Initial Study (Appendix A)

800 Carlisle Way Well & Water Tank

File No. 2022-7041

SCH No. 2023020080

Prepared by

Sunnyvale

In Consultation with

DAVID J. POWERS & ASSOCIATES, INC.

ENVIRONMENTAL CONSULTANTS & PLANNERS

May 2025

TABLE OF CONTENTS

Figures

Photos

Tables

Appendices

Appendix A: Health Risk & Greenhouse Gas Assessment

Appendix B: Arborist Report

Appendix C: Geotechnical Feasibility Study

Appendix D: Sustainable Groundwater Management Technical Memorandum

Appendix E: Phase I Environmental Site Assessment

All appendices are incorporated herein by reference.

SECTION 1.0 INTRODUCTION AND PURPOSE

The City of Sunnyvale, as the Lead Agency, has prepared this Initial Study for the 800 Carlisle Way Well & Water Tank project in compliance with the California Environmental Quality Act (CEQA), the CEQA Guidelines (California Code of Regulations §15000 et. seq.) and the regulations and policies of the City Sunnyvale, California.

The project proposes to demolish the existing chemical storage buildings, electrical control panel, and connection to the existing water main on-site. After demolition, the project would install a replacement groundwater well and construct a new, approximately 56,000-gallon steel water storage tank, three chemical storage enclosures, and several utility and right-of-way improvements, including a new discharge pipeline. The project would also include a diesel-powered emergency generator with a sound attenuation enclosure. The project would also include a diesel-powered emergency generator. A detailed description of the project is provided in Section 3.2 Project Description. This Initial Study evaluates the environmental impacts that might reasonably be anticipated to result from implementation of the proposed project and the analysis used to focus the Environmental Impact Report (EIR) on the significant effects of the project.

SECTION 2.0 PROJECT INFORMATION

2.1 PROJECT TITLE

800 Carlisle Way Well & Water Tank (File Number: 2022-7041)

2.2 LEAD AGENCY CONTACT

Mary Jeyaprakash
City of Sunnyvale
456 W Olive Ave, Sunnyvale, CA 94086
Email: MJeyaprakash@sunnyvale.ca.gov
Phone Number: (408) 730-7449

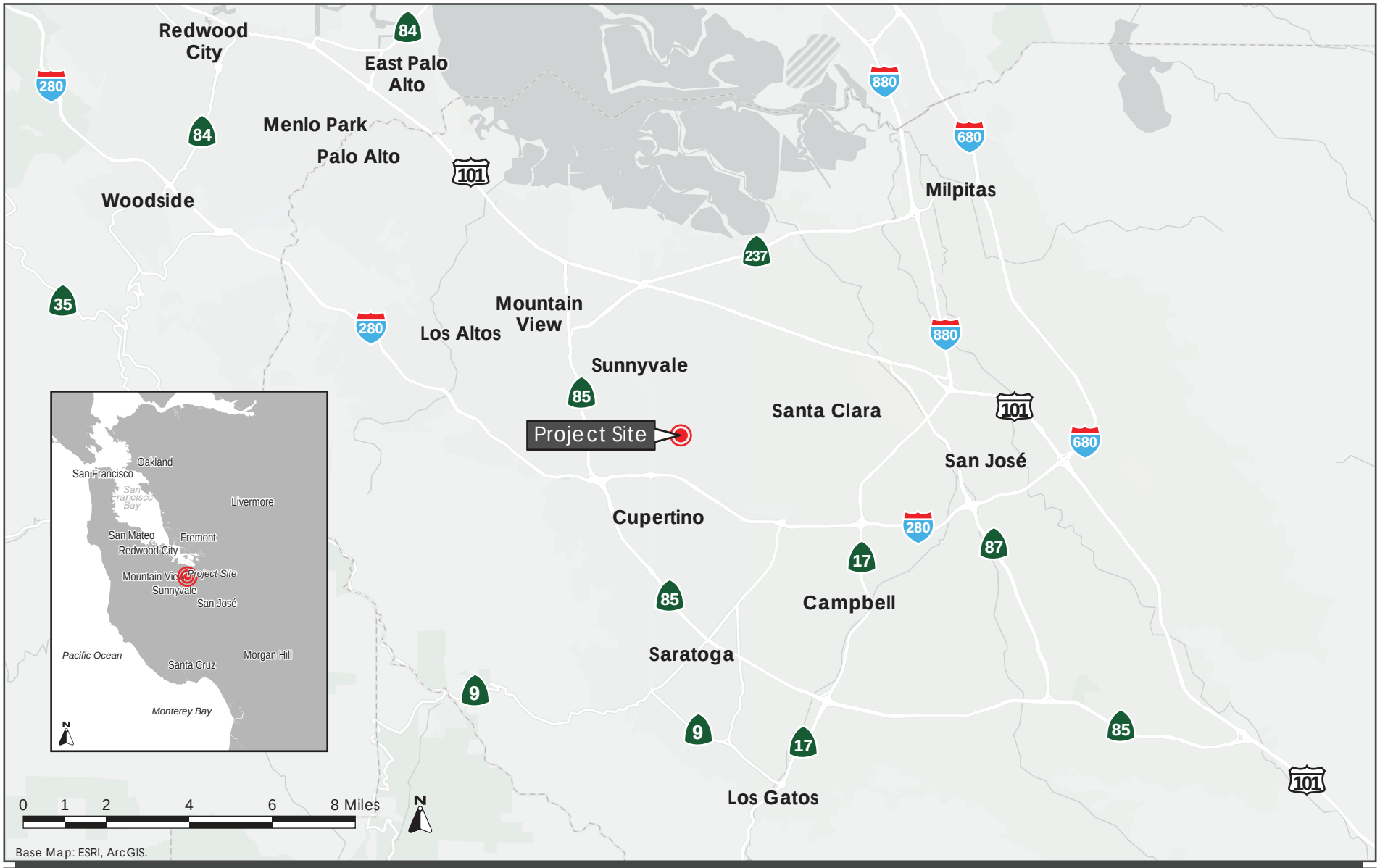
2.3 PROJECT APPLICANT

Melinda Schmidt, Superintendent II
California Water Service
1720 N First St, San Jose, CA 95112
Email: Mschmidt@calwater.com
Phone Number: (650) 390-0284

2.4 PROJECT LOCATION

The approximately 0.77-acre project site is located on the southeast corner of Lillian Avenue and Carlisle Way at 800 Carlisle Way in the City of Sunnyvale. The project site is bound by Panama Park to the west, Carlisle Way to the north, and residential developments to the south and east.

Regional and vicinity maps of the site are shown below on Figure 2.4-1 and Figure 2.4-2, respectively, and an aerial photograph of the project site and the surrounding land uses is shown on Figure 2.4-3.



REGIONAL MAP | FIGURE 2.4-1

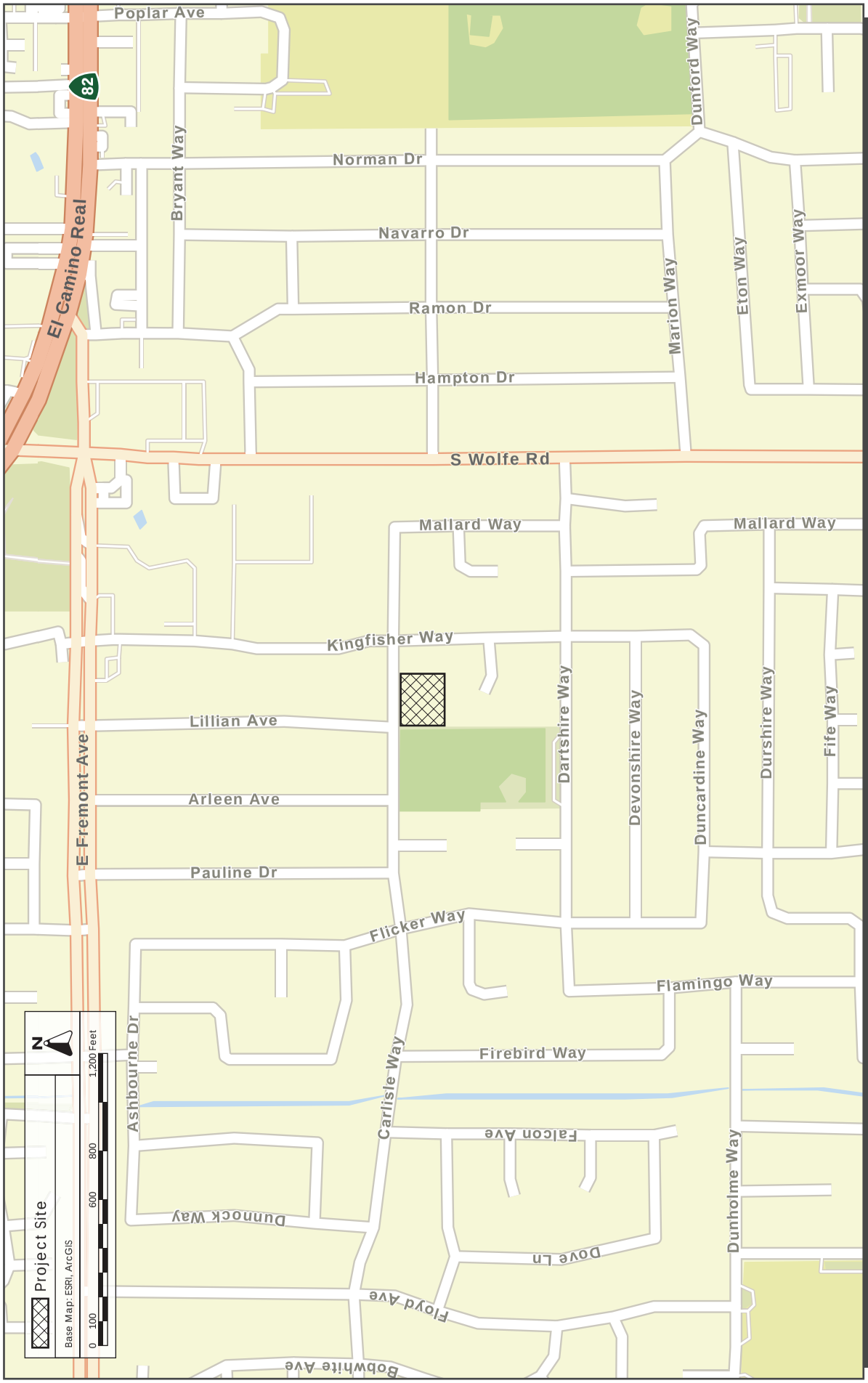


FIGURE 2.4-2

VICINITY MAP

AERIAL PHOTOGRAPH AND SURROUNDING LAND USES | FIGURE 2.4-3

2.5 ASSESSOR'S PARCEL NUMBER

309-12-013

2.6 GENERAL PLAN DESIGNATION AND ZONING DISTRICT

The City of Sunnyvale General Plan (General Plan) land use designation for the project site is Low Density Residential, which primarily preserves existing single-family neighborhoods designed around parks or schools that are located along neighborhood streets or residential collector streets. Development in this land use designation is allowed a maximum development intensity of zero to seven dwelling units per acre (du/ac), and accessory dwelling units are allowed pursuant to standards provided in the Zoning Code. The project site is identified as an active production well in the City's General Plan.[1]

The project site has a zoning designation of R0/S (low-density residential), which is generally reserved for the construction, use, and occupancy of no more than seven du/ac. Additionally, the project site is within the residential single-story (S) combining district which is intended to modify the site development regulations of the R-0 residential zoning district to maintain single-family neighborhoods with homes that are no more than 17 feet tall. Uses permitted in this zoning district include single-family residential, small-scale care facilities, small-scale boarding homes, and public parks and playgrounds. Additional uses such as agricultural facilities, primary and high schools, private parks, office, and public utility buildings and service facilities are allowed with a Use Permit. The City's municipal code contains additional development standards applicable to development in the R0/S zoning district such as floor area ratio (FAR) and maximum height.

2.7 PROJECT-RELATED APPROVALS, AGREEMENTS, AND PERMITS

- Use Permit
- Building Permits
- Hazardous Materials Storage Permit
- Variance for the maximum tank height

[1] City of Sunnyvale. *Sunnyvale General Plan*. July 26, 2011. Figure 7-1.

SECTION 3.0 BACKGROUND AND PROJECT DESCRIPTION

3.1 BACKGROUND INFORMATION

The project site was formerly used as a groundwater extraction site for California Water Service (Cal Water) to provide potable water to their Los Altos Suburban service district. This service district encompasses the City of Los Altos and portions of Cupertino, Los Altos Hills, Mountain View, Sunnyvale and adjacent unincorporated areas of Santa Clara County. The service district delivers potable water to approximately 18,000 service connections (approximately 2,000 of which are located in Sunnyvale) and a population of approximately 70,000 customers.[2]

The site consisted of a water well and associated chemical storage buildings, a cellular communication tower, booster pump, and a 17-foot tall, 50,000-gallon water storage tank (through Planning Permits - #1999-0687 and #2001-0319). In 2016, the water well on-site was decommissioned due to sanding issues and casing deterioration within the well. This water well, therefore, is no longer functional. The 50,000-gallon redwood tank was removed in 2016 because the closure of the groundwater well on-site rendered the storage tank obsolete. The chemical storage buildings and booster pump – though inactive – remain on-site. The cellular communication tower is still in active use and is owned and maintained separately by Sprint Nextel on a portion located within the northwestern portion of the project site that is leased from Cal Water. No modifications are proposed to the communication tower as part of the proposed project.

To provide water supply reliability and meet current customer water supply demands, Cal Water is proposing to reactivate the site as a groundwater extraction site by constructing a replacement well and associated improvements to accommodate future water demands. The proposed replacement well would provide access to a long-term source of water for Cal Water that would be used to partially offset a decrease in supply from other sources due to drought and climate change. Cal Water is continuously looking for ways to improve the reliability of their water system, including replacing and installing new wells. The project site was selected for a replacement well because land acquisition to install new wells in the area is challenging, Cal Water already owns the property, the water quality is better than in surrounding areas, and the historic yield from the previous well on-site was higher than other options in the surrounding area.

3.2 PROJECT DESCRIPTION

The project would demolish the existing chemical storage buildings, electrical control panel, and connection to the existing water main on-site. After demolition, the project would install a replacement groundwater well and construct a new, approximately 56,000-gallon steel water storage tank, three chemical storage enclosures, and several utility and right-of-way improvements, including a new discharge pipeline. The project would also include a diesel-powered emergency generator with a sound attenuation enclosure. These project components are described in further detail below.

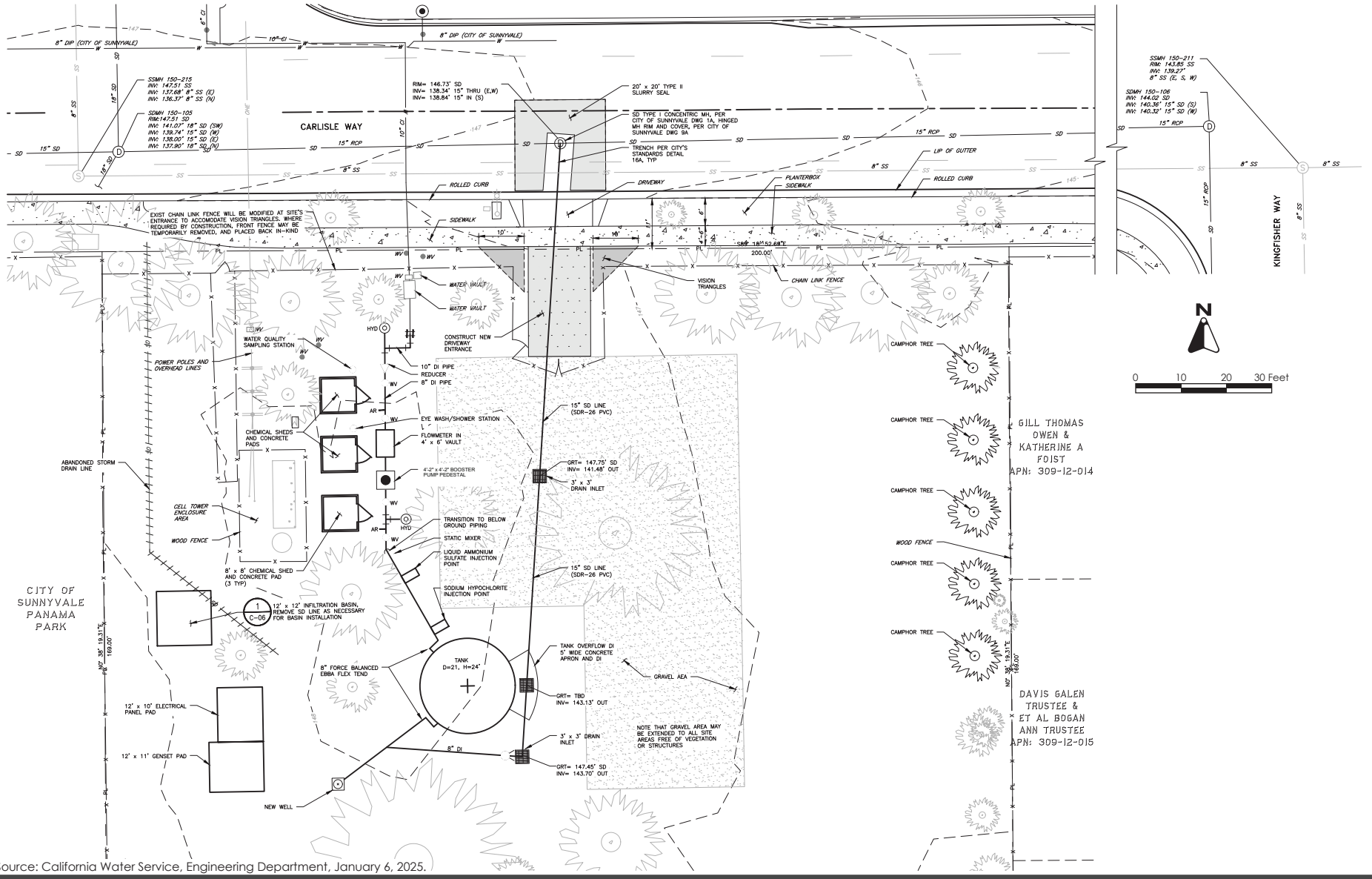
In addition to the primary project components, the project would also install new signs on the entry gate with contact information for an authorized bird conservation organization or museum to aid in

[2] California Water Service. *2020 Urban Water Management Plan – Los Altos Suburban District*. June 2021. Pages 24 to 27.

identification of any bird species involved with collisions with the proposed structures on-site. During operation of the project, Cal Water's Environmental Affairs group would maintain records documenting the number and location of bird deaths, if any, and report findings to the City at the required frequency. Emergency lighting would also be installed on-site; however, it would be reserved for emergency situations where repair work is required at night.

Conceptual site plans are shown in Figure 3.2-1, and the proposed project elevation is shown in Figure 3.2-2. The location of the well on-site was determined, in part, based on the separation requirements established by the California Department of Public Health (CDPH), Division of Drinking Water (DDW), California Department of Water Resources (DWR), and the American Water Works Association (AWWA). These entities have established guidance and provided various standards and requirements which necessitate a minimum set back of 50 feet from the existing well on-site and from sanitary sewer lines in the vicinity. In addition, the location of the proposed well would allow for necessary equipment to be installed in compliance with the City's property line setback requirements in order to minimize impact to neighboring properties.

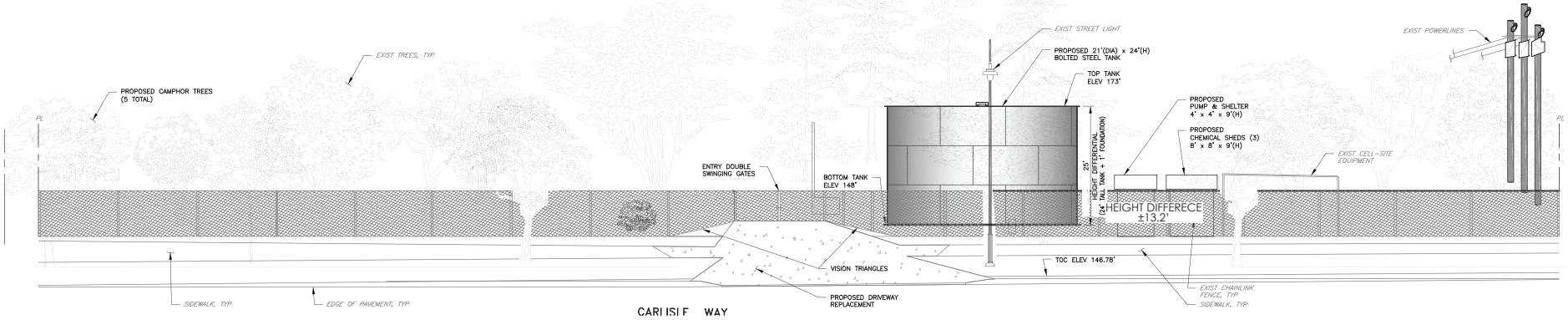
The project is consistent with the existing General Plan land use and zoning designations on the site, therefore, no General Plan amendment or rezoning is required. As mentioned in Section 2.7 Project-Related Approvals, Agreements, and Permits, the project requires a use permit, building permits, hazardous materials storage permit, and variance for the proposed height of the water tank which would exceed the height typically allowed for structures in this zone.



Source: California Water Service, Engineering Department, January 6, 2025.

PROPOSED SITE PLAN

FIGURE 3.2-1



SOUTH ELEVATION

Source: California Water Service, Engineering Department, January 6, 2025.

PROPOSED PROJECT ELEVATIONS | FIGURE 3.2-2

3.3 PROJECT COMPONENTS

3.3.1 Groundwater Well

The previous groundwater well that was capped in 2016 is located in the center of the site on the north side. The new well would be located on the southwest portion of the site and would reach a depth of approximately 1,000 feet below ground surface (bgs). Details about construction of the well are provided in Section 3.3.9 below.

After the well has been drilled and the casing installed, the project would conduct a standard water production test which would continuously pump water from the new well for 24 hours. The purpose of the production test would be to determine the yield of the aquifer as well as the size of the pump that would be necessary for the new well. It is anticipated that this would result in the pumping of approximately 1.7 million gallons of raw water from the aquifer. The water pumped from the aquifer would be discharged into the existing storm drain system on Carlisle Way pursuant to existing regulations, including Chapter 12.60 (Stormwater Management) of the Sunnyvale Municipal Code (SMC). During operation of the new well, a discharge of the initial raw water would be required per Division of Drinking Water regulations to flush the system prior to filling up the new water storage tank. This initial draw of raw water would last for approximately 15 minutes and would result in the discharge of approximately 18,000 gallons of water to the existing storm drain system on Carlisle Way. After this initial discharge is complete, the water tank would begin storing the groundwater pumped from the new well on-site.

3.3.2 Water Storage Tank

The project would construct a new, steel water storage tank in the center of the project site that would be connected to the new groundwater well. The storage tank would be 21 feet in diameter, 24 feet in height, and would have an approximate capacity of 56,000 gallons. The dimensions of the water tank would allow for optimal operation of the booster pump while still providing the necessary amount of freeboard for a tank of this size, which is four feet.[3] The groundwater in the aquifer has entrained air, which causes aesthetic problems and maintenance issues in the distribution system. To address these issues, the water must be aerated after it is pumped from the ground to allow for the release of entrained air in the water. To facilitate release of the entrained air, the water would be discharged into the tank from a point close to the top of the tank and allowed to “splash”, which would agitate the water and expedite aeration.

3.3.3 Chemical Storage Enclosures

The project would construct three new chemical storage sheds with a maximum height of 10 feet that would be placed on concrete pads on the northwest portion of the project site. These chemical storage sheds would be used to store approximately 300 gallons of 12.5 percent sodium hypochlorite and 100 gallons of 19.5 percent ammonium hydroxide within their own separate chemical storage sheds. These chemicals would be stored within a double containment system that would reduce the risk of any chemical leaks and would be used to disinfect the treated water in the storage tank prior to release into the distribution system. Most of the equipment operation required to disinfect the treated

[3] Freeboard is the area within the tank that does not contain water, as measured from the water overflow height to the top of the tank.

water would be done remotely; however, a staff member would visit the site daily to clean the chemical injector and ensure that the equipment is operating effectively.

3.3.4 Emergency Generator

The project would install an emergency back-up generator on-site that would only be operational during power outages or during bi-weekly testing. Routine testing would consist of running the generator bi-weekly for approximately 30 minutes during daytime hours. The bi-weekly testing is necessary to ensure the generator would operate during an emergency scenario. The generator would have fuel stored in a double lined tank under the generator and would also utilize a double containment system to reduce the risk of accidental fuel leaks. The generator would comply with diesel engine requirements set by the Bay Area Air Quality Management District.

3.3.5 Pump Station

In order to pump groundwater from the well to the potable water distribution lines, a pump station would be installed adjacent to the groundwater well. This pump station would include mechanical equipment such as a booster pump, pump motor, panel board (including the electric panel and controls), and connections for portable boosters that could be utilized if the primary booster pump is out of operation for maintenance or repairs.

3.3.6 Site Access

The project site is currently secured by a chain link fence and can only be accessed by Cal Water via a driveway on the north side of the site. The project would remove and replace the existing driveaway to ensure compliance with current City driveway standards. The new driveway would be in the same location as the current driveway. The proposed improvements within the public right-of-way are detailed further in Section 3.3.6. Public access to the project site would continue to be prohibited under the proposed project.

3.3.7 Utility and Right-of-Way Improvements

The proposed project would construct a new eight-inch distribution water line that would connect to an existing 10-inch water main on-site. In addition, the project would construct a new 15-inch storm drain lateral line that would connect to the existing 15-inch mainline in Carlisle Way. The point of connection to the existing storm drain would be within the public right-of-way on Carlisle Way. The project would also install a new manhole to provide maintenance access to the connection between the new storm drain lateral line and the existing storm drain main line. In addition, the project would install a private manhole at the property line. A portion of the sidewalk along Carlisle Way would be reconstructed concurrent with the new access driveway described in Section 3.3.5.

Electricity would be provided by the existing electrical utilities on-site. No connections to natural gas are proposed.

3.3.8 Landscaping

The project site currently contains 38 trees, 15 of which are protected under the City of Sunnyvale's tree protection ordinance.[4] The proposed project would remove a total of eight trees, including five protected trees and three unprotected trees. Four of the trees proposed for removal are either diseased, dead, or dying. The other four trees would be removed to construct the new well and storage tank. There are six street trees in front of the project site and none of them are proposed for removal. The project would plant 12 camphor trees for replacement along the eastern border of the project site consistent with the requirements outlined in Chapter 19.94 of the SMC.

3.3.9 Stormwater Treatment

The project site currently consists of approximately 524 square feet (or 1.6 percent) of impervious area. The remaining 33,276 square feet (or 98.4 percent) of the site consists of pervious area, which is comprised of landscaping and other permeable surfaces. The proposed project would result in an increase of impervious area by approximately 1,261 square feet (or 3.7 percent). The proposed improvements that would contribute to the increase in impervious area include the addition of small, paved areas throughout the project site.

3.3.10 Construction

Project construction activities include demolition, site preparation, drilling, minor grading, construction, and paving. Construction of the project would be completed in a total of approximately 10 months.

Demolition of the existing chemical storage buildings, electrical control panel, and connection to the existing water main on-site and other site preparation activities would take approximately one month.

It is estimated that the well construction and required testing would take a total of three months. The groundwater well would be constructed using borehole drilling equipment and a flooded-reverse mud rotary drilling technique. The drilling activity would consist of mixing drilling additives with water, which would then be circulated in the borehole to assist with the drilling process, remove excavated material, stabilize the borehole, and reduce water loss to the surrounding soil on-site. The primary drilling fluid would consist of powdered bentonite clay and potable water with other NSF/ANSI 60 certified additives used, as needed.[5]

Based on the data collected during operation of the previous well on-site, a well depth of approximately 1,000 feet bgs would provide a comparable yield and performance as the previous

[4] The provisions of Chapter 19.94 (Tree Preservation) of the Municipal Code identify and prescribe specific procedures and requirements for the filing, processing, and consideration of the removal and preservation of trees. A significant size tree (or protected tree) is defined as: Any single trunk tree 38 inches or greater in circumference (the circumference of the tree is measured at 4.5 feet above the ground); or any multi-trunk tree which has at least one trunk 38 inches or greater in circumference or where the measurements of the multi-trunks added together equal at least 113 inches.

[5] NSF/ANSI 60 establishes minimum health effects requirements for chemicals, chemical contaminants, and impurities added directly to drinking water from treatment chemicals. Source: NSF International. "NSF/ANSI Standard 60: Drinking Water Treatment Chemicals – Health Effects" January 2017. Accessed August 9, 2023. Available at: https://www.nsf.org/knowledge-library/nsf-ansi-standard-60-drinking-water-treatment-chemicals-health-effects.

well on-site. In addition, the water quality typically improves as wells reach deeper levels of an aquifer as there is lower risk of contamination from the ground surface. In order to reach the anticipated depth of approximately 1,000 feet bgs, portions of the drilling and construction process would be conducted continuously for 24 hours a day for a maximum total of 27 days. The 24-hour continuous construction activity on-site would be split into two phases. The initial phase of continuous, 24-hour per day drilling activity would take up to 12 days. This initial phase would consist of drilling the pilot hole in order to collect information and finalize the planned depth of the new well. The pilot hole would be approximately 17.5 inches in diameter and would potentially reach a depth of approximately 1,000 feet bgs. After this initial phase is completed, the drilling would pause for approximately two weeks (or 14 days) while the well materials are fabricated and delivered to the site. Once the required materials are on-site, the drilling for the well would resume for 24 hours per day for up-to 15 days. This hole would be approximately 28 to 32 inches in diameter, and casing for the new well would be inserted into the hole during construction. The well casing would have a diameter of 18 inches. Continuous operation of construction equipment during the two drilling phases reduces the risk of borehole collapse and damage to construction equipment. The soil, drilling additive, and water expelled from the borehole during the drilling process would be collected in a mud tank and disposed of at an off-site landfill location or recycling facility.

Construction for the remaining project components, including the chemical storage sheds, water storage tank, and required water storage tank discharge would take a total of six months.

The project requires excavation at a maximum depth of 1,000 feet bgs for the well and eight feet bgs for the remaining improvements, and would result in the off-haul of approximately 210 cubic yards of soil.

SECTION 4.0 ENVIRONMENTAL SETTING, CHECKLIST, AND IMPACT DISCUSSION

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

4.1	Aesthetics	4.12	Mineral Resources
4.2	Agriculture and Forestry Resources	4.13	Noise
4.3	Air Quality	4.14	Population and Housing
4.4	Biological Resources	4.15	Public Services
4.5	Cultural Resources	4.16	Recreation
4.6	Energy	4.17	Transportation
4.7	Geology and Soils	4.18	Tribal Cultural Resources
4.8	Greenhouse Gas Emissions	4.19	Utilities and Service Systems
4.9	Hazards and Hazardous Materials	4.20	Wildfire
4.10	Hydrology and Water Quality	4.21	Mandatory Findings of Significance
4.11	Land Use and Planning		

The discussion for each environmental subject includes the following subsections:

- **Environmental Setting** – This subsection 1) provides a brief overview of relevant plans, policies, and regulations that compose the regulatory framework for the project and 2) describes the existing, physical environmental conditions at the project site and in the surrounding area, as relevant.
- **Impact Discussion** – This subsection 1) includes the recommended checklist questions from Appendix G of the CEQA Guidelines to assess impacts and 2) discusses the project's impact on the environmental subject as related to the checklist questions. For significant impacts, feasible mitigation measures are identified. "Mitigation measures" are measures that will minimize, avoid, or eliminate a significant impact (CEQA Guidelines Section 15370). Each impact is numbered to correspond to the checklist question being answered. For example, Impact BIO-1 answers the first checklist question in the Biological Resources section. Mitigation measures are also numbered to correspond to the impact they address. For example, MM BIO-1.3 refers to the third mitigation measure for the first impact in the Biological Resources section.

4.1 AESTHETICS

4.1.1 Environmental Setting

4.1.1.1 *Regulatory Framework*

State

Streets and Highway Code Sections 260 through 263

The California Scenic Highway Program (Streets and Highway Code, Sections 260 through 263) is managed by the California Department of Transportation (Caltrans). The program is intended to protect and enhance the natural scenic beauty of California highways and adjacent corridors through special conservation treatment.

