853
605965	4130858	605965.45_4130857.61	0.52611	0.48546	6.20467
605225	4130878	605225.45_4130877.61	0.88278	0.87123	5.13598
605245	4130878	605245.45_4130877.61	1.01772	1.02295	5.50775
605265	4130878	605265.45_4130877.61	1.18004	1.20922	5.91775
605445	4130878	605445.45_4130877.61	4.84921	5.49939	13.11307
605505	4130878	605505.45_4130877.61	5.97701	6.22805	19.58899
605525	4130878	605525.45_4130877.61	5.99462	6.14531	23.22009
605545	4130878	605545.45_4130877.61	5.84903	6.20062	28.40608
605565	4130878	605565.45_4130877.61	5.44663	5.83804	36.42806
605645	4130878	605645.45_4130877.61	2.38312	2.32518	62.03365
605665	4130878	605665.45_4130877.61	2.02055	1.97707	45.75849
605685	4130878	605685.45_4130877.61	1.74635	1.68663	35.62886
605705	4130878	605705.45_4130877.61	1.53482	1.47786	28.87674
605725	4130878	605725.45_4130877.61	1.36952	1.33084	24.14607
605745	4130878	605745.45_4130877.61	1.22712	1.20957	20.50626
605765	4130878	605765.45_4130877.61	1.11294	1.10968	17.76595
605785	4130878	605785.45_4130877.61	1.00963	1.01434	15.49953
605805	4130878	605805.45_4130877.61	0.91813	0.92508	13.62659
605825	4130878	605825.45_4130877.61	0.83937	0.8443	12.09018
605845	4130878	605845.45_4130877.61	0.7668	0.76758	10.75758
605865	4130878	605865.45_4130877.61	0.70342	0.69885	9.6415
605885	4130878	605885.45_4130877.61	0.64909	0.63887	8.70184
605905	4130878	605905.45_4130877.61	0.59945	0.58426	7.88896
605925	4130878	605925.45_4130877.61	0.55524	0.53576	7.17884
605945	4130878	605945.45_4130877.61	0.51567	0.49279	6.55006
605965	4130878	605965.45_4130877.61	0.47985	0.4544	5.97434
605225	4130898	605225.45_4130897.61	0.94826	0.97692	5.17964
605245	4130898	605245.45_4130897.61	1.08704	1.13946	5.54924
605265	4130898	605265.45_4130897.61	1.25068	1.33513	5.95433
605505	4130898	605505.45_4130897.61	4.58245	4.60409	19.66628
605525	4130898	605525.45_4130897.61	4.53918	4.61305	23.35998

605545	4130898	605545.45_4130897.61	4.39401	4.65697	28.63861
605565	4130898	605565.45_4130897.61	4.08025	4.31637	36.80691
605645	4130898	605645.45_4130897.61	1.94618	1.86535	61.02167
605665	4130898	605665.45_4130897.61	1.66684	1.63618	45.11334
605685	4130898	605685.45_4130897.61	1.45224	1.41129	35.1133
605705	4130898	605705.45_4130897.61	1.28706	1.23233	28.45477
605725	4130898	605725.45_4130897.61	1.1585	1.10701	23.78651
605745	4130898	605745.45_4130897.61	1.04533	1.00937	20.13541
605765	4130898	605765.45_4130897.61	0.95547	0.93556	17.38963
605785	4130898	605785.45_4130897.61	0.87455	0.86815	15.12901
605805	4130898	605805.45_4130897.61	0.80214	0.80476	13.25849
605825	4130898	605825.45_4130897.61	0.74013	0.74696	11.73902
605845	4130898	605845.45_4130897.61	0.68169	0.68943	10.41996
605865	4130898	605865.45_4130897.61	0.62986	0.63589	9.31712
605885	4130898	605885.45_4130897.61	0.58511	0.58777	8.38903
605905	4130898	605905.45_4130897.61	0.54312	0.54192	7.59824
605925	4130898	605925.45_4130897.61	0.50583	0.50061	6.90452
605945	4130898	605945.45_4130897.61	0.47186	0.46283	6.29268
605965	4130898	605965.45_4130897.61	0.44057	0.42821	5.72666
605225	4130918	605225.45_4130917.61	0.99904	1.06629	5.21561
605245	4130918	605245.45_4130917.61	1.13599	1.23179	5.58315
605505	4130918	605505.45_4130917.61	3.58236	3.54682	19.69464
605525	4130918	605525.45_4130917.61	3.52721	3.6134	23.43148
605545	4130918	605545.45_4130917.61	3.40295	3.62003	28.78789
605565	4130918	605565.45_4130917.61	3.16294	3.31622	37.11471
605645	4130918	605645.45_4130917.61	1.62276	1.52061	60.03262
605665	4130918	605665.45_4130917.61	1.40138	1.37011	44.41889
605685	4130918	605685.45_4130917.61	1.23023	1.20832	34.57714
605705	4130918	605705.45_4130917.61	1.09767	1.05846	27.9903
605725	4130918	605725.45_4130917.61	0.9931	0.94417	23.3316
605745	4130918	605745.45_4130917.61	0.90083	0.85691	19.68169
605765	4130918	605765.45_4130917.61	0.82886	0.79591	16.95679
605785	4130918	605785.45_4130917.61	0.76339	0.7436	14.69797
605805	4130918	605805.45_4130917.61	0.7055	0.69724	12.84488
605825	4130918	605825.45_4130917.61	0.65579	0.65577	11.34083
605845	4130918	605845.45_4130917.61	0.6084	0.6137	10.03959
605865	4130918	605865.45_4130917.61	0.56588	0.57351	8.95605
605885	4130918	605885.45_4130917.61	0.52931	0.53684	8.05067
605905	4130918	605905.45_4130917.61	0.49436	0.50039	7.27564
605925	4130918	605925.45_4130917.61	0.46294	0.46646	6.59946
605945	4130918	605945.45_4130917.61	0.43327	0.4339	6.00686
605225	4130938	605225.45_4130937.61	1.03244	1.1326	5.24698
605245	4130938	605245.45_4130937.61	1.16139	1.29149	5.60619
605505	4130938	605505.45_4130937.61	2.85909	2.84613	19.63937
605525	4130938	605525.45_4130937.61	2.80908	2.92338	23.42162
605545	4130938	605545.45_4130937.61	2.71068	2.89116	28.89744
605565	4130938	605565.45_4130937.61	2.52361	2.62624	37.30451