In Santa Clara County, the one state-designated scenic highway is State Route (SR) 9 from the Santa Cruz County line to the Los Gatos City limit. Eligible state scenic highways (not officially designated) include: SR 17 from the Santa Cruz County line to SR 9, SR 35 from Santa Cruz County line to SR 9, Interstate 280 from the San Mateo County line to SR 17, and the entire length of SR 152 within the County.[6]

Local

City of Sunnyvale General Plan

The City of Sunnyvale General Plan (General Plan) includes policies for the purpose of avoiding or mitigating environmental impacts resulting from planned development projects within the City. The following policies are specific to aesthetic resources and are applicable to the proposed project.

Policy	Description
Land Use and Transportation Element	
LT-4.1	Preserve and enhance an attractive community, with a positive image, a sense of place, landscaping, and a human scale.
LT-4.3	Enforce design review guidelines and zoning standards that ensure the mass and scale of new structures are compatible with adjacent structures, and also recognize the City's vision of the future for transition areas such as neighborhood Village Centers and El Camino Real nodes.
Community Character Element	
CC-1.3	Ensure that new development is compatible with the character of special districts and residential neighborhoods.
CC-3.2	Ensure site design is compatible with the natural and surrounding built environment.

Sunnyvale Municipal Code

SMC Title 19 (Zoning) provides development standards and regulations that are meant to enhance the visual quality of new development through building height limits, building density, building

[6] California Department of Transportation. "State Scenic Highway Map" Accessed January 9, 2023. Available at: https://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=465dfd3d807c46cc8e8057116f1aacaa.

design and landscaping standards, architectural features, setback requirements, light restrictions, sign regulations, usable open space requirements, and public artwork in private developments.

The Zoning Code promotes good design and careful planning of development projects to enhance the visual environment. The City's development review process includes the review of preliminary plans and the consideration of public input by the Zoning Administrator, Planning Commission, and City Council. The City reviews private and public development applications for conformance with City plans, ordinances, and policies related to zoning, urban design, and CEQA.

- Chapter 19.84 (Variances) outlines the purpose, restrictions, procedures, actions required, and findings required to grant a Variance. The application process allows for review of the requested Variance and requires that the three findings below are met.
    - Because of exceptional or extraordinary circumstances or conditions applicable to the property, or use, including size, shape, topography, location or surroundings, the strict application of the ordinance is found to deprive the property owner of privileges enjoyed by other properties in the vicinity and within the same zoning district.
    - The granting of the variance will not be materially detrimental to the public welfare or injurious to the property, improvements or uses within the immediate vicinity and within the same zoning district.
    - Upon granting of the variance the intent and purpose of the ordinance will still be served and the recipient of the variance will not be granted special privileges not enjoyed by other surrounding property owners within the same zoning district.

- Chapter 19.88 (Use Permits) outlines the purpose, authority, actions required, and findings required to grant a Use Permit. The permit application process allows for review of the location, design, configuration of improvements, and potential impact on the surrounding area. One of the required findings that must be made by the City to approve a Use Permit is that the general appearance of proposed structures, or the uses to be made of the subject property, will not impair either the orderly development or the existing uses of adjacent properties.

- Chapter 19.94 (Tree Preservation) regulates the protection, installation, removal and long term management of significantly sized trees on private property within the City and City-owned golf courses and parks; encourages the proper protection and maintenance of significantly sized trees which are located on such property; establishes a review and permit procedure to assure the correct planting, maintenance, protection and removal of significant trees on such property; and establishes penalties for violation of its provisions. The provisions of Chapter 19.94 identify and prescribe specific procedures and requirements for the filing, processing, and consideration of the removal and preservation of trees. A significant size tree, or protected tree, is defined as:

    - Any single trunk tree 38 inches or greater in circumference (the circumference of the tree is measured at 4.5 feet above the ground); or
    - Any multi-trunk tree which has at least one trunk 38 inches or greater in circumference or where the measurements of the multi-trunks added together equal at least 113 inches.

In addition to the provisions of the Zoning Code, Chapter 13.16 (City Trees) within SMC Title 13 provides guidance and regulations on City trees, including protected trees, removal or damage to trees, and permitting. Permitting is required for planting trees in the public ROW, removal or maintenance to protected trees, and construction affecting protected trees.

4.1.1.2 *Existing Conditions*

Scenic Vistas

The term scenic vista typically refers to an expansive view of an area that is visually or aesthetically pleasing, usually as seen from an elevated point or open area. The project site is in developed area of the City and is located on relatively flat land, which limits the amount of expansive views from the project site. Obstructed views of the Santa Cruz Mountains can be seen in the project vicinity, looking southwest from the project site towards Panama Park.

Visual Character and Quality

There are no state-designated scenic highways in Sunnyvale. The nearest segment of state-designated scenic highway is SR 9 from the Santa Cruz County line to the Los Gatos City limit, which is approximately 6.25 miles south of the project site. The project site is not visible from this designated state scenic highway.

As discussed in Section 3.0, the site is currently developed with a non-operational groundwater well, booster pump, eight-foot tall chemical storage buildings, and an operational cellular communication tower. There is a short, paved driveway on the north side of the site that leads to a locked gate. The site is secured from public access by approximately six-foot tall chain-link fencing that surrounds the site on the north and west sides of the parcel and approximately six-foot tall wooden fences along the south and west property lines. The existing landscaping on-site is comprised of 38 trees and a variety of shrubs throughout the site. Of the 38 trees on-site, 15 are protected under the City of Sunnyvale's tree protection ordinance. Additional information regarding the trees on-site can be found in Section 4.4 Biological Resources.

The surrounding area in the immediate vicinity of the project site consists primarily of single-story residential houses. Panama Park is adjacent to the western side of the property and consists of a large grass field with a baseball diamond on the south side of the park.

Views of the project site and the surrounding area are shown in Photos 1-6.

Photo 1: View from the northwest corner of the project site looking west on Carlisle Way.

Photo 2: View from the northwest corner of the project site looking east on Carlisle Way.

PHOTOS 1 & 2

Photo 3: View of the existing improvements on-site related to the nonoperational groundwater well.

Photo 4: View from the project site looking south towards the adjacent residential uses.

PHOTOS 3 & 4

Photo 5: View from the project site looking east towards the adjacent residential uses.

Photo 6: View of the project site from the north side of Carlisle Way.

PHOTOS 5 & 6

4.1.2 Impact Discussion

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Except as provided in Public Resources Code Section 21099, would the project:				
1) Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
2) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
3) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? [7] If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☒	☐
4) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

Impact AES-1: The project would not have a substantial adverse effect on a scenic vista. **(Less than Significant Impact)**

As discussed in Section 4.1.1.2, the topography and location of the project area limits the view of scenic resources. The primary scenic resource visible from the project vicinity is the Santa Cruz Mountain Range. Views of the Santa Cruz Mountains in the project site vicinity are currently obstructed by existing development and mature landscaping.

The site previously included a 16-foot tall water storage tank with a capacity of 50,000 gallons, which was removed in 2016. The project includes constructing a new, 24-foot tall water storage tank with a capacity of 56,000 gallons and replacing the existing chemical storage buildings. The existing chemical storage sheds are eight feet tall and would be replaced with 10-foot tall chemical storage enclosures. Given that the project site is in an urban and developed area where views of the Santa Cruz Mountains are currently obstructed and the project would result in similar improvements on-site compared to what currently (as well as historically) been on-site, the project would not substantially affect the already obstructed views. The project, therefore, would result in a less than significant impact to scenic vistas. **(Less than Significant Impact)**

[7] Public views are those that are experienced from publicly accessible vantage points.

Impact AES-2:	The project would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway. **(No Impact)**

As discussed in Section 4.1.1.2, there are no state-designated scenic highways in Sunnyvale and the nearest designated scenic highway is approximately 6.25 miles south of the project site. The project site is not visible from that segment of state-designated scenic highway, so the development of the project would not have an adverse impact on the viewshed from the highway. **(No Impact)**

Impact AES-3:	The project would not conflict with applicable zoning and other regulations governing scenic quality. **(Less than Significant Impact)**

As discussed in additional detail in Section 4.11 Land Use and Planning, the proposed project would require a Use Permit in order to operate utility infrastructure in a residential neighborhood. Consistent with SMC Chapter 19.88, the location, design, configuration of improvements, and potential impact on the surrounding area would be evaluated by the City to ensure that the general appearance of proposed structures would not impair the adjacent properties. Consistent with SMC Chapter 19.88 and General Plan Policies LT-4.3 and CC-1.3, the project is subject to the City's design review process, which would ensure the project incorporates appropriate design measures (such as setbacks and landscaping) to reduce potential visual impacts and be compatible with the existing neighborhood character. The height of the new water tank (24 feet) would exceed the maximum height allowed for structures in this zoning district (17 feet). To construct a new 24-foot-tall water tank, the project would require a variance from the City for the proposed height, pursuant to SMC Chapter 19.84. Based on the above discussion, the proposed project would not conflict with applicable zoning and other regulations governing scenic quality. **(Less than Significant Impact)**

Impact AES-4:	The project would not 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 site is located in a residential neighborhood with existing light sources including lighting from residences, streetlights, and vehicles travelling on local roads. Sources of daytime glare include building windows and vehicles. The proposed project would construct a new water storage tank (33 feet in diameter and 24 feet in height) and three new chemical storage enclosures with a maximum height of 10 feet. The proposed structures would be constructed of prefabricated wood and would not contain reflective materials that would introduce new sources of substantial glare.

There are currently no light sources on-site, and the only new sources of light proposed as part of the project would be emergency lighting. This emergency lighting would not be routinely used or motion activated, and would only be utilized in the event that emergency work is required during the nighttime. Therefore, there would be no permanent, substantial increase in light or glare compared to existing conditions.

As discussed under Impact AES-3, the project would be subject to a design review process prior to receiving building permits. This review would ensure consistency with SMC Section 19.42.050, which prohibits lights, spotlights, floodlights, reflectors, and other means of illumination from being

directed onto public streets or adjacent properties. In addition, nighttime construction activities would include nighttime lighting for safety purposes. However, the nighttime construction lighting would be temporary and eliminated once construction of the project is complete.

For these reasons, the project would not create a new source of substantial light or glare. **(Less than Significant Impact)**

4.2 AGRICULTURE AND FORESTRY RESOURCES

4.2.1 Environmental Setting

4.2.1.1 *Regulatory Framework*

State

Farmland Mapping and Monitoring Program

The California Department of Conservation's Farmland Mapping and Monitoring Program (FMMP) assesses the location, quality, and quantity of agricultural land and conversion of these lands over time. Agricultural land is rated according to soil quality and irrigation status. The best quality land is identified as Prime Farmland. In CEQA analyses, the FMMP classifications and published County maps are used, in part, to identify whether agricultural resources that could be affected are present on-site or in the project area.[8]

California Land Conservation Act

The California Land Conservation Act (Williamson Act) enables local governments to enter into contracts with private landowners to restrict parcels of land to agricultural or related open space uses. In return, landowners receive lower property tax assessments. In CEQA analyses, identification of properties that are under a Williamson Act contract is used to also identify sites that may contain agricultural resources or are zoned for agricultural uses.[9]

Fire and Resource Assessment Program

The California Department of Forestry and Fire Protection (CAL FIRE) identifies forest land, timberland, and lands zoned for timberland production that can (or do) support forestry resources.[10] Programs such as CAL FIRE's Fire and Resource Assessment Program and are used to identify whether forest land, timberland, or timberland production areas that could be affected are located on or adjacent to a project site.[11]

4.2.1.2 *Existing Conditions*

The project site has a General Plan land use designation of Low Density Residential and is zoned R0/S (low-density residential). The project site is currently developed with utility infrastructure and surrounded primarily by residential uses. The Santa Clara County Important Farmlands 2018 Map designates the project site as "Urban and Built-Up Land", which is defined as land with at least six

[8] California Department of Conservation. "Farmland Mapping and Monitoring Program." Accessed January 9, 2023. Available at: http://www.conservation.ca.gov/dlrp/fmmp/Pages/Index.aspx.
[9] California Department of Conservation. "Williamson Act." Accessed January 9, 2023. Available at: http://www.conservation.ca.gov/dlrp/lca.
[10] Forest Land is land that can support 10 percent native tree cover and allows for management of forest resources (California Public Resources Code Section 12220(g)); Timberland is land not owned by the federal government or designated as experimental forest land that is available for, and capable of, growing trees to produce lumber and other products, including Christmas trees (California Public Resources Code Section 4526); and Timberland Production is land used for growing and harvesting timber and compatible uses (Government Code Section 51104(g)).
[11] California Department of Forestry and Fire Protection. "FRAP". Accessed January 9, 2023. http://frap.fire.ca.gov/

structures per 10 acres. Common examples of "Urban and Built-Up Land" are residential, institutional, industrial, commercial, landfill, golf course, airports, and other utility uses.[12] No lands adjacent to the project site are used for agricultural production, forest land, or timberland. Surrounding properties are designated, zoned, and used for urban uses. There are no Williamson Act parcels on or in the vicinity of the project site.[13]

4.2.2 Impact Discussion

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
1) 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?	☐	☐	☐	☒
2) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
3) 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))?	☐	☐	☐	☒
4) Result in a loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
5) 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?	☐	☐	☐	☒

[12] California Natural Resources Agency. "Santa Clara County Important Farmland 2018." Accessed January 12, 2023. Available at: https://www.conservation.ca.gov/dlrp/fmmp/Pages/SantaClara.aspx
[13] County of Santa Clara. "Williamson Act and Open Space Easement". September 17, 2018. Accessed January 12, 2023. Available at: https://www.sccgov.org/sites/dpd/programs/wa/pages/wa.aspx

Impact AG-1:	The project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use. **(No Impact)**

The project site is designated as "Urban and Built-Up Land" on maps prepared by the California Resources Agency for Santa Clara County. Therefore, no Prime Farmland, Unique Farmland, or Farmland of Statewide Importance would be converted to non-agricultural use as a result of project implementation. **(No Impact)**

Impact AG-2:	The project would not conflict with existing zoning for agricultural use, or a Williamson Act contract. **(No Impact)**

As discussed in Section 4.2.1.2, the project site has a General Plan land use designation of Low Density Residential and is zoned R0/S (low-density residential). The project site is not under a Williamson Act contract. Therefore, the project would not conflict with existing zoning for an agricultural use or a Williamson Act contract. **(No Impact)**

Impact AG-3:	The project would not conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production. **(No Impact)**

As discussed in Section 4.2.1.2, the project site is not zoned, or adjacent to land zoned, for forest land, timberland, or Timberland Production. It is in an urban area surrounded by urban development. Therefore, the project would not conflict with existing zoning or require rezoning of forest land or timberland uses. **(No Impact)**

Impact AG-4:	The project would not result in a loss of forest land or conversion of forest land to non-forest use. **(No Impact)**

The project site is in an urbanized area of the City and is currently developed with utility infrastructure. Therefore, no forest land would be lost as a result of the project. **(No Impact)**

Impact AG-5:	The project would not involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use. **(No Impact)**

The proposed development would occur in an urbanized area of the City. No agricultural or forestry uses are on-site or in the vicinity of the project site. Therefore, the project would not result in impacts to agricultural lands or forest lands. **(No Impact)**

4.3 AIR QUALITY

The following discussion is based, in part, on Health Risk & Greenhouse Gas Assessment prepared by Illingworth & Rodkin, Inc. in June 2023. This report is attached as Appendix A to this Initial Study.

4.3.1 Environmental Setting

4.3.1.1 *Background Information*

Criteria Pollutants

Criteria air pollutants are pollutants that have established federal or state standards for outdoor concentrations to protect public health. Pursuant with the federal and state Clean Air Act, the United States Environmental Protection Agency (EPA) and the California Air Resources Board (CARB) have established and enforce the National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS), respectively. The NAAQS and CAAQS address the following criteria air pollutants: ozone (O_3), nitrogen dioxide (NO_2), carbon monoxide (CO), particulate matter with a diameter of 10 microns or less (PM_{10}), particulate matter with a diameter of 2.5 micros or less ($PM_{2.5}$), sulfur dioxide (SO_2), and lead. The CAAQS also includes visibility reducing particles, sulfates, hydrogen sulfide, and vinyl chloride.

Toxic Air Contaminants

Toxic air contaminants (TACs) include airborne chemicals that are known to have short- and long-term adverse health effects. TACs are found in ambient air, especially in urban areas, and are caused by industry, agriculture, diesel fuel combustion, and commercial operations (e.g., dry cleaners). TACs are typically found in low concentrations, even near their source (e.g., diesel particulate matter [DPM] near a freeway). Unlike criteria air pollutants, which have a regional impact, TACs are highly localized and regulated at the individual emissions source level.

DPM is the predominant TAC in urban air and is estimated to represent about three-quarters of the cancer risk from TACs. Diesel exhaust is a complex mixture of gases, vapors, and fine particles. Medium- and heavy-duty diesel trucks represent the bulk of DPM emissions from California highways. The majority of DPM is small enough to be inhaled into the lungs. Most inhaled particles are subsequently exhaled, but some deposit on the lung surface or are deposited in the deepest regions of the lungs (most susceptible to injury).[14] Chemicals in diesel exhaust, such as benzene and formaldehyde, are also TACs identified by the CARB.

An overview of the sources of criteria pollutants and TACs, as well as their associated health effects, is provided in Table 4.3-1.

[14] California Air Resources Board. "Overview: Diesel Exhaust and Health." Accessed July 3, 2023. https://ww2.arb.ca.gov/resources/overview-diesel-exhaust-and-health.

Table 4.3-1: Sources and Health Effects of Criteria Air Pollutants and Toxic Air Contaminants

Pollutants	Description and Sources	Primary Effects
Ozone (O_3)	O_3 is a secondary criteria air pollutant that is the result of a photochemical (sunlight) reaction between reactive organic gases (ROG) and nitrogen oxides (NO_x). Pollutants emitted by motor vehicles, power plants, industrial boilers, refineries, and chemical plants are the common source for this reaction. High O_3 levels are caused by the cumulative emissions of ROG and NO_X. These precursor pollutants react under certain meteorological conditions to form high O_3 levels. Commons sources of ROG and NO_x are vehicles, industrial plants, and consumer products	Aggravation of respiratory and cardiovascular diseases Irritation of eyes Cardiopulmonary function impairment
Nitrogen Dioxide (NO_2)	NO_2 is a reactive gas that combines with nitric oxide (NO) to form NO_x. NO_2 the byproduct of fuel combustion with common sources of NO_2 being emissions from cars, trucks, buses, power plants, and off-road equipment. Sources of NO_2 include motor vehicle exhaust, high temperature stationary combustion, atmospheric reactions	Aggravation of respiratory illness Reduced visibility
Carbon Monoxide (CO)	CO is a colorless, odorless, and toxic gas that is the product of incomplete combustion of carbon-containing substances (e.g., when something is burned). Common outdoor sources of CO include mobile vehicles (passenger cars and trucks) and machinery that burn fossil fuels.	Interferes with oxygen delivery to the body's organ due to binding with the hemoglobin in the blood Fatigue, headaches, confusion, and dizziness
Fine Particulate Matter ($PM_{2.5}$) and Coarse Particulate Matter (PM_{10})	Particulate Matter is any material that is emitted as liquid or solid particles or a gaseous material, such as dust, soot, aerosols, and fumes. PM_{10} and $PM_{2.5}$ are both small enough particulates to be inhaled into the human lungs, and $PM_{2.5}$ is small enough to deposit into the lungs, which poses an increased health risk compared to PM_{10}. Typical sources of particular matter include stationary combustion of solid fuels, construction activities, vehicles, industrial processes, and atmospheric chemical reactions.	Reduced lung function, especially in children Aggravation of respiratory and cardiorespiratory diseases Increased cough and chest discomfort Reduced visibility
Sulfur Dioxide (SO_2)	SO_2 is a pungent and colorless gaseous pollutant the is part of the sulfur oxides (SO_x) group and is the pollutant of greatest concern in the SO_x group. SO_x can react with other compounds in the atmosphere to form small particles. These particles contribute to particulate matter pollution. SO_2 is primarily formed from fossil fuel combustion at power plants and other industrial facilities. Sources of SO_2 include motor vehicles, locomotives, ships, and off-road diesel equipment that are operated with fuels that contain high levels of sulfur. Industrial processes, such as natural gas and petroleum extraction, oil refining, and metal processing.	Aggravation of respiratory illness Respiratory irritation such as wheezing, shortness of breath and chest tightness Increased incidence of pulmonary symptoms and disease, decreased pulmonary function
Lead	Lead is a naturally occurring element that can be found in all parts of the environment including the air, soil, and water. As an air pollutant, lead is present in small particles. The most common historic source of lead exposure was the past use of leaded gasoline in motor vehicles. The exhaust resulting from use of leaded gasoline would release lead emissions into the air. Now, major sources of lead in the air	Adversely affect the nervous system, kidney function, immune system, reproductive and developmental systems and the cardiovascular system

Pollutants	Description and Sources	Primary Effects
	are from ore and metals processing plants and piston-engine aircraft operating on leaded aviation fuel. Other sources are waste incinerators, utilities, and lead-acid battery manufacturers. The highest air concentrations of lead are usually found near lead smelters.	
Toxic Air Contaminants (TACs)	TACs include certain air pollutants known to increase the risk of cancer and/or other serious health effects that range from eye irritation, respiratory issues, and neurological damage. Sources of TAC include, but are not limited to, cars and trucks, especially diesel-fueled; industrial sources, such as chrome platers; dry cleaners and service stations; building materials and products	Cancer Chronic eye, lung, or skin irritation Neurological and reproductive disorders

Sensitive Receptors

Some groups of people are more affected by air pollution than others. CARB has identified the following persons who are most likely to be affected by air pollution: children under 16, the elderly over 65, athletes, and people with cardiovascular and chronic respiratory diseases. These groups are classified as sensitive receptors. Locations that may contain a high concentration of these sensitive population groups include residential areas, hospitals, daycare facilities, elder care facilities, and elementary schools.

4.3.1.2 *Regulatory Framework*

Federal and State

Clean Air Act

At the federal level, the EPA is responsible for overseeing implementation of the Clean Air Act and its subsequent amendments. The federal Clean Air Act requires the EPA to set national ambient air quality standards for the six common criteria pollutants (discussed previously): PM, O_3, CO, SO_2, NO_2, and lead.[15]

CARB is the state agency that regulates mobile sources throughout the state and oversees implementation of the state air quality laws and regulations, including the California Clean Air Act. The EPA and the CARB have adopted ambient air quality standards establishing permissible levels of these pollutants to protect public health and the climate. Violations of ambient air quality standards are based on air pollutant monitoring data and are determined for each air pollutant. Attainment status for a pollutant means that a given air district meets the standard set by the EPA and/or CARB.

[15] NO_x is the group of nitrogen compounds (NO_2 and nitric oxide [NO]) that typically represents NO_2 emissions because NO_2 emissions contribute the majority of NO_x exhaust emissions emitted from fuel combustion.

Diesel Risk Reduction Plan

To address the issue of diesel emissions in the state, CARB developed the Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles. In addition to requiring more stringent emission standards for new on-road and off-road mobile sources and stationary diesel-fueled engines to reduce particulate matter emissions by 90 percent, this plan involves application of emission control strategies to existing diesel vehicles and equipment to reduce DPM (in additional to other pollutants). Implementation of this plan, in conjunction with stringent federal and CARB-adopted emission limits for diesel fueled vehicles and equipment (including off-road equipment), will significantly reduce emissions of DPM and NO_X.

Regional and Local

2017 Clean Air Plan

The Bay Area Air District (Air District, formerly known as the Bay Area Air Quality Management District or BAAQMD) is the agency primarily responsible for assuring that the federal and state ambient air quality standards are maintained in the San Francisco Bay Area. Regional air quality management districts, such as the Air District, must prepare air quality plans specifying how federal and state air quality standards will be met. The Air District's most recently adopted plan is the Bay Area 2017 Clean Air Plan. The 2017 Clean Air Plan focuses on the following two related Air District goals and how to achieve them:

- Protect air quality and health at the regional and local scale by attaining all state and national air quality standards and eliminating disparities among Bay Area communities in cancer health risk from TAC; and
- Protect the climate by reducing Bay Area greenhouse gas (GHG) emissions 40 percent below 1990 levels by 2040 and 80 percent below 1990 levels by 2050.[16]

CEQA Air Quality Guidelines

The BAAQMD CEQA Air Quality Guidelines are intended to serve as a guide for those who prepare or evaluate air quality impact analyses for projects and plans in the San Francisco Bay Area. Jurisdictions in the San Francisco Bay Area Air Basin utilize the thresholds and methodology for assessing air quality impacts developed by the Air District within their CEQA Air Quality Guidelines. The guidelines include information on legal requirements, Air District rules, methods of analyzing impacts, and recommended mitigation measures. The latest CEQA Air Quality Guidelines are the 2022 CEQA Air Quality Guidelines adopted on April 20, 2023 by the Air District Board of Directors.

City of Sunnyvale General Plan

The City's General Plan includes policies for the purpose of avoiding or mitigating environmental impacts resulting from planned development projects within the City. The following policies are specific to air quality and are applicable to the proposed project.

[16] Bay Area Air Quality Management District. *Final 2017 Clean Air Plan.* April 19, 2017. Page 12.

Policy	Description
Environmental Management Element	
EM-11.2	Utilize land use strategies to reduce air quality impact.
EM-11.3	Require all new development to utilize site planning to protect citizens from unnecessary exposure to air pollutants.
EM-11.4	Apply the Indirect Source Rule to new development with significant air quality impacts. Indirect Source review would cover commercial and residential projects as well as other land uses that produce or attract motor vehicle traffic.
EM-11.6	Contribute to a reduction in regional vehicle miles travelled.
Land Use Element	
LT-2.1	Enhance the public's health and welfare by promoting the city's environmental and economic health through sustainable practices for the design, construction, maintenance, operation, and deconstruction of buildings, including measures in the Climate Action Plan.

4.3.1.3 *Existing Conditions*

The San Francisco Bay Area (Bay Area) Air Basin is designated a nonattainment area for the federal O_3 and $PM_{2.5}$ standards and for the state O_3, PM_{10}, and $PM_{2.5}$ standards.[17,18] The area has attained both NAAQS and CAAQS for CO, SO_2, and NO_2. As the regional air district, the Air District is responsible for attaining the NAAQS and CAAQS for these pollutants. As part of an effort to attain and maintain ambient air quality standards for O_3, PM_{10}, and $PM_{2.5}$, the Air District has established thresholds of significance for these air pollutants and their precursors that apply to both construction period and operational period impacts. Controlling the emissions of these precursor pollutants is the focus of the Bay Area's attempts to reduce O_3 levels. The highest O_3 levels in the Bay Area occur in the eastern and southern inland valleys where temperatures are higher, there is less wind circulation, and sources of the precursor pollutants (ROG and NO_x) are prominent. In the Bay Area, most particulate matter is generated from the following activities: combustion, factories, construction, grading, demolition, agriculture, and motor vehicles. Motor vehicles are currently responsible for about half of particulates in the Bay Area. Elevated concentrations of PM_{10} and $PM_{2.5}$ are the result of both region-wide emissions and localized emissions.

4.3.2 Impact Discussion

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
1) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☒	☐	☐

[17] Bay Area Air Quality Management District. "Air Quality Standards and Attainment Status." Last Updated August 3, 2023. Accessed July 3, 2023. Available at: https://www.baaqmd.gov/about-air-quality/research-and-data/air-quality-standards-and-attainment-status.

[18] The area has attained both state and federal ambient air quality standards for CO. The project does not include substantial new emissions of SO2 or lead. These criteria pollutants are not discussed further.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
2) 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?	☐	☒	☐	☐
3) Expose sensitive receptors to substantial pollutant concentrations?	☐	☒	☐	☐
4) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☒	☐

Note: Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the determinations.

As discussed in CEQA Guidelines Section 15064(b), the determination of whether a project may have a significant effect on the environment calls for judgment on the part of the lead agency and must be based to the extent possible on scientific and factual data. The City of Sunnyvale has considered the air quality thresholds updated by the Air District in April 2023 and regards these thresholds to be based on the best information available for the San Francisco Bay Area Air Basin and conservative in terms of the assessment of health effects associated with TACs and $PM_{2.5}$. The Air District CEQA Air Quality thresholds for criteria air pollutants and fugitive dust used in this analysis are identified in Table 4.3-2. Table 4.3-3 below lists the Air District health risk and hazards thresholds for single-source and cumulative-sources.

Table 4.3-2: Air District Air Quality Significance Thresholds

Criteria Air Pollutant	**Construction Thresholds***	**Operation Thresholds**	**Operation Thresholds**
	Average Daily Emissions (pounds/day)	**Average Daily Emissions (pounds/day)**	**Annual Average Emissions (tons/year)**
ROG and NO_x	54	54	10
PM_{10}	82 (exhaust)	82	15
$PM_{2.5}$	54 (exhaust)	54	10
CO	Not Applicable	9.0 ppm (eight-hour) or 20.0 ppm (one-hour)	
Fugitive Dust	Dust Control Measures/Best Management Practices	Not Applicable	

Notes: ROG = reactive organic gases; NO_X = oxides of nitrogen; PM_{10} = respirable particulate matter with an aerodynamic resistance diameter of 10 micrometers or less; $PM_{2.5}$= fine particulate matter with an aerodynamic resistance diameter of 2.5 micrometers or less; CO = carbon monoxide

* The Air District recommends for construction projects that require less than 1 year to complete, lead agencies should annualize impacts over the scope of actual days that peak impacts would occur rather than over the full year. Additionally, for phased projects that results in concurrent construction and operational emissions. Construction-related exhaust emissions should be combined with operational emissions for all phases where construction and operations overlap

Source: Bay Area Air Quality Management District. *2022 California Environmental Quality Act Air Quality Guidelines*. April 2023. Pages 3-5 and 3-6.

Table 4.3-3: Air District Health Risks and Hazards Thresholds

Health Risk	Single Source	Combined Cumulative Sources
Cancer Risk	10 per one million	100 per one million
Non-Cancer Hazard Index	1.0	10.0
Annual $PM_{2.5}$ Concentration	0.3 µg/m^3	0.8 µg/m^3 (average)

Notes: µg/m^3 = micrograms per cubic meter; $PM_{2.5}$= fine particulate matter with an aerodynamic resistance diameter of 2.5 micrometers or less
Thresholds are applicable to construction and operational activities.
Source: Bay Area Air Quality Management District. *2022 California Environmental Quality Act Air Quality Guidelines*. April 2023. Pages 3-5 and 3-6.

Impact AIR-1:	The project would not conflict with or obstruct implementation of the applicable air quality plan. **(Less than Significant Impact with Mitigation Incorporated)**

The BAAQMD CEQA Air Quality Guidelines set forth criteria for determining consistency with the 2017 CAP. In general, a project is considered consistent if a) it supports the primary goals of the 2017 CAP; b) it includes relevant control measures; and c) it does not interfere with implementation of the 2017 CAP control measures.

Support of Primary 2017 CAP Goals

As discussed in Section 4.3.1.2 Regulatory Framework, the goals of the 2017 CAP include 1) protecting public health by progressing towards attaining air quality standards and eliminating health risk and 2) protecting the climate. If a project exceeds the Air District criteria air pollutants thresholds of significance, its emissions are considered to result in significant adverse air quality impacts to the region's existing air quality conditions. An analysis of the project's construction and operational air pollutant emissions is provided below.

Construction Period Emissions

Implementation of the proposed project would result in short-term emissions from construction activities associated with development, including demolition, drilling, site grading, and generation of truck trips. Emissions commonly associated with construction activities include fugitive dust from soil disturbance, fuel combustion from mobile heavy-duty diesel- and gasoline-powered equipment, portable auxiliary equipment, and worker commute trips. During construction, fugitive dust, the dominant source of PM_{10} and $PM_{2.5}$ emissions, is generated when wheels or blades disturb surface materials. Uncontrolled dust from construction can become a nuisance and potential health hazard to those living and working nearby.

Demolition and construction activities can also generate PM_{10} and $PM_{2.5}$ emissions. Off-road construction equipment is often diesel-powered and can be a substantial source of NO_x emissions, in addition to PM_{10} and $PM_{2.5}$ emissions. Diesel exhaust from construction equipment poses both a health and nuisance impact to nearby receptors.

Construction period emissions were modeled based on equipment list and schedule information provided by the applicant. Refer to Appendix A for details about the modeling, data inputs, and

assumptions. The average daily construction criteria air pollutant emissions of the proposed project is summarized in Table 4.3-4 below. As shown in Table 4.3-4, the construction period emissions would be below the Air District significance thresholds.

Table 4.3-4: Average Daily Construction Period Criteria Pollutant Emissions

Emission Source	Emissions (pounds/day)			
	NO_x	**ROG**	**PM_{10}**	**$PM_{2.5}$**
Construction Period Average (2024)	6.37	0.73	0.25	0.23
Significance Threshold	54	54	82	54
Significant?	*No*	*No*	*No*	*No*

Source: Illingworth & Rodkin, Inc. *800 Carlisle Way Well & Water Tank Project Health Risk & Greenhouse Gas Assessment*. June 29, 2023.

The Air District considers construction emission impacts that are below the thresholds of significance (such as those of the project) less than significant if Best Management Practices (BMPs) are implemented. The City's 2017 Land Use and Transportation Element (LUTE) EIR (SCH# 2012032003) included a mitigation measure to reduce construction period emissions (LUTE DEIR MM 3.5.3).

Mitigation Measure:

LUTE DEIR MM 3.5.3: Basic BMPs – Include measures to control dust and exhaust during construction.

During any construction period ground disturbance, the applicant shall ensure that the project contractor implement measures to control dust and exhaust. Implementation of the measures recommended by BAAQMD and listed below would reduce the air quality impacts associated with grading and new construction to a less-than-significant level. Additional measures are identified to reduce construction equipment exhaust emissions. The contractor shall implement the following best management practices that are required of all projects:

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
- All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
- 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.
- All vehicle speeds on unpaved roads shall be limited to 15 miles per hour (mph).

- 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.
- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.
- All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
- Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

With implementation of mitigation measure LUTE DEIR MM 3.5.3, the project construction period emissions would be further reduced by controlling dust, limiting equipment idling, and properly maintaining equipment. **(Less than Significant Impact with Mitigation Incorporated)**

Operational Period Emissions

Operational emissions from the project would be generated primarily from vehicles driven by future employees and testing on the emergency generator on-site. The operational emissions of the project were modeled, and the results are summarized in Table 4.3-5. Refer to Appendix A for details about the modeling, data inputs, and assumptions.

Table 4.3-5: Operational Period Criteria Pollutant Emissions

Emission Source	Annual Emissions (tons/year)			
	NOx	**ROG**	**PM_{10}**	**$PM_{2.5}$**
Tons Per Year				
Annual Project Operational Emissions	0.11	0.04	0.01	0.01
Significance Threshold	10	10	15	10
Significant?	*No*	*No*	*No*	*No*
Pounds Per Day				
Daily Project Operational Emissions*	0.58	0.21	0.03	0.03
Significance Threshold	54	54	82	54
Significant?	*No*	*No*	*No*	*No*

* Assumes 365-day operation

Source: Illingworth & Rodkin, Inc. *800 Carlisle Way Well & Water Tank Project Health Risk & Greenhouse Gas Assessment*. June 29, 2023.

As shown in Table 4.3-5, the project's operation emissions would be below the Air District annual tons per year and average pounds per day significance thresholds. The project, therefore, would not result in significant operational criteria air pollutant emissions. **(Less than Significant Impact)**

Consistency with 2017 CAP Control Measures

Because the project would not exceed the Air District impact thresholds for criteria air pollutant emissions, the project is not required to incorporate project-specific control measures listed in the 2017 CAP. Furthermore, implementation of the project would not inhibit the Air District or partner agencies from continuing progress toward attaining state and federal air quality standards and eliminating health-risk disparities from exposure to air pollution among Bay Area communities, as described within the 2017 CAP. Based on the above discussion, the project would not conflict with 2017 CAP. **(Less than Significant Impact)**

Impact AIR-2:	The project would not 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 with Mitigation Incorporated)**

As discussed previously in Section 4.3.1.3 Existing Conditions, the Bay Area is considered a non-attainment area for ground-level O_3 and $PM_{2.5}$ under both the federal and state Clean Air Act. The area is also considered a nonattainment area for PM_{10} under the state act, but not the federal act. The Bay Area has attained both state and federal ambient air quality standards for CO. As part of an effort to attain and maintain ambient air quality standards for O_3 and PM_{10}, the Air District has established thresholds of significance for these air pollutants and their precursors, as listed in Table 4.3.2. These thresholds are for O_3 precursor pollutants (ROG and NO_X), PM_{10}, and $PM_{2.5}$, and apply to both construction period and operational period impacts.

As discussed under Impact AQ-1, the construction period and operational period criteria air pollutant emissions would not exceed the Air District thresholds of significance, and the project would implement BMPs consistent with Air District-recommended BMPs (LUTE DEIR MM 3.5.3) controlling dust, limiting equipment idling, and properly maintaining equipment. Therefore, the project would not result in a cumulatively considerable net increase of criteria air pollutant emissions. **(Less than Significant Impact with Mitigation Incorporated)**

Impact AIR-3:	The project would not expose sensitive receptors to substantial pollutant concentrations. **(Less than Significant Impact with Mitigation Incorporated)**

Development of the proposed project can increase the health risk of existing sensitive receptors during construction and operation. Temporary project construction activity which generates dust and equipment exhaust would affect nearby sensitive receptors. Operation of the project would include the use of diesel-powered emergency generators, which would increase air pollutant and TAC emissions in the area. Community risk impacts were addressed by predicting increased cancer risk, the increase in annual $PM_{2.5}$ concentrations and computing the Hazard Index (HI) for non-cancer health risks. To evaluate the increased cancer risks from the project, a 30-year exposure period was used, per Air District guidance, with the sensitive receptors being exposed to both project construction and operation emissions during this timeframe. Unlike the increased maximum cancer risk, the annual $PM_{2.5}$ concentration and HI values are not additive but based on the annual maximum values for the entirety of the project.

The project's community risk impacts to existing sensitive receptors for construction activities and operational activities, and cumulative community risk impacts combined with other existing sources of TACs in the project area are discussed below.

Construction Period Emissions

The primary health risk impact associated with construction projects are cancer risks associated with diesel exhaust (i.e., DPM), which is a known TAC, and exposure to high ambient concentrations of dust (i.e., $PM_{2.5}$). DPM poses both a potential health and nuisance impact to nearby receptors. A community health risk assessment of the project construction activities was conducted that evaluated potential health effects to nearby sensitive receptors from construction emissions of DPM and $PM_{2.5}$. Refer to Appendix A for details about community health risk modeling, data inputs, and assumptions.

Table 4.3-6 summarizes the maximum excess cancer risk, annual $PM_{2.5}$ concentration, and non-cancer HI based on the maximum DPM concentration affecting the maximally exposed individual (MEI), which is the sensitive receptor affected the most by project construction emissions. The MEI that would be most affected by project construction is located on the first floor (five feet above ground) of an adjacent single-family residence to the southeast of the project, this location is show on Figure 4.3-1. As shown in Table 4.3-6, the construction risk impacts from the proposed project exceed the Air District single-source threshold for incremental cancer risk, while the single-source $PM_{2.5}$ concentration and HI thresholds are not exceeded.

Table 4.3-6: Project Health Risk Impacts to the Off-Site MEI

Emission Source	Cancer Risk (per million)	Annual $PM_{2.5}$ (mg/m^3)	Hazard Index
Project Construction (0-1 year)			
Unmitigated	**13.65**	0.08	0.02
Mitigated*	5.45	0.03	0.01
Project Operation – Generator (2-30 years)	1.46	<0.1	<0.1
Total Project (Construction + Operation) (0-30 years)			
Unmitigated	**15.11**	0.08	0.02
Mitigated*	6.91	0.03	0.01
Air District Single-Source Threshold	10.0	0.3	1.0
Exceed Threshold? Unmitigated	***Yes***	*No*	*No*
*Mitigated**	*No*	*No*	*No*

*Assumes implementation of mitigation measures LUTE DEIR MM 3.5.3 and MM AIR-3.1.

Source: Illingworth & Rodkin, Inc. *800 Carlisle Way Well & Water Tank Project Health Risk & Greenhouse Gas Assessment*. June 29, 2023.

Source: Illingworth & Rodkin, Inc., June 29, 2023.

LOCATION OF OFF-SITE RECEPTORS AND MAXIMUM TAC IMPACT | FIGURE 4.3-1

Mitigation Measure:

MM AIR-3.1: Use construction equipment that has low diesel particulate matter exhaust emissions.

Implement a feasible plan to reduce DPM emissions by 35 percent such that increased cancer risk from construction would be reduced below the Air District significance threshold as follows:

1. All construction equipment larger than 25 horsepower used at the site for more than two continuous days or 20 hours total shall meet U.S. EPA Tier 4 emission standards for PM (PM_{10} and $PM_{2.5}$), if feasible, otherwise,

    a. If use of Tier 4 equipment is not available, alternatively use equipment that meets U.S. EPA emission standards for Tier 2 or 3 engines and include particulate matter emissions control equivalent to CARB Level 3 verifiable diesel emission control devices that altogether achieve a 35 percent reduction in particulate matter exhaust in comparison to uncontrolled equipment; alternatively (or in combination).
    b. Use of electrical or non-diesel fueled equipment.

2. Alternatively, the applicant may develop another construction operations plan demonstrating that the construction equipment used on-site would achieve a reduction in construction diesel particulate matter emissions by 35 percent or greater. Elements of the plan could include a combination of some of the following measures:
    - Implementation of No. 1 above to use Tier 4 or alternatively fueled equipment,
    - Installation of electric power lines during early construction phases to avoid use of diesel generators and compressors,
    - Use of electrically-powered equipment,
    - Forklifts and aerial lifts used for exterior and interior building construction shall be electric or propane/natural gas powered,
    - Change in construction build-out plans to lengthen phases, and
    - Implementation of different building techniques that result in less diesel equipment usage.

Such a construction operations plan would be subject to review by an air quality expert and approved by the City prior to construction.

Modeling was completed to determine the effectiveness of mitigation measures LUTE DEIR MM 3.5.3 (implementation of BMPs consistent with Air District recommendations) and MM AIR-3.1 (requiring reduction of DPM emissions) at reducing health risk impacts to project MEI. The modeling results show that with the implementation of mitigation measures LUTE DEIR MM 3.5.3 and MM AIR-3.1, the project's significant cancer risk impact would be reduced to a less than significant level (see Table 4.3-6). Refer to Appendix A for additional details about the modeling. **(Less than Significant Impact with Mitigation Incorporated)**

Operation Period Emissions

Operation of the project would have long-term emissions from stationary sources (i.e., generators). While these emissions would not be as intensive at or near the site as construction activity, they would contribute to long-term effects to sensitive receptors. The project would include one 230-kilowatt, 308-horsepower stand-by emergency diesel generator to power the system in the event of a power failure. Operation of the diesel generators would be a source of TAC emissions. As discussed in Section 3.3.4, the generator would be tested bi-weekly for approximately 30 minutes at a time in order to ensure that it would be able to power the site in the event of a power failure.

Table 4.3-6 above summarizes the maximum excess cancer risk, annual $PM_{2.5}$ concentration, and non-cancer HI based on the maximum DPM concentration affecting the MEI. The MEI identified for project construction is the same MEI identified during project operation. Refer to Appendix A for details about the modeling, data inputs, assumptions, and MEIs. As summarized in Table 4.3-6, the project's operation-related increased cancer risk, annual $PM_{2.5}$ concentration, and HI at the MEI do not exceed the Air District single-source thresholds. **(Less than Significant Impact)**

Cumulative Emissions

By its very nature, air pollution is largely a cumulative impact. The geographic area for cumulative impacts to sensitive receptors is within 1,000 feet of the project site. This distance is recommended by the Air District because adverse effects are the greatest within this distance. At further distances, health risk diminishes. Within 1,000 feet of the project site, only one existing source of TACs was identified, South Wolfe Road, which could have traffic exceeding 10,000 vehicles per day. Other nearby streets were assumed to have less than 10,000 vehicles per day.

Community risk impacts from the cumulative sources to the project MEI were modeled and the results are summarized in Table 4.3-7. Refer to Appendix A for details about the modeling, data inputs, and assumptions. As shown in Table 4.3-7, the project would not exceed the Air District cumulative thresholds for cancer risk, annual $PM_{2.5}$, or HI.

Table 4.3-7: Cumulative Health Risk Impacts to the Off-Site MEI

Emission Source	Cancer Risk (per million)*	Annual $PM_{2.5}$ (mg/m^3)*	Hazard Index
Total Project (Construction + Operation)			
Unmitigated	**15.11**	0.08	0.02
Mitigated*	6.91	0.03	0.01
South Wolfe Road, Air District Raster Screening Tool	4.02	0.15	0.02
Combined Sources			
Unmitigated	19.13	0.23	0.04
Mitigated*	10.93	0.18	0.03
Air District Cumulative Source Threshold	100	0.8	10.0
Exceed Threshold?			
Unmitigated	*No*	*No*	*No*
*Mitigated**	*No*	*No*	*No*

*Assumes implementation of mitigation measures LUTE DEIR MM 3.5.3 and MM AIR-3.1.

Source: Illingworth & Rodkin, Inc. *800 Carlisle Way Well & Water Tank Project Health Risk & Greenhouse Gas Assessment*. June 29, 2023.

As discussed previously, the project would not result in significant health risks to nearby sensitive receptors with the implementation of mitigation measures LUTE DEIR MM 3.5.3 and MM AIR-3.1. As shown in Table 4.3.7, the project's cumulative health risk impacts would be less than significant without mitigation; however, the project would implement LUTE DEIR MM 3.5.3 and MM AIR-3.1 which would further reduce the less than significant cumulative impact. **(Less than Significant Cumulative Impact with Mitigation Incorporated)**

Heath Effects from Criteria Air Pollutants

In a 2018 decision (Sierra Club v. County of Fresno), the state Supreme Court determined CEQA requires that when a project's criteria air pollutant emissions would exceed applicable thresholds and contribute a cumulatively considerable contribution to a significant cumulative regional criteria pollutant impact, the potential for the project's emissions to affect human health in the air basin must be disclosed. State and federal ambient air quality standards are health-based standards, and exceedances of those standards result in continued unhealthy levels of air pollutants.

As stated in the 2017 BAAQMD CEQA Air Quality Guidelines, air pollution by its nature is largely a cumulative impact. No single project is sufficient in size, by itself, to result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. In developing thresholds of significance for air pollutants, the Air District considered the emission levels for which a project's individual emissions would be cumulatively considerable. If a project has a less than significant impact for criteria pollutants, it is assumed to have no adverse health effect. As discussed under Impact AQ-2, the project's construction and operation emissions would be below the Air District criteria air pollutant emissions thresholds with the implementation of mitigation measures LUTE DEIR MM 3.5.3 and

MM AIR-3.1. For these reasons, the project's criteria air pollutant emissions would not result in a significant health impact. **(Less than Significant Impact)**

Impact AIR-4:	The project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people. **(Less than Significant Impact)**

According to the Air District's CEQA Guidelines, an odor source with five or more confirmed complaints per year averaged over three years is considered to have a significant impact. Future construction activities in the project area could result in odorous emissions from diesel exhaust associated with construction equipment. Because of the temporary nature of these emissions and highly diffusive properties of diesel exhaust, odorous exposure of sensitive receptors to these emissions would be limited and the impact is considered less than significant.

The Air District has identified a variety of land uses and types of operations that would produce emissions that may lead to odors. Land uses identified include wastewater treatment plants, sanitary landfills, food processing facilities, coffee roasters, composting facilities, and confined animal facility/feed lot/dairy facility. The project proposes a groundwater pumping and storage use, which does not fall under any of the land uses identified by the Air District to cause objectionable odors. Therefore, the impact would be less than significant. **(Less than Significant Impact)**

4.4 BIOLOGICAL RESOURCES

The discussion in this section is based, in part, on the Arborist Report prepared by Urban Tree Management, Inc. dated September 28, 2021. This report is attached to this Initial Study as Appendix B.

4.4.1 Environmental Setting

4.4.1.1 *Regulatory Framework*

Federal and State

Endangered Species Act

Individual plant and animal species listed as rare, threatened, or endangered under state and federal Endangered Species Acts are considered special-status species. Federal and state endangered species legislation has provided the United States Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (CDFW) with a mechanism for conserving and protecting plant and animal species of limited distribution and/or low or declining populations. Permits may be required from both the USFWS and CDFW if activities associated with a proposed project would result in the take of a species listed as threatened or endangered. To "take" a listed species, as defined by the State of California, is "to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill" these species. Take is more broadly defined by the federal Endangered Species Act to include harm of a listed species.

In addition to species listed under state and federal Endangered Species Acts, Sections 15380(b) and (c) of the CEQA Guidelines provide that all potential rare or sensitive species, or habitats capable of supporting rare species, must be considered as part of the environmental review process. These may include plant species listed by the California Native Plant Society and CDFW-listed Species of Special Concern.

Migratory Bird Treaty Act

The federal Migratory Bird Treaty Act (MBTA) prohibits killing, capture, possession, or trade of migratory birds except in accordance with regulations prescribed by the Secretary of the Interior. Hunting and poaching are also prohibited. The taking and killing of birds resulting from an activity is not prohibited by the MBTA when the underlying purpose of that activity is not to take birds.[19] Nesting birds are considered special-status species and are protected by the USFWS. The CDFW also protects migratory and nesting birds under California Fish and Game Code Sections 3503, 3503.5, and 3800. The CDFW defines taking as causing abandonment and/or loss of reproductive efforts through disturbance.

[19] United States Department of the Interior. "Memorandum M-37050. The Migratory Bird Treaty Act Does Not Prohibit Incidental Take." Accessed January 9, 2023. Available at: https://www.doi.gov/sites/doi.gov/files/uploads/m-37050.pdf.

Sensitive Habitat Regulations

Wetland and riparian habitats are considered sensitive habitats under CEQA. They are also afforded protection under applicable federal, state, and local regulations, and are generally subject to regulation by the United States Army Corps of Engineers (USACE), Regional Water Quality Control Boards (RWQCBs), CDFW, and/or the USFWS under provisions of the federal Clean Water Act (e.g., Sections 303, 304, 404) and State of California Porter-Cologne Water Quality Control Act.

Fish and Game Code Section 1602

Streambeds and banks, as well as associated riparian habitat, are regulated by the CDFW per Section 1602 of the Fish and Game Code. Work within the bed or banks of a stream or the adjacent riparian habitat requires a Streambed Alteration Agreement from the CDFW.

Regional and Local

City of Sunnyvale General Plan

The City's General Plan includes policies for the purpose of avoiding or mitigating environmental impacts resulting from planned development projects within the City. The following policies are specific to biological resources and are applicable to the proposed project.

Policy	Description
Land Use and Transportation Element	
LT-2.3	Accelerate the planting of large canopy trees to increase tree coverage in Sunnyvale in order to add to the scenic beauty and walkability of the community; provide environmental benefits such as air quality improvement, wildlife habitat, and reduction of heat islands; and enhance the health, safety, and welfare of residents.
LT-2.5	Recognize the value of protected trees and heritage landmark trees (as defined in City ordinances) to the legacy, character, and livability of the community by expanding the designation and protection of large signature and native trees on private property and in City parks.

Urban Forest Management Plan

The Urban Forest Management Plan (UFMP) was adopted by the City in 2014 to sustain, protect, and promote the urban forest. The UFMP contains goals and guidelines for tree maintenance and encouraging positive tree management.

Sunnyvale Municipal Code

- Chapter 13.16 (City Trees) provides guidance and regulations on City trees, including protected trees, removal or damage to trees, and permitting.[20] Permitting is required for

[20] Pursuant to SMC Chapter 13.16, a "City tree" is defined as any woody plant which is growing within the public right-of-way along a city street and has a trunk four inches or more in diameter at four and one-half feet above normal ground level.

planting trees in the public right of way, removal or maintenance to protected trees, and construction affecting protected trees.

- Chapter 19.94 (Tree Preservation) regulates the protection, installation, removal and long term management of significantly sized trees on private property within the City and City owned golf courses and parks; encourages the proper protection and maintenance of significantly sized trees which are located on such property; establishes a review and permit procedure to assure the correct planting, maintenance, protection and removal of significant trees on such property; and establishes penalties for violation of its provisions. The provisions of Chapter 19.94 identify and prescribe specific procedures and requirements for the filing, processing, and consideration of the removal and preservation of trees. A significant size tree (or protected tree) is defined as:

    - Any single trunk tree 38 inches or greater in circumference (the circumference of the tree is measured at 4.5 feet above the ground); or
    - Any multi-trunk tree which has at least one trunk 38 inches or greater in circumference or where the measurements of the multi-trunks added together equal at least 113 inches.

Bird Safe Design Guidelines

In order to address bird safety concerns, the City Council adopted the Bird Safe Building Design Guidelines in January 2014. The intent of these guidelines is to reduce the risk of bird collisions in new construction. These guidelines focus on building design issues based upon the location of the proposed building and provide a set of design requirements. These guidelines address design requirements for (1) sites within 300 feet of a body of water or that are adjacent to an open space or park area larger than one acre in size and (2) for other areas of the City that are considered to be lower risk for bird collisions. The design requirements include minimizing reflective surfaces and glass walls, reducing nighttime lighting, discouraging the placement of larger water features, and avoiding landscape designs that emphasize tall landscaping adjacent to reflective surfaces.

4.4.1.2 *Existing Conditions*

The project site consists of utility infrastructure (i.e., chemical storage buildings, cellular communication tower, and booster pump), compact dirt, trees, and shrubs and is located within an urban area. The project site provides habitat and foraging opportunities for urban-adapted birds. Habitats primarily associated with Bay Area special-status species, such a riparian, wetland, salt marsh, freshwater marsh, and serpentine grassland habitats, are not present on or adjacent to the site. The nearest waterway is the Sunnyvale East Channel, which is a man-made channel constructed to mitigate the risk associated with flooding in the area.[21] It is located approximately 0.28-mile to the west of the project site. The pond located adjacent to the Sunnyvale Community Center, which is classified as freshwater pond habitat, is located 0.8-mile northwest of the project site.[22]

[21] Santa Clara Valley Water District. *Sunnyvale East and West Channels Flood Protection Project*. Accessed January 13, 2023. Available at: https://www.valleywater.org/sites/default/files/Fact%20Sheet_Sunnyvale%20EW%20Channels%20040816.pdf.
[22] United States Fish and Wildlife Service. *National Wetlands Inventory, Surface Waters and Wetlands.* Map. May 2021.

The primary biological resources on-site are trees. The project site contains 38 trees, including 15 protected trees as defined in the SMC. The health of the trees on-site ranges from being dead or near dead to stable with no significant health concerns, with most of the trees in "fair" condition (which means that the tree health is declining and measures should be taken to improve health and appearance). The predominant tree species on-site is the southern live oak, which comprises approximately 32 percent of the trees within the project site. The 15 protected trees on-site are distributed throughout the site. The largest tree on-site is a red flowering eucalyptus located on the southern portion of the project site, which has a trunk circumference of approximately 36 inches and is in fair health. Refer to Appendix B for additional information about the existing trees on-site, including a tree location map.

4.4.2 Impact Discussion

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
1) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife (CDFW) or United States Fish and Wildlife Service (USFWS)?	☐	☒	☐	☐
2) 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 CDFW or USFWS?	☐	☐	☐	☒
3) 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?	☐	☐	☐	☒
4) 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?	☐	☒	☐	☐
5) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☒	☐

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
6) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

Impact BIO-1:	The project would not 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 CDFW or USFWS. **(Less than Significant Impact with Mitigation Incorporated)**

As discussed in Section 4.4.1.2 Existing Conditions, given the urbanized nature of the surrounding area, there are no sensitive habitats or special-status species on or adjacent to the project site. Of the existing 38 trees on-site, eight would be removed due to interference with the project design and required construction activities. These trees could provide nesting habitat for birds, including migratory birds and raptors. Nesting birds are protected under provisions of the Migratory Bird Treaty Act and California Fish and Game Code Sections 3503, 3503.5, and 2800.

Future construction activities during the breeding season could result in the incidental loss of fertile eggs or nestlings, or otherwise lead to nest abandonment. Disturbance that causes abandonment and/or loss of reproductive effort is considered a taking by the CDFW and MBTA. Construction activities, such as tree removal and site grading, that disturb a nesting bird on a site or immediately adjacent to the construction zone would constitute a significant impact.

Mitigation Measures:

MM BIO-1.1: When possible, 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 1 through August 31.

If it is not possible to schedule construction and tree removal between September and January, then pre-construction surveys for nesting birds shall be completed by a qualified ornithologist to ensure that no nests shall be disturbed during project implementation. This survey shall be completed no more than 14 days prior to the initiation of grading, tree removal, or other demolition or construction activities during the early part of the breeding season (February through April) and no more than 30 days prior to the initiation of these activities during the late part of the breeding season (May through August).

During this survey, the ornithologist shall inspect all trees and other possible nesting habitats within and immediately adjacent to the construction area for

nests. If an active nest is found sufficiently close to work areas to be disturbed by construction, the ornithologist shall determine the extent of a construction-free buffer zone to be established around the nest to ensure that nests of bird species protected by the MBTA or Fish and Game code shall not be disturbed during project construction.

A final report of nesting birds, including any protection measures, shall be submitted to the Director of Community Development prior to the start of grading or tree removal.

The proposed project, with the implementation of the above mitigation measure, would result in less than significant impacts to nesting birds by avoiding construction activities during the nesting season and conducting preconstruction surveys if construction activities were to take place during nesting season to avoid disturbing active nests that may be affected by project construction. If any nesting birds are identified during these surveys, construction-free buffer zones would be established around nests to protect the nesting birds. **(Less than Significant Impact with Mitigation Incorporated)**

Impact BIO-2:	The project would not 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 CDFW or USFWS. **(No Impact)**

The project site and adjacent sites are within an urban area and do not contain sensitive habitats. There is no riparian habitat or other sensitive natural communities on or adjacent to the site. The nearest waterway is Sunnyvale East Channel, a man-made flood control channel approximately 0.28-mile west of the project site. Therefore, the project would not have an impact on state or federally protected riparian habitat or other sensitive natural community identified in local or regional plans and policies. **(No Impact)**

Impact BIO-3:	The project would not have a substantial adverse effect on state or federally protected wetlands through direct removal, filling, hydrological interruption, or other means. **(No Impact)**

There is no wetland on or adjacent to the site. As discussed in Section 4.1.1.2 Existing Conditions, the freshwater pond habitat at the Sunnyvale Community Center is the nearest wetland to the project site and is located 0.8-mile northwest of the project site.[23] Therefore, the project would not have an impact on state or federally protected wetlands. **(No Impact)**

[23] United States Fish and Wildlife Service. *National Wetlands Inventory*, *Surface Waters and Wetlands*. Map. May 2021.

Impact BIO-4:	The project would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites. **(Less than Significant Impact with Mitigation Incorporated)**

Because the project site is surrounded by urban development and does not contain any waterways, sensitive habitats (such as wetlands), or open space areas along the San Francisco Bay, it does not function as a wildlife movement corridor for fish, birds, and non-flying wildlife in the region. The site is adjacent to Panama Park. The park is surrounded by urban development on all four sides and, therefore, does not act as a wildlife corridor. The project would implement the mitigation measure MM BIO-1.1 identified under Impact BIO-1 to protect nesting birds, if present during construction. The project would, therefore, not substantially interfere with the movement of fish or wildlife species, nor interfere with established corridors or wildlife nursery sites. **(Less than Significant Impact with Mitigation Incorporated)**

Impact BIO-5:	The project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. **(Less than Significant Impact)**

Sunnyvale Municipal Code

The proposed project would remove eight of the 38 existing trees on-site, including five protected trees, and replace them with 12 new trees on the eastern portion of the site. The trees removed would be replaced at a 1:1 ratio. SMC Chapter 13.16 requires projects to obtain the necessary permits to plant, maintain, remove, and protect city trees during construction. Pursuant to SMC Chapter 19.94, the project shall follow the procedures and requirements for removing protected trees on the project site. At the discretion of the Director of Community Development, additional replacement trees may be required as a condition of issuance of a protected tree removal permit, or as a condition of any discretionary permit for development or redevelopment (SMC Chapter 19.94.080). The project, therefore, would not conflict with the SMC Chapters 13.16 and 19.94. **(Less than Significant Impact)**

Bird Safe Design Guidelines

The City's Bird Safe Building Design Guidelines outline that efforts should be taken by development projects to reduce bird strikes within the City. Because the site is located immediately adjacent to a park larger than one acre in size, the proposed project is required to comply with the Bird Safe Design Guidelines. Applicable guidelines and the project's consistency with them are summarized in Table 4.4-1 below.

Table 4.4-1: Summary of the Project's Consistency with Applicable Bird Safe Design Guidelines

Applicable Guideline	Consistency
Avoid the use of multi-floor expanse of reflective or transparent glass in the first 60 feet of the building design, specifically in these area facing the water or open space	**Consistent:** No reflective or transparent glass would be used on either the proposed chemical storage enclosures or water tank. The proposed project is consistent with this guideline.
Consider use of opaque, fritted or etched glass on ground floor in areas adjacent to landscaped areas	**Consistent:** The proposed chemical storage enclosures and water tank would be constructed out of opaque materials. The proposed project is consistent with this guideline.
Consider using angled glass (20-40 degrees) from vertical to reflect ground instead of adjacent habitat or sky buildings with an expanse of glass near water or landscaping areas	**Consistent:** No reflective glass would be used on either the chemical storage enclosures or water tank proposed by the project. The proposed project is consistent with this guideline.
Avoid placing tall landscaping in front of highly reflective glass and the use of green roofs and water features near glass	**Consistent:** The project does not include any glass, and does not propose green roofs or water features near glass. The proposed project is consistent with this guideline.
No up lighting or spot lights on- site	**Consistent:** No up-lighting or spotlights are proposed as part of the project; therefore, the proposed project is consistent with this guideline.
Ensure all site lighting uses shielded fixtures	**Consistent:** The only lighting proposed on-site would be emergency lighting that would be reserved for emergency situations where repair work is required at night. This lighting would be used infrequently and would be installed consistent with City requirements; therefore, the proposed project is consistent with this guideline.
Place signs at several locations near building with the telephone number an authorized bird conservation organization or museum to aid in species identification and to benefit scientific study	**Consistent:** These signs would be installed on the entry gate on the north side of the site; therefore, the proposed project is consistent with this guideline.
Monitoring efforts shall include a bird-safe program developed by the project owner of the methods to ensure necessary steps are taken to reduce bird strikes. These efforts would include how each dead bird will be handled and donated to scientific study, providing a yearly inventory to the City of the number of birds found and locations, and the steps necessary to resolve any consistent location's bird deaths. Options include shades to reduce transparency and night lighting, fritted glass, netting, stickers, etc.	**Consistent:** The applicant's monitoring program would be administered by Cal Water's Environmental Affairs group in coordination with the Cal Water Los Altos Suburban District operations staff. Cal Water's Environmental Affairs group would maintain records documenting the number and location of bird deaths, and report findings to the City at the required frequency. This monitoring program would be consistent with City requirements; therefore, the proposed project is consistent with this guideline.

Other guidelines related to building glass, architectural building design, proximity to existing water features, glass skyways, glass walls, and interior building lighting are not applicable and, therefore, not included in Table 4.4-1. As summarized by Table 4.4-1, the proposed project is consistent with applicable Bird Safe Design Guidelines because it would not include any glass materials or up-

lighting/spotlights, and it would include signage and monitoring. For these reasons, the proposed project would not conflict with the City's Bird Safe Design Guidelines. **(Less than Significant Impact)**

Impact BIO-6:	The project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. **(No Impact)**

The project site is not part of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan. The Santa Clara Valley Habitat Plan/Natural Community Conservation Plan (Habitat Plan) is a conservation program to promote the recovery of endangered species in portions of Santa Clara County while accommodating planned development, infrastructure, and maintenance activities. The City of Sunnyvale, including the project site, is located outside the Habitat Plan area and outside of the expanded study area for burrowing owl conservation. Therefore, it would not conflict with any approved local, regional, or state habitat conservation plan. **(No Impact)**

4.5 CULTURAL RESOURCES

The discussion in this section is based in part on an Archaeological Sensitivity Assessment prepared by Archaeological/Historical Consultants dated February 2023. A copy of the Archaeological Sensitivity Assessment, which contains confidential information related to archaeological resources, is on file at the City.

4.5.1 Environmental Setting

4.5.1.1 *Regulatory Framework*

Federal and State

National Historic Preservation Act

Federal protection is legislated by the National Historic Preservation Act of 1966 (NHPA) and the Archaeological Resource Protection Act of 1979. These laws maintain processes for determination of the effects on historical properties eligible for listing in the National Register of Historic Places (NRHP). Section 106 of the NHPA and related regulations (36 Code of Federal Regulations [CFR] Part 800) constitute the primary federal regulatory framework guiding cultural resources investigations and require consideration of effects on properties that are listed or eligible for listing in the NRHP. Impacts to properties listed in the NRHP must be evaluated under CEQA.

California Register of Historical Resources

The California Register of Historical Resources (CRHR) is administered by the State Office of Historic Preservation and encourages protection of resources of architectural, historical, archeological, and cultural significance. The CRHR identifies historic resources for state and local planning purposes and affords protections under CEQA. Under Public Resources Code Section 5024.1(c), a resource may be eligible for listing in the CRHR if it meets any of the NRHP criteria.[24]

Historical resources eligible for listing in the CRHR must meet the significance criteria described previously and retain enough of their historic character or appearance to be recognizable as historical resources and to convey the reasons for their significance. A resource that has lost its historic character or appearance may still have sufficient integrity for the CRHR if it maintains the potential to yield significant scientific or historical information or specific data.