605645	4130938	605645.45_4130937.61	1.37453	1.25908	59.00069
605665	4130938	605665.45_4130937.61	1.19618	1.15409	43.67658
605685	4130938	605685.45_4130937.61	1.05619	1.04415	33.94255
605705	4130938	605705.45_4130937.61	0.94867	0.92716	27.44988
605725	4130938	605725.45_4130937.61	0.86198	0.82475	22.79296
605745	4130938	605745.45_4130937.61	0.7859	0.74372	19.16249
605765	4130938	605765.45_4130937.61	0.7262	0.6878	16.4473
605785	4130938	605785.45_4130937.61	0.67183	0.64272	14.19875
605805	4130938	605805.45_4130937.61	0.62441	0.60566	12.36989
605825	4130938	605825.45_4130937.61	0.58384	0.57425	10.88951
605845	4130938	605845.45_4130937.61	0.5449	0.54296	9.61337
605865	4130938	605865.45_4130937.61	0.50984	0.51322	8.55159
605885	4130938	605885.45_4130937.61	0.47977	0.48605	7.67815
605905	4130938	605905.45_4130937.61	0.451	0.45846	6.92059
605925	4130938	605925.45_4130937.61	0.4239	0.43109	6.28358
605945	4130938	605945.45_4130937.61	0.39778	0.40373	5.63827
605225	4130958	605225.45_4130957.61	1.04722	1.16979	5.27289
605245	4130958	605245.45_4130957.61	1.16508	1.3116	5.63058
605265	4130958	605265.45_4130957.61	1.29331	1.46212	6.02177
605505	4130958	605505.45_4130957.61	2.34094	2.35406	19.65459
605525	4130958	605525.45_4130957.61	2.29398	2.41566	23.44954
605545	4130958	605545.45_4130957.61	2.20983	2.35711	28.97612
605565	4130958	605565.45_4130957.61	2.05896	2.12898	37.41229
605645	4130958	605645.45_4130957.61	1.17937	1.05946	57.92419
605665	4130958	605665.45_4130957.61	1.03407	0.97796	42.88825
605685	4130958	605685.45_4130957.61	0.91788	0.90532	33.24704
605705	4130958	605705.45_4130957.61	0.82907	0.82054	26.81816
605725	4130958	605725.45_4130957.61	0.75693	0.73398	22.17691
605745	4130958	605745.45_4130957.61	0.69327	0.65911	18.56384
605765	4130958	605765.45_4130957.61	0.64266	0.60546	15.85546
605785	4130958	605785.45_4130957.61	0.5967	0.5637	13.63109
605805	4130958	605805.45_4130957.61	0.55649	0.53085	11.827
605825	4130958	605825.45_4130957.61	0.52238	0.50465	10.37719
605845	4130958	605845.45_4130957.61	0.48986	0.47991	9.13843
605865	4130958	605865.45_4130957.61	0.4607	0.4573	8.11039
605885	4130958	605885.45_4130957.61	0.43579	0.43722	7.27678
605905	4130958	605905.45_4130957.61	0.41144	0.41625	6.5483
605925	4130958	605925.45_4130957.61	0.38805	0.39478	5.90468
605225	4130978	605225.45_4130977.61	1.0434	1.17416	5.28977
605245	4130978	605245.45_4130977.61	1.14688	1.29195	5.64181
605265	4130978	605265.45_4130977.61	1.25627	1.41075	6.02854
605465	4130978	605465.45_4130977.61	1.993	1.92377	14.7242
605505	4130978	605505.45_4130977.61	1.95426	1.98941	19.65356
605525	4130978	605525.45_4130977.61	1.91164	2.02707	23.47419
605545	4130978	605545.45_4130977.61	1.83588	1.95438	28.99644
605565	4130978	605565.45_4130977.61	1.71245	1.76018	37.54761
605645	4130978	605645.45_4130977.61	1.02319	0.90582	56.80053

605665	4130978	605665.45_4130977.61	0.90317	0.83511	41.99938
605685	4130978	605685.45_4130977.61	0.80506	0.78524	32.40229
605705	4130978	605705.45_4130977.61	0.73161	0.72889	26.07274
605725	4130978	605725.45_4130977.61	0.67104	0.66067	21.44579
605745	4130978	605745.45_4130977.61	0.61701	0.59367	17.84579
605765	4130978	605765.45_4130977.61	0.57365	0.54221	15.15793
605785	4130978	605785.45_4130977.61	0.53393	0.50178	12.96487
605805	4130978	605805.45_4130977.61	0.49933	0.47094	11.20673
605825	4130978	605825.45_4130977.61	0.47015	0.44735	9.80578
605845	4130978	605845.45_4130977.61	0.44219	0.42595	8.61337
605865	4130978	605865.45_4130977.61	0.41839	0.40829	7.65248
605885	4130978	605885.45_4130977.61	0.39655	0.39196	6.84637
605905	4130978	605905.45_4130977.61	0.37568	0.37571	6.16764
605225	4130998	605225.45_4130997.61	1.0223	1.14761	5.29249
605245	4130998	605245.45_4130997.61	1.11078	1.23966	5.64223
605265	4130998	605265.45_4130997.61	1.20126	1.32943	6.02467
605465	4130998	605465.45_4130997.61	1.68897	1.62037	14.64047
605485	4130998	605485.45_4130997.61	1.67428	1.65101	16.76422
605505	4130998	605505.45_4130997.61	1.65244	1.70785	19.55304
605525	4130998	605525.45_4130997.61	1.61306	1.72154	23.33945
605545	4130998	605545.45_4130997.61	1.54712	1.64267	28.86954
605565	4130998	605565.45_4130997.61	1.44666	1.47881	37.62641
605645	4130998	605645.45_4130997.61	0.89586	0.78566	55.55147
605665	4130998	605665.45_4130997.61	0.79577	0.72007	40.96259
605685	4130998	605685.45_4130997.61	0.71315	0.68316	31.4679
605705	4130998	605705.45_4130997.61	0.65071	0.64735	25.1518
605725	4130998	605725.45_4130997.61	0.59917	0.59744	20.53698
605745	4130998	605745.45_4130997.61	0.55299	0.5406	16.97044
605765	4130998	605765.45_4130997.61	0.51578	0.49254	14.33228
605785	4130998	605785.45_4130997.61	0.48123	0.45317	12.19941
605805	4130998	605805.45_4130997.61	0.45121	0.42337	10.51312
605825	4130998	605825.45_4130997.61	0.42551	0.40078	9.17381
605845	4130998	605845.45_4130997.61	0.40154	0.38151	8.05653
605865	4130998	605865.45_4130997.61	0.38095	0.36591	7.15529
605885	4130998	605885.45_4130997.61	0.36169	0.35174	6.39491
605225	4131018	605225.45_4131017.61	0.98893	1.09685	5.29293
605245	4131018	605245.45_4131017.61	1.06211	1.16695	5.63635
605645	4131018	605645.45_4131017.61	0.79096	0.69037	54.16097
605665	4131018	605665.45_4131017.61	0.70677	0.62792	39.73726
605685	4131018	605685.45_4131017.61	0.63654	0.59679	30.31197
605705	4131018	605705.45_4131017.61	0.58282	0.57441	23.99763
605725	4131018	605725.45_4131017.61	0.53857	0.54071	19.41854
605745	4131018	605745.45_4131017.61	0.49901	0.49559	15.92957
605765	4131018	605765.45_4131017.61	0.46688	0.45251	13.3747
605785	4131018	605785.45_4131017.61	0.43666	0.4146	11.33678
605805	4131018	605805.45_4131017.61	0.41029	0.38533	9.74926
605825	4131018	605825.45_4131017.61	0.38728	0.36301	8.49293