The concept of integrity is essential to identifying the important physical characteristics of historical resources and, therefore, in evaluating adverse changes to them. Integrity is defined as "the authenticity of a historical resource's physical identity evidenced by the survival of characteristics that existed during the resource's period of significance." The processes of determining integrity are similar for both the CRHR and NRHP and use the same seven variables or aspects to define integrity that are used to evaluate a resource's eligibility for listing. These seven characteristics include 1) location, 2) design, 3) setting, 4) materials, 5) workmanship, 6) feeling, and 7) association.

[24] California Office of Historic Preservation. "CEQA Guidelines Section 15064.5(a)(3) and California Office of Historic Preservation Technical Assistance Series #6." Accessed January 9, 2023. Available at: http://www.ohp.parks.ca.gov/pages/1069/files/technical%20assistance%20bulletin%206%202011%20update.pdf.

California Native American Historical, Cultural, and Sacred Sites Act

The California Native American Historical, Cultural, and Sacred Sites Act applies to both state and private lands. The act requires that upon discovery of human remains, construction or excavation activity must cease and the County coroner be notified.

Public Resources Code Sections 5097 and 5097.98

Section 15064.5 of the CEQA Guidelines specifies procedures to be used in the event of an unexpected discovery of Native American human remains on non-federal land. These procedures are outlined in Public Resources Code Sections 5097 and 5097.98. These codes protect such remains from disturbance, vandalism, and inadvertent destruction, establish procedures to be implemented if Native American skeletal remains are discovered during construction of a project, and establish the Native American Heritage Commission (NAHC) as the authority to resolve disputes regarding disposition of such remains.

Pursuant to Public Resources Code Section 5097.98, in the event of human remains discovery, no further disturbance is allowed until the County coroner has made the necessary findings regarding the origin and disposition of the remains. If the remains are of a Native American, the County coroner must notify the NAHC. The NAHC then notifies those persons most likely to be related to the Native American remains. The code section also stipulates the procedures that the descendants may follow for treating or disposing of the remains and associated grave goods.

Local

City of Sunnyvale General Plan

The City's General Plan includes policies for the purpose of avoiding or mitigating environmental impacts resulting from planned development projects within the City. The following policies are specific to cultural resources and are applicable to the proposed project.

Policy	Description
Community Character Element	
CC-5.1	Preserve existing landmarks and cultural resources and their environmental settings.
CC-5.5	Archeological resources should be preserved whenever possible.

Sunnyvale Municipal Code

Chapter 19.96 (Heritage Preservation) establishes the Heritage Preservation Commission to oversee the designation, preservation, restoration, rehabilitation, relocation, or reconstruction of qualified historic resources (e.g., buildings, properties, signs, features, and trees). The heritage preservation commission has the chance to review all permit applications regarding heritage resources, heritage resource districts, landmark site or landmark district designated structures that involve changing use, exterior alteration, or demolition; and approve, disapprove, or approve as modified said applications.

Heritage Resource Inventory

The City maintains its Heritage Resource Inventory, containing landmarks, trees, residential and commercial districts, and individual structures of local importance. There are two main types of protected structures in Sunnyvale: heritage resources and local landmarks. A local landmark is the highest level of protection afforded by the City under the SMC. Heritage resources have a somewhat lower level of protection that recognizes properties which have architectural or historic significance. The inventory was last updated in September 2018.[25]

4.5.1.2 *Existing Conditions*

Historic Resources

Sunnyvale was a historically agricultural community until the mid-twentieth century when the economy shifted towards industrial uses, and as a result, the City became more urbanized. The area surrounding the project site was historically used for agricultural land uses. In the early 1950's the surrounding area began to be subdivided and developed with residential land uses. By the early to mid-1960's, the project site was surrounded by additional residential development and was developed with a groundwater well, water storage tank, and several accessory buildings. The project site currently contains a non-operational groundwater well, a cellular communication tower, chemical storage buildings, and booster pump.

To be considered a historic resource, a site must meet certain sets of criteria including relevance to local and regional history, its association with historic figures, and the distinctiveness of its architecture. The site does not contain any resources listed on or eligible for listing on the NRHP, CRHP, or the City of Sunnyvale Historic Resources Inventory because none of the existing structures meet the criteria for historical significance. Because the site was not developed with any structures prior to the mid-1960's and there is no historic evidence of previous structures, the project site has a low sensitivity for historic-era subsurface deposits.

Archaeological Resources

A records search at the Northwest Information Center of the California Historical Resources Information System (CHRIS) was completed to identify all recorded archaeological sites on and within one-quarter mile of the project site. No resources have been recorded on-site or within 0.25-mile of the project site.

Archaeological sites are most often found in flat locations with access to a perennial source of fresh water. In Santa Clara County, Native American sites are most often found within 0.50-mile of major watercourses and 0.25-mile of minor watercourses. Soils deposited during the Holocene era (approximately 11,700 years ago), especially young alluvium from the last 2,000 to 3,000 years, are more likely to contain buried archaeological deposits. The soil on-site consists of late Pleistocene alluvial fan deposits, and therefore, dates back to more than 11,700 years ago. Based on the absence of known archaeological resources within a 0.25-mile of the site, the approximate age of the soils,

[25] City of Sunnyvale. "Heritage Resources Inventory." Accessed: January 9, 2023. Available at: https://www.sunnyvale.ca.gov/home/showpublisheddocument/1556/637820850915270000.

and lack of access to nearby fresh water, the project site has a low sensitivity for buried Native American archaeological deposits.

4.5.2 Impact Discussion

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
1) Cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines Section 15064.5?	☐	☐	☐	☒
2) Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5?	☐	☒	☐	☐
3) Disturb any human remains, including those interred outside of dedicated cemeteries?	☐	☒	☐	☐

Impact CUL-1: The project would not cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines Section 15064.5. **(No Impact)**

The site and adjacent sites do not contain any resources listed on or eligible for listing on the NRHP or the CRHP; nor does it contain any resources listed on the City of Sunnyvale Historic Resources Inventory. Therefore, the project would not impact historical resources pursuant to CEQA Guidelines Section 15064.5. **(No Impact)**

Impact CUL-2: The project would not cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5. **(Less than Significant Impact with Mitigation Incorporated)**

As discussed in Section 4.5.1.2, no archaeological resources have been previously identified on or adjacent to the site. Based on the absence of historic development on-site, the approximate age of the soils on-site, and the lack of access to a nearby source of fresh water, the site has a low sensitivity for pre-historic archaeological resources and a low sensitivity for historic-era archaeological resources. Although there are no known archaeological resources on-site, it is possible that resources could be discovered on-site and impacted during excavation.

Mitigation Measures:

MM CUL-2.1: Prior to ground-disturbing activities, a qualified archaeologist shall provide cultural resources training to all contractors and employees involved in trenching and excavation. The training shall inform participants how to recognize archaeological artifacts and deposits, and discuss their obligations under the law and the project mitigation measures.

MM CUL-2.2: A qualified archaeologist shall monitor the demolition of the building foundations and any other below surface disturbances, such as but not limited to, grading, excavation, and utility connections and improvements. If any cultural resources are identified, all activity in the vicinity of such resources shall stop until a research design and treatment plan is prepared to address those types of resources encountered and such plan is approved by the City, as described in mitigation measure MM CUL-2.3 below. Any cultural resources identified shall be evaluated to determine if these resources would qualify for the NRHP or CRHR. If no resources are found during excavation work, the implementation of mitigation measure MM CUL-2.3 below is not required.

MM CUL-2.3: In the event that buried, or previously unrecognized archaeological deposits or materials of any kind are inadvertently exposed during any construction activity, all activity within a 50-foot radius of the find shall be stopped until a qualified archaeologist can assess the find and provide recommendations for further treatment, if warranted. Preservation in place is the preferred treatment of an archeological resource. When preservation in place of an archeological resource is not feasible, data recovery, in accordance with a data recovery plan prepared by a qualified archaeologist and adopted by the City, is the appropriate mitigation. Construction and potential impacts to the area within a radius determined by the archaeologist shall not recommence until the assessment is complete.

With implementation of mitigation measures MM CUL-2.1 through MM CUL-2.3, the proposed project would not result in significant impacts to buried archaeological resources because it would provide cultural sensitivity training to educate all contractors on types of artifacts and features that may be encountered and what to do if those items are encountered, retain a qualified archaeologist to monitor excavation work, and stop construction and prepare a research design and treatment plan to protect and preserve resources if found. **(Less than Significant Impact with Mitigation Incorporated)**

Impact CUL-3:	The project would not disturb any human remains, including those interred outside of dedicated cemeteries. **(Less than Significant Impact with Mitigation Incorporated)**

As discussed in Impact CUL-2, although the project site has low sensitivity for pre-historic resources, ground-disturbing activities during project construction could impact unknown underground resources, including human remains.

Mitigation Measure:

MM CUL-3.1: In the event that human remains are discovered during excavation and/or grading of the site, all activity within a 50-foot radius of the find shall be stopped. The Santa Clara County Coroner shall be notified and shall make a determination as to whether the remains are of Native American origin or whether an investigation into the cause of death is required. If the remains are determined to be Native American, the Coroner shall notify the NAHC immediately. Once NAHC identifies the most likely descendants, the descendants shall make recommendations regarding proper burial, which shall be implemented in accordance with Section 15064.5 of the CEQA Guidelines.

With implementation of mitigation measure MM CUL-3.1, the proposed project would not result in significant impacts to human remains because, if any remains are discovered, work would be stopped within a 50-foot radius of the find and, if the find is determined to be Native American, recommendations by the most likely descendants would be implemented for a proper burial. **(Less than Significant Impact with Mitigation Incorporated)**

4.6 ENERGY

4.6.1 Environmental Setting

4.6.1.1 *Regulatory Framework*

Federal and State

Energy Star and Fuel Efficiency

At the federal level, energy standards set by the EPA apply to numerous consumer products and appliances (e.g., the EnergyStar™ program). The EPA also sets fuel efficiency standards for automobiles and other modes of transportation.

Renewables Portfolio Standard Program

In 2002, California established its Renewables Portfolio Standard Program, with the goal of increasing the percentage of renewable energy in the state's electricity mix to 20 percent of retail sales by 2010. Governor Schwarzenegger issued Executive Order (EO) S-3-05, requiring statewide emissions reductions to 80 percent below 1990 levels by 2050. In 2008, EO S-14-08 was signed into law, requiring retail sellers of electricity serve 33 percent of their load with renewable energy by 2020. In October 2015, Governor Brown signed Senate Bill (SB) 350 to codify California's climate and clean energy goals. A key provision of SB 350 requires retail sellers and publicly owned utilities to procure 50 percent of their electricity from renewable sources by 2030. SB 100, passed in 2018, requires 100 percent of electricity in California to be provided by 100 percent renewable and carbon-free sources by 2045.

Executive Order B-55-18 To Achieve Carbon Neutrality

In September 2018, Governor Brown issued an executive order, EO-B-55-18 To Achieve Carbon Neutrality, setting a statewide goal "to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter." The executive order requires CARB to "ensure future Scoping Plans identify and recommend measures to achieve the carbon neutrality goal." EO-B-55-18 supplements EO S-3-05 by requiring not only emissions reductions, but also that, by no later than 2045, the remaining emissions be offset by equivalent net removals of carbon dioxide (CO_2) from the atmosphere through sequestration.

California Building Standards Code

The Energy Efficiency Standards for Residential and Nonresidential Buildings, as specified in Title 24, Part 6 of the California Code of Regulations (Title 24), was established in 1978 in response to a legislative mandate to reduce California's energy consumption. Title 24 is updated approximately every three years.[26] Compliance with Title 24 is mandatory at the time new building permits are issued by city and county governments.[27]

[26] California Building Standards Commission. "California Building Standards Code." Accessed January 19, 2023. Available at: https://www.dgs.ca.gov/BSC/Codes#@ViewBag.JumpTo.
[27] California Energy Commission. "2019 Building Energy Efficiency Standards." Accessed January 19, 2023. Available at: https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2019-building-energy-efficiency.

California Green Building Standards Code

The California Green Building Standards Code (CALGreen) establishes mandatory green building standards for buildings in California. CALGreen was developed to reduce GHG emissions from buildings, promote environmentally responsible and healthier places to live and work, reduce energy and water consumption, and respond to state environmental directives. CALGreen covers five categories: planning and design, energy efficiency, water efficiency and conservation, material and resource efficiency, and indoor environmental quality.

Advanced Clean Cars and Advanced Clean Cars II Program

CARB adopted the Advanced Clean Cars program in 2012 in coordination with the EPA and National Highway Traffic Safety Administration. The program combines the control of smog-causing pollutants and GHG emissions into a single coordinated set of requirements for vehicle model years 2015 through 2025. The program promotes development of environmentally superior passenger cars and other vehicles, as well as saving the consumer money through fuel savings.[28] On November 30, 2022, the Advanced Clean Cars II program was approved and filed with the Secretary of State. This update to the program requires that all new passenger cars, trucks, and SUVs sold in California be zero emissions by 2035.[29]

Regional and Local

City of Sunnyvale Climate Action Playbook

The City of Sunnyvale Climate Action Playbook (August 2019) sets a vision for the City to reduce carbon emissions by 2050. The playbook includes six strategies with "plays" that identify areas for action to reduce GHG emissions (including energy consumption). The following play is related to energy and is applicable to the proposed project.

Play	Description
1.1	Promote 100 percent clean electricity
4.1	Achieve Zero Waste goals for solid waste

Sunnyvale Construction and Demolition Waste Diversion

The City requires remodel or demolition projects where 50 percent or more of the exterior wall will be removed to recycle or reuse at least 65 percent of the project's nonhazardous waste.[30] Recycling of nonhazardous waste reduces the energy use to produce new materials from raw, non-renewable resources.

[28] California Air Resources Board. "The Advanced Clean Cars Program." Accessed January 9, 2023. Available at: https://www.arb.ca.gov/msprog/acc/acc.htm.
[29] California Air Resources Board. "Advanced Clean Cars II." Accessed January 9, 2023. Available at: https://ww2.arb.ca.gov/our-work/programs/advanced-clean-cars-program/advanced-clean-cars-ii.
[30] City of Sunnyvale. "Construction Waste." January 1, 2022. Accessed January 19, 2023. Available at: https://www.sunnyvale.ca.gov/business-and-development/planning-and-building/construction-waste.

4.6.1.2 *Existing Conditions*

Total energy usage in California was approximately 6,956.6 trillion British thermal units (Btu) in the year 2020, the most recent year for which this data was available. Out of the 50 states, California is ranked second in total energy consumption and 49th in energy consumption per capita. The breakdown by sector was approximately 21.8 percent (1,507.7 trillion Btu) for residential uses, 19.6 percent (1,358.3 trillion Btu) for commercial uses, 24.6 percent (1,701.2 trillion Btu) for industrial uses, and 34 percent (2,355.5 trillion Btu) for transportation. This energy is primarily supplied in the form of natural gas, petroleum, nuclear electric power, and hydroelectric power.

Electricity

Electricity in Santa Clara County in 2020 was consumed primarily by the non-residential sector (73 percent), followed by the residential sector consuming 24 percent. In 2020, a total of approximately 16,435 gigawatt hours (GWh) of electricity was consumed in Santa Clara County.

The community-owned Silicon Valley Clean Energy (SVCE) is the electricity provider for the City of Sunnyvale.[31] SVCE sources the electricity and the Pacific Gas and Electric Company (PG&E) delivers it to customers over their existing utility lines. Customers are automatically enrolled in the GreenStart plan and can upgrade to the GreenPrime plan. Both options are considered 100 percent GHG-emission free.

Electricity demand on-site is limited to the operation of irrigation equipment and the cellular communication tower.

Natural Gas

PG&E provides natural gas services within the City of Sunnyvale. In 2020, approximately two percent of California's natural gas supply came from in-state production, while the remaining supply was imported from other western states and Canada.[32] In 2021 residential and commercial customers in California used 33 percent of the state's natural gas, power plants used 0.01 percent, the industrial sector used 33 percent.[33] In 2020, Santa Clara County used less than one percent of the state's total consumption of natural gas.[34]

There is no use of natural gas on-site.

[31] Silicon Valley Clean Energy. "Frequently Asked Questions." Accessed January 19, 2023. Available at: https://www.svcleanenergy.org/faqs.
[32] California Gas and Electric Utilities. 2020 *California Gas Report.* Accessed January 19, 2023. Available at: https://www.socalgas.com/sites/default/files/2020-10/2020_California_Gas_Report_Joint_Utility_Biennial_Comprehensive_Filing.pdf.
[33] United States Energy Information Administration. "Natural Gas Consumption by End Use. 2021." Accessed January 19, 2023. Available at: https://www.eia.gov/state/?sid=CA#tabs-2.
[34] California Energy Commission. "Natural Gas Consumption by County." Accessed January 19, 2023. Available at: http://ecdms.energy.ca.gov/gasbycounty.aspx.

Fuel for Motor Vehicles

In 2020, California produced 144.2 million barrels of crude oil and in 2019, 19.2 billion gallons of gasoline were sold in California. [35] [36] The average fuel economy for light-duty vehicles (autos, pickups, vans, and sport utility vehicles) in the United States has steadily increased from about 13.1 miles per gallon (mpg) in the mid-1970s to 25.4 mpg in 2020.[37] Federal fuel economy standards have changed substantially since the Energy Independence and Security Act was passed in 2007. That standard, which originally mandated a national fuel economy standard of 35 miles per gallon by the year 2020, was updated in April 2022 to require all cars and light duty trucks achieve an overall industry average fuel economy of 49 mpg by model year 2026. [38, 39]

The demand for fuel on-site is limited to the small number of maintenance trips that vehicles make to the site each month.

4.6.2 Impact Discussion

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

[35] U.S. Energy Information Administration. "Petroleum & Other Liquids, California Field Production of Crude Oil." September 30, 2020. Available at: https://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=pet&s=mcrfpca1&f=a
[36] California Department of Tax and Fee Administration. "Net Taxable Gasoline Gallons." Accessed January 19, 2023. Available at: https://www.cdtfa.ca.gov/dataportal/dataset.htm?url=VehicleTaxableFuelDist.
[37] United States Environmental Protection Agency. "The 2021 EPA Automotive Trends Report: Greenhouse Gas Emissions, Fuel Economy, and Technology since 1975." November 2021. Available at: https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P1010U68.pdf.
[38] United States Department of Energy. *Energy Independence & Security Act of 2007.* Accessed January 19, 2023. Available at: http://www.afdc.energy.gov/laws/eisa.
[39] United States Department of Transportation. "USDOT Announces New Vehicle Fuel Economy Standards for Model Year 2024-2026." Accessed January 19, 2023. Available at: https://www.nhtsa.gov/press-releases/usdot-announces-new-vehicle-fuel-economy-standards-model-year-2024-2026

Impact EN-1:	The project would not result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation. **(Less than Significant Impact with Mitigation Incorporated)**

Construction

Construction of the proposed project would require energy for the manufacture and transportation of building materials, preparation of the site (e.g., demolition and grading), and construction of the well, water tank, and other improvements.[40] Construction processes are generally designed to be efficient in order to avoid excess monetary costs. The project would be built and managed in order to maximize energy efficiency, and inefficient or wasteful use of energy is not expected to occur. Further, project development in urbanized areas with proximity to roadways, construction supplies, and workers is already more efficient than construction occurring in outlying, undeveloped areas. For these reasons, the construction process is considered efficient.

The proposed project is required to implement the Air District's BMPs (see mitigation measure LUTE DEIR MM 3.5.3) and mitigation measure MM AIR-3.1 to restrict equipment idling times, require signs be posted on the project site reminding workers to shut off idle equipment, and require use of certain construction equipment with emission controls, thus reducing the potential for energy waste. The project would also comply with the City's requirements to recycle and/or salvage for reuse a minimum of 65 percent of nonhazardous construction and demolition waste, minimizing energy impacts from the creation of excessive waste. For these reasons, construction activities would not use fuel or energy in a wasteful manner. **(Less than Significant Impact with Mitigation Incorporated)**

Operation

Operation of the project would consume energy for multiple purposes, including operating the pump station, chemical treatment equipment, and regularly testing the emergency generator. Operational energy also includes gasoline consumption from vehicles traveling to and from the project site. Based on the average monthly electricity demand from other well locations in the project vicinity, it is estimated that the project would increase electricity demand on-site by approximately 49 kWh each month.[41] This nominal increase in energy usage would be required for essential activities such as operation of the pump station and chemical treatment equipment. Fuel would be used by maintenance vehicles during the daily trips that staff would make to the site and the regular emergency generator testing. Based on this discussion, although operation of the project would result in an incremental increase in energy demand on-site, the energy would be necessary for operation and proper maintenance of the equipment. Therefore, the project operation would not result in wasteful, inefficient, or unnecessary consumption of energy resources. **(Less than Significant Impact)**

[40] Project construction energy use is not quantified (i.e., there is no estimated diesel and gasoline consumption for vehicles, equipment, and generators; and electricity use for tools) because there is no currently acceptable standard model or accurate way to predict construction energy usage (in terms of fuel or electricity usage). Accordingly, the following analysis is qualitative and not quantitative.

[41] Lechler, Benjamin. California Water Service. Personal Communication. November 3, 2023.

Impact EN-2:	The project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. **(Less than Significant Impact)**

The project would obtain electricity from SVCE, which is 100 percent GHG-emission free energy from renewable and hydroelectric sources, consistent with the state's RPS program and SB 350.[42] In addition, the project would exceed state mandated Title 24 energy efficiency standards and CALGreen standards by complying with the City's non-residential Building Reach Code (all-electric construction).

The project's consistency with the City's Climate Action Playbook is discussed in detail in Section 4.8 Greenhouse Gas Emissions. The project is consistent with plays that promote 100% clean electricity (Play 1.1) and recycle/salvage demolition waste (Play 4.1).

Based on the above discussion, the proposed project would not obstruct a state or local plan for renewable energy or energy efficiency. **(Less than Significant Impact)**

[42] SVCE is the default electricity provider in the City. Building occupants/owners need to voluntarily opt-out of SVCE in order to obtain electricity directly from PG&E.

4.7 GEOLOGY AND SOILS

The following discussion is based, in part, on a Geotechnical Feasibility Study prepared by Cornerstone Earth Group dated December 9, 2022 and a Sustainable Groundwater Management Technical Memorandum prepared by EKI Environment & Water, Inc. dated May 4, 2023. Copies of these reports are included as Appendix C and Appendix D of this Initial Study.

4.7.1 Environmental Setting

4.7.1.1 *Regulatory Framework*

State

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act was passed following the 1971 San Fernando earthquake. The act regulates development in California near known active faults due to hazards associated with surface fault ruptures. Alquist-Priolo maps are distributed to affected cities, counties, and state agencies for their use in planning and controlling new construction. Areas within an Alquist-Priolo Earthquake Fault Zone require special studies to evaluate the potential for surface rupture to ensure that no structures intended for human occupancy are constructed across an active fault.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act (SHMA) was passed in 1990 following the 1989 Loma Prieta earthquake. The SHMA directs the California Geological Survey (CGS) to identify and map areas prone to liquefaction, earthquake-induced landslides, and amplified ground shaking. CGS has completed seismic hazard mapping for the portions of California most susceptible to liquefaction, landslides, and ground shaking, including the central San Francisco Bay Area. The SHMA requires that agencies only approve projects in seismic hazard zones following site-specific geotechnical investigations to determine if the seismic hazard is present and identify measures to reduce earthquake-related hazards.

California Building Standards Code

The California Building Code (CBC) prescribes standards for constructing safe buildings. The CBC contains provisions for earthquake safety based on factors including occupancy type, soil and rock profile, ground strength, and distance to seismic sources. The CBC requires that a site-specific geotechnical investigation report be prepared for most development projects to evaluate seismic and geologic conditions such as surface fault ruptures, ground shaking, liquefaction, differential settlement, lateral spreading, expansive soils, and slope stability. The CBC is updated every three years.

California Division of Occupational Safety and Health Regulations

Excavation, shoring, and trenching activities during construction are subject to occupational safety standards for stabilization by the California Department of Industrial Relations, Division of Occupational Safety and Health (Cal/OSHA) under Title 8 of the California Code of Regulations and

Excavation Rules. These regulations minimize the potential for instability and collapse that could injure construction workers on the site.

Public Resources Code Section 5097.5

Paleontological resources are the fossilized remains of organisms from prehistoric environments found in geologic strata. They range from mammoth and dinosaur bones to impressions of ancient animals and plants, trace remains, and microfossils. These materials are valued for the information they yield about the history of the earth and its past ecological settings. California Public Resources Code Section 5097.5 specifies that unauthorized removal of a paleontological resource is a misdemeanor. Under the CEQA Guidelines, a project would have a significant impact on paleontological resources if it would disturb or destroy a unique paleontological resource or site or unique geologic feature.

Regional

Municipal Regional Permit Provision C.6.c

Provision C.6.c of the Municipal Regional Stormwater Permit (MRP) outlines the BMP categories that permittees must require all construction sites to implement. These BMPs are divided into six sections which include erosion control, run-on and run-off control, sediment control, active treatment systems, good site management, and non-stormwater management. Each construction site is required to implement the BMPs that are seasonally and phase appropriate.

Local

City of Sunnyvale General Plan

The City's General Plan includes policies for the purpose of avoiding or mitigating environmental impacts resulting from planned development projects within the City. The following policies are specific to geologic and soil resources and are applicable to the proposed project.

Policy	Description
Environmental Management Element	
EM-8.5	Prevent accelerated soil erosion. Continue implementation of a construction site inspection and control program to prevent discharges of sediment from erosion and discharges of other pollutants from new and redevelopment projects.
Safety and Noise Element	
SN-1.1	Evaluate and consider existing and potential hazards in developing land use policies. Make land use decisions based on an awareness of the hazards and potential hazards for the specific parcel of land.

Sunnyvale Municipal Code

SMC Titles 16 (Building and Construction) and 12 (Water and Sewers) includes the CBC and requirements for soil erosion control. In accordance with the SMC, procedures for the issuance, administration, and enforcement of a building and grading permits are employed in order to protect

health and safety, this includes the reduction or elimination of the hazards of undue settlement, erosion, siltation, and flooding, or other special conditions. SMC Chapter 12.60.230 outlines the BMPs required for development projects which mandate effective erosion control, run-on and runoff control, sediment control, active treatment systems, good site management, and non-stormwater management through all phases of construction.

4.7.1.2 *Existing Conditions*

Regional Geology

The project site is located in the Santa Clara Valley, an alluvial basin bounded by the Santa Cruz Mountains to the southwest and west and the Diablo Range to the northeast. The Valley was formed when sediments derived from both mountain ranges were exposed by tectonic uplift and regression of the inland sea which previously inundated the area. The alluvial soil thickness in the site vicinity ranges from approximately 200 feet to 300 feet.

On-Site Geological Conditions

Soils and Topography

The project site is located on relatively flat land that is generally level with the surrounding street, properties, and park. The site is generally unpaved, and contains a gravel parking area, non-operational groundwater well, chemical storage buildings, a cellular communication tower, and booster pump. The soil profile on-site is anticipated to generally consist of stiff to hard fine-grained soils interbedded with medium-dense to very-dense sands. Testing conducted at nearby sites indicate that the surficial clay soils on-site may exhibit a low to moderate potential for expansion.[43]

Groundwater

Based on measurements taken from groundwater monitoring wells in the project site's vicinity, groundwater is estimated to be at a depth between 38 feet to 56 feet below ground surface (bgs).[44] Water levels on-site may vary depending on seasonal precipitation, irrigation practices, and other climate conditions.

Seismic and Seismic-Related Hazards

Earthquake Faults

As the San Francisco Bay Area contains numerous active and potentially active faults, there is a high potential for seismic events such as fault surface ruptures and ground shaking, which can cause ground failure (landslides), settlement, erosion, liquefaction, lateral spreading, and soil expansion. Faults in the region are capable of generating earthquakes of magnitude 6.7 or higher, and strong-to-very-strong ground shaking would be expected to occur at the project site during a major earthquake on one of the nearby faults. There are several major faults located near the project site (refer to Table 4.7-1).

[43] Cornerstone Earth Group. *Geotechnical Feasibility Study – Well Station 20*. December 9, 2022. Page 4.
[44] Ibid.

Table 4.7-1: Active Faults in the Project Site Vicinity

Fault Name	Distance and Direction from Project Site*
Monte Vista-Shannon	4.0 miles southwest
San Andreas	7.5 miles southwest
Hayward	10.2 miles northeast
Calaveras	13.5 miles northeast
* Approximate distances	

During a major earthquake on a segment of one of the nearby faults, moderate to severe ground shaking is expected to occur at the project site. The ground shaking intensity felt at the project site would depend on the size of the earthquake (magnitude), the distance from the site to the fault source, the directivity (focusing of earthquake energy along the fault in the direction of the rupture), and the site-specific soil conditions. The project site is not located within a State of California Earthquake Fault Zone or a Fault-Rupture Hazard Zone.[45]

Liquefaction and Lateral Spreading

Soil liquefaction can be defined as a complete loss of strength that causes otherwise solid soil to take on the characteristics of a liquid. The types of soil most susceptible to this hazard are loose, saturated, uniformly graded, fine-grain sands that comprise the soil layer within approximately 45 to 50 feet of the ground surface. Soils saturated with groundwater are more likely to experience liquefaction. Liquefaction mostly frequently occurs under vibratory conditions, such as those created by seismic events. The project site is not located in a county or state designated liquefaction hazard zone, and is mapped as having a low liquefaction potential by the Association of Bay Area Governments (ABAG).[46]

Lateral spreading is horizontal/lateral ground movement of relatively flat-lying soil deposits towards a free face such as an excavation, channel, or open body of water; typically, lateral spreading is associated with liquefaction of one or more subsurface layers near the bottom of the exposed slope. There are no open faces in proximity to the project site where lateral spreading could occur.

Other Geologic Hazards

The project site is not located within a Santa Clara County Geologic Hazard Zone for compressible soil, landslides, or fault rupture.[47]

Paleontological Resources

Paleontological resources are the fossilized remains of organisms from prehistoric environments in geologic strata. As discussed in Section 4.5 Cultural Resources, the project site underlain by late Pleistocene alluvial fan deposits which are more than 11,700 years old. These older sediments, which

[45] Santa Clara County Planning & Development. *Geologic Hazard Zones Mapping Application.* 2021.
[46] Cornerstone Earth Group. *Geotechnical Feasibility Study – Well Station 20*. December 9, 2022. Page 5.
[47] CA Department of Conservation. *California Earthquake Hazards Zone.* Webmap. Accessed January 19, 2023. Available at: https://maps.conservation.ca.gov/cgs/EQZApp/app/.

are often found at depths of greater than 10 feet, are considered highly sensitive for paleontological resources.[48]

4.7.2 Impact Discussion

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
1) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
- 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)?	☐	☐	☐	☒
- Strong seismic ground shaking?	☐	☐	☒	☐
- Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
- Landslides?	☐	☐	☐	☒
2) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
3) 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?	☐	☐	☒	☐
4) Be located on expansive soil, as defined in the current California Building Code, creating substantial direct or indirect risks to life or property?	☐	☐	☒	☐
5) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒
6) Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?	☐	☒	☐	☐

[48] City of Sunnyvale. *Land Use and Transportation Element Draft Environmental Impact Report. SCH No. 2012032003*. August 2016. Page 3.7-12.

Impact GEO-1:	The project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving 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; strong seismic ground shaking; seismic-related ground failure, including liquefaction; or landslides. **(Less than Significant Impact)**

Fault Rupture

The project site is not located in an Alquist-Priolo Earthquake Fault Zone and no known faults cross the site. While existing faults considered active are located within approximately 10 miles of the site (i.e., the Monte Vista-Shannon, San Andreas, and Hayward faults), the project site is located outside of their fault rupture zones. For these reasons, the project would not directly or indirectly cause potential substantial adverse effects from rupture of a known earthquake fault. **(No Impact)**

Seismic Ground Shaking

As discussed previously, there are several major fault lines within 20 miles of the project site that have the potential to produce a major earthquake during the lifespan of this project. During a major earthquake, this site is expected to experience moderate to severe ground shaking. The level of intensity of this ground shaking at the project site would depend on a variety of factors such as the magnitude, distance from the site to the fault source, and the site-specific soil conditions. The ground shaking could potentially damage the proposed structures.