605845	4131018	605845.45_4131017.61	0.36661	0.3451	7.47227
605865	4131018	605865.45_4131017.61	0.3479	0.33011	6.63246
605225	4131038	605225.45_4131037.61	0.94612	1.03243	5.28665
605245	4131038	605245.45_4131037.61	1.00518	1.08647	5.62354
605645	4131038	605645.45_4131037.61	0.70341	0.61328	52.50228
605665	4131038	605665.45_4131037.61	0.63201	0.55374	38.18677
605685	4131038	605685.45_4131037.61	0.57148	0.5241	28.774
605705	4131038	605705.45_4131037.61	0.52534	0.50967	22.5294
605725	4131038	605725.45_4131037.61	0.48686	0.48857	18.03402
605745	4131038	605745.45_4131037.61	0.45269	0.4552	14.68772
605765	4131038	605765.45_4131037.61	0.42491	0.41872	12.27846
605785	4131038	605785.45_4131037.61	0.39844	0.3833	10.38636
605805	4131038	605805.45_4131037.61	0.37501	0.35446	8.92758
605825	4131038	605825.45_4131037.61	0.35494	0.33268	7.79827
605845	4131038	605845.45_4131037.61	0.33624	0.31502	6.87233
606025	4131038	606025.45_4131037.61	0.22893	0.23299	3.0672
605225	4131058	605225.45_4131057.61	0.89689	0.96388	5.27185
605245	4131058	605245.45_4131057.61	0.94362	1.00705	5.60248
605645	4131058	605645.45_4131057.61	0.62983	0.55003	50.4264
605665	4131058	605665.45_4131057.61	0.56882	0.49372	36.1253
605685	4131058	605685.45_4131057.61	0.51687	0.46434	26.79713
605705	4131058	605705.45_4131057.61	0.47625	0.45294	20.64774
605725	4131058	605725.45_4131057.61	0.44221	0.44039	16.34296
605745	4131058	605745.45_4131057.61	0.413	0.41801	13.26986
605765	4131058	605765.45_4131057.61	0.38845	0.38874	11.06799
605785	4131058	605785.45_4131057.61	0.36535	0.35711	9.3815
605805	4131058	605805.45_4131057.61	0.345	0.32965	8.10171
605825	4131058	605825.45_4131057.61	0.32671	0.30767	7.09812
605845	4131058	605845.45_4131057.61	0.30924	0.28964	6.26943
606005	4131058	606005.45_4131057.61	0.22222	0.22154	3.06182
606025	4131058	606025.45_4131057.61	0.21455	0.21603	2.89476
605645	4131078	605645.45_4131077.61	0.56744	0.49728	47.53602
605665	4131078	605665.45_4131077.61	0.51476	0.4445	33.1643
605685	4131078	605685.45_4131077.61	0.46982	0.41475	24.07891
605705	4131078	605705.45_4131077.61	0.43388	0.40381	18.28559
605725	4131078	605725.45_4131077.61	0.40371	0.39655	14.39396
605745	4131078	605745.45_4131077.61	0.37856	0.38309	11.72426
605765	4131078	605765.45_4131077.61	0.35658	0.36107	9.81105
605785	4131078	605785.45_4131077.61	0.33643	0.3343	8.37648
605805	4131078	605805.45_4131077.61	0.31842	0.30868	7.28621
605825	4131078	605825.45_4131077.61	0.30159	0.28662	6.41736
605985	4131078	605985.45_4131077.61	0.21553	0.2095	3.1163
606005	4131078	606005.45_4131077.61	0.20814	0.20452	2.90794
606025	4131078	606025.45_4131077.61	0.2016	0.20022	2.78405
605645	4131098	605645.45_4131097.61	0.51395	0.4525	42.92519
605665	4131098	605665.45_4131097.61	0.4679	0.40339	28.75178
605685	4131098	605685.45_4131097.61	0.42838	0.37308	20.46312

605705	4131098	605705.45_4131097.61	0.39657	0.36132	15.51188
605725	4131098	605725.45_4131097.61	0.36989	0.35687	12.30926
605745	4131098	605745.45_4131097.61	0.34762	0.34958	10.14126
605765	4131098	605765.45_4131097.61	0.32849	0.3348	8.59857
605785	4131098	605785.45_4131097.61	0.31087	0.31349	7.43135
605805	4131098	605805.45_4131097.61	0.29467	0.29037	6.52514
605985	4131098	605985.45_4131097.61	0.20179	0.19381	2.96026
606005	4131098	606005.45_4131097.61	0.19546	0.18945	2.80457
606025	4131098	606025.45_4131097.61	0.18948	0.18553	2.6428
605645	4131118	605645.45_4131117.61	0.46744	0.41378	34.9484
605665	4131118	605665.45_4131117.61	0.42762	0.36907	22.8123
605685	4131118	605685.45_4131117.61	0.39312	0.3391	16.45244
605705	4131118	605705.45_4131117.61	0.36459	0.32575	12.75896
605725	4131118	605725.45_4131117.61	0.34092	0.3222	10.38014
605745	4131118	605745.45_4131117.61	0.32101	0.31893	8.73127
605765	4131118	605765.45_4131117.61	0.30383	0.30981	7.52579
605785	4131118	605785.45_4131117.61	0.28804	0.29371	6.59303
605965	4131118	605965.45_4131117.61	0.19579	0.18524	3.00823
605985	4131118	605985.45_4131117.61	0.18952	0.18038	2.82464
606005	4131118	606005.45_4131117.61	0.18386	0.17624	2.66186
606025	4131118	606025.45_4131117.61	0.17813	0.17223	2.51017
605545	4131138	605545.45_4131137.61	0.62842	0.64725	24.55008
605565	4131138	605565.45_4131137.61	0.59353	0.58868	32.12342
605645	4131138	605645.45_4131137.61	0.42781	0.3808	24.05283
605665	4131138	605665.45_4131137.61	0.39229	0.33969	16.74775
605685	4131138	605685.45_4131137.61	0.36107	0.30974	12.81343
605705	4131138	605705.45_4131137.61	0.33615	0.2954	10.42539
605725	4131138	605725.45_4131137.61	0.31489	0.29139	8.76169
605745	4131138	605745.45_4131137.61	0.29704	0.29038	7.54785
605765	4131138	605765.45_4131137.61	0.28204	0.28604	6.63164
605945	4131138	605945.45_4131137.61	0.19052	0.17881	3.02855
605965	4131138	605965.45_4131137.61	0.18406	0.17337	2.84194
605985	4131138	605985.45_4131137.61	0.17853	0.16886	2.67904
606005	4131138	606005.45_4131137.61	0.17305	0.16455	2.52753
606025	4131138	606025.45_4131137.61	0.16783	0.16066	2.3892

Appendix B

Biological Resources Technical Information

TABLE BIO-1
SPECIAL-STATUS PLANTS AND ANIMALS WITH POTENTIAL TO OCCUR IN THE EVERGREEN WATER PRODUCTION WELL STUDY AREA

Scientific and Common Names	Status Federal/State/ Other	Geographic Distribution	Habitat Requirements	Potential Occurrence in Project Area
Plants				
Balsamorhiza macrolepis big-scale balsamroot	--/--/1B.2	Western foothills of the Sierra Nevada and the eastern Coast Ranges near San Francisco Bay.	Species is found in chaparral, valley and foothill grassland, and cismontane woodland; 35 to 1465 meters above MSL. Blooms March-June	**None**; study area does not provide suitable habitat.
Centromadia parryi ssp. *Congdonii* Congdon's tarplant	--/--/1B.1	East San Francisco Bay Area, Salinas Valley, Los Osos Valley.	Alkaline soils in annual grassland, on lower slopes, flats, and swales, sometimes on saline soils; below 230 meters above MSL. Blooms May – October	**Low**; ruderal areas within the study area provide marginally suitable habitat. However, the only extant records in Santa Clara County are located over 10 miles to the north of the study area and are clustered near San Francisco Bay. This species was not observed during the ESA April 2026 site visit.
Chorizanthe robusta var. robusta Robust spineflower	E/--/1B.1	Coastal central California, from San Mateo to Monterey County.	Coastal bluff scrub, coastal dunes openings in cismontane woodland, on sandy soil. Blooms April - September	**None**; no suitable habitat within study area.
Cirsium fontinale var. *campylon* Mt. Hamilton thistle	--/--/1B.2	Endemic to the Diablo Range in California, primarily restricted to Santa Clara, Alameda, and Stanislaus Counties.	Species is found in cismontane woodland, chaparral, and valley and foothill grassland. In seasonal and perennial drainages on serpentine; 75-890 meters above MSL Blooms March – October	**None**; no suitable habitat within study area.
Collinsia multicolor San Francisco collinsia	--/--/1B.2	Restricted to the San Francisco Bay Area and central coast.	Closed-cone coniferous forest, coastal scrub. On decomposed shale (mudstone) mixed with humus; sometimes on serpentine. 10-275 meters above MSL. Blooms March – May	**None**; no suitable habitat within study area.
Dudleya setchellii Santa Clara Valley Dudleya	E/--/1B.1	Endemic specifically to the Coyote Valley area in Santa Clara County, California.	Valley and foothill grassland, cismontane woodland. On rocky serpentine outcrops and on rocks within grassland or woodland. 60-455 m. Blooms May – June	**None**; no suitable habitat within study area.

Scientific and Common Names	Status Federal/State/ Other	Geographic Distribution	Habitat Requirements	Potential Occurrence in Project Area
Fritillaria liliacea Fragrant fritillary	--/--/1B.2	Endemic to California, specifically found in the San Francisco Bay Area and surrounding coastal regions.	Broad-leafed upland forest (mesic), chaparral, lower montane coniferous forest, cismontane woodland. Rocky sites. Sometimes on serpentine; sometimes along roadsides. 95-1140 m. Blooms February – April	**None**; no suitable habitat within study area.
Lasthenia conjugens Contra Costa goldfields	E/--/1B.1	Scattered occurrences in Coast Range valleys and southwest edge of Sacramento Valley, Alameda, Contra Costa, Monterey, Marin, Napa, Solano and Sonoma Counties. Presumed extirpated in Mendocino, Santa Barbara and Santa Clara Counties.	Wet areas in cismontane woodland, valley and foothill grassland, vernal pools, alkaline playas or saline vernal pools and swales; seasonal wetlands below 470 meters above MSL. Blooms March – June	**None**; no suitable habitat within study area.
Lessingia micradenia var. *glabrata* Smooth lessingia	--/--/1B.2	Endemic to California, specifically found in Santa Clara and Alameda counties.	Chaparral, cismontane woodland, valley and foothill grassland. Serpentine; often on roadsides. 90-490 meters above MSL. Blooms (April-June) July – November	**None**; no suitable habitat within study area.
Malacothamnus hallii Hall's bushmallow	--/--/1B.2	Endemic to California, restricted to the southern Coast Ranges, specifically in the northern Diablo Range and areas near the Santa Cruz Mountains.	Chaparral, coastal scrub. Some populations on serpentine. 10-735 meters above MSL. Blooms (April) May – September (October)	**None**; no suitable habitat within study area.
Plagiobothrys glaber Hairless popcornflower	--/--/1A	Endemic to California. It historically occurred in wet, alkaline soils, meadows, seeps, and coastal salt marshes at low elevations.	Meadows and seeps, marshes and swamps. Coastal salt marshes and alkaline meadows. 5-125 meters above MSL. Blooms March – May	**None**; no suitable habitat within study area.
Senecio aphanactis Chaparral ragwort	--/--/2B.2	Coastal California (from the Bay Area south) and Baja California, Mexico.	Chaparral, cismontane woodland, coastal scrub. Drying alkaline flats. 20-1020 meters above MSL. Blooms January-April (May)	**None**; no suitable habitat within study area.
Streptanthus albidus ssp. *albidus* Metcalf Canyon Jewelflower	E/--/1B.1	Endemic to a very limited area in Santa Clara County, California.	Valley and foothill grassland. Relatively open areas in dry grassy meadows on serpentine soils; also on serpentine balds. 50-275 meters above MSL. Blooms April-July	**None**; no suitable habitat within study area.