The project would be required to adhere to the current CBC and recommendations in the site-specific geotechnical report to be prepared for the project, prior to permit issuance. Additionally, the project would be required to utilize standard engineering techniques to increase the likelihood that the project could withstand minor earthquakes without damage and major earthquakes without collapse. For these reasons, the proposed project would not result in seismic hazards as it would be constructed in accordance with current design and engineering standards. As such, the existing seismic hazards on the project would not be exacerbated by the project that it would impact (or worsen) off-site conditions. **(Less than Significant Impact)**

Liquefaction and Lateral Spreading

As discussed previously in Section 4.7.1.2, the project site is not located within a county or state designated liquefaction hazard zone and is located in an area deemed to have a low liquefaction potential by ABAG. The project would adhere to the current CBC and any structural recommendations in the design-level geotechnical report to be prepared for the project to further reduce the risk of liquefaction at the project site.

There are no adjacent bodies of water, channels, or excavations in the vicinity of the site that would increase the potential for lateral spreading, therefore, the project would not exacerbate such conditions off-site. For these reasons, the project would not cause potential substantial adverse effects related to liquefaction and lateral spreading. **(Less than Significant Impact)**

Landslides

As discussed under Section 4.7.1.2, the project site is not located in a state or county designated landslide hazard zone. The project site is relatively flat and is not located in the vicinity of steep embankments that could increase the risk of landslides affecting the site. Construction of the project would not create unstable slopes that would exacerbate any existing landslide risks. **(No Impact)**

Impact GEO-2:	The project would not result in substantial soil erosion or the loss of topsoil. **(Less than Significant Impact)**

Ground disturbance related to the demolition of the existing improvements on-site and excavation and construction of the proposed groundwater well, water storage tank, chemical storage enclosures, and utility improvements would occur on-site. Transportation of construction materials and equipment to and from the project site could also result in disturbance of the soils. These activities would increase exposure of soil to wind and water erosion and increase sedimentation. The project would implement standard grading and best management practices to prevent soil erosion as required by the SMC in Section 12.60.230 and the recommendations of the site-specific geotechnical report to be prepared for the project. Compliance with the best management practices regarding erosion and sediment control required by Provision C.6.c of the MRP would further reduce potential construction-related erosion impacts. In summary, implementation of the erosion control measures required by SMC Section 12.60.230, recommendations in the site-specific geotechnical report, and Provision C.6.c of the MRP would reduce erosion and the loss of topsoil to a less than significant level. **(Less than Significant Impact)**

Impact GEO-3:	The project would not 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)**

Landslide, Lateral Spreading, Liquefaction, Collapse

As discussed under Section 4.7.1.2 Existing Conditions and Impact GEO-1, the site is not located in a designated liquefaction hazard zone and there is a low potential for liquefaction related hazards on-site. The City's General Plan includes a Hazards and Disaster Preparedness and response chapter that outlines policies and goals relating to mitigating risks stemming from natural hazards. Policy SN-1.1 requires geotechnical reports to determine the geologic stability of the site and to identify design measures to minimize geologic hazards. The proposed project would adhere to the current CBC, the grading regulations identified in Section 12.60.230 of the SMC, and recommendations in the design-level geotechnical report to be prepared for the project to further reduce the risk of liquefaction at the project site. As discussed under Section 4.7.1.2 and Impact GEO-1, the project site is not subject to landslide, lateral spreading, or other forms of ground failure. **(Less than Significant Impact)**

Subsidence

The project site is located within Cal Water's LAS District, which currently operates 19 active groundwater wells. The proposed replacement well would be drilled to a depth of 1,000 feet bgs. As discussed in Section 3.3, two initial drawings of raw water would occur after the construction of the

proposed well and water storage tank. These drawings would result in the pumping of approximately 1.7 million gallons of water from the aquifer underneath the project site which would subsequently be discharged into the existing stormwater system.

The estimated maximum pumping capacity of the proposed groundwater well is 1,200 gallons per minute (gpm). Assuming continuous (i.e., 24 hours a day, seven days a week) operation of the well, the theoretical maximum potential annual yield of the well could be up to 1,935 acre-feet per year (AFY). However, the previous well on-site was estimated to have a similar maximum pumping capacity and had a historical production that ranged from approximately 140 to 1,100 AFY (an average of 610 AFY) between 2000 to 2016, which was only one-third of the theoretical maximum annual production capacity. The proposed well would be intended to operate at the maximum pumping capacity; however, the actual amount pumped would vary based on customer demand and the availability of other water sources (e.g., surface water supplies). For the purposes of this analysis, it is assumed that the annual production of the proposed well would be approximately 1,935 AFY, which is the maximum theoretical capacity.

In 2023, 112,200 AF of groundwater was pumped from the Santa Clara Subbasin.[49] Between 2014 to 2021, Cal Water's LAS District pumped an average of approximately 3,800 AFY of groundwater from their active well stations, which would account for approximately 3.4 percent of the total amount pumped from the subbasin. During a similar time period (2015 to 2023), the measured amount of subsidence over the Santa Clara Subbasin utilized by Cal Water's LAS District was approximately 0.01 feet, which is an average annual subsidence rate of 0.0015 feet per year. This is lower than the 95 percent certainty interval of accuracy (18 millimeters or 0.06 feet) of these measurements and significantly less than the maximum allowable subsidence rate of 0.01 feet per year detailed in Valley Water's Alternative Groundwater Sustainability Plan.[50] In addition, prior analysis of the subbasin estimated that up to 200,000 AF of water could potentially be pumped in a single year without causing land subsidence.[51]

Given that a total of 200,000 AF of groundwater could be pumped annually without causing land subsidence, a total of 112,200 AF of groundwater was pumped from the subbasin in recent years, and the project's proposed a maximum of 1,935 AF of additional of groundwater per year that could be pumped, the project would not result in substantial subsidence. **(Less than Significant Impact)**

[49] Santa Clara Valley Water District. *Water Year 2023 Report*. March 2024 Page i.
[50] EKI Environment & Water, Inc. *Technical Memorandum*. May 4, 2023. Page 4
[51] Valley Water. *2021 Groundwater Management Plan, Santa Clara and Llagas Subbasins* .November 2021. Page 4-11.

Impact GEO-4:	The project would not be located on expansive soil, as defined in the current California Building Code, creating substantial direct or indirect risks to life or property. **(Less than Significant Impact)**

Expansive soils possess a "shrink-swell" characteristic. Shrink-swell is the cyclic change in volume (expansion and contraction) that occurs in fine-grained clay sediments from the process of wetting and drying. Structural damage may result over a long period of time, usually the result of inadequate soil and foundation engineering or the placement of structures directly on expansive soils. As discussed under Section 4.7.1.2 Existing Conditions, the near-surface soils present on the project site have a low to moderate potential for expansion.

Although expansive soils can be a hazard, it is generally mitigated through adherence with the standard engineering and building practices and techniques specified in the CBC and adherence to the recommendations in the design-level geotechnical report. The City's General Plan Policy SN-1.1 requires geotechnical reports, in part, to determine the geologic stability of the site and to identify design measures to minimize geologic hazards. With adherence to the recommendations of the site-specific geotechnical report to be prepared for the project and the current CBC, the project would not create substantial direct or indirect risks to life or property due to expansive soils. **(Less than Significant Impact)**

Impact GEO-5:	The project would not have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater. **(No Impact)**

The project would not construct any plumbing fixtures on-site or generate wastewater; therefore, the project would not need to support septic tanks or alternative wastewater disposal systems on-site. **(No Impact)**

Impact GEO-6:	The project would not directly or indirectly destroy a unique paleontological resource or site or unique geological feature. **(Less than Significant Impact with Mitigation Incorporated)**

Paleontological resources are the fossilized remains of organisms from prehistoric environments found in geologic strata. As discussed in Section 4.7.1.2, the project site is situated on late Pleistocene alluvial fan deposits which are more than 11,700 years old and are considered highly sensitive for paleontological resources.

Although it is improbable that paleontological resources would be discovered on-site given the site's prior disturbance from the previously constructed groundwater well, storage tank, and other associated improvements, construction activities could result in the disturbance and/or accidental destruction of unknown paleontological resources if on-site.

Mitigation Measure:

MM GEO-6.1: Should a unique paleontological resource or site or unique geological feature be identified at the project site during any phase of construction, all ground disturbing activities within 25 feet shall cease and the Sunnyvale Community Development Director notified immediately. A qualified paleontologist shall evaluate the find and prescribe measures to preserve the find. Work may proceed on other parts of the project site while measures to preserve the paleontological resources or geologic features are implemented. One such measure would be a buffer that would be established by the qualified paleontologist. This buffer would preserve the area immediately surrounding the discovered resource while allowing work to happen beyond the buffer. Upon completion of the paleontological assessment, a report shall be submitted to the City and, if paleontological materials are recovered, a paleontological repository, such as the University of California Museum of Paleontology shall also be submitted to the City.

With the implementation of the above mitigation measure, the project would halt work and implement measures to preserve any undiscovered paleontological resources encountered during construction, ensuring impacts to paleontological resources would be less than significant. **(Less than Significant Impact with Mitigation Incorporated)**

4.8 GREENHOUSE GAS EMISSIONS

The following discussion is based, in part, on a Health Risk & Greenhouse Gas Assessment prepared by Illingworth & Rodkin, Inc. in June 2023. This report is attached as Appendix A to this Initial Study.

4.8.1 Environmental Setting

4.8.1.1 *Background Information*

Gases that trap heat in the atmosphere, GHGs, regulate the earth's temperature. This phenomenon, known as the greenhouse effect, is responsible for maintaining a habitable climate. In GHG emission inventories, the weight of each gas is multiplied by its global warming potential (GWP) and is measured in units of CO_2 equivalents ($CO2_e$). The most common GHGs are CO_2 and water vapor but there are also several others, most importantly methane (CH4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). These are released into the earth's atmosphere through a variety of natural processes and human activities. Sources of GHGs are generally as follows:

- CO_2 and N_2O are byproducts of fossil fuel combustion.
- N_2O is associated with agricultural operations such as fertilization of crops.
- CH_4 is commonly created by off-gassing from agricultural practices (e.g., keeping livestock) and landfill operations.
- Chlorofluorocarbons (CFCs) were widely used as refrigerants, propellants, and cleaning solvents, but their production has been stopped by international treaty.
- HFCs are now used as a substitute for CFCs in refrigeration and cooling.
- PFCs and SF_6 emissions are commonly created by industries such as aluminum production and semiconductor manufacturing.

An expanding body of scientific research supports the theory that global climate change is currently causing changes in weather patterns, average sea level, ocean acidification, chemical reaction rates, and precipitation rates, and that it will increasingly do so in the future. The climate and several naturally occurring resources within California are adversely affected by the global warming trend. Increased precipitation and sea level rise will increase coastal flooding, saltwater intrusion, and degradation of wetlands. Mass migration and/or loss of plant and animal species could also occur. Potential effects of global climate change that could adversely affect human health include more extreme heat waves and heat-related stress; an increase in climate-sensitive diseases; more frequent and intense natural disasters such as flooding, hurricanes and drought; and increased levels of air pollution.

4.8.1.2 *Regulatory Framework*

State

Assembly Bill 32 and State Bill 32

Under the California Global Warming Solutions Act, also known as AB 32, CARB established a statewide GHG emissions cap for 2020, adopted mandatory reporting rules for significant sources of GHGs, and adopted a comprehensive plan, known as the Climate Change Scoping Plan, identifying how emission reductions would be achieved from significant GHG sources. The first Scoping Plan was approved by CARB in 2008 and must be updated at least every five years. Since 2008, there have been two updates to the Scoping Plan.

In 2016, SB 32 was signed into law, amending the California Global Warming Solution Act. SB 32, and accompanying Executive Order B-30-15, require CARB to ensure that statewide GHG emissions are reduced to 40 percent below the 1990 level by 2030. CARB updated its Climate Change Scoping Plan in December of 2017 to express the 2030 statewide target in terms of million metric tons of CO_2e ($MMTCO_2e$). Based on the emissions reductions directed by SB 32, the annual 2030 statewide target emissions level for California is 260 $MMTCO_2e$.

2022 Scoping Plan

On December 15, 2022, CARB approved the 2022 Scoping Plan. The 2022 Scoping Plan provides a sector-by-sector guide on how to reduce man-made (i.e., anthropogenic) GHG emissions by 85 percent below 1990 levels and achieve carbon neutrality by 2045 over a 25-year horizon.[52] The primary focus of the 2022 Scoping Plan is to reduce the usage of fossil fuels by electricizing the transportation sector, procuring electricity from renewable resources, phasing out natural gas in land use developments, and building transit-oriented communities that encourage multi-modal transportation. If implemented successfully, the 2022 Scoping Plan would not only reduce GHG emissions but also reduce smog-forming air pollution (NO_x) by 71 percent and reduce fossil fuel demand by 94 percent. The 2022 Scoping Plan also details natural carbon capture and storage process along with mechanical carbon capture programs to address the remaining 15 of anthropogenic GHG emissions that will remain post-2045. To meet these goals, CARB also includes a revised goal of reducing state GHG emissions 48 percent below 1990 levels by 2030.

Senate Bill 375 and Plan Bay Area 2050

SB 375, known as the Sustainable Communities Strategy and Climate Protection Act, was signed into law in September 2008. SB 375 builds upon AB 32 by requiring CARB to develop regional GHG reduction targets for automobile and light truck sectors for 2020 and 2035. The per capita GHG emissions reduction targets for passenger vehicles in the Bay Area include a seven percent reduction by 2020 and a 15 percent reduction by 2035.

Consistent with the requirements of SB 375, the Metropolitan Transportation Commission (MTC) partnered with the ABAG, the Air District, and the Bay Conservation and Development Commission

[52] California Air Resources Board. *2022 Scoping Plan for Achieving Carbon Neutrality*. November 16, 2022. Page 5.

to prepare the region's Sustainable Communities Strategy (SCS) as part of the Regional Transportation Plan process. The SCS is referred to as Plan Bay Area 2050.

Plan Bay Area 2050 is a long-range plan for the nine-county San Francisco Bay Area that provides strategies that increase the availability of affordable housing, support a more equitable and efficient economy, improve the transportation network, and enhance the region's environmental resilience. Plan Bay Area 2050 promotes the development of a variety of housing types and densities within identified priority development areas (PDAs). PDAs are areas generally near existing job centers or frequent transit that are locally identified for housing and job growth.[53]

Play Bay Area 2050 includes a goal to increase the number of households that live within 0.5 mile of frequent transit by 2050. Plan Bay Area 2050 promotes strategies that support active and shared modes, combined with a transit-supportive land use patterns, which together are forecasted to lower the share of Bay Area residents that drive to work alone from 50 percent in 2015 to 33 percent in 2050, resulting in a decrease in GHG emissions. Plan Bay Area 2050 also includes goals to expand TDM initiatives that support and augment employers' commute programs, providing a path to emissions reductions.

SB 100

SB 100, known as The 100 Precent Clean Energy Act of 2018, was adopted on September 10, 2018. The overall goal is to have all retail electricity sold in California be procured from 100 percent renewable and zero-carbon resources by the year 2045. SB 100 also modified the renewables portfolio standard to 50 percent by 2025 and 60 percent by 2030.

Executive Order B-55-18 and Assembly Bill 1279

Executive Order B-55-18 was issued in September 2018. It ordered a new statewide goal of achieving carbon neutrality no later than 2045 and to maintain net negative emissions thereafter.

Assembly Bill 1279, also known as the California Climate Crisis Act, was approved on September 16, 2022 and codifies the statewide goal set by Executive Order B-55-18 of achieving net zero GHG emissions no later than the year 2045 and maintaining net negative emissions thereafter. In addition, this bill has a statewide goal of reducing anthropogenic GHG emissions by 85 percent below the 1990 levels by the year 2045. The bill requires CARB to work with relevant state agencies to ensure that updates to the scoping plan identify and recommend measures to achieve these policy goals and strategies that enable CO_2 removal solutions and carbon capture, utilization, and storage technologies in California are implemented. The bill requires CARB to submit an annual report.

Advanced Clean Cars II Regulation

To continue reducing air pollutants and GHG emissions in the transportation sector, CARB adopted the Advanced Clean Cars II Regulations (Resolution 22-12) on August 25, 2022. The new regulation requires that by 2035 all new passenger cars, trucks, and SUVs sold in California will be zero emissions. This regulation bans the sale of new gasoline or diesel passenger cars, trucks, and SUVs

[53] Association of Bay Area Governments and Metropolitan Transportation Commission. Plan Bay Area 2050. October 21, 2021. Page 20.

in California from automakers. Beginning in the 2026, 35 percent of new vehicle sales must be zero-emission vehicles and plug-in hybrid electric vehicles and that percentage will increase per year. By 2030, 70 percent of new vehicle sales will be zero-emissions vehicles and by the 2035 model year 100 percent of new vehicle sales will be zero-emissions. CARB will limit the use of plug-in hybrid electric vehicles in the percentage requirements to keep the manufacturing of zero-emissions as the primary goal. Existing gasoline cars can continue to be driven and sold as used cars beyond 2035. CARB is required to track and report on the zero-emissions vehicle market development annually.

California Building Standards Code – Title 24 Part 11 and Part 6

The CALGreen Code is part of the California Building Standards Code under Title 24, Part 11.[54] The CALGreen Code encourages sustainable construction standards that incorporate planning/design, energy efficiency, water efficiency resource efficiency, and environmental quality. These green building standard codes are mandatory statewide and are applicable to residential and non-residential developments. The most recent CALGreen Code (2022 CALGreen Code) was effective as of January 1, 2023. However, projects that started the development process prior the January 1, 2023 are subject to the 2019 California Building Standards.]

CALGreen also requires new construction and demolition projects to have a diversion of at least 65 percent of the construction waste generated. CALGreen also allows a disposal reduction option that can be met when the project's disposal rate is 2.0 pounds per square foot or less for non-residential and high-rise residential construction or 3.4 pounds per square foot or less for low-rise residential construction.

Regional and Local

2017 Clean Air Plan

To protect the climate, the 2017 CAP (prepared by the Air District) includes control measures designed to reduce emissions of methane and other super-GHGs that are potent climate pollutants in the near-term, and to decrease emissions of carbon dioxide by reducing fossil fuel combustion.

BAAQMD CEQA Thresholds for Evaluating Climate Impacts from Land Use Projects and Plans

On April 20, 2022, the Air District Board of Directors adopted the Justification Report: CEQA Thresholds for Evaluating the Significance of Climate Impacts from Land Use Projects and Plans. The report includes the Air District's thresholds of significance for use in determining whether a proposed project or plan will have a significant impact on climate change and provides the substantial evidence to support of these thresholds. The April 2022 GHG thresholds replace the GHG thresholds set forth in the May 2017 BAAQMD CEQA Air Quality Guidelines and represent what is required of new land use development projects and plans to achieve California's long-term climate goal of carbon neutrality by 2045.

[54] California Building Standards Commission. "CALGreen." Accessed August 9, 2023. Available at: https://www.dgs.ca.gov/BSC/CALGreen.

City of Sunnyvale General Plan

The City's General Plan includes policies for the purpose of avoiding or mitigating environmental impacts resulting from planned development projects within the City. The following policies are specific to greenhouse gas reduction and are applicable to the proposed project.

Policy	Description
Land Use and Transportation Element	
LT-2.1	Enhance the public's health and welfare by promoting the city's environmental and economic health through sustainable practices for the design, construction, maintenance, operation, and deconstruction of buildings, including measures in the Climate Action Plan.
LT-2.2	Reduce greenhouse gas emissions that affect climate and the environment through land use and transportation planning and development.

City of Sunnyvale Climate Action Playbook

The City of Sunnyvale Climate Action Playbook (August 2019) sets a vision for the City to reduce carbon emissions by 2050. The playbook includes six strategies with "plays" that identify areas for action to reduce GHG emissions. The following plays are applicable to the proposed project.

Play	Description
1.1	Promote 100 percent clean electricity
4.1	Achieve Zero Waste goals for solid waste

Sunnyvale Construction and Demolition Waste Diversion

The City requires remodel or demolition projects where 50 percent or more of the exterior wall will be removed to recycle or reuse at least 65 percent of the project's nonhazardous waste.[55] Recycling of nonhazardous waste reduces the energy use to produce new materials from raw, non-renewable resources.

4.8.1.3 *Existing Conditions*

Unlike emissions of criteria and toxic air pollutants, which have regional and local impacts, emissions of GHGs have a broader, global impact. Global warming is a process whereby GHGs accumulating in the upper atmosphere contribute to an increase in the temperature of the earth and changes in weather patterns.

[55] City of Sunnyvale. "Construction Waste." February 5, 2019. Accessed December 20, 2021. Available at: https://sunnyvale.ca.gov/business/environmental/waste.htm.

4.8.2 Impact Discussion

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

Impact GHG-1: The project would not generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment. **(Less than Significant Impact with Mitigation Incorporated)**

As outlined in the Air District's CEQA Guidelines, for a project to have a less-than-significant impact related to stationary source GHG emissions, it must fall below the bright line threshold of producing 10,000 metric tons of carbon dioxide equivalent ($MTCO_2e$) per year.

Construction

The project would generate short-term GHG emissions during construction consisting primarily of emissions from equipment exhaust and worker and vendor trips. It is estimated that GHG emissions associated with project construction would be approximately 85 MT of CO2e for the total construction period. These are the emissions from on-site operation of construction equipment, vendor and hauling truck trips, and worker trips. Neither the City nor the Air District have an adopted threshold of significance for construction-related GHG emissions. There is nothing atypical or unusual about the project's construction. In addition, the project would implement mitigation measure LUTE DEIR MM 3.5.3 and MM AIR-3.1 to restrict idling of construction equipment and utilize energy-efficient equipment, which would in turn reduce GHG emissions. For these reasons, the project's construction GHG emissions are less than significant. **(Less than Significant Impact with Mitigation Incorporated)**

Operation

There would also be long-term operational emissions associated with energy usage, water usage, and testing of the emergency generator on-site. As discussed in Section 3.3.4, the project would include one 230- kilowatt, 308-horsepower stand-by emergency diesel generator to power the system in the event of a power failure.

The Greenhouse Gas Assessment prepared for this project determined that the annual GHG emissions resulting from operation of the project would be approximately 18 MT of CO2e in 2025. This is well below the 10,000 MT/yr of CO2e threshold, therefore, the project would have a less than significant operational GHG emissions impact. **(Less than Significant Impact)**

Impact GHG-2:	The project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. **(Less than Significant Impact with Mitigation Incorporated)**

2017 Clean Air Plan

The Air District's 2017 CAP focuses on two goals: protecting public health and protecting the climate. The 2017 CAP includes air quality standards and control measures designed to reduce emissions of methane, carbon dioxide, and other super-GHGs. As discussed in Section 4.3 Air Quality, the project is consistent with the 2017 Clean Air Plan because the project would not exceed Air District criteria air pollutant emissions thresholds during construction with implementation of Air District BMPs (which are consistent with the measures outlined in LUTE DEIR MM 3.5.3) and during operation. In addition, the project construction would implement mitigation measure MM AIR-3.1 by using energy-efficient and/or alternative fueled construction equipment to reduce air pollutant (DPM and $PM_{2.5}$) emissions. For these reasons, the proposed project would not conflict with the 2017 CAP goal to reduce GHG emissions. **(Less than Significant Impact with Mitigation Incorporated)**

General Plan

The proposed project would be consistent with the General Plan by complying with Title 24 and CALGreen, and being screened to have a less than significant vehicle miles traveled (VMT) impact. In addition, the project would comply with the City's Construction and Demolition Waste Diversion program by recycling and/or salvaging for reuse a minimum of 65 percent of nonhazardous construction and demolition waste from the site. **(Less than Significant Impact)**

Climate Action Playbook

The Climate Action Playbook's applicable strategies to reduce the proposed project's GHG emissions are through managing solid waste and utilizing 100 clean electricity. The project's consistency with applicable plays in the Climate Action Playbook is detailed in Table 4.8-1 below. **(Less than Significant Impact)**

Table 4.8-1: Project Consistency with Applicable Climate Action Playbook Plays

Play	Description	Consistency
1.1	Promote 100 percent clean electricity	The project would obtain electricity from SVCE, which is 100 percent GHG-emission free energy from renewable and hydroelectric sources.
4.1	Achieve zero waste goals for solid waste	The project would recycle and/or salvage for reuse a minimum of 65 percent of nonhazardous construction and demolition waste. The project is consistent with the intent of this play.

4.9 HAZARDS AND HAZARDOUS MATERIALS

The following discussion is based on a Phase I Environmental Site Assessment (ESA) completed by Cornerstone Earth Group dated December 19, 2022. A copy of this report is included in Appendix E of this Initial Study.

4.9.1 Environmental Setting

4.9.1.1 *Regulatory Framework*

The storage, use, generation, transport, and disposal of hazardous materials and waste are highly regulated under federal and state laws. In California, the EPA has granted most enforcement authority over federal hazardous materials regulations to the California Environmental Protection Agency (CalEPA). In turn, local agencies have been granted responsibility for implementation and enforcement of many hazardous materials regulations under the Certified Unified Program Agency (CUPA) program.

Worker health and safety and public safety are key issues when dealing with hazardous materials. Proper handling and disposal of hazardous material is vital if it is disturbed during project construction. Cal/OSHA enforces state worker health and safety regulations related to construction activities. Regulations include exposure limits, requirements for protective clothing, and training requirements to prevent exposure to hazardous materials. Cal/OSHA also enforces occupational health and safety regulations specific to lead and asbestos investigations and abatement.

Federal and State

Federal Aviation Regulations Part 77

Federal Aviation Regulations, Part 77 Objects Affecting Navigable Airspace (FAR Part 77) sets forth standards and review requirements for protecting the airspace for safe aircraft operation, particularly by restricting the height of potential structures and minimizing other potential hazards (such as reflective surfaces, flashing lights, and electronic interference) to aircraft in flight. These regulations require that the Federal Aviation Administration (FAA) be notified of certain proposed construction projects located within an extended zone defined by an imaginary slope radiating outward for several miles from an airport's runways, or which would otherwise stand at least 200 feet in height above the ground.

Comprehensive Environmental Response, Compensation, and Liability Act

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as Superfund, was enacted by Congress on December 11, 1980. This law created a tax on the chemical and petroleum industries and provided broad federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment. Over five years, $1.6 billion was collected and the tax went to a trust fund for cleaning up abandoned or uncontrolled hazardous waste sites.

CERCLA accomplished the following objectives:

- Established prohibitions and requirements concerning closed and abandoned hazardous waste sites;
- Provided for liability of persons responsible for releases of hazardous waste at these sites; and
- Established a trust fund to provide for cleanup when no responsible party could be identified.

The law authorizes two kinds of response actions:

- Short-term removals, where actions may be taken to address releases or threatened releases requiring prompt response; and
- Long-term remedial response actions that permanently and significantly reduce the dangers associated with releases or threats of releases of hazardous substances that are serious, but not immediately life-threatening. These actions can be completed only at sites listed on the EPA's National Priorities List.

CERCLA also enabled the revision of the National Contingency Plan (NCP). The NCP provided the guidelines and procedures needed to respond to releases and threatened releases of hazardous substances, pollutants, or contaminants. The NCP also established the National Priorities List. CERCLA was amended by the Superfund Amendments and Reauthorization Act on October 17, 1986.[56]

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA), enacted in 1976, is the principal federal law in the United States governing the disposal of solid waste and hazardous waste. RCRA gives the EPA the authority to control hazardous waste from the "cradle to the grave." This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA also sets forth a framework for the management of non-hazardous solid wastes.

The Federal Hazardous and Solid Waste Amendments (HSWA) are the 1984 amendments to RCRA that focused on waste minimization, phasing out land disposal of hazardous waste, and corrective action for releases. Some of the other mandates of this law include increased enforcement authority for the EPA, more stringent hazardous waste management standards, and a comprehensive underground storage tank program.[57]

Government Code Section 65962.5

Section 65962.5 of the Government Code requires CalEPA to develop and update a list of hazardous waste and substances sites, known as the Cortese List. The Cortese List is used by state and local agencies and developers to comply with CEQA requirements. The Cortese List includes hazardous

[56] United States Environmental Protection Agency. "Superfund: CERCLA Overview." Accessed January 9, 2023. Available at: https://www.epa.gov/superfund/superfund-cercla-overview.
[57] United States Environmental Protection Agency. "Summary of the Resource Conservation and Recovery Act." Accessed January 9, 2023. Available at: https://www.epa.gov/laws-regulations/summary-resource-conservation-and-recovery-act.

substance release sites identified by the Department of Toxic Substances Control (DTSC) and State Water Resources Control Board (SWRCB).[58]

Toxic Substances Control Act

The Toxic Substances Control Act (TSCA) of 1976 provides the EPA with authority to require reporting, record-keeping and testing requirements, and restrictions relating to chemical substances and/or mixtures. Certain substances are generally excluded from TSCA, including, among others, food, drugs, cosmetics, and pesticides. The TSCA addresses the production, importation, use, and disposal of specific chemicals including polychlorinated biphenyls (PCBs), asbestos, radon, and lead-based paint.

California Accidental Release Prevention Program

The California Accidental Release Prevention (CalARP) Program aims to prevent accidental releases of regulated hazardous materials that represent a potential hazard beyond the boundaries of a property. Facilities that are required to participate in the CalARP Program use or store specified quantities of toxic and flammable substances (hazardous materials) that can have off-site consequences if accidentally released. The Sunnyvale Department of Public Safety reviews CalARP risk management plans as the CUPA.

Asbestos-Containing Materials

Friable asbestos is any asbestos-containing material (ACM) that, when dry, can easily be crumbled or pulverized to a powder by hand, allowing the asbestos particles to become airborne. Common examples of products that have been found to contain friable asbestos include acoustical ceilings, plaster, wallboard, and thermal insulation for water heaters and pipes. Common examples of non-friable ACMs are asphalt roofing shingles, vinyl floor tiles, and transite siding made with cement. The EPA phased out use of friable asbestos products between 1973 and 1978. National Emission Standards for Hazardous Air Pollutants (NESHAP) guidelines require that potentially friable ACMs be removed prior to building demolition or remodeling that may disturb the ACMs.

CCR Title 8, Section 1532.1

The United States Consumer Product Safety Commission banned the use of lead-based paint in 1978. Removal of older structures with lead-based paint is subject to requirements outlined by the Cal/OSHA Lead in Construction Standard, CCR Title 8, Section 1532.1 during demolition activities. Requirements include employee training, employee air monitoring, and dust control. If lead-based paint is peeling, flaking, or blistered, it is required to be removed prior to demolition.

Regional and Local

Municipal Regional Permit Provision C.12.f

PCBs were produced in the United States between 1955 and 1978 and used in hundreds of industrial and commercial applications, including building and structure materials such as plasticizers, paints,

[58] California Environmental Protection Agency. "Cortese List Data Resources." Accessed January 9, 2023. Available at: https://calepa.ca.gov/sitecleanup/corteselist/.

sealants, caulk, and wood floor finishes. In 1979, the EPA banned the production and use of PCBs due to their potential harmful health effects and persistence in the environment. PCBs can still be released to the environment today during demolition of buildings that contain legacy caulks, sealants, or other PCB-containing materials.

With the adoption of the San Francisco Bay Region Municipal Regional Stormwater National Pollutant Discharge Elimination System (NPDES) Permit by the San Francisco Bay Regional Water Quality Control Board on November 19, 2015, Provision C.12.f requires that permittees develop an assessment methodology for applicable structures planned for demolition to ensure PCBs do not enter municipal storm drain systems.[59] Municipalities throughout the Bay Area are currently modifying demolition permit processes and implementing PCB screening protocols to comply with Provision C.12.f. Buildings constructed between 1950 and 1980 that are proposed for demolition must be screened for the presence of PCBs prior to the issuance of a demolition permit. Single family homes and wood-frame structures are exempt from these requirements.

Comprehensive Land Use Plan for Moffett Federal Airfield

The project site is approximately four miles southeast of the Moffett Federal Airfield (Airfield); which is the closest airport to the site. The Moffett Federal Airfield Comprehensive Land Use Plan (CLUP), adopted by the Santa Clara County Airport Land Use Commission, is intended to safeguard the general welfare of the inhabitants within the vicinity of the airport, as well as aircraft occupants.[60] The CLUP is also intended to ensure that surrounding new land uses do not affect airfield operations. The CLUP identifies the Airfield's Airport Influence Area (AIA). The AIA is a composite of areas surrounding the Airfield that are affected by noise, height, and safety considerations. Within the AIA, the CLUP establishes a (1) noise restriction area, (2) height restriction area, and (3) safety restriction area.

Santa Clara County Operational Area Hazard Mitigation Plan

The City's Hazard Mitigation Plan, an annex to Santa Clara County's Operational Area Hazard Mitigation Plan (2017), performs a full risk assessment on the nine hazards that present the greatest concern in Santa Clara County. The nine hazards focused on for this mitigation plan are climate change/sea-level rise, dam and levee failure, drought, earthquakes, floods, landslides, severe weather, tsunamis, and wildfires.