Scientific and Common Names	Status Federal/State/ Other	Geographic Distribution	Habitat Requirements	Potential Occurrence in Project Area
Invertebrates				
Bombus crotchii Crotch's bumble bee	--/CE/--	Coastal California east to the Sierra-Cascade crest and south into Mexico.	Food plant genera include Antirrhinum, Phacelia, Clarkia, Dendromecon, Eschscholzia, and Eriogonum.	**Moderate**; floral resources present within study area. Nearest recorded CNDDB occurrence in San Jose area from 2021 (Occurrence No. 601) is approximately 2.2 miles southeast if the study area.
Bombus occidentalis Western bumble bee	--/CE/--	Species has declined precipitously from central California to southern British Columbia.	Food plant genera include Melilotus, Cirsium, Trifolium, Centaurea, Chrysothamnus, Eriogonum.	**Low**; this species has suffered a severe range contraction and is not expected to occur within the vicinity of the study area. There are no recent records in the vicinity.
Danaus Plexippus Monarch butterfly		Winter roost sites extend along the coast from northern Mendocino to Baja California, Mexico. Breeds throughout state.	Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, cypress), with nectar and water sources nearby. Requires host plant milkweed (Asclepias spp.) for breeding.	**Low**; no overwintering or breeding habitat (milkweed) present in study area.
Euphydryas editha bayensis Bay checkerspot butterfly	T/--/--	Disjunct occurrences in San Mateo and Santa Clara Counties.	Associated with specific host plants that typically grow on serpentine soils.	**None**; no serpentine soils within study area.
Fish				
Oncorhynchus mykiss irideus pop. 8 Steelhead – Central California Coast DPS	T/--/--	DPS includes all naturally spawned populations of steelhead (and their progeny) in streams from the Russian River to Aptos Creek, Santa Cruz County, California (inclusive). Also includes the drainages of San Francisco and San Pablo Bays.	Requires cold, freshwater streams with suitable gravel for spawning. Rears in rivers and tributaries to the San Francisco Bay.	**None**; known to occur in multiple South Bay streams including the Guadalupe River and Coyote Creek watersheds. No streams or otherwise suitable aquatic resources are present within the study area. The well sites is outside of areas of known or suspected surface water/groundwater interaction.
Amphibians				
Ambystoma californiense California tiger salamander	T/T/--	Central Valley, including Sierra Nevada foothills, up to approximately 1,000 feet, and coastal region from Sonoma County south to Santa Barbara County.	Small ponds, lakes, or vernal pools in grasslands and oak woodlands for larvae; rodent burrows, rock crevices, or fallen logs for cover for adults and for summer dormancy.	**None**; no suitable breeding or upland habitat within study area. Development around the study area limits possibility of dispersal into sites. All occurrences of this species within the vicinity of the study area are labeled as extirpated.

Scientific and Common Names	Status Federal/State/ Other	Geographic Distribution	Habitat Requirements	Potential Occurrence in Project Area
Rana boylii Foothill yellow-legged frog Central Coast DPS	F/E/--	San Francisco Peninsula and Diablo Range south of San Francisco Bay Estuary, and south through the Santa Cruz and Gabilan Mountains east of the Salinas River in the southern inner Coast Ranges.	Partly-shaded, shallow streams and riffles with a rocky substrate in a variety of habitats.	**None**; no suitable breeding or upland habitat within study area. Development around the study area restricts possibility of dispersal into site.
Rana draytonii California red-legged frog	T/SSC/--	Found along the coast and coastal mountain ranges of California from Mendocino County to San Diego County and in the Sierra Nevada from Butte County to Stanislaus County.	Permanent and semi-permanent aquatic habitats, such as creeks and cold-water ponds, with emergent and submergent vegetation; may aestivate in rodent burrows or cracks during dry periods.	**None**; no suitable breeding or upland habitat within study area. Development surrounding study area restricts possibility of dispersal into sites. Nearest documented occurrence of this species is within 2 miles to the southeast of the study area but is noted as possibly extirpated.
Reptiles				
Actinemys marmorata Northwestern pond turtle	PT/SSC/--	The western pond turtle is uncommon to common in suitable aquatic habitat throughout California, west of the Sierra-Cascade crest and absent from desert regions, except in the Mojave Desert along the Mojave River and its tributaries.	Occupies ponds, marshes, rivers, streams, and irrigation canals with muddy or rocky bottoms and with watercress, cattails, water lilies, or other aquatic vegetation in woodlands, grasslands, and open forests. Nests are typically constructed in upland habitat within 0.25 miles of aquatic habitat.	**Low**; a stormwater detention basin is present in the study area but does not support permanent aquatic habitat. The study area is separated from more permanent and potentially suitable water sources such as Thomson Creek and Lake Cunningham by development, including multiple roadways.
Mammals				
Antrozous pallidus Pallid bat	--/SSC/--	Ranges throughout western North America, from British Columbia 's southern interior, south to Queretaro and Jalisco, and east to Texas	Deserts, grasslands, shrublands, woodlands and forests. Most common in open, dry habitats with rocky areas for roosting. Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.	**Low**; may forage within study area. Unlikely to roost within trees in the study area or nearby buildings due to the relatively high levels of disturbance.
Corynorhinus townsendii Townsend’s big-eared bat	--/SSC/--	Throughout the west and is distributed from the southern portion of British Columbia south along the Pacific coast to central Mexico and east into the Great Plains, with isolated populations occurring in the central and eastern United States.	Wide variety of habitat types ranging from sea level to 3,300 meters. Habitat associations include coniferous forests, mixed meso-phytic forests, deserts, native prairies, riparian communities, active agricultural areas, and coastal habitat types. Distribution is strongly correlated with the availability of caves and cave-like roosting habitat.	**Low**; may forage within study area. Preferred roosting habitat (caves) is not present within the study area.