The City's annex, Chapter 16 of the document, provides a detailed overview of the City's response capabilities, the organizational structure of local authorities, risk rating scores that determine which hazards present the greatest risk to Sunnyvale, and a priority schedule for mitigation measures planned by local and regional agencies.

[59] California Regional Water Quality Control Board. *San Francisco Bay Region Municipal Regional Stormwater NPDES Permit.* November 2015.
[60] Santa Clara County Airport Land Use Commission. *Moffett Federal Airfield Comprehensive Land Use Plan.* November 2, 2016.

City of Sunnyvale General Plan

The City's General Plan includes policies for the purpose of avoiding or mitigating environmental impacts resulting from planned development projects within the City. The following policies are specific to hazards and hazardous materials and are applicable to the proposed project.

Policy	Description
Safety and Noise Element	
SN-1.1	Evaluate and consider existing and potential hazards in developing land use policies. Make land use decisions based on an awareness of the hazardous and potential hazards for the specific parcel of land.
SN-1.5	Promote a living and working environment safe from exposure to hazardous materials.
SN-1.6	Operate a response system that will provide effective control and investigation of hazardous materials emergencies

Certified Unified Program Agency

Approved by CalEPA, the Sunnyvale Department of Public Safety serves as the CUPA within its jurisdiction and is responsible for the unified hazardous waste and hazardous materials management regulatory program established by Health and Safety Code, Division 20, Chapter 6.11, Section 25404, et seq. This program consolidates the administration and enforcement of six hazardous materials management programs and ensures the coordination and consistency of any regulations adopted pursuant to such program requirements. The six locally implemented programs are:

1. Hazardous Waste Generator and On-site Hazardous Waste Treatment (tiered permitting) Program;
2. Aboveground Petroleum Storage Act;
3. Underground Storage Tank Program;
4. Hazardous Materials Release Response Plans and Inventories (Business Plans);
5. CalARP Program; and
6. California Fire Code: Hazardous Material Management Plans and Inventory Statements.

Sunnyvale Municipal Code

Chapter 20.10 of the SMC outlines the City's CUPA administration policies. This includes details on permits, fees, and enforcement policies regarding the regulation of hazardous materials in the City. Chapter 16.52 of the SMC includes additional regulations within the City's Fire Code which regulate the safe storage and proper containment of hazardous materials in the City.

4.9.1.2 *Existing Conditions*

Site History

As discussed in Section 4.5 Cultural Resources, the project site was historically surrounded by and developed with agricultural land uses. By the early 1960s, most of the surrounding area had been converted from orchards to residential land uses and the project site was developed with a groundwater well and water storage tank. By 1982, the remaining orchards and agricultural parcels in

the vicinity of the project site were converted to urban land uses. Due to the historic agricultural use of the project site and the surrounding parcels, it is possible that the soils on-site contain residual agricultural chemicals such as pesticides.

Conditions On-Site

Hazardous Materials Storage and Use

The site was previously an active groundwater well site. In 2016, the groundwater well was decommissioned, and the storage tank was removed. Remaining, inoperable, infrastructure includes chemical storage buildings and a booster pump. When the existing and former infrastructure on-site was actively pumping and storing groundwater, sodium hypochlorite and ammonia were stored in secondarily contained aboveground storage tanks to treat the groundwater. These chemicals were contained in the existing chemical storage buildings on-site. There is no evidence of significant spills that could have impacted soil or groundwater on-site.

Electrical Equipment

The project site contains a cellular communication tower and associated electrical equipment that was constructed in 2006. In addition, there are three pole mounted electrical transformers on-site. No evidence of transformer oil leaks was observed on-site.

Cortese List

The project site and the adjacent parcels are not listed on the Cortese List.[61]

Off-Site Sources of Contamination

Land uses in the vicinity of the project site include residential, park, and commercial uses. There are no nearby properties with spill incidents that would impact soil, soil vapor, or groundwater beneath the project site.

Airport Safety

The project site is approximately four miles southeast of the Moffett Federal Airfield and it is located outside of the Airfield's AIA, 65 dBA noise contour area, and airport safety zones.[62] As previously mentioned, FAR Part 77 requires that the FAA be notified of certain proposed construction projects located within an extended zone defined by an imaginary slope radiating outward for several miles from an airport's runways, or which would otherwise stand at least 200 feet in height above ground. The project site is within the Airfield's FAR Part 77 Notification Surface Area.[63] Based on the project site's elevation of 148 feet above mean sea level (amsl), any structure exceeding 384 feet in height above grade would require submittal to the FAA for airspace safety review.

[61] California Environmental Protection Agency. "Cortese List Data Resources." Accessed January 20, 2023. Available at: https://calepa.ca.gov/sitecleanup/corteselist/.
[62] Santa Clara County Airport Land Use Commission. *Moffett Federal Airfield Comprehensive Land Use Plan.* November 2, 2012. Figure 5, Figure 7, and Figure 8.
[63] Santa Clara County Airport Land Use Commission. *Moffett Federal Airfield Comprehensive Land Use Plan.* November 2, 2012. Figure 6.

Wildland Fire Hazards

The project site is in an urban area surrounded by existing development that is not near any wildlands that could present a fire hazard. The site is not located within an identified Very High Fire Hazard Severity Zone in a State Responsibility Area (SRA) or a Local Responsibility (LRA).[64,65]

4.9.2 Impact Discussion

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
1) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
2) 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?	☐	☐	☒	☐
3) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
4) 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?	☐	☐	☐	☒
5) 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, result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☒	☐
6) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
7) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	☐	☐	☐	☒

[64] California Department of Forestry and Fire Protection. *Santa Clara County Fire Hazard Safety Zone Map – State Responsibility Area.* November 2007.
[65] California Department of Forestry and Fire Protection. *Santa Clara County Fire Hazard Safety Zone Map – Local Responsibility Area.* October 2008.

Impact HAZ-1:	The project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. **(Less than Significant Impact)**

The proposed project would include the construction of three new chemical storage enclosures which would store approximately 300 gallons of 12.5 percent sodium hypochlorite and 100 gallons of 19.5 percent ammonium hydroxide. These chemicals would be used to disinfect the pumped groundwater in the newly constructed storage tank, and would be stored within a double containment system in the secured storage sheds. The project would also install an emergency back-up generator on-site. The fuel for this generator would be stored in a double lined tank under the generator and would also utilize a double containment system to reduce the risk of accidental fuel leaks. These hazardous materials would be stored consistent with the regulations listed in SMC Chapter 16.52. Based on this discussion, the project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. **(Less than Significant Impact)**

Impact HAZ-2:	The project would not 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)**

As discussed under Impact HAZ-1, the hazardous materials that would be used on-site would utilize double containment systems to reduce the risk of accidental release into the environment. Given the historic agricultural use in the project area, surficial soils on-site may contain levels of pesticides exceeding applicable screening thresholds. The project would excavate soils to a maximum depth of eight feet to construct the water tank and chemical storage enclosures. Excavation of shallow soils may expose construction workers and adjacent uses to hazardous materials if pesticides are present in soils on-site. As required by Cal/OSHA, a Health and Safety Plan (HSP) would be prepared to establish health and safety protocols for construction personnel working at the project site. In addition, the excess soil that would be hauled off-site for disposal would be sampled and tested for compounds of concern consistent with the requirements of the disposal facility. These standard requirements would reduce impacts from potential soil contamination to a less than significant level by requiring that proper safety measures are implemented on-site during construction and that proper disposal protocols are followed. **(Less than Significant Impact)**

Impact HAZ-3:	The project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. **(No Impact)**

The nearest school is Peterson Middle School, which is approximately 0.43-mile east of the project site. There are no existing or proposed schools within one quarter of a mile of the project site. Therefore, the project would not emit hazardous emissions within one quarter mile of a school. **(No Impact)**

Impact HAZ-4:	The project would not 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, create a significant hazard to the public or the environment. **(No Impact)**

As discussed in Section 4.9.1.2 Existing Conditions, the project site is not listed on any regulatory databases for hazardous materials compiled pursuant to Government Code Section 65962.5. Based on this, the project would not create a significant hazard to the public or the environment as a result of being listed on a hazardous materials site. **(No Impact)**

Impact HAZ-5:	The project would not result in a safety hazard or excessive noise for people residing or working in the project area. **(Less than Significant Impact)**

As discussed in Section 4.9.1.2, the project site is located approximately four miles southeast of the Moffett Federal Airfield. It is outside of the Airfield's AIA, 65 dBA noise contour area, and airport safety zones. While the project site is located within the FAA's FAR Part 77 Notification Surface Area, the proposed maximum structure height of 24 feet and the estimated maximum height of the construction equipment (50 feet) do not require notification and review by the FAA to determine potential aviation hazard. Therefore, the project's proximity to the Airfield would not result in a safety hazard or excessive noise for people working in the project area. **(Less than Significant Impact)**

Impact HAZ-6:	The project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. **(Less than Significant Impact)**

The City of Sunnyvale has a Hazard Mitigation Plan, which is an annex to Santa Clara County's Operational Area Hazard Mitigation Plan (2017) that provides a regional framework for coordinated and comprehensive emergency response in the County. The proposed project would not intensify the level of development on-site in a manner that could increase the demand on emergency responders during an emergency response situation. In addition, Sunnyvale's Department of Public Safety would review site development plans to ensure that fire protection design features are incorporated, the hazardous chemicals are properly stored, and adequate emergency access is provided. Based on this, the proposed project would not impair or physically interfere with the implementation of the Hazard Mitigation Plan. **(Less than Significant Impact)**

Impact HAZ-7:	The project would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires. **(No Impact)**

The project site is not located within a Very High Fire Hazard Severity Zone as delineated on CAL FIRE State Responsibility Area and Local Responsibility Area maps. The project site is in a developed, urban area and is not located near wildland areas that would be susceptible to wildland fires. For these reasons, implementation of the proposed project would not expose people or structures to wildland fires. **(No Impact)**

4.10 HYDROLOGY AND WATER QUALITY

The following discussion is based, in part, on a Sustainable Groundwater Management Technical Memorandum prepared by EKI Environment & Water, Inc. dated May 4, 2023. A copy of this report is included in Appendix D of this Initial Study.

4.10.1 Environmental Setting

4.10.1.1 *Regulatory Framework*

Federal and State

The federal Clean Water Act and California's Porter-Cologne Water Quality Control Act are the primary laws related to water quality in California. Regulations set forth by the EPA and the SWRCB have been developed to fulfill the requirements of this legislation. EPA regulations include the NPDES permit program, which controls sources that discharge pollutants into the waters of the United States (e.g., streams, lakes, bays, etc.). These regulations are implemented at the regional level by the RWQCBs. The project site is within the jurisdiction of the San Francisco Bay RWQCB.

National Flood Insurance Program

The Federal Emergency Management Agency (FEMA) established the National Flood Insurance Program (NFIP) to reduce impacts of flooding on private and public properties. The program provides subsidized flood insurance to communities that comply with FEMA regulations protecting development in floodplains. As part of the program, FEMA publishes Flood Insurance Rate Maps (FIRMs) that identify Special Flood Hazard Areas (SFHAs). An SFHA is an area that would be inundated by the one-percent annual chance flood, which is also referred to as the base flood or 100-year flood.

Regional

San Francisco Bay Basin Plan

The San Francisco Bay RWQCB regulates water quality in accordance with the Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan). 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 nonpoint 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.

Municipal Regional Permit Provision C.15

The San Francisco Bay RWQCB re-issued the MRP in 2015 to regulate stormwater discharges from municipalities and local agencies (co-permittees) in Alameda, Contra Costa, San Mateo, and Santa Clara counties, and the cities of Fairfield, Suisun City, and Vallejo.[66] Under Provision C.15,

[66] California Regional Water Quality Control Board. San Francisco Bay Region Municipal Regional Stormwater NPDES Permit. November 2015.

discharge of water produced during well construction activities, including well development water and pump test discharge water, is allowed, providing that both the water to be discharged and the receiving water body (i.e., the surface water stream into which the storm sewer discharges) are sampled and monitored for pH and turbidity, and record keeping of all best practices are employed. Specific water quality parameters from the permit are listed below:

- Per C.15.b.i.(1)(b)(vi) – "Turbidity of the discharged groundwater shall be maintained below 50 nephelometric turbidity units (NTU) for discharges to dry creeks, 110 percent of the ambient stream turbidity for a flowing stream with turbidities greater than 50 NTU, or 5 NTU above ambient turbidity for flowing streams with turbidities less than or equal to 50 NTU."
- Per C.15.b.i.(1)(b)(vii) – "The pH of the discharged groundwater shall be maintained within the range of 6.5 to 8.5 and shall not vary from normal ambient pH by more than 0.5 pH units."

Water Resources Protection Ordinance and District Well Ordinance

Valley Water operates as the flood protection agency for Santa Clara County. Valley Water also provides stream stewardship and is the wholesale water supplier throughout the county, which includes the groundwater recharge program. In accordance with Valley Water's Water Resources Protection Ordinance, any work within Valley Water's fee title right of way or easement or work that impacts Valley Water facilities requires the issuance of a Valley Water permit. Under Valley Water's Well Ordinance 90-1, permits are required for any boring, drilling, deepening, refurbishing, or destroying a water well, cathodic protection well, observation well, monitoring well, exploratory boring (45 feet or deeper), or other deep excavation that intersects the groundwater aquifers of Santa Clara County. Abandoned wells encountered during construction are required to be properly destroyed per Well Ordinance 90-1.

2021 Groundwater Management Plan

The 2021 Groundwater Management Plan (GWMP) describes Valley Water's comprehensive groundwater management framework, including existing and potential actions to achieve basin sustainability goals and ensure continued sustainable groundwater management. The GWMP covers the Santa Clara and Llagas subbasins, which are located entirely in Santa Clara County. Valley Water manages a diverse water supply portfolio, with sources including groundwater, local surface water, imported water, and recycled water. About half of the county's water supply comes from local sources and the other half comes from imported sources. Imported water includes Valley Water's State Water Project and Central Valley contract supplies and supplies delivered by the San Francisco Public Utilities Commission (SFPUC) to cities in northern Santa Clara County. Local sources include natural groundwater recharge and surface water supplies. A small portion of the county's water supply is recycled water.

Local groundwater resources make up the foundation of the county's water supply, but they need to be augmented by Valley Water's comprehensive water supply management activities to reliably meet the county's needs. These include the managed recharge of imported and local surface water and in-

lieu groundwater recharge through the provision of treated surface water and raw water, acquisition of supplemental water supplies, and water conservation and recycling.[67]

Construction Dewatering Waste Discharge Requirements

Each of the RWQCBs regulate construction dewatering discharges to storm drains or surface waters within its Region under the NPDES program and Waste Discharge Requirements.

Local

City of Sunnyvale General Plan

The City's General Plan includes policies for the purpose of avoiding or mitigating environmental impacts resulting from planned development projects within the City. The following policies are specific to hydrology and water quality and are applicable to the proposed project.

Policy	Description
Environmental Management Element	
EM-8.3	Ensure that stormwater control measures and best management practices are implemented to reduce the discharge of pollutants in stormwater to the maximum extent practicable.
EM-8.5	Prevent accelerated soil erosion. Continue implementation of a construction site inspection and control program to prevent discharges of sediment from erosion and discharges of other pollutants from new and redevelopment projects.
EM-8.6	Minimize the impacts from stormwater and urban runoff on the biological integrity of natural drainage systems and water bodies.
EM-10.1	Consider the impacts of surface runoff as part of land use and development decisions and implement BMPs to minimize the total volume and rate of runoff of waste quality and quantity (hydro modification) of surface runoff as part of land use and development decisions.
EM-10.2	Consider the ability of a land parcel to detain excess stormwater runoff in flood prone areas and require incorporation of appropriate controls. Require the incorporation of appropriate stormwater treatment and control measures for new and redevelopment regulated projects and/or any sites that may reasonably be considered to cause or contribute to the pollution of stormwater and urban runoff as defined in the current version of the stormwater Municipal Regional Permit.
EM-10.3	Require the incorporation of appropriate stormwater treatment and control measures for industrial and commercial facilities as identified in the stormwater Municipal Regional Permit.
Safety and Noise Element	
SN-1.2	Take measures to protect life and property from the effects of a 1% (100-year) flood.
SN-1.3	Operate and maintain the storm drainage system at a level to minimize damages and ensure public safety.

Sunnyvale Municipal Code

Chapter 12.60 (Stormwater Management) in Title 12 of the SMC includes the currently adopted water quality, wastewater, and stormwater management regulations. This includes regulations for

[67] Valley Water. *2021 Groundwater Management Plan, Santa Clara and Llagas Subbasins* .November 2021.

compliance with NPDES permits, best management practices, project design, and water quality. Chapter 16.52 of the SMC contains the City's Fire Code, which regulates the safe storage and proper containment of hazardous materials in the City. These regulations include design requirements for spill control, containment features, tank capacity, and piping design. Chapter 16.62 of the SMC provides regulations to prevent flood damage in Sunnyvale. This chapter establishes provisions for reducing flood hazards, including standards for construction, utilities, subdivisions, manufactured homes, floodways, and coastal high hazard areas.

4.10.1.2 *Existing Conditions*

Water Quality

The project site is developed with two chemical storage buildings, a capped groundwater well, and a cellular communication tower. The landscaping on-site primarily consists of trees and small shrubs. Stormwater runoff from the project site enters the City's main storm drain system and eventually flows to the San Francisco Bay.

Groundwater

The City of Sunnyvale is located within the Santa Clara Valley Groundwater Basin.[68] Hydrologically, the groundwater basin is separated into recharge and confined zones. Geological conditions in the recharge areas allow precipitation, stream flow, and water diverted into percolation areas to recharge the deeper aquifers. The confined zones include areas of the valley where low permeability clays and silts overlie the major groundwater aquifers which impedes the vertical flow of groundwater into the deeper aquifers. The City of Sunnyvale, including the project site, lies entirely within the area of the confined zone.[69]

As discussed in Section 4.7, groundwater is estimated to be located at a depth between 38 to 56 feet bgs on-site.[70] Water levels on-site may vary depending on seasonal precipitation, irrigation practices, and other climate conditions.

Stormwater Drainage

The storm drainage system that serves the project site is owned and maintained by the City of Sunnyvale. Currently, the project site consists of approximately 524 square feet (or 1.6 percent) of impervious area. The remaining 33,276 square feet (or 98.4 percent) of the site consists of pervious area, which is comprised of landscaping and other permeable surfaces. The nearest drainage inlets to the project site are located on Carlisle Way and the storm drain line adjacent to the project site is 15-inches in diameter.[71]

[68] United States Geological Survey. "Groundwater Quality in the San Francisco Bay Groundwater Basins, California". March 2013. Accessed March 10, 2023. Available at: https://pubs.usgs.gov/fs/2012/3111/pdf/fs20123111.pdf.
[69] Santa Clara Valley Water District. *2021 Groundwater Management Plan, Santa Clara and Llagas Subbasins*. November 2021.
[70] Cornerstone Earth Group. *Geotechnical Feasibility Study – Well Station 20*. December 9, 2022. Page 4.
[71] City of Sunnyvale. "Utility Maps." Accessed March 10, 2023. Available at: https://www.sunnyvale.ca.gov/city-services/online-services/maps-and-gis/utility-maps.

Flooding

The project site is not located within a 100-year special flood hazard area. According to the FEMA, the project site is in Zone X with 0.2 percent annual chance of flood.[72]

Other Inundation Hazards

A seiche is a standing wave oscillating in a body of water that can produce flooding along the shoreline under certain natural conditions.[73] There are no bodies of water such as lakes, harbors, or reservoirs near the project site that would affect the site in the event of a seiche. The project site is not close enough to San Francisco Bay to be affected in the event of a tsunami.[74]

4.10.2 Impact Discussion

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
1) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☐	☒	☐
2) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☒	☐
3) 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:	☐	☐	☒	☐
- result in substantial erosion or siltation on- or off-site;	☐	☐	☒	☐
- substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;	☐	☐	☒	☐

[72] Federal Emergency Management Agency. "FEMA Flood Map Service Center". Accessed March 10, 2023. Available at: https://msc.fema.gov/portal/search?AddressQuery=800%20carlisle%20way%20sunnyvale%20ca#searchresultsanchor

[73] National Ocean Service. "What is a Seiche?". Accessed March 10, 2023. Available at: https://oceanservice.noaa.gov/facts/seiche.html

[74] Association of Bay Area Governments. "Tsunami & Additional Hazards". Accessed March 10, 2023. Available at: https://abag.ca.gov/our-work/resilience/data-research/tsunami-additional-hazards

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
- 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	☐	☐	☒	☐
- impede or redirect flood flows?	☐	☐	☒	☐
4) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☒	☐
5) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☒	☐

Impact HYD-1: The project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality. **(Less than Significant Impact)**

Construction

Implementation of the proposed project would require demolition, site preparation, drilling, minor grading, construction, and paving, which can result in temporary impacts to surface water quality. These construction activities could increase erosion and sedimentation once the disturbed soil is exposed to water and wind. This would increase the potential for soil, sediment, and pollutants to be carried by runoff into local waterways and the San Francisco Bay. The project would comply with Title 12, Chapter 12.60 (Stormwater Management) of the SMC by implementing the required best management practices during project construction to reduce stormwater runoff from the site.

The drilling process for both the pilot hole and the proposed well would generate a mixture of soil, water, and drilling additive. To prevent this discharged material from reaching the stormwater system, the material would be collected in a mud tank prior to being disposed off-site. As discussed in Section 3.3.9 Construction, the discharged material would likely disposed of at an off-site landfill; however, if it does not meet the discharge requirements set by the NPDES permit, it would be taken to a recycling facility for disposal.

After the well is constructed, a water production test would be performed which would continuously pump water from the new well for a 24-hour period. It is estimated that this test would produce approximately 1.7 million gallons of raw water that would be discharged into the existing stormwater system. Prior to discharge, the high turbidity water generated during the initial pumping would be conveyed to two, 21,000-gallon temporary holding tanks to allow for the settling of suspended solids. Once the turbidity level and water pH is tested and meets the requirements listed in Provision C.15 of the MRP, the water would be discharged into the existing stormwater system in Carlisle Way.

Given the project's compliance with Title 12 Chapter 12.60 of the SMC, collection of material generated by the drilling process for proper disposal, and compliance with Provision C.15 of the MRP, project construction would not result in significant water quality impacts. **(Less than Significant Impact)**

Post Construction

Surface Water

The project would increase the amount of impervious surface on-site from 524 to 1,785 square feet. The remaining 32,015 square feet of the site would consist of pervious surfaces such as gravel and landscaped areas. Although the project would result in a minor increase in impervious surface area (1,261 square feet), this additional hardscaping would be surrounded by pervious surfaces that would allow for water infiltration on-site, which would limit the amount of runoff from the project site. In addition, Chapter 12.60.110 requires that all projects incorporate design features and implement stormwater best management practices consistent with the standards and guidelines set forth in the City's BMP Guidance Manual to reduce stormwater pollution to the maximum extent practicable. Therefore, development of the project would not result in significant water quality impacts to surface water. **(Less than Significant Impact)**

Groundwater

During operation of the proposed well, drawdown associated with pumping has the potential to cause a downward vertical hydraulic gradient beneath the site, which could potentially mobilize nearby contaminant plumes, if present, and degrade local groundwater quality. Of the 26 listed cleanup sites within one mile of the project site, two are open cases where the most recent groundwater sampling has shown that concentrations of constituents of concern (COCs) were below the applicable Environmental Screening Levels (ESLs), and one is a closed case whose contaminated plume extent is primarily limited to the property boundaries. Based on the distance, location, and level of contamination at those three sites, pumping operations at the proposed well would not mobilize or cause migration of existing contaminants at those sites.[75] Therefore, the project would have a less than significant impact on groundwater quality. **(Less than Significant Impact)**

Impact HYD-2:	The project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin. **(Less than Significant Impact)**

On-Site

Groundwater recharge occurs when surface water percolates through the soil to recharge groundwater aquifers. As discussed in Impact HYD-1 above, although the project would result in a minor increase in impervious surface area on-site, the remaining 95 percent of the site would remain pervious which would allow for water infiltration on-site. In addition, the project site is not located in

[75] EKI Environment & Water, Inc. *Technical Memorandum*. May 4, 2023. Pages 5-6.

a recharge area as identified by the 2021 GWMP.[76] Therefore, the project would not interfere substantially with groundwater recharge. **(Less than Significant Impact)**

Santa Clara Subbasin

Valley Water is responsible for managing the sustainability of groundwater levels in the Santa Clara Subbasin, and it does so by managing groundwater levels to maintain sustainable conditions through annual operations and long-term water supply planning, not by managing to a particular value for sustainable yield.[77] According to Valley Water, "the Santa Clara Subbasin is not in a condition of chronic overdraft due to the managed recharge of local imported water as well as in-lieu recharge activities."[78] Between 2010 and 2019, the water budget for the Santa Clara Plain principal aquifer showed an average inflow of 86,000 AFY and an average outflow of 83,000 AFY, which resulted in an average annual increase in storage of approximately 3,000 AFY in the aquifer.[79]

In 2023, approximately 112,200 AF of groundwater was pumped from the Santa Clara Subbasin.[80] As discussed under Impact GEO-3, the maximum annual production of the proposed well would be approximately 1,935 AF of groundwater per year, which would account for approximately 1.7 percent of the total annual amount pumped from the Santa Clara Subbasin. Cal Water is permitted to pump groundwater from the Subbasin, and although the project would result in a nominal increase in groundwater pumped from the Santa Clara Subbasin, the 1,935 additional AFY would not result in a significant increase in groundwater outflow and Valley Water would be able to continue to manage groundwater to sustainable levels. Based on this discussion, the project would have a less than significant impact on the sustainable groundwater management of the basin. **(Less than Significant Impact)**

Impact HYD-3:	The project would not 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 result in substantial erosion or siltation on- or off-site; substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site; 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 impede or redirect flood flows. **(Less than Significant Impact)**

There are no streams or rivers on-site, therefore, the proposed project would not affect the existing drainage pattern of any streams or rivers. As discussed in Section 3.3, the project would result in a minor increase of impervious area on-site of approximately 1,261 square feet. This increase represents a 3.7 percent increase in impervious surfaces on-site compared to existing conditions. Given the minor increase in impervious area proposed, the project would not substantially increase the rate or amount of surface runoff from the site.

[76] Santa Clara Valley Water District. *2021 Groundwater Management Plan, Santa Clara and Llagas Subbasins*. November 2021. Page 2-1.
[77] Ibid. Page 4-17.
[78] Ibid. Page 4-11.
[79] Ibid. Page 4-14.
[80] Santa Clara Valley Water District. *Water Year 2023 Report*. March 2024 Page i.

The site is currently served by a 15-inch stormwater mainline in Carlisle Way. The project would install a new, 15-inch storm drain line on-site that would connect to the existing mainline and a new manhole on Carlisle Way to provide maintenance access to the mainline. With these improvements, the project site would continue to be adequately served by the existing stormwater infrastructure. As a result, no off-site flooding would occur.

The project would also be subject to SMC Chapter 12.60 (Stormwater Management), which presents regulations for compliance with NPDES permits, best management practices, project design, and water quality. Adherence to these regulations would reduce the potential for project-generated runoff to result in erosion, siltation, and/or flooding.

Based on this discussion, the proposed project would not substantially alter the existing drainage pattern of the site or create or contribute runoff which would exceed existing stormwater drainage capacity or result in flooding on- or off-site. **(Less than Significant Impact)**

Impact HYD-4:	The project would not risk release of pollutants due to project inundation in flood hazard, tsunami, or seiche zones. **(Less than Significant Impact)**

The project would store approximately 300 gallons of 12.5 percent sodium hypochlorite and 100 gallons of 19.5 percent ammonium hydroxide in separate chemical storage enclosures on-site. These chemicals would be used to disinfect the water within the proposed water storage tank and would be stored within a double containment system to reduce the risk of any chemical leaks. These hazardous materials would be stored consistent with the regulations listed in SMC Chapter 16.52 regarding spill control, tank capacity, and containment design.

As discussed in Section 4.10.1.2, the project site is not located within a 100-year special flood hazard area. According to the FEMA, the project site is in Zone X with 0.2 percent annual chance of flood. Although San Francisco Bay presents an inundation risk to sections of the coastline during a tsunami, the project site is not located near enough to San Francisco Bay to be affected in the event of a tsunami. There are no bodies of water such as lakes, harbors, or reservoirs near the project site that would affect the site in the event of a seiche.

Based on the above discussion, there would be a low risk of pollutant release because there would be low risk of inundation from flooding and all hazardous materials on-site would be stored consistent with the regulations listed in SMC Chapter 16.52. **(Less than Significant Impact)**

Impact HYD-5:	The project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. **(Less than Significant Impact)**

The San Francisco Basin Plan provides a framework for state and local governments to meet water quality objectives and criteria to protect the beneficial uses of local aquifers, streams, marshes, and San Francisco Bay. Consistent with the San Francisco Basin Plan, the proposed project would comply with the MRP requirements regarding stormwater runoff and discharge of groundwater into the stormwater system, as discussed under Impact HYD-1.

The 2021 GWMP by Valley Water establishes recharge facilities, recycled water systems, and conservation strategies to proactively manage groundwater and surface water resources within its jurisdiction. Natural recharge of the groundwater basin occurs along the margins and southern portion of the subbasin where high lateral and vertical permeability allow surface water to infiltrate the aquifers. Percolation of precipitation and other surface water within recharge areas replenishes groundwater and contributes to the recharge of principal aquifers. As discussed under Impact HYD-2, although the project would result in a relatively small increase in the amount of groundwater pumped from the Santa Clara Subbasin each year, this would not be enough to significantly impact the long-term sustainability of the basin.

In addition, the project is consistent with the various sustainable management criteria included in the GWMP because it would not substantially deplete groundwater levels, increase subsidence, interfere with the subbasin's groundwater storage capacity, or result in diminished groundwater quality. For additional details regarding the project's compliance with the GWMP, see Appendix D. Therefore, the project would not conflict with water quality control plans or sustainable groundwater management plans. **(Less than Significant Impact)**

4.11 LAND USE AND PLANNING

4.11.1 Environmental Setting

4.11.1.1 *Regulatory Framework*

Local

City of Sunnyvale General Plan

The City's General Plan includes policies for the purpose of avoiding or mitigating environmental impacts resulting from planned development projects within the City. The following policies are specific to land use and planning and are applicable to the proposed project.

Policy	Description
Land Use and Transportation Element	
LT-5.3	Require new development, renovation, and redevelopment to be compatible and well integrated with existing residential neighborhoods.
LT-6.2	Limit the intrusion of incompatible uses and inappropriate development in and near residential neighborhoods, but allow transition areas at the edges of neighborhoods.

Sunnyvale Municipal Code

The Zoning Code, Title 19, defines the various zoning districts and allowable land uses within the City and provides development standards (i.e., building height limits, building density, sign regulations, etc.) to enhance the visual appeal of new development.

- Chapter 19.84 (Variances) outlines the purpose, restrictions, procedures, actions required, and findings required to grant a Variance. The application process allows for review of the requested Variance and requires that the three findings below are met.
    - Because of exceptional or extraordinary circumstances or conditions applicable to the property, or use, including size, shape, topography, location or surroundings, the strict application of the ordinance is found to deprive the property owner of privileges enjoyed by other properties in the vicinity and within the same zoning district.
    - The granting of the variance will not be materially detrimental to the public welfare or injurious to the property, improvements or uses within the immediate vicinity and within the same zoning district.
    - Upon granting of the variance the intent and purpose of the ordinance will still be served and the recipient of the variance will not be granted special privileges not enjoyed by other surrounding property owners within the same zoning district.

4.11.1.2 *Existing Conditions*

As discussed in Section 2.6 General Plan Designation and Zoning District, the existing General Plan land use designation of the project site is Low Density Residential. This designation is typically reserved for single-family neighborhoods designed around parks or schools that are located along neighborhood streets or residential collector streets.

The project site is zoned R0/S (low-density residential), which is generally reserved for the construction, use, and occupancy residential units that are developed at a maximum density of seven du/ac. The project site is also within the residential single-story (S) combining district which includes additional design restrictions to maintain single-family neighborhoods that are primarily developed with single-story units. Public utility buildings and service facilities are allowed in this zoning district with a Use Permit.

The project site is surrounded by a primarily residential land uses, however, Panama Park is located directly to the west of the site.