Scientific and Common Names	Status Federal/State/ Other	Geographic Distribution	Habitat Requirements	Potential Occurrence in Project Area
Lasiurus cinereus Hoary bat	--/--/WBWG-M	Ranges from Canada through most of the United States, Mexico, and South America.	Prefers open habitats or habitat mosaics, with access to trees for cover and open areas or habitat edges for feeding. Roosts in dense foliage of medium to large trees. Feeds primarily on moths. Requires water.	**Low**; may forage within study area. Trees within the study area were assessed and determined to not provide suitable roosting habitat. Nearest CNDDB occurrence record is approximately 3.5 miles to the west of the study area (Occurrence No. 98).
Lasiurus frantzii Western red bat	-- /SSC/WBWG-H	Found across western North America, ranging from British Columbia, Canada, through the western United States to Central America	Roosts primarily in trees, 2-40 ft above ground, from sea level up through mixed conifer forests. Prefers thick stands of trees, habitat edges and mosaics with trees that are protected from above and open below with open areas for foraging.	**Low**; May forage in study area. Trees within the study area were assessed and determined to not provide suitable roosting habitat. Multiple research grade iNaturalist records are located within San Jose, CA.
Myotis evotis Long-eared myotis	--/--/--	Found throughout western North America, ranging from Southeast Alaska and southwestern Canada south to Baja California, and eastward to the Dakotas, Nebraska, and New Mexico.	Found in all brush, woodland and forest habitats from sea level to about 9000 ft. Prefers coniferous woodlands and forests. Nursery colonies in buildings, crevices, spaces under bark, cracks in trees, and snags. Caves used primarily as night roosts.	**Low**; May forage in study area. Trees within the study area were assessed and determined to not provide suitable roosting habitat. Nearest CNDDB occurrence record is approximately 2.5 miles to the east of the study area (Occurrence No. 108).
Neotoma fuscipes annectens San Francisco dusky-footed woodrat	--/SSC/--	San Francisco Bay Area south to Monterey County.	Forests with moderate canopy cover and brushy understory.	**Low**; study area generally lacks suitable habitat. No woodrat nests observed during ESA April 2026 site visit.
Taxidea taxus American badger	--/SSC/--	Widely distributed across North America, with a range extending from south-central Canada down to central Mexico.	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils.	**Low**; no mammal burrows observed during ESA April 2026 site visit. Nearest occurrence 1.3 miles south of the study area (Occurrence No. 623) near Evergreen Valley Community College.
Vulpes macrotis mutica San Joaquin Kit Fox	E/T/--	West side of the San Joaquin Valley and in the Carrizo Plain National Monument as well as the Los Padres National Forest in the upper Cuyama Valley and on the eastern slopes of the La Panza Range in San Luis Obispo County. Largest remaining populations are in western Kern County, Kern County, and in the Carrizo Plain.	San Joaquin scrub and grasslands.	**None**; no suitable habitat within study area. Study area is outside of known kit fox range.

Scientific and Common Names	Status Federal/State/ Other	Geographic Distribution	Habitat Requirements	Potential Occurrence in Project Area
Birds				
Agelaius tricolor Tricolored blackbird	--/SSC/--	Permanent resident in the Central Valley from Butte County to Kern County. Breeds at scattered coastal locations from Marin County south to San Diego County; and at scattered locations in Lake, Sonoma, and Solano Counties. Rare nester in Siskiyou, Modoc, and Lassen Counties.	Nests in dense colonies in emergent marsh vegetation, such as tules and cattails, or upland sites with blackberries, nettles, thistles, and grainfields. Habitat must be large enough to support 50 pairs. Probably requires water at or near the nesting colony.	**Low**; may occur incidentally but study area generally lacks suitable nesting or foraging habitat.
Athene cunicularia hypugaea Western burrowing owl	--/CE/--	Lowlands throughout California, including the Central Valley, northeastern plateau, southeastern deserts, and coastal areas; rare along south coast.	Level, open, dry, heavily grazed or low stature grassland or desert vegetation with available burrows.	**Low**; study area is within Santa Clara Valley Habitat Plan burrowing owl survey area. However, there is no suitable breeding habitat in study area. No evidence of burrowing owls or mammal burrows was observed during ESA's April 2026 site visit. The nearest recorded occurrence of this species is a breeding site within 0.25 miles of the study area (Occurrence No. 429). However, the occurrence area has since been developed into residential housing.
Coturnicops noveboracensis Yellow rail	--/SSC/--	San Francisco Bay Area within winter range of yellow rail.	Freshwater marshlands.	**None**; no suitable habitat within study area.
Gymnogyps californianus California condor	E/E, CFP	Coastal mountains in Monterey, San Luis Obispo, Santa Barbara, Kern, and Ventura counties, with expanding populations observed in the Diablo and Gabilan ranges.	Require vast expanses of open savannah, grasslands, and foothill chaparral in mountain ranges of moderate altitude.	**None**; no suitable habitat within study area.
Sternula antillarum browni California least tern	E/E/CFP	Found along the Pacific Coast of California from San Francisco to Baja California.	Nests on open beaches kept free of vegetation by natural scouring from tidal action.	**None**; no suitable habitat within study area.

Scientific and Common Names	Status Federal/State/ Other	Geographic Distribution	Habitat Requirements	Potential Occurrence in Project Area

Notes:

Potential Occurrence in the study area:

High = Species is expected to occur and habitat meets species requirements.
Moderate = Habitat is only marginally suitable or is suitable but not within species geographic range.
Low = Habitat does not meet species requirements as currently understood in the scientific community.

California Rare Plant Rank (CRPR):

Rank 1A = Plants presumed extirpated in California and either rare or extinct elsewhere.
Rank 1B = Plants rare, threatened, or endangered in California and elsewhere.
Rank 2A = Plants presumed extirpated in California, but more common elsewhere.
Rank 2B = Plants rare, threatened, or endangered in California, but more common elsewhere.
Rank 3 = Plants about which we need more information – a review list
Rank 4 = Plants of limited distribution – a watch list

An extension reflecting the level of threat to each species is appended to each rarity category as follows:

.1 – Seriously endangered in California.
.2 – Fairly endangered in California.
.3 – Not very endangered in California.

Status Codes:

Federal

E = listed as endangered under the ESA
T = listed as threatened under the ESA
C = candidate for listing under the ESA
– = no listing

State

E = listed as endangered under CESA
T = listed as threatened under CESA
C = candidate for listing under CESA
SSC = California Department of Fish and Wildlife designated “species of special concern”
CFP = California Department of Fish and Wildlife designated “fully protected”
WL = California Department of Fish and Wildlife “watch list”
– = no listing

Western Bat Working Group

WBWG-H = Western Bat Working Group as a “high” conservation priority
WBWG-M = Western Bat Working Group as a “medium” conservation priority

Source: USFWS, 2026, CNPS, 2026, and CDFW, 2026

Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (San Jose East (3712137))

Evergreen Water Production Well

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Actinemys marmorata northwestern pond turtle	ARAAD02031	Proposed Threatened	None	G2	SNR	SSC
Adela oplerella Opler's longhorn moth	IILEE0G040	None	None	G2	S2	
Agelaius tricolor tricolored blackbird	ABPBXB0020	None	Threatened	G3	S2	SSC
Ambystoma californiense pop. 1 California tiger salamander - central California DPS	AAAAA01181	Threatened	Threatened	G3T3	S3	WL
Anniella pulchra Northern California legless lizard	ARACC01020	None	None	G3	S2S3	SSC
Antrozous pallidus pallid bat	AMACC10010	None	None	G4	S3	SSC
Athene cunicularia burrowing owl	ABNSB10010	None	Candidate Endangered	G4	S2	SSC
Balsamorhiza macrolepis big-scale balsamroot	PDAST11061	None	None	G2	S2	1B.2
Bombus caliginosus obscure bumble bee	IIHYM24380	None	None	G2G3	S1S2	
Bombus crotchii Crotch's bumble bee	IIHYM24480	None	Candidate Endangered	G2	S2	
Bombus occidentalis western bumble bee	IIHYM24252	None	Candidate Endangered	G3	S1	
Centromadia parryi ssp. congdonii Congdon's tarplant	PDAST4R0P1	None	None	G3T2	S2	1B.1
Chorizanthe robusta var. robusta robust spineflower	PDPGN040Q2	Endangered	None	G2T1	S1	1B.1
Cirsium fontinale var. campylon Mt. Hamilton thistle	PDAST2E163	None	None	G2T2	S2	1B.2
Clarkia concinna ssp. automixa Santa Clara red ribbons	PDONA050A1	None	None	G5?T3	S3	4.3
Collinsia multicolor San Francisco collinsia	PDSCR0H0B0	None	None	G2	S2	1B.2
Corynorhinus townsendii Townsend's big-eared bat	AMACC08010	None	None	G4	S2	SSC
Coturnicops noveboracensis yellow rail	ABNME01010	None	None	G4	S2	SSC
Dipodomys heermanni goldmani Salinas kangaroo rat	AMAFD03065	None	None	G4T2T3	S2S3	
Dudleya abramsii ssp. setchellii Santa Clara Valley dudleya	PDCRA040Z0	Endangered	None	G4T2	S2	1B.1

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Euphydryas editha bayensis Bay checkerspot butterfly	IILEPK4055	Threatened	None	G4G5T1	S3	
Fritillaria liliacea fragrant fritillary	PMLIL0V0C0	None	None	G2	S2	1B.2
Gonidea angulata western ridged mussel	IMBIV19010	None	None	G3	S2	
Lasiurus cinereus hoary bat	AMACC05032	None	None	G3G4	S4	
Lasthenia conjugens Contra Costa goldfields	PDAST5L040	Endangered	None	G1	S1	1B.1
Lessingia micradenia var. glabrata smooth lessingia	PDAST5S062	None	None	G2T2	S2	1B.2
Malacothamnus hallii Hall's bushmallow	PDMAL0Q0F0	None	None	G2	S2	1B.2
Microcina homi Hom's micro-blind harvestman	ILARA47020	None	None	G1	S2	
Myotis evotis long-eared myotis	AMACC01070	None	None	G5	S3	
Neotoma fuscipes annectens San Francisco dusky-footed woodrat	AMAFF08082	None	None	G5T2T3	S2S3	
Oncorhynchus mykiss irideus pop. 8 steelhead - central California coast DPS	AFCHA0209G	Threatened	None	G5T3Q	S3	SSC
Plagiobothrys glaber hairless popcornflower	PDBOR0V0B0	None	None	GX	SX	1A
Rana boylii pop. 4 foothill yellow-legged frog - central coast DPS	AAABH01054	Threatened	Endangered	G3T2	S2	
Rana draytonii California red-legged frog	AAABH01022	Threatened	None	G2G3	S2S3	SSC
Senecio aphanactis chaparral ragwort	PDAST8H060	None	None	G3	S2	1B.2
Streptanthus albidus ssp. albidus Metcalf Canyon jewelflower	PDBRA2G011	Endangered	None	G2T1	S1	1B.1
Taxidea taxus American badger	AMAJF04010	None	None	G5	S3	SSC

Record Count: 37

CALIFORNIA NATIVE PLANT SOCIETY

CNPS Rare Plant Inventory

Search Results

19 matches found. Click on scientific name for details

Search Criteria: , Quad is one of [**3712137**]

▲ SCIENTIFIC NAME	COMMON NAME	FAMILY	LIFEFORM	BLOOMING PERIOD	FED LIST	STATE LIST	GLOBAL RANK	STATE RANK	CA RARE PLANT RANK	CA ENDEMIC	DATE ADDED	PHOTO
Androsace elongata ssp. *acuta*	California androsace	Primulaceae	annual herb	Mar-Jun	None	None	G5? T3T4	S3S4	4.2		1994-01-01	 © 2008 Aaron Schusteff
Balsamorhiza macrolepis	big-scale balsamroot	Asteraceae	perennial herb	Mar-Jun	None	None	G2	S2	1B.2	Yes	1974-01-01	 ©1998 Dean Wm. Taylor
Centromadia parryi ssp. *congdonii*	Congdon's tarplant	Asteraceae	annual herb	(Apr)May-Oct(Nov)	None	None	G3T2	S2	1B.1	Yes	1994-01-01	No Photo Available
Chorizanthe robusta var. *robusta*	robust spineflower	Polygonaceae	annual herb	Apr-Sep	FE	None	G2T1	S1	1B.1	Yes	1980-01-01	No Photo Available
Cirsium fontinale var. *campylon*	Mt. Hamilton thistle	Asteraceae	perennial herb	(Feb)Apr-Oct	None	None	G2T2	S2	1B.2	Yes	1974-01-01	No Photo Available
Clarkia concinna ssp. *automixa*	Santa Clara red ribbons	Onagraceae	annual herb	(Apr)May-Jun(Jul)	None	None	G5?T3	S3	4.3	Yes	1994-01-01	No Photo Available

Collinsia multicolor	San Francisco collinsia	Plantaginaceae	annual herb	(Feb)Mar-May	None	None	G2	S2	1B.2	Yes	1974-01-01	No Photo Available
Convolvulus simulans	small-flowered morning-glory	Convolvulaceae	annual herb	Mar-Jul	None	None	G4	S4	4.2		1994-01-01	No Photo Available
Dudleya abramsii ssp. *setchellii*	Santa Clara Valley dudleya	Crassulaceae	perennial herb	Apr-Oct	FE	None	G4T2	S2	1B.1	Yes	1988-01-01	No Photo Available
Eriogonum argillosum	clay buckwheat	Polygonaceae	annual herb	Mar-Jun	None	None	G3G4	S3S4	4.3	Yes	1974-01-01	 © 2010 Steve Matson
Fritillaria liliacea	fragrant fritillary	Liliaceae	perennial bulbiferous herb	Feb-Apr	None	None	G2	S2	1B.2	Yes	1974-01-01	 © 2004 Carol W. Witham
Iris longipetala	coast iris	Iridaceae	perennial rhizomatous herb	Mar-May(Jun)	None	None	G3	S3	4.2	Yes	2006-10-12	 © 2014 Aaron Schusteff
Lasthenia conjugens	Contra Costa goldfields	Asteraceae	annual herb	Mar-Jun	FE	None	G1	S1	1B.1	Yes	1974-01-01	 © 2013 Neal Kramer
Leptosiphon ambiguus	serpentine leptosiphon	Polemoniaceae	annual herb	Mar-Jun	None	None	G4	S4	4.2	Yes	1994-01-01	 © 2010 Aaron Schusteff
Lessingia micradenia var. *glabrata*	smooth lessingia	Asteraceae	annual herb	(Apr-Jun)Jul-Nov	None	None	G2T2	S2	1B.2	Yes	1994-01-01	 © 2015 Aaron Schusteff