4.11.2 Impact Discussion

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
1) Physically divide an established community?	☐	☐	☒	☐
2) 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?	☐	☐	☒	☐

Impact LU-1:	The project would not physically divide an established community. **(Less than Significant Impact)**

A physical division of an established community typically refers to the construction of a physical feature (such as a wall, roadway, or railroad tracks) or the removal of a means of access (such as a local roadway or bridge) that would impair mobility within an existing community or between communities. The project would redevelop the site with a new groundwater well, water storage tank, and other associated improvements. The project would not include the construction of features, such as highways, freeways, or major arterial streets, or remove means of access that would divide the community. Movement of residents to and from the project area would not be inhibited by the proposed project. Based on this discussion, development of the project would not physically divide an established community. **(Less than Significant Impact)**

Impact LU-2:	The project would not cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. **(Less than Significant Impact)**

General Plan

The project site is in an area designated as Low Density Residential by the City's General Plan, which is intended to preserve the existing single-family neighborhoods in Sunnyvale. The proposed project would be constructed on a site that was previously developed with an operational

groundwater well and water tank. The project would not result in any development that would interfere with the surrounding low density residential neighborhood. **(Less than Significant Impact)**

Sunnyvale Municipal Code

The project site is zoned R0/S (low-density residential) and is within the (S) combining district. The permitted uses and development standards for these designations are outlined in Chapter 19.18 and SMC Chapter 19.26.200. As discussed in Section 4.11.1.2 Existing Conditions, the proposed use on-site would be permitted in the zoning district with a Use Permit. The project would meet all applicable development standards listed in Chapter 19.18 and Chapter 19.26.200 of the SMC, with the exception of the maximum height limits established for this zoning district. As discussed in Section 4.1 Aesthetics, the height of the new water tank (24 feet) would exceed the maximum height allowed for structures in this zoning district (17 feet). To construct a new 24-foot-tall water tank, the project would require an approved Variance from the City, pursuant to SMC Chapter 19.84. This review would ensure that the project would not cause a significant environmental impact due to a conflict with the SMC. **(Less than Significant Impact)**

Moffett Field CLUP

As discussed in Section 4.9 Hazards and Hazardous Materials, the project site is located within the AIA but is not located within the airfield's 65 dBA noise contour area or airport safety zones. The CLUP relies on the FAR Part 77 Notification Surface review process to regulate height restrictions. The proposed maximum building height of 24 feet would not require notification and review by the FAA to determine potential aviation hazard. In addition, the project's construction equipment would not have the potential to exceed 384 feet in height, therefore, the project would not be subject to FAA's review. For these reasons, the project would not conflict with airport operations at Moffett Federal Airfield. **(Less than Significant Impact)**

4.12 MINERAL RESOURCES

4.12.1 Environmental Setting

4.12.1.1 *Regulatory Framework*

State

Surface Mining and Reclamation Act

The Surface Mining and Reclamation Act (SMARA) was enacted by the California legislature in 1975 to address the need for a continuing supply of mineral resources, and to prevent or minimize the negative impacts of surface mining to public health, property, and the environment. As mandated under SMARA, the State Geologist has designated mineral land classifications in order to help identify and protect mineral resources in areas within the state subject to urban expansion or other irreversible land uses which would preclude mineral extraction. SMARA also allowed the State Mining and Geology Board (SMGB), after receiving classification information from the State Geologist, to designate lands containing mineral deposits of regional or statewide significance.

4.12.1.2 *Existing Conditions*

The project site is in an urban area and is currently developed with non-operational groundwater well infrastructure, as well as a cellular communication tower. According to the US Geologic Service (USGS), there are no critical mineral resources in Sunnyvale, including this project site.[81]

4.12.2 Impact Discussion

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
1) 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?	☐	☐	☐	☒
2) 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?	☐	☐	☐	☒

[81] United States Geological Survey. "Mineral Resources Online Spatial Data." Accessed January 11, 2023. https://mrdata.usgs.gov/general/map-us.html

Impact MIN-1:	The project would not result in the loss of availability of a known mineral resource that would be of value to the region and residents of the state. **(No Impact)**

There are no known mineral resources on-site, nor are there any in the immediate vicinity of the project area. The proposed project, therefore, would not result in impacts to mineral resources. **(No Impact)**

Impact MIN-2:	The project would not result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan. **(No Impact)**

The proposed project site is not identified in the General Plan as containing any locally important mineral resources and no known mineral resources have previously been discovered on-site. The project, therefore, would not result in impacts to locally important mineral resource recovery sites. **(No Impact)**

4.13 NOISE

The analysis of the project's noise and vibration impacts is presented in the EIR prepared for project. No further analysis of the project's noise and vibration impacts are provided in this Initial Study.

4.14 POPULATION AND HOUSING

4.14.1 Environmental Setting

4.14.1.1 *Existing Conditions*

As of May 2021, the City of Sunnyvale had an approximate population 156,234 with an average of 2.62 persons per household.[82] ABAG estimates that in 2040, the City's population will be 221,040 residents.[83] The project site is currently developed with a non-operational groundwater well, chemical storage buildings, and a cellular communication tower. There are no dwelling units on-site, and the existing utility infrastructure is maintained occasionally by employees who are based off-site.

4.14.2 Impact Discussion

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
1) 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)?	☐	☐	☒	☐
2) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

Impact POP-1:	The project would not induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure). **(Less than Significant Impact)**

A project can induce substantial population growth by proposing new housing beyond projected or planned development levels, generating demand for housing as a result of new businesses, extending roads or other infrastructure to previously undeveloped areas, or removing obstacles to population growth (e.g., expanding capacity of a wastewater treatment plant beyond that necessary to serve planned growth).

The proposed project does not include any new housing or businesses that would generate demand for additional housing. The project site contained an operational groundwater well and water tank until 2016 when the well was decommissioned and the tank was removed. This project would construct a new, replacement groundwater well, water tank, and accessory structures to continue the historic use of the property.

[82] Population: California Department of Finance. "E-5 City/County Population and Housing Estimates – January 1, 2022." Accessed: January 20, 2023. Available at: http://www.dof.ca.gov/Forecasting/Demographics/Estimates/E-5/.
[83] Association of Bay Area Governments. *Plan Bay Area Projections 2040*. November 2018.

As discussed in Section 3.2, the intent of the proposed groundwater well would be to provide access to an additional long-term source of water that would be used to partially offset a decrease in supply from other sources and address concerns due to drought and climate change. The water supplied by the proposed groundwater well would serve existing and projected water demand. For these reasons, the project would not induce substantial unplanned growth. **(Less than Significant Impact)**

Impact POP-2:	The project would not displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere. **(No Impact)**

The project site is developed with non-operational water infrastructure and provides no housing. Therefore, the project would not displace existing housing or people or require replacement housing to be constructed. **(No Impact)**

4.15 PUBLIC SERVICES

4.15.1 Environmental Setting

4.15.1.1 *Regulatory Framework*

Local

City of Sunnyvale General Plan

The City's General Plan includes policies for the purpose of avoiding or mitigating environmental impacts resulting from planned development projects within the City. The following policies are specific to public services and are applicable to the proposed project.

Policy	Description
Safety and Noise Element	
SN-3.1	Provide rapid and timely response to all emergencies.
SN-5.1	Assure that equipment and facilities are provided and maintained to meet reasonable standards of safety, dependability, and compatibility with fire service operations.

Sunnyvale Municipal Code

SMC Chapter 16.52 is the City's Fire Code and, adopted by reference, the 2018 International Fire Code (IFC) in its entirety as published by the International Code Council and the California Fire Code under Ordinance 3018-13 are included in the City's Fire Code. The Fire Code regulates, among other things, issuance of permits where operations or business or the installation or modification of any systems regulated under the Fire Code are planned (Section 16.52.105), application and collection of applicable fire permit fees (Section 16.52.106), and installation of residential and commercial automatic sprinkler systems (Section 16.52.903).

4.15.1.2 *Existing Conditions*

Fire and Police Protection Services

Fire and police protection services are provided for the project site by the Sunnyvale Department of Public Safety (DPS). The DPS is staffed by Public Safety Officers who are cross-trained as police officers, firefighters, and emergency medical technicians.[84] The DPS is divided into nine separate programs: Fire Services, Police Services, Special Operations, and Internal Affairs. The Fire Services program is responsible for responding to fire calls and providing emergency medical services. The Fire Services program provides fire prevention compliance inspections, fire code enforcement, and hazardous materials regulation. The Police Services program is responsible for providing law enforcement and SWAT services to the community.[85]

[84] City of Sunnyvale. "Public Safety." Accessed February 3, 2023. Available at https://www.sunnyvale.ca.gov/your-government/departments/public-safety.
[85] City of Sunnyvale. "DPS Organizational Chart." Accessed February 3, 2023. Available at https://www.sunnyvale.ca.gov/home/showpublisheddocument/3052/638100604224870000.

The Fire Services program operates a total of six fire stations that serve the City of Sunnyvale. The nearest fire station to the project site is Sunnyvale Fire Station #4 at 996 South Mathilda Ave, which is approximately 0.6-mile north of the project site. The Police Services program is based out of the Sunnyvale DPS complex at 700 All America Way, which is approximately 1.9 miles northwest of the project site. The City and DPS do not have an established response time goal or service ratio for fire and police protection services.

The City of Sunnyvale participates in a mutual aid program with neighboring cities, including the cities of Mountain View, Santa Clara, and San José. Through this program, should Sunnyvale need additional assistance, one or more of the mutual aid cities would provide assistance in whatever capacity was needed.

Schools

The project site is within the boundaries of Cupertino Union School District and Fremont Union High School District. Cupertino Union School District is comprised of 14 elementary schools, five middle schools, and four alternative schools.[86] Fremont Union High School District is comprised of five high schools and one adult school.

Parks

Parks and open space in the City are managed by the Parks Division within the Department of Public Works. The City currently has approximately 772 acres of parkland, including 185 acres of parks, 264 acres of special use facilities (including the Sunnyvale Golf Course and Baylands Park Wetlands), 87 acres of school open space, three acres of public grounds (including orchards and open space surrounding the Community Center and Civic Center campuses), and 48 acres of greenbelts and trails. The City's parkland total includes other recreational facilities such as the John W. Christian Greenbelt, a senior center, tennis courts, a skate park. The nearest recreational facility to the project site Panama Park, which is directly adjacent to the western border of the project site.

Libraries

Sunnyvale Public Library is the sole public library in the City. It is located at 665 West Olive Avenue, which is approximately two miles northwest of the project site. Library features include book rentals, computer services, wireless internet, access to 3D printing, and a sewing lab.[87]

[86] Cupertino Union School District. "District Map." Accessed September 14, 2023. Available at: https://www.cusdk8.org/about-us/district-map.
[87] City of Sunnyvale. "Sunnyvale Public Library: About." Accessed February 3, 2023. Available at: https://www.library.sunnyvale.ca.gov/about/computers-printing.

4.15.2 Impact Discussion

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

Impact PS-1:	The project would not 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 fire protection services. **(Less than Significant Impact)**

The project site is in an area that is currently served by the City's Fire Services program. The operation of the proposed groundwater well would not substantially increase demand for fire protection services compared to existing conditions because the project would not result in an increase in population on-site. As discussed in Section 4.9 Hazards and Hazardous Materials, the hazardous materials required to disinfect the pumped groundwater would be stored consistent with the regulations listed in SMC Chapter 16.52. The project would also be required to meet current California Building Standards Code and requirements in SMC Chapter 16.52 that ensure future development include adequate design and infrastructure for fire protection. For these reasons, development of the proposed project would not result in a significant impact to fire protection services in the City or require the construction of new or expanded fire protection facilities. **(Less than Significant Impact)**

Impact PS-2:	The project would not 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 police protection services. **(Less than Significant Impact)**

The project site would continue to be secured by the existing fences and access gate on Carlisle Way. The operation of the water well would not substantially increase demand for police protection services compared to existing conditions because the project would not result in an increase in population on-site. For these reasons, development of the proposed project would not result in a significant impact to police protection services in the City or require the construction of new or expanded police protection facilities. **(Less than Significant Impact)**

Impact PS-3:	The project would not 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 schools. **(No Impact)**

The proposed project does not include any residential units and, therefore, would not generate any new students that could increase demand on public schools in the project area. The project would not impact existing school services or result in the need for new schools in the project area. **(No Impact)**

Impact PS-4:	The project would not 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 parks. **(Less than Significant Impact)**

The City collects park in-lieu fees from residential developments. Parkland demand, therefore, is based on residents and not employees. The proposed project would not generate new residents that could increase demand on local parks. Once the proposed improvements are constructed, the equipment operation would be conducted remotely by off-site employees. A small number of employees may visit the site daily to ensure proper equipment operation. While some of these employees may use nearby parks such as Panama Park on during their break time, this would not be substantial enough to require the construction of any new or expanded parks. Therefore, the proposed project would not result in the need for new or physically altered parks in the project area. **(Less than Significant Impact)**

Impact PS-5:	The project would not 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 other public facilities. **(Less than Significant Impact)**

The proposed project does not include any residential development and would not increase the number of residents in the area. Therefore, the proposed project would not increase demand on other public facilities such as libraries. **(Less than Significant Impact)**

4.16 RECREATION

4.16.1 Environmental Setting

4.16.1.1 *Regulatory Framework*

Local

City of Sunnyvale General Plan

The City's General Plan includes policies for the purpose of avoiding or mitigating environmental impacts resulting from planned development projects within the City. The following policies are specific to recreation and are applicable to the proposed project.

Policy	Description
Land Use and Transportation Element	
LT-9.1	Ensure that the planned availability of open space in both the city and the region is adequate.

4.16.1.2 *Existing Conditions*

As discussed in Section 4.15 Public Services, parks and open space in the City are managed by the Parks Division within the Department of Public Works. The City currently has approximately 772 acres of parkland, including 185 acres of parks, 264 acres of special use facilities (including the Sunnyvale Golf Course and Baylands Park Wetlands), 87 acres of school open space, three acres of public grounds (including orchards and open space surrounding the Community Center and Civic Center campuses), and 48 acres of greenbelts and trails.[88] The City's parkland total includes other recreational facilities such as the John W. Christian Greenbelt, a senior center, tennis courts, and a skate park. The nearby recreational facilities to the project site include Panama Park and the Sunnyvale Community Center, which are directly adjacent to and 0.72-mile northwest of the project site, respectively.

4.16.2 Impact Discussion

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
1)	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?	☐	☐	☒	☐
2)	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?	☐	☐	☒	☐

[88] City of Sunnyvale. *Draft EIR: Downtown Specific Plan Amendments and Specific Development Project.* SCH# 2018052020. Page 212. November 2019.

Impact REC-1:	The project would not 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. **(Less than Significant Impact)**

Unlike a residential development project, which increases City population and associated demand on City parks, the development of the proposed groundwater well and associated infrastructure would not substantially increase the use of existing parks or other recreational facilities. As discussed in Section 4.15 Public Services, while the estimated one employee that would visit the site daily for maintenance and quality control may visit nearby recreational facilities on breaks, this nominal increase in use would not result in substantial physical deterioration of those facilities. Therefore, the proposed project would result in less than significant impacts to existing recreational facilities. **(Less than Significant Impact)**

Impact REC-2:	The project does not include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment. **(Less than Significant Impact)**

The proposed improvements on-site do not include recreational facilities. As discussed above under Impact REC-1, the employee may use nearby recreational facilities during breaks and the usage would not be substantial nor necessitate the construction or expansion of new recreational facilities. **(Less than Significant Impact)**

4.17 TRANSPORTATION

4.17.1 Environmental Setting

4.17.1.1 *Regulatory Framework*

Consistent with the requirements of SB 743, Council Policy 1.2.8 was adopted to outline the City's Transportation Analysis Policy. Under this policy, a land use project is not required to conduct a VMT analysis to identify significant transportation impacts under CEQA if it meets any of the exemption criteria under Section 2 – Exemptions in the policy. This includes small projects that generate 110 daily trips or less. The City's 2020 Active Transportation Plan recommends improvements that integrate pedestrian, bicycling, and safe routes to schools throughout the City to create a connected and efficient network.

4.17.1.2 *Existing Conditions*

The project site is owned by Cal Water and was previously an operating groundwater extraction site. The groundwater well extraction operations have been inactive since 2016. The site is not being actively used and generates little, if any, vehicle traffic. The project site does not generate bicycle, pedestrian, or transit trips. A brief overview of the transportation network in the project site area is provided below.

Regional and Local Access

Regional access to the project site is provided by Interstate 280, Lawrence Expressway, and El Camino Real. Local roadway access to the project site is provided by Lilian Avenue, Kingfisher Way, and Carlisle Way.

Existing Bicycle, Pedestrian, and Transit Facilities

Bicycle Facilities

Bicycle facilities in the vicinity of the project site consist of Class II bike lanes and Class IIIB bike routes.[89] Dartshire Way, which is south of the project site, is an east-west Class IIIB bike route. East Fremont Avenue and South Wolfe Road both contain Class II bike lanes that are oriented in an east-west direction and north-south direction, respectively.

Pedestrian Facilities

The street adjacent to the project site, Carlisle Way, has continuous sidewalks on the south side of the street and noncontiguous sidewalks on the north side of the street near the project site. The two nearest intersections, Lilian Avenue/Carlisle Way and Kingfisher Way/Carlisle Way, have no striped crosswalks in the intersections. Both intersections are unsignalized.

[89] Class II bike lanes are on-street bike lanes with a striped lane, pavement markings, and signage for one way bicycle traffic. Class IIIB bike routes are streets where the lanes are wide enough and the number of vehicles is low enough for both bicycles and vehicles to share the road.

Transit Facilities

The existing bus transit services in the vicinity of the project site are provided by the VTA. The nearest bus stop to the project site is serviced by VTA Local Route 56 and is located on South Wolfe Road, approximately 880 feet east of the project site. An additional bus stop located on El Camino Real approximately 0.35-mile northeast of the site is serviced by VTA Frequent Route 22 and VTA Rapid Route 522.

4.17.2 Impact Discussion

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

Impact TRN-1: The project would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadways, bicycle lanes, and pedestrian facilities. **(Less than Significant Impact)**

Roadway System

As further discussed in Impact TRN-2 below, small projects that generate 110 daily trips or less are not required to prepare a detailed VMT analysis as their transportation impacts are assumed to be less than significant. The proposed project would generate a small number of daily trips as the operation of the proposed groundwater well, pump, and water tank would primarily be conducted by remote employees. It is expected that one employee would visit the site daily. The daily trip by this employee would be under the threshold of 100 AM and PM peak hour trips established in the City's Transportation Analysis Guidelines that would trigger the requirement to conduct a Local Transportation Analysis (LTA) for a LOS analysis. Given the minimal number of daily trips by the project, impacts to the surrounding roadway system would be negligible.

Based on this discussion, the project is consistent with the City's Council Policy 1.2.8 and Transportation Analysis Guideline. **(Less than Significant Impact)**

Pedestrian Facilities

During the installation of the new utility lines on-site, the project would demolish the existing driveway and a segment of the sidewalk on the northern boundary of the project site. Both the driveway and segment of sidewalk would be replaced in the same location after installation of the utility lines. No other pedestrian facilities would be affected. This impact to adjacent pedestrian facilities would be temporary and only during construction; therefore, the project would not conflict with a program, plan, ordinance, or policy addressing the pedestrian circulation system. **(Less than Significant Impact)**

Bicycle Facilities

The project would not affect any existing bicycle facilities. There are no planned bicycle improvements adjacent to the project site along Carlisle Way, therefore, the project would not impede implementation of any planned improvements, nor would it conflict with another program, plan, ordinance, or policy addressing the bicycle circulation system. **(Less than Significant Impact)**

Transit Facilities

The project area is served by three VTA bus routes with stops within walking distance of the project site. However, the proposed project would not generate any transit riders because employees visiting the site would arrive in a maintenance vehicle with equipment. In addition, the project would not impact existing or planned transit facilities. Therefore, the project would not conflict with a program, plan, ordinance, or policy addressing the transit circulation system. **(Less than Significant Impact)**

Impact TRN-2:	The project would not conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b). **(Less than Significant Impact)**

The City of Sunnyvale adopted Council Policy 1.2.8 in June 2020 to implement a VMT analysis policy that would be consistent with the requirements of SB 743 and CEQA Guidelines Section 15064.3, subdivision (b). Council Policy 1.2.8 implements additional requirements and criteria for projects to be screened out of preparing a VMT analysis. As discussed in Section 4.17.1, small projects that generate 110 daily trips or less are not required to prepare a detailed VMT analysis as their transportation impacts are assumed to be less than significant. The proposed project would generate a limited number of daily trips as only one employee is expected to visit the site each day and most of the operation of the project would be done remotely by off-site employees. Based on this discussion, the project would generate less than 110 daily trips, and therefore, would meet the City's screening criteria and be assumed to have a less than significant VMT impact. **(Less than Significant Impact)**

Impact TRN-3:	The project would not substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment). **(Less than Significant Impact)**

Currently, vehicles enter and exit the project site via a secured (i.e., fenced) one-way driveway located on Carlisle Way. Under the proposed project, the existing driveway would be replaced by a new driveway in the same location. The proposed driveway would meet the design standards from

Chapter 19.46.120 of the SMC that require a minimum width of 12 feet for one-way driveways. The driveway, therefore, would not result in a hazardous design feature. The existing security fencing around the site would remain under the project.

The project site is in a residential neighborhood and is adjacent to Panama Park. The project would construct a replacement groundwater well, water tank, and other accessory structures required to operate a well on-site. The land use is not a new use on-site, as the site was previously used for groundwater extraction from 1959 until 2016. In addition, the project site is identified as an active production well in the City's General Plan.[90] For these reasons, the project would not introduce an incompatible land use.

Based on the discussion above, the project would not substantially increase hazards due to a geometric design feature or incompatible uses. **(Less than Significant Impact)**

Impact TRN-4:	The project would not result in inadequate emergency access. **(Less than Significant Impact)**

The project would not include development of any structures within the public right-of-way and no alteration to the geometry of public roadways would occur. The proposed development would be reviewed for consistency with applicable California Building Code and Fire Code requirements for access and safety. As such, the proposed project would have a less than significant emergency access impact. **(Less than Significant Impact)**

[90] City of Sunnyvale. *Sunnyvale General Plan*. July 26, 2011. Figure 7-1.

4.18 TRIBAL CULTURAL RESOURCES

4.18.1 Environmental Setting

4.18.1.1 *Regulatory Framework*

State

Assembly Bill 52

AB 52, effective July 2015, established a new category of resources for consideration by public agencies called Tribal Cultural Resources (TCRs). AB 52 requires lead agencies to provide notice of projects to tribes that are traditionally and culturally affiliated with the geographic area if they have requested to be notified. Where a project may have a significant impact on a TCR, consultation is required until the parties agree to measures to mitigate or avoid a significant effect on a TCR or until it is concluded that mutual agreement cannot be reached.

Under AB 52, TCRs are defined as follows:

1) Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are also either:
    - Included or determined to be eligible for inclusion in the CRHR, or
    - Included in a local register of historical resources as defined in Public Resources Code Section 5020.1(k).
2) A resource determined by the lead agency to be a TCR.

4.18.1.2 *Existing Conditions*

There are no known TCRs on-site. The Tamien Nation tribe requested notification of all projects within the City of Sunnyvale. Letters were sent to representatives at eight separate Native American groups (including Tamien Nation) on January 10, 2023 via certified US Mail and email and invited the Native American groups to initiate formal consultation with the City of Sunnyvale, pursuant to AB 52. The AB 52 30-day consultation window ended on February 10, 2023 and the tribes contacted via the consultation process did not request consultation with the City.

As discussed in Section 4.5 Cultural Resources, the site has low sensitivity for pre-historic resources and a low sensitivity for historic-era archaeological resources.

4.18.2 Impact Discussion

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
1) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)?	☐	☒	☐	☐
2) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☒	☐	☐

Impact TCR-1:	The project would not cause a substantial adverse change in the significance of a tribal cultural resource that is 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 with Mitigation Incorporated)**

The project site does not contain any known TCRs and no Native American tribes requested consultation with the City for this project.

The project would implement mitigation measures MM CUL-2.1, MM CUL-2.2, MM CUL-2.3, and MM CUL-3.1 identified in Section 4.5 Cultural Resources to reduce the potential for adverse impacts to buried cultural resources (including TCRs) to a less than significant level by providing cultural sensitivity training to educate all contractors on types of artifacts and features that may be encountered and what to do if those items are encountered, monitoring excavation work by a qualified archaeologist, and stopping construction and preserving the resources in place if any are found, or preparing a data recovery plan if preservation in place is not possible. Based on this discussion, the project would not result in a significant impact to TCRs. **(Less than Significant Impact with Mitigation Incorporated)**

Impact TCR-2:	The project would not cause a substantial adverse change in the significance of a tribal cultural resource that is 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. **(Less than Significant Impact with Mitigation Incorporated)**

As discussed under Impact TCR-1, there are no TCRs on the project site and the implementation of mitigation measures MM CUL-2.1, MM CUL-2.2, MM CUL-2.3, and MM CUL-3.1 would reduce impacts unknown, buried TCRs (if present on-site) to a less than significant level. As such, the project would not cause a substantial adverse change in the significance of a TCR. **(Less than Significant Impact with Mitigation Incorporated**

4.19 UTILITIES AND SERVICE SYSTEMS

4.19.1 Environmental Setting

4.19.1.1 *Regulatory Framework*

Federal and State

Federal Clean Water Act and California Porter-Cologne Water Quality Control Act

The federal Clean Water Act and California's Porter-Cologne Water Quality Control Act are the primary laws related to water quality in California. Regulations set forth by the EPA and the SWRCB have been developed to fulfill the requirements of this legislation. EPA regulations include the NPDES permit program, which controls sources that discharge pollutants into the waters of the United States (e.g., streams, lakes, bays, etc.). NPDES permits establish discharge limits on what can be discharged to the waters of the United States, and contains monitoring and reporting requirements, and other provisions to ensure that the discharge does not hurt water quality or people's health. These regulations are implemented at the regional level by the RWQCBs, specifically by the San Francisco Bay RWQCB for the San Francisco Bay Area region.

State Water Code

Pursuant to the State Water Code, water suppliers providing water for municipal purposes to more than 3,000 customers or supplying more than 3,000 acre-feet (approximately 980 million gallons) of water annually must prepare and adopt an urban water management plan (UWMP) and update it every five years. As part of a UWMP, water agencies are required to evaluate and describe their water resource supplies and projected needs over a 20-year planning horizon, water conservation, water service reliability, water recycling, opportunities for water transfers, and contingency plans for drought events. The City of Sunnyvale adopted its most recent UWMP in June 2020.

Assembly Bill 939

The California Integrated Waste Management Act of 1989, or AB 939, established the Integrated Waste Management Board, required the implementation of integrated waste management plans, and mandated that local jurisdictions divert at least 50 percent of solid waste generated (from 1990 levels), beginning January 1, 2000, and divert at least 75 percent by 2010. Projects that would have an adverse effect on waste diversion goals are required to include waste diversion mitigation measures.

Assembly Bill 341

AB 341 sets forth the requirements of the statewide mandatory commercial recycling program. Businesses that generate four or more cubic yards of garbage per week and multi-family dwellings with five or more units in California are required to recycle. AB 341 sets a statewide goal for 75 percent disposal reduction by the year 2020.

Senate Bill 1383

SB 1383 establishes targets to achieve a 50 percent reduction in the level of the statewide disposal of organic waste from the 2014 level by 2020 and a 75 percent reduction by 2025. The bill grants CalRecycle the regulatory authority required to achieve the organic waste disposal reduction targets and establishes an additional target that at least 20 percent of currently disposed edible food is recovered for human consumption by 2025.

California Green Building Standards Code

In January 2010, the State of California adopted the California Green Building Standards Code, establishing mandatory green building standards for all buildings in California. 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 nonhazardous construction and demolition debris; and
- Providing readily accessible areas for recycling by occupants.

Local

City of Sunnyvale General Plan

The City's General Plan includes policies for the purpose of avoiding or mitigating environmental impacts resulting from planned development projects within the City. The following policies are specific to utilities and service systems and are applicable to the proposed project.

Policy	Description
Environmental Management Element	
EM-1.3	Provide enough redundancy in the water supply system so that minimum potable water demand and fire suppression requirements can be met under both normal and emergency circumstances.
EM-2.1	Lower overall water demand through the effective use of water conservation programs in the residential, commercial, industrial and landscaping arenas.
EM-10.1	Consider the impacts of surface runoff as part of land use and development decisions and implement BMPs to minimize the total volume and rate of runoff of waste quality and quantity (hydro modification) of surface runoff as part of land use and development decisions.
EM-14.2	Maximize diversion of solid waste from disposal by use of demand management techniques, providing and promoting recycling programs, and encouraging private sector recycling.
EM-14.3	Meet or exceed all federal, state and local laws and regulations concerning solid waste diversion and implementation of recycling and source reduction programs.

Sunnyvale Water Pollution Control Plan Master Plan

In 2016, the City adopted its Water Pollution Control Plant Master Plan to rebuild the Donald M. Somers Water Pollution Control Plant (WPCP) over the next 20 years. Implementation of the plan will upgrade existing outdated equipment and aging infrastructure, complying with all applicable federal, state, and local regulations.

Sunnyvale Water Utility Master Plan

The City's Water Utility Master Plan (WUMP) was adopted in 2010 and later updated as part of the Potable Water System Comprehensive Preliminary Design Study Report (CPDS, 2013). The City's WUMP and CPDS identify Capital Improvement Projects (CIPs) and pipeline upsizing projects to address the City's fire flow deficiencies and provide sufficient fire flow in the City through 2033.[91]

Sunnyvale Wastewater Collection System Master Plan

The City's 2015 Wastewater Collection System Master Plan (WWMP) evaluated the capacity and condition of the sanitary sewer and storm drain collection system in order to recommend a long-term Capital Improvement Program with improvements.[92] The City's sewer system performance criteria defines a pipe as potentially deficient when the Maximum Flow Depth/Pipe Diameter (d/D) is greater than 0.75 for 12 inch and greater diameter pipes and 0.5 for 10 inch and smaller diameter pipes.[93] Based on the findings, the WWMP identifies CIPs to be implemented to ensure the sanitary sewer and storm drain systems can accommodate the existing development and projected growth in the City. Improvements needed for the City's sewer system, including the WPCP, are funded through the collection of sewer connection fees. Developers are required to pay the appropriate sewer connection fee prior to redevelopment of a property

Sunnyvale Municipal Code

Section 12.16.020 (Types of charges and fees) states that the City Council from time to time shall establish by resolution fees and charges for sewage services provided by the City. Such fees and charges shall be based on cost influencing factors such as flow, pollutant loading rates, volumes, and the degree of effort required for purposes of billing, inspection, sampling, testing and permitting.

Section 12.40.010 (Allocation of Sewage Treatment Capacity) states that the entire sewage treatment capacity of the WPCP shall be allocated to four categories as follows: (A) Industrial (consisting of all zoning districts M-1, M-2, M-3, M-4 or any replacement district intended to be primarily for manufacturing land use); (B) Commercial/Public (consisting of all zoning districts O, P-F, CD, C-H, C-1, C-2, C-3, C-4); (C) Residential (consisting of all zoning districts R-0, R-1, R-2, R-3, R-4, R-5, R-MH); which allocations shall total 96% of the WPCP's rated capacity. In addition, a fourth category, (D) "Reserves" shall be established totaling four percent of the WPCP's rated capacity.

[91] City of Sunnyvale. *Water Utility Master Plan*. November 2010. Page 9, Table 7-2 for CIPs and Table 8-2 for pipeline upsizing.
[92] The 2015 WWMP evaluated 12-inch or larger pipelines.
[93] City of Sunnyvale. *Wastewater Collection System Master Plan. December 2015*. Pages 28-29.

Section 12.40.030 (Initial baseline limits) states there shall be established for each of Categories A, B and C, an "Initial Baseline Limit," which shall be defined as the initial allocations, less the present estimated vacant land needs of 1.485 MGD for Category A (Industrial), 0.256 MGD for Category B (Commercial/Public), and 1.160 MGD for Category C (Residential).

Section 12.40.060 (Monitoring of Wastewater Flows) states the Director of Community Development or his or her designate shall monitor wastewater flows to the WPCP and periodically calculate, on the basis of water sales information, and any other relevant information, the amount of wastewater flow originating from the zoning districts comprising each of the wastewater capacity allocation categories.

Section 12.40.070 (Declaration of need for wastewater capacity evaluations) states if the calculated amount of wastewater from any allocation category reaches the baseline limit for such category, the Director of Community Development, or designate, shall immediately issue and cause to be filed with the City Clerk a Declaration of Need for Wastewater Capacity Evaluation. The City Clerk shall within 10 days publish this Declaration in the official newspaper of the City. Thereupon for a period of 60 days, or until the Declaration is withdrawn, whichever is earlier, no new wastewater discharge permits shall be issued, and no existing permits shall be modified to permit increased flow. The Director of Community Development or his or her designate shall perform within such 60 days an analysis of the remaining vacant land in each wastewater capacity allocation category, and the wastewater capacity anticipated to be needed to service such vacant land when developed. For each acre of vacant land in Categories A and B, three thousand gallons per acre per day will be reserved. For each vacant acre of land within Category C, capacity needs based upon the maximum density allowed in each zoning district making up Category C, will be calculated and reserved. A new baseline limit for each capacity allocation category shall be calculated by subtracting vacant land needs in each category from total WPCP capacity allocation in each category.

Chapter 19.37 (Landscaping, Irrigation and Usable Open Space) promotes the conservation and efficient use of water. All new landscaping installations of 500 square feet or more or rehabilitated landscaping projects of 1,000 square feet or more are subject to water-efficiency design, planting, and irrigation requirements.

Sunnyvale Construction and Demolition Waste Diversion

The City requires remodel or demolition projects where 50 percent or more of the exterior wall will be removed to recycle or reuse at least 65 percent of the project's nonhazardous waste.[94] Recycling of nonhazardous waste reduces the energy use to produce new materials from raw, non-renewable resources.

4.19.1.2 *Existing Conditions*

The project site is located in a developed area within the City of Sunnyvale and is currently connected to existing water and stormwater service systems.

[94] City of Sunnyvale. "Construction Waste." January 1, 2022. Accessed February 10, 2023. Available at: https://www.sunnyvale.ca.gov/business-and-development/planning-and-building/construction-waste.

Storm Drain System

The City stormwater system is comprised of approximately 150 miles of storm drains and two pump systems that convey water to four separate waterways that lead to San Francisco Bay. These waterways are the Sunnyvale West Channel, Sunnyvale East Channel, Stevens Creek, and Calabazas Creek.[95]

The project site is comprised of approximately 524 square feet (or 1.6 percent) of impervious area. The remaining 33,276 square feet (or 98.4 percent) of the site consists of pervious area, which is comprised of landscaping and other permeable surfaces. Runoff from the project site flows into the nearest drainage inlets on Carlisle Way. The storm drain line in the immediate vicinity of the site is 15-inches in diameter and eventually carries the storm water into the San Francisco Bay.

Potable Water

The only use on-site that consumes potable water is the small amount of landscaping that requires irrigation. The previous groundwater well and water storage tank on-site were connected to the City's potable water system by a 10-inch mainline. Although it is no longer in use, the 10-inch mainline remains on-site.

4.19.2 Impact Discussion

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
1) Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☒	☐
2) Have insufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☒	☐
3) Result in a determination by the wastewater treatment provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒
4) 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?	☐	☐	☒	☐

[95] City of Sunnyvale. *2020 Urban Water Management Plan.* Adopted June 29, 2021. Page 6-5.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
5) Be noncompliant with federal, state, or local management and reduction statutes and regulations related to solid waste?	☐	☐	☒	☐

Impact UTL-1:	The project would not require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects. **(Less than Significant Impact)**

Water System Infrastructure

The proposed project would construct a new lateral eight-inch distribution water line that would be connected to a ten-inch water main on-site. Construction impacts related to this new connection to the water system would be limited to the project site and a small portion of the adjacent right-of-way on Carlisle Way. While the proposed project would result in construction of new water infrastructure, it would not result in the need for expanded water infrastructure in the City's water system (i.e., new water pipes to accommodate increased water flow). **(Less than Significant Impact)**

Sanitary Sewage Infrastructure

The project would not create any wastewater, therefore, there would be no impact to sanitary sewer infrastructure or wastewater treatment facilities as a result of the project. **(No Impact)**

Stormwater Drainage Infrastructure

Improvements to the stormwater drainage infrastructure would be limited to the construction of a new 15-inch storm drain lateral line that would connect to the existing 15-inch mainline in Carlisle Way and installation of a new manhole to provide improved maintenance access to the connection point.

As discussed in Section 4.10 Hydrology and Water Quality, the project would increase the amount of impervious surface on-site from 524 square feet to 1,785 square feet. Although the project would result in a minor increase in impervious surfaces, the remaining 32,015 square feet of the site would consist of pervious surfaces such as gravel and landscaped areas that would allow for water infiltration on-site. This would limit the amount of runoff from the project site that would reach the stormwater drainage system.

After construction of the groundwater well is completed, the project would be required to conduct a water production test and a discharge of initial raw water that would pump approximately 1.7 million gallons of water from the aquifer. This water would be discharged into the storm drain system on Carlisle Way. Although the project would discharge a large amount of water initially at a rate of approximately 1,200 gallons per minute, it would not be required on an ongoing basis and the

existing infrastructure in Carlisle Way would be able to accommodate the initial discharges.[96] To ensure that the stormwater infrastructure on Carlisle Way can accommodate this discharge, the project would comply with the following condition of approval.

Condition of Approval

- To prevent overloading the storm drain system, the water production test and associated 1,200 gpm discharge, or any other high flow rate discharge from the site, must only occur during dry weather.

Based on this discussion, the project would not result in the need to relocate or construct any new or expanded stormwater drainage infrastructure beyond the proposed lateral line. The construction impacts related to the proposed lateral line connection are discussed throughout this Initial Study and would result in a less than significant impact. **(Less than Significant Impact)**

Electric Power and Telecommunications Facilities

The project site would continue to be served by existing electric power facilities; no new improvements are proposed. There is a cellular communication tower on-site that is owned and maintained separately by Sprint Nextel on a portion of the project site that is leased from Cal Water. No improvements are proposed to these facilities, therefore, no impacts would result from project implementation. **(No Impact)**

Impact UTL-2:	The project would not have insufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years. **(Less than Significant Impact)**

As discussed in Section 4.10 Hydrology and Water Quality under Impact HYD-2, although the project would result in the pumping of a maximum of 1,935 AF of additional of groundwater per year, this would only account for approximately 2.4 percent of the total annual amount pumped from the Santa Clara Subbasin and would result in a less than significant impact on the sustainable groundwater management of the basin.

The City has three primary sources of potable water which include purchased water from SFPUC, treated water purchased from Valley Water, and City-owned and operated groundwater wells. In addition, the City's water system is connected to utility systems operated by the City of Santa Clara, the City of Mountain View, the City of Cupertino, and Cal Water, which can provide water service in the event of an emergency in the City.[97] The facilities operated by Cal Water include local groundwater wells within the City, such as the one proposed by the project.

The landscaping on-site would continue to utilize a small amount of potable water for irrigation purposes. As part of Sunnyvale's 2020 UWMP, a Drought Risk Assessment was conducted to determine whether the City would be able to adequately meet the demand for water during normal, single-dry year, and five consecutive dry-year conditions. The assessment was calculated in five-year

[96] Jeyaprakash, Mary, City of Sunnyvale, Senior Planner. Personal Communication. November 8, 2023.
[97] City of Sunnyvale. *2020 Urban Water Management Plan.* Adopted June 29, 2021. Page 3-5.

intervals from 2025 to 2040. This assessment found that the City has adequate water supplies to maintain a surplus level of water supply during normal, dry, and multiple (five-year) drought years even when accounting for future growth in the City.[98] Based on the City's projected water supply (36.54 mgd), future citywide projected water demand (24.41 mgd), and the minor amount of water required for landscaping on-site, the City would continue to have adequate water supply to serve development within the City and the proposed project during normal, single- and multiple-dry years. **(Less than Significant Impact)**

Impact UTL-3:	The project would not result in a determination by the wastewater treatment provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments. **(No Impact)**

The project would not generate any wastewater; therefore, the project would not result in a determination from the wastewater treatment provider that it does not have adequate capacity to continue meeting its existing commitments. (**No Impact)**

Impact UTL-4:	The project would not generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals. **(Less than Significant Impact)**

In order to reduce the amount of solid waste disposed of within the City, contractors are required to use a waste diversion and recycling tracking system called Green Halo to create a Construction and Demolition Waste Management Plan (CDWMP) for any construction and demolition projects. This program helps the contractor and City track diversion rates for construction waste. In compliance with CALGreen construction waste management requirements, the City requires a minimum 65 percent waste diversion of building materials or a disposal rate of less than or equal to two pounds of waste per square foot of building area.[99] The project would comply with these regulations while demolishing the small amount of existing improvements on-site during construction. Once operational, the proposed project would not generate solid waste.

For these reasons, the project would not generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, and therefore, would result in a less than significant impacts. **(Less than Significant Impact)**

[98] City of Sunnyvale. *2020 Urban Water Management Plan.* Adopted June 29, 2021. Pages 7-24 through 7-26.
[99] City of Sunnyvale. "Construction and Demolition Waste Tracking Requirements for Projects in Sunnyvale." Accessed March 10, 2023. Available at: https://www.sunnyvale.ca.gov/home/showpublisheddocument/1524/637820848558170000.

Impact UTL-5:	The project would not be noncompliant with federal, state, or local management and reduction statutes and regulations related to solid waste. **(Less than Significant Impact)**

As discussed under Impact UTL-4, the project would comply with City requirements regarding waste diversion during project construction. This would be in line with CALGreen requirements regarding the diversion of construction waste and debris by recycling or reusing a minimum of 65 percent of the non-hazardous waste. Once operational, the project would not be required to establish a waste diversion, composting, or recycling program as there would not be any residents or established employees on-site to generate ongoing waste. Therefore, the project would comply with federal, state, and local solid waste statutes and regulations. **(Less than Significant Impact)**

4.20 WILDFIRE

4.20.1 Environmental Setting

4.20.1.1 *Existing Conditions*

The project site is in an urban area surrounded by existing development. The site is not located within an identified Very High Fire Hazard Severity Zone in an SRA or an LRA.[100,101] The project site is not located near wildlands that could present a fire hazard.

4.20.2 Impact Discussion

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
1) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
2) 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?	☐	☐	☐	☒
3) 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?	☐	☐	☐	☒
4) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☐	☒

The project site is not located in or near state responsibility areas or lands classified as very high fire hazard severity zones; therefore, the project would not result in wildfire impacts. **(No Impact)**

[100] California Department of Forestry and Fire Protection. *Santa Clara County Fire Hazard Safety Zone Map – State Responsibility Area.* November 2007.
[101] California Department of Forestry and Fire Protection. *Santa Clara County Fire Hazard Safety Zone Map – Local Responsibility Area.* October 2008.

4.21 MANDATORY FINDINGS OF SIGNIFICANCE

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
1)	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?	☐	☒	☐	☐
2)	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.)	☐	☒	☐	☐
3)	Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☒	☐	☐	☐

Impact MFS-1: The project does not have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory. **(Less than Significant Impact with Mitigation Incorporated)**

As discussed in Section 4.4 Biological Resources, the project would not impact sensitive habitats or special-status species. The project would implement mitigation measure MM BIO-1.1 to reduce impacts to nesting birds to a less than significant level. As discussed in Sections 4.5 Cultural Resources and 4.18 Tribal Cultural Resources, there are no cultural resources on-site and the project would implement mitigation measures MM CUL-2.1, MM CUL-2.2, MM CUL-2.3, and MM CUL-3.1 to reduce impacts to unknown resources (if encountered on-site during construction) to a less than significant level. **(Less than Significant with Mitigation Incorporated)**

Impact MFS-2:	The project would not have impacts that are individually limited, but cumulatively considerable. **(Less than Significant Cumulative Impact)**

Under Section 15065(a)(3) of the CEQA Guidelines, 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." As defined in Section 15065(a)(3) of the CEQA Guidelines, cumulatively considerable means "that 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." In addition, under Section 15152(f) of the CEQA Guidelines, where a lead agency has determined that a cumulative effect has been adequately addressed in a prior EIR, the effect is not treated as significant for purposes of later environmental review and need not be discussed in detail.

The project would not result in impacts to agricultural and forestry resources, mineral resources, or wildfires; therefore, the project would not contribute to cumulative impacts to these resources. The project's impacts to hazards and hazardous materials are specific to the site and no other cumulative projects contribute to the project's site-specific hazards and hazardous materials impacts. As discussed in Section 4.7 Geology and Soils, the proposed well would result in the pumping of additional groundwater pump from the Santa Clara Subbasin that would account for less than two percent of the total annual amount pumped from the Subbasin. Although the project would increase the amount of groundwater pumped from the subbasin, the rate of existing subsidence due to groundwater pumping has been minimal under similar levels of cumulative groundwater production. Therefore, the project would not contribute to a cumulative geology and soils impact related to subsidence. In addition, the project would be required to adhere to existing regulations including the current CBC, SMC Section 12.60.230, and Provision C.6.c of the MRP, which would reduce potential cumulative impacts related to geologic hazards, construction on expansive soils, and erosion to a less than significant level. Implementation of mitigation measure MM GEO-6.1 would reduce potential cumulative impacts to paleontological resources to a less than significant level.

The geographic area for cumulative aesthetic impacts is generally the immediate vicinity of the project site because it would affect common resources and impacts would be limited to the immediate vicinity. There are no cumulative projects in the immediate vicinity of the project, therefore, the project would not contribute to a significant cumulative aesthetics impact.

As discussed in Section 4.10 Hydrology & Water Quality, the maximum amount of 1,935 AF of additional of groundwater pumped per year would only account for approximately 1.7 percent of the total annual amount pumped from the Santa Clara Subbasin which would not result in a significant increase in groundwater outflow. Valley Water would continue to manage groundwater to sustainable levels. The project, and other operational groundwater wells in the region, would also comply with the GWMP and applicable stormwater control measures; therefore, the project would not contribute to a cumulative Hydrology and Water Quality impact pertaining to groundwater management In addition, the project would comply with SMC Chapter 12.60 and the City's BMP Guidance Manual. Therefore, the project would not contribute to a cumulative impact pertaining to surface water quality or an increase in erosion, siltation, and/or flooding as a result of increase stormwater runoff.

Given the project's consistency with the General Plan (and, therefore, assumptions and analysis in LUTE EIR), compliance with existing regulations, and implementation of standard mitigation measures (including MM BIO-1.1, MM CUL-2.1, MM CUL-2.2, MM CUL-2.3, and MM CUL-3.1), the project and other cumulative projects consistent with the General Plan would not contribute to significant cumulative biological resources, cultural and tribal cultural resources, land use, population and housing, public services, recreation, and utilities and service systems impacts beyond what was disclosed in the certified 2017 LUTE EIR.

In general, an individual project's impact on broader resources including air quality, energy, GHGs, and VMT are evaluated at a cumulative level. That is, if a project results in a significant impact to air quality (specifically criteria air pollutants), energy, GHGs, and VMT, the project would be considered to have a significant cumulative impact to those resources. As discussed in Sections 4.3 Air Quality, 4.6 Energy, 4.8 GHG Emissions, and 4.17 Transportation, the project would not result in significant impacts to those resources areas with adherence to local regulations and policies and the implementation of the identified mitigation measures (i.e., LUTE DEIR MM 3.5.3 and MM AIR-3.1). The geographic boundary for cumulative community health risk impacts is 1,000 feet from the project site; however, there are no cumulative projects within 1,000 feet of the site.

Table 4.3-7 summarizes the cumulative community risk impacts from the combined TAC sources at project MEI and illustrates that implementation of LUTE DEIR MM 3.5.3 and MM AIR-3.1 would further reduce the less than significant cumulative air quality impact.

The geographic area for cumulative noise and vibration impacts is within 1,000 feet of the project site. Cumulative projects within 1,000 feet of the project site have the ability to contribute to a cumulative noise or vibration impact with the project. There are no cumulative projects within 1,000 feet of the project site. For this reason, the project would not result in a significant cumulative noise or vibration impact.

Based on the discussion above, the project would not result in a cumulative considerable contribution to a significant cumulative impact. **(Less than Significant Cumulative Impact)**

Impact MFS-3:	The project may have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly. **(Potentially Significant Impact)**

Consistent with Section 15065(a)(4) of the CEQA Guidelines, 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 the potential to cause substantial adverse effects on human beings, either directly or indirectly. Under this standard, a change to the physical environmental that might otherwise by minor must be treated as significant if it would cause substantial adverse effects to humans, either directly or indirectly. This factor relates to adverse changes to the environment of human beings generally, and not effects on particular individuals.

The potential for the proposed project to result in changes to the environment that could directly or indirectly affect human beings is evaluated in each section of this Initial Study using the CEQA Checklist. In particular, the resource areas that could directly affect human beings include air quality,

geology and soils, hazards and hazardous materials, and noise. The potential project-related air quality, geology and soils, and hazards and hazardous materials impacts discussed in Sections 4.3, 4.7, and 4.9 would all be reduced to a less than significant level with adherence to existing regulations and implementation of the identified mitigation measures (LUTE DEIR MM 3.5.3 and MM AIR-3.1). Implementation of the proposed project could result in potentially significant noise and vibration impacts to surrounding residents. The project's noise (as well as vibration) impacts are evaluated in detail in the EIR. Responses to the impact statements above are discussed in Section 3.1 Noise and Section 5.0 Significant and Irreversible Environmental Changes, in the EIR. **(Potentially Significant Impact)**

SECTION 5.0 REFERENCES

The analysis in this Initial Study is based on the professional judgement and expertise of the environmental specialists preparing this document, based upon review of the site, surrounding conditions, site plans, and the following references:

Association of Bay Area Governments and Metropolitan Transportation Commission. *Plan Bay Area 2050*. October 21, 2021.

---. "Tsunami & Additional Hazards". Accessed March 10, 2023. Available at: https://abag.ca.gov/our-work/resilience/data-research/tsunami-additional-hazards.

---. *Plan Bay Area Projections 2040*. November 2018.

Bay Area Air Quality Management District. "Air Quality Standards and Attainment Status." Last Updated January 5, 2017. Accessed August 3, 2023. Available at: https://www.baaqmd.gov/about-air-quality/research-and-data/air-quality-standards-and-attainment-status.

---. *Final 2017 Clean Air Plan*. April 19, 2017.

CA Department of Conservation. *California Earthquake Hazards Zone*. Webmap. Accessed January 19, 2023. Available at: https://maps.conservation.ca.gov/cgs/EQZApp/app/.

California Air Resources Board. "Advanced Clean Cars II." Accessed January 9, 2023. Available at: https://ww2.arb.ca.gov/our-work/programs/advanced-clean-cars-program/advanced-clean-cars-ii.

---. "Overview: Diesel Exhaust and Health." Accessed July 3, 2023. Available at: https://ww2.arb.ca.gov/resources/overview-diesel-exhaust-and-health.

---. "The Advanced Clean Cars Program." Accessed January 9, 2023. Available at: https://www.arb.ca.gov/msprog/acc/acc.htm.

---. *2022 Scoping Plan for Achieving Carbon Neutrality*. November 16, 2022.

California Building Standards Commission. "CALGreen." Accessed August 9, 2023. Available at: https://www.dgs.ca.gov/BSC/CALGreen.

---. "California Building Standards Code." Accessed January 19, 2023. Available at: https://www.dgs.ca.gov/BSC/Codes#@ViewBag.JumpTo.

California Department of Conservation. "Farmland Mapping and Monitoring Program." Accessed January 9, 2023. Available at: http://www.conservation.ca.gov/dlrp/fmmp/Pages/Index.aspx.

---. "Williamson Act." Accessed January 9, 2023. Available at: http://www.conservation.ca.gov/dlrp/lca.

California Department of Finance. "E-5 City/County Population and Housing Estimates – January 1, 2022." Accessed: January 20, 2023. Available at: http://www.dof.ca.gov/Forecasting/Demographics/Estimates/E-5/.

California Department of Forestry and Fire Protection. "FRAP". Accessed January 9, 2023. Available at: http://frap.fire.ca.gov/.

---. *Santa Clara County Fire Hazard Safety Zone Map – State Responsibility Area*. November 2007.

---. *Santa Clara County Fire Hazard Safety Zone Map – Local Responsibility Area*. October 2008.

California Department of Tax and Fee Administration. "Net Taxable Gasoline Gallons." Accessed January 19, 2023. Available at: https://www.cdtfa.ca.gov/dataportal/dataset.htm?url=VehicleTaxableFuelDist.

California Department of Transportation. "State Scenic Highway Map" Accessed January 9, 2023. Available at: https://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=465dfd3d807c46cc8e8057116f1aacaa.

California Energy Commission. "2019 Building Energy Efficiency Standards." Accessed January 19, 2023. Available at: https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2019-building-energy-efficiency.

---. "Natural Gas Consumption by County." Accessed January 19, 2023. Available at: http://ecdms.energy.ca.gov/gasbycounty.aspx.

California Environmental Protection Agency. "Cortese List Data Resources." Accessed January 9, 2023. Available at: https://calepa.ca.gov/sitecleanup/corteselist/.

California Gas and Electric Utilities. 2020 California Gas Report. Accessed January 19, 2023. Available at: https://www.socalgas.com/sites/default/files/2020-10/2020_California_Gas_Report_Joint_Utility_Biennial_Comprehensive_Filing.pdf.

California Natural Resources Agency. "Santa Clara County Important Farmland 2018." Accessed January 12, 2023. Available at: https://www.conservation.ca.gov/dlrp/fmmp/Pages/SantaClara.aspx.

California Office of Historic Preservation. "CEQA Guidelines Section 15064.5(a)(3) and California Office of Historic Preservation Technical Assistance Series #6." Accessed January 9, 2023. Available at: http://www.ohp.parks.ca.gov/pages/1069/files/technical%20assistance%20bulletin%206%202011%20update.pdf.

California Regional Water Quality Control Board. San Francisco Bay Region Municipal Regional Stormwater NPDES Permit. November 2015.

City of Sunnyvale. "Construction and Demolition Waste Tracking Requirements for Projects in Sunnyvale." Accessed March 10, 2023. Available at: https://www.sunnyvale.ca.gov/home/showpublisheddocument/1524/637820848558170000.

---. "Construction Waste." February 5, 2019. Accessed December 20, 2021. Available at: https://sunnyvale.ca.gov/business/environmental/waste.htm.

---. "DPS Organizational Chart." Accessed February 3, 2023. Available at https://www.sunnyvale.ca.gov/home/showpublisheddocument/3052/638100604224870000.

---. "Heritage Resources Inventory." Accessed: January 9, 2023. Available at: https://www.sunnyvale.ca.gov/home/showpublisheddocument/1556/637820850915270000.

---. "Public Safety." Accessed February 3, 2023. Available at: https://www.sunnyvale.ca.gov/your-government/departments/public-safety.

---. "Sunnyvale Public Library: About." Accessed February 3, 2023. Available at: https://www.library.sunnyvale.ca.gov/about/computers-printing.

---. "Utility Maps." Accessed March 10, 2023. Available at: https://www.sunnyvale.ca.gov/city-services/online-services/maps-and-gis/utility-maps.

---. *2020 Urban Water Management Plan*. Adopted June 29, 2021.

---. *Draft EIR: Downtown Specific Plan Amendments and Specific Development Project. SCH# 2018052020*. Page 212. November 2019.

---. *Green Building Program*. May 2019.

---. *Land Use and Transportation Element Draft Environmental Impact Report. SCH No. 2012032003*. August 2016.

---. *Wastewater Collection System Master Plan*. December 2015.

---. *Water Utility Master Plan*. November 2010..

Cornerstone Earth Group. *Geotechnical Feasibility Study – Well Station 20*. December 9, 2022.

County of Santa Clara. "Williamson Act and Open Space Easement". September 17, 2018. Accessed January 12, 2023. https://www.sccgov.org/sites/dpd/programs/wa/pages/wa.aspx.

EKI Environment & Water, Inc. *Technical Memorandum*. May 4, 2023.

Federal Emergency Management Agency. “FEMA Flood Map Service Center”. Accessed March 10, 2023. Available at: https://msc.fema.gov/portal/search?AddressQuery=800%20carlisle%20way%20sunnyvale%20ca#searchresultsanchor.

National Ocean Service. “What is a Seiche?”. Accessed March 10, 2023. Available at: https://oceanservice.noaa.gov/facts/seiche.html.

NSF International. “NSF/ANSI Standard 60: Drinking Water Treatment Chemicals – Health Effects” January 2017. Accessed August 9, 2023. Available at: https://www.nsf.org/knowledge-library/nsf-ansi-standard-60-drinking-water-treatment-chemicals-health-effects.

Santa Clara County Airport Land Use Commission. Moffett Federal Airfield Comprehensive Land Use Plan. November 2, 2016.

Santa Clara County Planning & Development. *Geologic Hazard Zones Mapping Application*. 2021.

Santa Clara Valley Water District. *2021 Groundwater Management Plan, Santa Clara and Llagas Subbasins*. November 2021.

---. *Sunnyvale East and West Channels Flood Protection Projec*t. Accessed January 13, 2023. Available at: https://www.valleywater.org/sites/default/files/Fact%20Sheet_Sunnyvale%20EW%20Channels%20040816.pdf.

---. *Water Year 2022 Report*. March 2023.

Silicon Valley Clean Energy. “Frequently Asked Questions.” Accessed January 19, 2023. Available at: https://www.svcleanenergy.org/faqs.

Sunnyvale School District. “About Us.” Accessed February 3, 2023. Available at: https://www.sesd.org/domain/295.

U.S. Energy Information Administration. “Petroleum & Other Liquids, California Field Production of Crude Oil.” September 30, 2020. Available at: https://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=pet&s=mcrfpca1&f=a.

United States Department of Energy. *Energy Independence & Security Act of 2007*. Accessed January 19, 2023. Available at: http://www.afdc.energy.gov/laws/eisa.

United States Department of the Interior. “Memorandum M-37050. The Migratory Bird Treaty Act Does Not Prohibit Incidental Take.” Accessed January 9, 2023. Available at: https://www.doi.gov/sites/doi.gov/files/uploads/m-37050.pdf.

United States Department of Transportation. "USDOT Announces New Vehicle Fuel Economy Standards for Model Year 2024-2026." Accessed January 19, 2023. Available at: https://www.nhtsa.gov/press-releases/usdot-announces-new-vehicle-fuel-economy-standards-model-year-2024-2026.

United States Energy Information Administration. "Natural Gas Consumption by End Use. 2021." Accessed January 19, 2023. Available at: https://www.eia.gov/state/?sid=CA#tabs-2.

United States Environmental Protection Agency. "Summary of the Resource Conservation and Recovery Act." Accessed January 9, 2023. Available at: https://www.epa.gov/laws-regulations/summary-resource-conservation-and-recovery-act.

---. "Superfund: CERCLA Overview." Accessed January 9, 2023. Available at: https://www.epa.gov/superfund/superfund-cercla-overview.

---. "The 2021 EPA Automotive Trends Report: Greenhouse Gas Emissions, Fuel Economy, and Technology since 1975." November 2021. Available at: https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P1010U68.pdf.

United States Fish and Wildlife Service. *National Wetlands Inventory, Surface Waters and Wetlands*. Map. May 2021.

United States Geological Survey. "Groundwater Quality in the San Francisco Bay Groundwater Basins, California". March 2013. Accessed March 10, 2023. Available at: https://pubs.usgs.gov/fs/2012/3111/pdf/fs20123111.pdf.

United States Geological Survey. "Mineral Resources Online Spatial Data." Accessed January 11, 2023. https://mrdata.usgs.gov/general/map-us.html.

SECTION 6.0 LEAD AGENCY AND CONSULTANTS

6.1 LEAD AGENCY

City of Sunnyvale
Department of Community Development
Trudi Ryan, Community Development Director
Noren Caliva Lepe, Principal Planner
Mary Jeyaprakash, Senior Planner

6.2 CONSULTANTS

David J. Powers & Associates, Inc.
Environmental Consultants and Planners
Kristy Weis, Vice President/Principal Project Manager
Nick Towstopiat, Assistant Project Manager
Ryan Osaka, Graphic Artist

Archaeological/Historical Consultants
Archaeological Consultants
Daniel Shoup, Principal/Owner
Molly Fierer-Donaldson, Archaeologist

Cornerstone Earth Group, Inc.
Hazardous Materials Consultants
Ron Helm, C.Hg., C.E.G, Senior Principal Geologist
Stason Foster, Project Engineer
Geotechnical Consultants
Jennifer Campbell, P.E.
Matthew Schaffer, P.E. G.E.

EKI Environment & Water
Hydrology Consultants
Anona Dutton, P.G., C.Hg.
Sarah Hodson, P.E.
Patrick O'Connell, P.G., C.Hg.

KYLE Groundwater, Inc.
Groundwater Consultants
Russell J. Kyle, PG, CHG

Illingworth & Rodkin, Inc.
Acoustical and Air Quality Consultants
Michael Thill, Principal
James Reyff, Principal
Casey Divine, Consultant
Jordyn Bauer, Staff Consultant

Urban Tree Management, Inc.
Arborists
Chris Stewart, Arborist
Michael Young, Arborist

SECTION 7.0 ACRONYMS AND ABBREVIATIONS

ABAG	Association of Bay Area Governments
ACM	Asbestos-Containing Material
AFY	Acre-Feet per Year
AIA	Airport Influence Area
Air District	Bay Area Air District
AMSL	Above Mean Sea Level
BAAQMD	Bay Area Air Quality Management District
BGS	Below Ground Surface
BMPs	Best Management Practices
Btu	British thermal units
CAAQS	California Ambient Air Quality Standards
CalARP	California Accidental Release Prevention
CalEPA	California Environmental Protection Agency
CALGreen	California Green Building Standards Code
Cal/OSHA	California Department of Industrial Relations, Division of Occupational Safety and Health
CALTRANS	California Department of Transportation
CAL FIRE	California Department of Forestry and Fire Protection
Cal Water	California Water Service
CARB	California Air Resources Board
CBC	California Building Code
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFCs	Chlorofluorocarbons
CGS	California Geological Survey
CHRIS	California Historical Resources Information System
CIPs	Capital Improvement Projects
CLUP	Comprehensive Land Use Plan
CO_2	Carbon Dioxide
CO_2e	CO_2 Equivalents

CRHR	California Register of Historical Resources
CUPA	Certified Unified Program Agency
d/D	Maximum Flow Depth/Pipe Diameter
DPM	Diesel Particulate Matter
DPS	Sunnyvale Department of Public Safety
DTSC	Department of Toxic Substances Control
DU/AC	Dwelling Units per Acre
EIR	Environmental Impact Report
EPA	Environmental Protection Agency
ESA	Environmental Site Assessment
EV	Electric Vehicle
FAA	Federal Aviation Administration
FAR	Floor Area Ratio
FAR	Federal Aviation Regulations
FEMA	Federal Emergency Management Agency
FIRMs	Flood Insurance Rate Maps
FMMP	Farmland Mapping and Monitoring Program
GHG	Greenhouse Gas
GPM	Gallons Per Minute
GWh	Gigawatt Hours
GWMP	Groundwater Management Plan
GWP	Global Warming Potential
HFCs	Hydrofluorocarbons
HI	Hazard Index
HOV	High-Occupancy Vehicle
HSWA	Hazardous and Solid Waste Amendments
IFC	International Fire Code
LID	Low Impact Development
LOS	Level of Service
LRA	Local Responsibility Area
LTA	Local Transportation Analysis
MBTA	Migratory Bird Treaty Act
MEI	Maximally Exposed Individual

MRP	Municipal Regional Stormwater NPDES Permit
MTC	Metropolitan Transportation Commission
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NCP	National Contingency Plan
NESHAP	National Emission Standards for Hazardous Air Pollutants
NFIP	National Flood Insurance Program
NHPA	National Historic Preservation Act of 1966
NO_x	Nitrogen Oxides
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
O_3	Ground-level Ozone
OPR	Governor's Office of Planning and Research
PCB	Polychlorinated Biphenyls
PDAs	Priority Development Areas
PFCs	Perfluorocarbons
PG&E	Pacific Gas and Electric Company
PM	Particulate Matter
RCRA	Resource Conservation and Recovery Act
ROG	Reactive Organic Gases
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SCH	State Clearinghouse
SCS	Sustainable Communities Strategy
SFHA	Special Flood Hazard Areas
SFPUC	San Francisco Public Utilities Commission
SMARA	Surface Mining and Reclamation Act
SMC	Sunnyvale Municipal Code
SMGB	State Mining and Geology Board
SO_x	Sulfur Oxides
SRA	State Responsibility Area
SR	State Route
SVCE	Silicon Valley Clean Energy

SWRCB	State Water Resources Control Board
TACs	Toxic Air Contaminants
TCRs	Tribal Cultural Resources
TSCA	Toxic Substances Control Act
UFMP	Urban Forest Management Plan
USACE	United States Army Corps of Engineers
USFWS	United States Fish and Wildlife Service
USGS	US Geologic Service
UWMP	Urban Water Management Plan
VMT	Vehicle Miles Traveled
VTA	Santa Clara Valley Transportation Authority
WPCP	Donald M. Somers Water Pollution Control Plant
WUMP	Water Utility Master Plan
WWMP	Wastewater Collection System Master Plan