Malacothamnus hallii	Hall's bushmallow	Malvaceae	perennial deciduous shrub	(Apr)May-Sep(Oct)	None	None	G2	S2	1B.2	Yes	1974-01-01	 © 2017 Keir Morse
Plagiobothrys glaber	hairless popcornflower	Boraginaceae	annual herb	Mar-May	None	None	GX	SX	1A	Yes	1974-01-01	No Photo Available
Senecio aphanactis	chaparral ragwort	Asteraceae	annual herb	Jan-Apr(May)	None	None	G3	S2	1B.2		1994-01-01	 Neal Kramer
Streptanthus albidus ssp. *albidus*	Metcalf Canyon jewelflower	Brassicaceae	annual herb	Apr-Jul	FE	None	G2T1	S1	1B.1	Yes	1974-01-01	 © 2015 Aaron Schusteff

Showing 1 to 19 of 19 entries

Go to top

Suggested Citation:

California Native Plant Society, Rare Plant Program. 2026. Rare Plant Inventory (online edition, v9.5.1). Website https://www.rareplants.cnps.org [accessed 6 April 2026].

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United States Department of the Interior

FISH AND WILDLIFE SERVICE
Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
Phone: (916) 414-6600 Fax: (916) 414-6713

In Reply Refer To: 04/21/2026 03:41:58 UTC
Project Code: 2026-0079099
Project Name: Evergreen Water Production Well Project

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)

(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts, see https://www.fws.gov/program/migratory-bird-permit/what-we-do.

It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see https://www.fws.gov/library/collections/threats-birds.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/partner/council-conservation-migratory-birds.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
(916) 414-6600

PROJECT SUMMARY

Project Code: 2026-0079099
Project Name: Evergreen Water Production Well Project
Project Type: Water Supply Facility - Withdrawal - Groundwater
Project Description: The City of San Jose proposes to construct a new municipal groundwater production well, along with associated connections to the existing potable water distribution system, to secure an additional source of potable water supplies for its Evergreen Service Area. The Project includes drilling of boreholes up to 800 feet in depth and the installation of steel casings, gravel packs, contamination sealants/screenings, submersible pumps, motors, and power supplies. Pipes and appurtenances would also be installed to connect the groundwater well to the existing distribution system.

Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@37.31727455,-121.80839101512757,14z



Counties: Santa Clara County, California

ENDANGERED SPECIES ACT SPECIES

There is a total of 12 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

MAMMALS

NAME	STATUS
San Joaquin Kit Fox *Vulpes macrotis mutica*	Endangered

No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/2873
General project design guidelines:
https://ipac.ecosphere.fws.gov/project/GAFGKRJAE5AJ7D6NBVCTRSDKPQ/documents/generated/11271.pdf

BIRDS

NAME	STATUS
California Condor *Gymnogyps californianus*	Endangered

Population: Wherever found, except where listed as an experimental population
There is **final** critical habitat for this species. Your location does not overlap the critical habitat.
Species profile: https://ecos.fws.gov/ecp/species/8193
General project design guidelines:
https://ipac.ecosphere.fws.gov/project/GAFGKRJAE5AJ7D6NBVCTRSDKPQ/documents/generated/11271.pdf

California Least Tern *Sternula antillarum browni*	Endangered

No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/8104
General project design guidelines:
https://ipac.ecosphere.fws.gov/project/GAFGKRJAE5AJ7D6NBVCTRSDKPQ/documents/generated/11271.pdf

REPTILES

NAME	STATUS
Northwestern Pond Turtle *Actinemys marmorata*	Proposed Threatened

No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/1111
General project design guidelines:
https://ipac.ecosphere.fws.gov/project/GAFGKRJAE5AJ7D6NBVCTRSDKPQ/documents/generated/11271.pdf

AMPHIBIANS

NAME	STATUS
California Red-legged Frog *Rana draytonii*	Threatened

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.
Species profile: https://ecos.fws.gov/ecp/species/2891
General project design guidelines:
https://ipac.ecosphere.fws.gov/project/GAFGKRJAE5AJ7D6NBVCTRSDKPQ/documents/generated/11271.pdf

California Tiger Salamander *Ambystoma californiense*	Threatened

NAME STATUS

Population: U.S.A. (Central CA DPS)
There is **final** critical habitat for this species. Your location does not overlap the critical habitat.
Species profile: https://ecos.fws.gov/ecp/species/2076
General project design guidelines:
https://ipac.ecosphere.fws.gov/project/GAFGKRJAE5AJ7D6NBVCTRSDKPQ/documents/generated/11271.pdf

Foothill Yellow-legged Frog *Rana boylii* Threatened
Population: Central Coast Distinct Population Segment (Central Coast DPS)
There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat.
Species profile: https://ecos.fws.gov/ecp/species/5133
General project design guidelines:
https://ipac.ecosphere.fws.gov/project/GAFGKRJAE5AJ7D6NBVCTRSDKPQ/documents/generated/11271.pdf

INSECTS

NAME STATUS

Monarch Butterfly *Danaus plexippus* Proposed Threatened
There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat.
Species profile: https://ecos.fws.gov/ecp/species/9743
General project design guidelines:
https://ipac.ecosphere.fws.gov/project/GAFGKRJAE5AJ7D6NBVCTRSDKPQ/documents/generated/11271.pdf

FLOWERING PLANTS

NAME STATUS

Contra Costa Goldfields *Lasthenia conjugens* Endangered
There is **final** critical habitat for this species. Your location does not overlap the critical habitat.
Species profile: https://ecos.fws.gov/ecp/species/7058

Metcalf Canyon Jewelflower *Streptanthus albidus ssp. albidus* Endangered
No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/4186

Robust Spineflower *Chorizanthe robusta var. robusta* Endangered
There is **final** critical habitat for this species. Your location does not overlap the critical habitat.
Species profile: https://ecos.fws.gov/ecp/species/9287

Santa Clara Valley Dudleya *Dudleya setchellii* Endangered
No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/3207

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

IPAC USER CONTACT INFORMATION

Agency: San Jose city
Name: Sharon Dulava Melesurgo
Address: 1731 Technology Dr
City: San Jose
State: CA
Zip: 95110
Email sdulava@esassoc.com
Phone: 9252859473